# DETERMINANTS AFFECTING THE EFFECTIVENESS OF RISK MANAGEMENT OF COMMERCIAL BANKS IN DONG NAI PROVINCE

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**ABSTRACT:** Risk management is the identification, assessment, and prioritization of risks followed by coordinated and economical application of resources to minimize, monitor, and control the probability and/or impact of unfortunate events or to maximize the realization of opportunities. Risk management's objective is to assure uncertainty does not deflect the endeavor from the business goals. The objectives of this study are to identify the factors that affecting the effectiveness of risk management of commercial banks in Dong Nai province. The data analysis for this study is a quantitative type. Moreover, the results provided an insight of the effectiveness of risk management from 350 customers related to commercial banks in Dong Nai province. The regression analysis result showed that there were five factors that included of factors following the procedure (Pr), the communication (Co), the technology (Te), the Human Resource development (Hr) and the organization structure (Or) affecting the effectiveness of risk management of commercial banks in Dong Nai province with significance level of five percent. In addition, the study results showed that there were 350 customers who interviewed and answered about 29 questions. The Data collected from November 2016 to April 2017. This study had been analyzed Cronbach's Alpha, KMO testing and the result of KMO testing used for the research method of the regression. Customers' responses measured through an adapted questionnaire on a 5-point Likert scale following; conventions: 1: Completely disagree, 2: Disagree, 3: Normal; 4: Agree; 5: completely agree. Hard copy and online questionnaire distributed among 50.500 customers of the commercial banks.

**KEYWORDS**: Risk Management, Customers, Commercial Banks, LHU

# **INTRODUCTION**

A large number of experts believe that Vietnam will be able to achieve its target economic growth of 6.7% in 2017. This is due to three main factors: a sustainable rise in FDI, local production recovery and improvements in domestic business environment. Vietnam in recent years has actively fostered integration by signing different free trade agreements with industrialized economies, which serves as an impetus for foreign investors to enter and develop in Vietnam. With sustained strong levels of FDI inflows, Vietnam's exports are expected to surge in 2017 and consequently contribute to the overall economic growth. Besides performing the usual commercial banking functions, banks in developing countries play an effective role in their economic development. The majority of people in such countries are poor, unemployed and engaged in traditional agriculture. There is acute shortage of capital. People lack initiative and enterprise. Means of transport are undeveloped. Industry is depressed. The commercial banks help in overcoming these obstacles and promoting economic development.

Moreover, there is the importance of risk management in an organization, especially, commercial banks. Risk management is the uncertain economic times of the past few years

have had a major effect on how companies operate these days. Commercial banks that used to operate smoothly with the help of forecasts and projections now refrain from making business judgements that are set in stone. Now, Commercial banks have a renewed focus: to manage risk. Risk is the main cause of uncertainty in any Commercial banks. Thus, Commercial banks increasingly focus more on identifying risks and managing them before they even affect the business. The ability to manage risk will help companies act more confidently on future business decisions. Their knowledge of the risks they are facing will give them various options on how to deal with potential problems. The above mentioned things, the researchers had chosen topic "Determinants affecting the effectiveness of risk management of commercial banks in Dong Nai province" as a paper. This paper helps mangers of the commercial banks who apply the research results for improving policy on the effectiveness of risk management of commercial banks in the future.

#### LITERATURE REVIEW

**Risk management**: It is a widely used discipline for dealing with the possibility that some future event will cause harm. It provides a systematic approach to recognizing and confronting threats faced by an organization in fulfilling its mission. Besides, Risk management is the process to manage the potential risks by identifying, analyzing and addressing them. The process can help to reduce the negative impact and emerging opportunities. The outcome may help to mitigate the likelihood of risk occurring and the negative impact when it happens (Partnerships BC, 2005).

The procedure (Pr): The procedures of risk management have recently been published in a few papers. According to SBP (2003), a risk management framework encompasses the scope, the process/system/procedures to manage risks and the roles and responsibilities of the individual related to risk management. The effective risk management framework includes the risk management policies and procedures that cover risk identification, acceptance, measurement, monitoring, reporting and control.

The technology (Te): an organization is on such a large scale that it would be difficult for members to communicate and share information without an information technology infrastructure (Hasanali, 2002). Information technology can enable prompt searches, the access of and retrieval of data, and support communication in an organization.

Rolland (2008) suggests using IT to drive effective risk management. IT can create an important link between risk management and corporate performance. IT provides data security by employee level, limiting a user's access by time, line of business, business activity and individual risk. IT tools collect data used in the past so companies can learn through experience and avoid repeating the same mistakes. The effective risk management information make more valuable for decision making. Therefore, Information Technology (IT) is another imperative factor for successful risk management.

The communication (Co): communication is another important consideration for effective risk management. Grabowski and Roberts (1999) claim that communication plays an important role in risk mitigation. It provides opportunities for clarification, for making sense of the organization's progress, and for members to discuss how to improve the organization and the impact of using different risk mitigation strategies.

The communication process provides opportunities for members to understand their roles and responsibilities as the structure of the organization changes. In case, the wide range of people from a broad cross-section of the business. There is involved in the risk identification and assessment process and if there are no "taboo" subjects which prevent conventional wisdom within the organization being challenged when necessary. Financial institutions need to consider the concept of verifiability. If a different group of members were making the same decision about the importance of risks, it would come to the same conclusion (Carey, 2001).

The Human Resource development (Hr): Carey (2001) shows that the ability to respond to changing conditions in an organization's operations relates to a range of activities including the development of risk training courses and the involvement of staff in responding to early warning systems.

NSW Department of State and Regional Development (2005) suggest that effective risk management become a part of good business practice and include training staff appropriately.

The main reason for an education and training program is not only to ensure that members are comfortable with the system, but also to increase their expertise and knowledge. Training not only uses the new system, but also new processes and understands the integration within the system - how the work of one employee influences the work of others.

**The organization structure (Or)**: Grabowski and Roberts (1999) suggest that risk management is primarily associated with the fluidity of organizational structures. Responding in different ways and responding quickly in the face of changing conditions is a flexible approach.

DeLoach (2004) focuses on enterprise-wide risk management process (EWRM) to manage risks and to create and protect enterprise value. EWRM built on a well-defined organizational structure. Risk management responsibilities and authorities are assigned to appropriate personnel. They decide what must be done for developing and accessing risk management alternatives and selecting a structural approach to evaluating risk management options. The effectiveness of alternative strategies balanced within established risk parameters and limits.

#### METHODS OF RESEARCH

In this research, the data processing and statistical treatment have contents following:

Data Processing: The term of data process often used more specifically in the context of a business or other organization to refer to the class of commercial data processing applications, the data collected by the researcher and be analyzed by SPSS 20.0. Before having analyzed, the data screened to delete outliners to secure reliability. Creative Research Systems offers complete data processing services. I provide presentation-quality tables, text reports and graphics. In addition, I can provide the tables, reports and graphics on disk, ready for you to incorporate into a document or research presentation. I can enter data from paper questionnaires or use a data file you provide. Most interviewing, scanning and database packages can produce a data file I can use. If I use the survey system, the interviewing and tabulation software, I can provide instruction files you can use for further analysis. If you want more than data processing, my research professionals can also analyze your data and present you with a complete report.

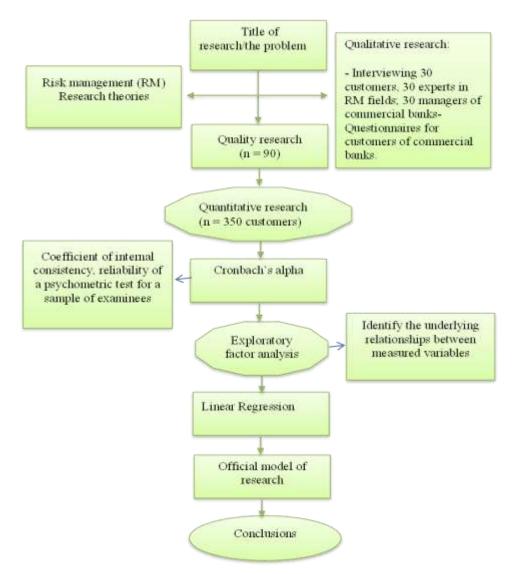


Figure 1: Research processing for the effectiveness of risk management of commercial banks in Dong Nai province

The fact that survey data obtained from units selected with complex sample designs needs to take into account in the survey analysis: weights need to use in analyzing survey data and variances of survey estimates need to compute in a manner that reflects the complex sample design. I survey 350 customers of commercial banks. There are 350 customers who interviewed and answered about 27 questions. The Data collected from November 2016 to April 2017. This study had been analyzed Cronbach's Alpha, KMO testing and the result of KMO testing used for the next research of the regression. Customers' responses measured through an adapted questionnaire on a 5-point Likert scale following; conventions: 1: Completely disagree, 2: Disagree, 3: Normal; 4: Agree; 5: completely agree. Hard copy and online questionnaire distributed among 50.500 customers of the commercial banks. First of all, I survey 30 customers related to Commercial banks, Secondly, I had surveyed 30 experts in risk management fields in the province. Finally, I had surveyed 30 managers of Commercial banks. The purpose of the survey is to examine the content of the questions and to test the research model.

After preliminary investigations, formal research is done by using quantitative methods questionnaire survey of 350 customers of commercial banks who related and answered nearly 29 questions. The reason tested measurement models, model and test research hypotheses. Data collected were tested by the reliability index (excluding variables with correlation coefficients lower < 0.30 and variable coefficient Cronbach's alpha < 0.60), factor analysis explored (remove the variable low load factor < 0.50). The hypothesis was tested through multiple regression analysis with linear Enter method. Conventions: 1: Completely disagree, 2: Disagree, 3: Normal; 4: Agree; 5: completely agree. Data collected were tested by the reliability index (excluding variables with correlation coefficients lower < 0.30 and variable coefficient Cronbach's alpha < 0.60), factor analysis explored (remove the variable low load factor < 0.50).

The data collected by the researcher and be analyzed by SPSS 20.0. Before having analyzed, the data screened to delete outliners to secure reliability. Creative research systems offers complete data processing services. I provide presentation-quality tables, text reports and graphics. In addition to or instead of paper copies, the researcher can provide the tables, reports and graphics on disk, ready for you to incorporate into a document or research presentation. the researcher can enter data from paper questionnaires or use a data file you provide. Most interviewing, scanning and database packages can produce a data file we can use. If you use the survey system, interviewing and tabulation software, the researcher can provide instruction files you can use for further analysis.

Research model for factors affecting the effectiveness of risk management of commercial banks

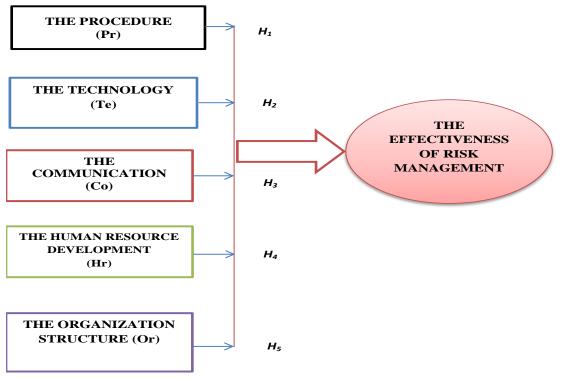


Figure 2: Research model for factors affecting the effectiveness of risk management of commercial banks

Figure 2 showed that the effectiveness of risk management of commercial banks is the dependent variable but we had five various factors that mentioned are independent variables.

Hypothesis: There are all of five factors that have positive with the effectiveness of risk management of commercial banks.

### RESEARCH RESULTS

Table 1: Descriptive Statistics and Cronbach's Alpha for factors affecting the effectiveness of risk management (Ef) of commercial banks

1. PROCEDURE (Pr)	Min	Max	Mean	S.D			
Pr1: Identity card: clearly no more than 15 years	1	5	3.78	1.046			
Pr2: Permanent household registration, temporary	2	5	3.92	.951			
residence certificate	2	J	3.72	./31			
Pr3: Certificate of temporary residence or permanent	2	5	3.86	.966			
residence	_		2.00	.,, 00			
Pr4: Proof of ownership of the property (red book, pink	1	5	3.38	1.107			
book or sales contract).							
Pr5: Strengthen the news report and the declaration by	2	5	3.66	1.300			
electronic means (IT)							
Pr6: Increase the use of information systems and	1	5	3.35	1.334			
business records of the business							
Pr7: Customers should provide relevant documentation							
proving they are the owners of the respective assets	1	5	3.34	1.353			
mentioned above so that the bank has grounds for							
lending.							
Cronbach's Alpha is 0.947							
2. COMMUNICATION (Co)	Min	Max	Mean	S.D			
Co1: Cooperation, answering questions between	1	5	3.07	1.025			
commercial banks and customers	1	<u> </u>	3.07	1.023			
Co2: Customs cooperation between agencies such as	1	5	3.06	.980			
banks, airports, airlines,	1			.,,,,,			
Co3: Centralized control method, reference							
concentration is applied in inter-bank payment	1	5	3.05	1.025			
electronically							
Co4: Commercial bank cooperation between Dong Nai	1	5	3.05	1.002			
province with other provinces in Vietnam							
Co5: Cooperation and sharing of information between		_					
commercial banks in Dong Nai province with agencies	1	5	3.05	1.025			
such as taxes, the environment							
Co6: Strengthening exchanges between the commercial	1	5	3.03	1.043			
bank authorities in the provinces and in the region.							
Cronbach's Alpha is 0.938							
3. TECHNOLOGY (Te)	Min	Max	Mean	S.D			
Te1: The commercial banks have the use of	1	5	3.30	.949			
information technology in risk management	1	<i>J</i>	5.50	•272			
Te2: The commercial banks have the automatic data	1	5	3.32	.969			
processing via modern technology	•			., 0,			

Te3: The commercial banks have the system

automatically updates the information of the enterprises and customers	1	5	3.38	.924			
Table 1: Continued							
Te4: The commercial banks have the information	1	5	3.36	.922			
processing to ensure accuracy and security	-			.>22			
Te5: The commercial banks have the declaration							
technology to friendly, modern, fast and easy to use for	1	5	3.24	.995			
businesses and customers							
Cronbach's Alpha is 0.9		1					
4. HUMAN RESOURCE DEVELOPMENT (Hr)	Min	Max	Mean	S.D			
Hr1: The commercial banks have the declaration additional							
periodically and update professional knowledge to bank	1	5	2.88	.945			
staffs							
Hr2: The commercial banks send staff to study soft skills							
and improve human resource quality through modern	1	5	2.80	1.573			
technology							
Hr3: The commercial banks supporting training specialized	1	5	2.19	1.231			
staff of bank procedures online	1	3	2.19	1.231			
Hr4: Commercial bank staffs are to fit the specialized and	1	5	2.72	1.450			
meet job demand	1	3	2.12	1.430			
Cronbach's Alpha is 0.793							
5. ORGANIZATION STRUCTURE (Or)	Min	Max	Mean	S.D			
Or1: Commercial bank organizational structure consistent	1	5	2 52	.884			
with typical job	1	3	3.53	.004			
Or2: Commercial banks have specialization of each	1	5	2.62	004			
department and each job for each staff	1	3	3.62	.904			
Or3: Leaders create the best conditions for staffs	1	_	2.56	010			
professional development and other skills	1	5	3.56	.910			
Or4: Leaders from central to local have the processes							
uniform risk control and have a specialized department of	1	5	3.49	.905			
risk management.							
Cronbach's Alpha is 0.8	91						
6. THE EFFECTIVENESS OF RISK MANAGEMENT	Min	Max	Mean	S.D			
( <b>Ef</b> )							
Ef1: Commercial banks have department decrease the risk	1	_	2.22	7.47			
and increase total revenue from services	1	5	3.22	.747			
Ef2: Commercial banks have application of modern							
information technology, training, developing of human							
resources, improved compliance with laws, regulations and	1	5	2.38	.568			
being satisfactions of customer services							
Ef3: Customer procedures and the information updated and							
shared with relevant agencies, customers reduced release							
times and hence lower transaction costs; and improved	1	5	4.21	.863			
cooperation between the banks and customers.							
Cronbach's Alpha is 0.78	3 <b>4</b>	<u>.                                    </u>					
(Source: The researcher's collecting data and SPSS)							

(Source: The researcher's collecting data and SPSS)

Table 1 showed that there were 350 customers of commercial banks who interviewed and answered about 29 questions but 325 samples processed and 25 samples lack of information. Data collected from November 2016 to April 2017. Std. Deviation (S.D) is around 1.00. Table 1 showed that all of Cronbach's Alpha is high > 0.6; this is very high reliability statistics. All of variables surveyed Corrected Item-Total Correlation greater than 0.3 and Cronbach's Alpha if Item deleted greater than 0.5 and Cronbach's Alpha is very reliability. Such observations make it eligible for the survey variables after testing scale. This showed that data was suitable and reliability for researching.

Table 2: KMO and Bartlett's Test for factors affecting the effectiveness of risk management (Ef) of commercial banks

#### **KMO** and Bartlett's Test

Kaiser-Meyer-Olkin Measure	.810	
	Approx. Chi-Square	9644.215
Bartlett's Test of Sphericity	df	325
	Sig.	.000

**Total Variance Explained** 

Com.	I	nitial Eigenv	alues	Extraction Sums of Squared		Squared	Rota	ation Sums o	f Squared
					Loadings			Loading	S
	Total	% of	Cumulativ	Total	% of	Cumulativ	Total	% of	Cumulative
		Variance	e %		Variance	e %		Variance	%
1	6.813	26.206	26.206	6.813	26.206	26.206	5.480	21.076	21.076
2 3	5.038	19.376	45.582	5.038	19.376	45.582	4.634	17.824	38.900
	4.267	16.411	61.994	4.267	16.411	61.994	4.624	17.785	56.685
4	2.380	9.156	71.149	2.380	9.156	71.149	2.999	11.534	68.219
5	1.754	6.745	77.894	1.754	6.745	77.894	2.516	9.675	77.894
6	.824	3.168	81.062						
7	.750	2.884	83.946						
8	.667	2.567	86.513						
9	.566	2.175	88.688						
10	.460	1.770	90.458						
11	.429	1.649	92.107						
12	.367	1.412	93.519						
13	.269	1.035	94.554						
14	.225	.865	95.419						
15	.192	.737	96.156						
16	.174	.668	96.824						
17	.162	.621	97.445						
18	.160	.616	98.062						
19	.127	.487	98.549						
20	.087	.335	98.884						
21	.084	.322	99.207						
22	.058	.223	99.430						
23	.049	.187	99.617						
24	.043	.164	99.781						
25	.031	.120	99.902						
26	.026	.098	100.000						

Extraction Method: Principal Component Analysis.

(Source: The researcher's collecting data and SPSS)

Table 2 showed that Kaiser-Meyer-Olkin Measure of Sampling Adequacy was statistically significant and high data reliability (KMO = 0.810 > 0.6). This result was very good for data analysis. Table 2 showed that Cumulative percent was statistically significant and high data reliability was 77.894 % (> 60 %). There are 26 items for the factors that affecting the effectiveness of risk management (Ef) of commercial banks.

Table 3: Structure Matrix for factors affecting the effectiveness of risk management (Ef) of commercial banks

Code			Componen	t	
	X1	X2	X3	X4	X5
Pr2	.944				
Pr3	.912				
Pr6	.901				
Pr5	.871				
Pr7	.864				
Pr1	.820				
Pr4	.807				
Te1		.956			
Te4		.918			
Te5		.910			
Te2		.908			
Te3		.892			
Co4			.922		
Co2			.915		
Co5			.893		
Co3			.857		
Co6			.836		
Co1			.808		
Or2				.862	
Or3				.850	
Or1				.782	
Or4				.769	
Hr4					.866
Hr2					.837
Hr1					.711
Hr3					.704

(Source: The researcher's collecting data and SPSS)

Table 3 showed that Structure Matrix had five Components. Component 1 was Procedure (X1), Component 2 was Technology (X2), Component 3 was Communication (X3), Component 4 is Organization structure (X4) and Component 5 was HR development (X5).

Besides, factor analysis is a method of data reduction. It does this by seeking underlying unobservable (latent) variables that are reflected in the observed variables (manifest variables). There are many different methods that can be used to conduct a factor analysis. In this study, the researchers used the method such as principal axis factor. There are also many different types of rotations that can be done after the initial extraction of factors, including orthogonal rotations, such as varimax and equimax, the researchers used varimax, which impose the

restriction that the factors cannot be correlated, and oblique rotations, such as promax, which allow the factors to be correlated with one another.

Table 4: KMO and Bartlett's Test for the effectiveness of risk management (Ef) of commercial banks

#### **KMO** and Bartlett's Test

Kaiser-Meyer-Olkin I	.711	
Adeq	./11	
	Approx. Chi-Square	300.848
Bartlett's Test of Sphericity	df	3
	Sig.	.000

**Total Variance Explained** 

Com.		Initial Eigenva	llues	Extraction	Sums of Squa	red Loadings
	Total	% of	Cumulative	Total	% of	Cumulative
		Variance	%		Variance	%
1	2.143	71.419	71.419	2.143	71.419	71.419
2	.448	14.917	86.336			
3	.410	13.664	100.000			

Extraction Method: Principal Component Analysis.

(Source: The researcher's collecting data and SPSS)

Table 4 showed that the result was very good for data analysis. The effectiveness of risk management (Ef) of commercial banks showed that cumulative percent was statistically significant and high data reliability was 71.419 % (>60 %). Extraction Method: Principal Component Analysis. Rotation Method: Promax with Kaiser Normalization. KMO and Bartlett's Test for the sustainability showed that Kaiser-Meyer-Olkin Measure of Sampling Adequacy was statistically significant and high data reliability (KMO = 0.711 > 0.6). Y: the effectiveness of risk management (Ef) of commercial banks.

Table 5: Factors affecting the effectiveness of risk management (Ef) of commercial banks

Model Summarv<sup>b</sup>

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin- Watson
1	.703ª	.494	.487	.44054	1.352

a. Predictors: (Constant), X5, X3, X4, X1, X2

b. Dependent Variable: Y

#### **ANOVA**<sup>a</sup>

Mode	el	Sum of Squares	df	Mean Square	F	Sig.
	Regression	60.552	5	12.110	62.400	.000 <sup>b</sup>
1	Residual	61.911	319	.194		
	Total	122.464	324			

- a. Dependent Variable: Y
- b. Predictors: (Constant), X5, X3, X4, X1, X2

# **Coefficients**<sup>a</sup>

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Colline Statis	•
	В	Std. Error	Beta			Tolerance	VIF
(Constant)	.102	.190		.537	.592		
X1	.192	.025	.317	7.738	.000	.945	1.058
X2	.200	.032	.292	6.207	.000	.715	1.399
X3	.093	.028	.134	3.345	.001	.983	1.017
X4	.260	.037	.330	7.021	.000	.717	1.395
X5	.228	.024	.386	9.506	.000	.963	1.039

(Source: The researcher's collecting data and SPSS)

Table 5 showed that Adjusted R Square (= 0.487) was statistically significant and high data reliability. In addition, Adjusted R Square reached 48.7 %. The results showed that all t value > 2 was statistically significant and high data reliability. Besides, the regression coefficients were positive. Multicollinearity (MC): Variance Inflation Factor (VIF) and Tolerance are two measures that can guide a researcher in identifying MC. VIF < 10 (1 < VIF < 10). This showed that there was not Multicollinearity. Besides, the table 5 showed that all five factors affecting the effectiveness of risk management (Ef) of commercial banks with significance level of 5%. Besides, the value of F = 62.400, sig = 0.00. This model is very good for policies improving the effectiveness of risk management (Ef) of commercial banks.

# CONCLUSIONS AND RECOMMENDATIONS

# **Conclusions**

Commercial banks are important to the financial segment, particularly in developing economies where capital markets are not well developed and strong. Commercial Banks' risk management is important because the soundness of an industry is closely connected to soundness of the whole economy. Risk management of the banking sector is also central as the well-being of the industry is closely associated with the wellness of the whole economy in general. Thus, a proficient and productive banking sector depend on risk management is able and better placed to endure negative economic shocks. Moreover, the researchers had the results which provided an insight of the effectiveness of risk management from 350 customers related to commercial banks in Dong Nai province. The regression analysis results of above mentioned things showed that there were five factors that included of factors following the procedure (Pr), the communication (Co), the technology (Te), the Human Resource development (Hr) and the organization structure (Or) affecting the effectiveness of risk management of commercial banks in Dong Nai province with significance level of five percent. In addition, the study results showed that there were 350 customers who interviewed and answered about 29 questions. The Data collected from November 2016 to April 2017. This study had been analyzed Cronbach's Alpha, KMO testing and the result of KMO testing used for the research method of the regression. The data collected was edited, sorted for

completeness and then analyzed using ordinary least squares (OLS) and finally the researchers have recommendations improving the effectiveness of risk management following.

#### RECOMMENDATIONS

# **Recommendation for procedure**

Commercial banks should have the things doing: (1) the first line of defense is the business blocks, sales, customer specialists, branches, units operating at the headquarters... The main task of these units is to identify, price, prevention, reporting and monitoring of risks arising from business operations (lending) and other operating procedures; protect the interests of the unit through self-assessment of risk and control the effectiveness of each unit. (2) The second line of defense is risk management, compliance, risk management and regulatory. This service has many tasks, the most important of which is to independently evaluate and control the effectiveness of the system at the first line of defense; Main risk management through the establishment of risk appetite/lending policy, development of credit/loan guidelines/procedures, monitoring, early warning, portfolio management; Monitoring of internal control programs, compliance... (3) The third defense line is the internal audit department. This is a subordinate unit of the Board of Supervisors and not part of the Bank's Board of Management, so the evaluation of the two previous defensive lines and the possible risks is carried out independently and objectively.

# **Recommendation for technology**

Commercial banks continue investment in technology development. In today's competitive environment, technology is an important factor in the success of banks. Along with the increase in equity capital, commercial banks need to upgrade investment in developing modern technologies that can be integrated in the system, in order to raise the competitive pressure against the trend of increasingly competitive commercial banks.

#### **Recommendation for communication**

The commercial banks should be participation of all departments in the loss data collection activities. In addition, the process of data collection should be formalized and formalized. This process must be flexible in order to be able to update the sources of information as well as properly reflect the potential risks when the business environment changes. This process should be widely and unified throughout the bank.

The commercial banks based on the collection of risk data, internal and external losses, commercial risk measurement banks operate in two ways: qualitative and quantitative measurement. For quantitative measurement, data storage is most important. Commercial banks must store at least 3 years of operational risk data and the quality of data must be strictly controlled to ensure the correctness of the calculation.

## **Recommendation for organization structure**

The commercial banks need to identify key risks in its operations/departmental operations, for the purpose of day-to-day monitoring of performance-based standards and conditions at the bottom-up level. Business, regularly review the processes and risks identified. Since then, more closely analyzed the types of business-related risks. Establish an effective early warning

system as a precautionary measure to minimize operational risk. To identify key risks, banks rely on key risk indicators (KRI) developed for each business sector.

The commercial banks must also classify the level of operational risk from the low to high importance level of its operations and identify appropriate reporting levels. At the same time, the commercial banks provide methods or ways to assess and control risk at various levels (leadership, management or staff ...). Risk assessment and control must be conducted regularly and applied to all departments in the system.

#### Recommendation for human resource development

Commercial banks continue to improve the quality of human resources. Recruitment: Continuously maintain the policy of recruiting talents to recruit talented people who are competent enough to take on the increasingly demanding task of the banking system. In addition, Commercial banks continue to training: To adopt policies to encourage cadres and employees in self-learning banks to raise their professional qualifications; appoint qualified people to go to training learning how to work, how to organize and manage in developed countries in the world. Commercial banks continue to strengthen cooperation with foreign banks, in the context of deepening economic integration. Commercial banks need to step up their cooperation with foreign banks to learn about management, administration and application of technology. This will help commercial banks to control the transaction to ensure safety and stability. Finally, the next study should survey more than 350 customers of commercial banks and survey more than 29 items in other commercial banks in Vietnam.

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