Journal of Trade Science

ISSN 2819-5793

Volume 10 Number 3 September 2022

CONTENTS

Page

Journal of Trade Science 10:3 (2022) 82 - 92

ISSN 2819-5793

IMPACT OF THE COVID-19 PANDEMIC ON LOAN GROWTH OF COMMERCIAL BANKS IN VIETNAM

Le Hoang Vinh*
Email: vinhlh@uel.edu.vn
Nguyen Hoang Minh*
Email: minhnh19604@sdh.uel.edu.vn
Nguyen Thai Thanh*
Email: thanhnt@uel.edu.vn
Nguyen Phuoc Bao Thanh
Vietnam Joint Stock Commercial Bank for Industry and Trade, Binh Dinh Branch
Email: baothanh87@gmail.com
*** University of Economics and Law, Viet Nam National University - Ho Chi Minh City**

Received: *2nd May 2022* ***Revised:*** *20th July 2022* ***Accepted:*** *23rd July 2022*

The aim of our study is to evaluate the impact of the Covid-19 pandemic on loan growth of commercial banks in Vietnam. The authors used the purposive sampling method, and selected the research sample, consisted of 25 commercial banks in the period of 12 years, from 2010 to 2021. The regression results according to GLS and Robust FEM showed that the Covid-19 pandemic has a negative impact on the loan growth of commercial banks. This relationship implied that the outbreak of the Covid-19 pandemic reduces the repayment capacity and creates barriers for companies and citizens to access bank credit, the decrease in capital needs of companies and people during the Covid-19 crisis is the reason why commercial banks have reduced lending, and the Government needs to focus on assessing the effectiveness of expansionary monetary policies through bank credit channels in the context of the pandemic crisis.

Keywords*: Covid-19 pandemic; Commercial banks; Loan growth*

JEL Classifications*: G20, G21, I15, E51*

DOI*: 10.54404/JTS.2022.10.03.07*

1. Introduction

Lending is one of the profitable operations of commercial banks. Rossi *et al.* (2021), Wijayanti and Mardiana (2020) asserted that commercial banks' profitability will increase thanks to the expansion of loan growth. Pasaribu and Mindosa (2021) stated that banking is not only the most prominent industry, but also the most vulnerable sector in all countries. This comes from the fact that many firms and activities of the economy rely on loans from banks. Thus, the appropriate loan growth policy of commercial banks is not only a driving force to promote economic growth and improve living standards in general, but also creates solid financial benefits for banks.

The coronavirus (Covid-19) first appeared in China in November 2019 and is an international public health emergency (World Health Organization, 2020). The Covid-19 not only affects the health of people globally, but also has significant impacts on banking operations (Seelye & Ziegler, 2020). According to Mersha and Worku (2020), the banking industry in Ethiopia has experienced an unprecedented period of growth and prosperity before the Covid-19, and the pandemic has disrupted the operations of financial institutions; and these authors have researched and confirmed that deposit mobilization, lending and advances, international banking operations and profitability of the banking sector are negatively affected by the Covid-19 pan-

demic. Meanwhile, Levine et al., (2021) provided the empirical evidence that the increasing prevalence of Covid-19 causes households to be more worried about the possibility of unemployment and the decrease in income in the future; therefore, they will tend to reduce spending on themselves and increase deposits at banks. From the research results of Giese and Haldane (2020), in the global financial crisis and the Covid-19 pandemic, commercial banks are part of the solution, not part of the problem. These are thanks to institutional and regulatory reforms over the past decade. Many experiences have been found from the global financial crisis, and they become lessons for the financial system in the wake of the Covid-19 pandemic.

Within the scope of this article, the authors identified and assessed the impact of the Covid-19 pandemic on loan growth of commercial banks in Vietnam. We expect to provide useful information on lending policy of commercial banks in the context of the epidemic. Besides, the research results will be reliable evidence to develop the theory of this relationship. The next content of the article is structured into 5 sections. Section 2 reviews the theoretical and empirical evidence, and then we discuss the research gap and set up research hypothesis. Section 3 details the research model. Section 4 provides information about the sample, data and research methods. Section 5 analyzes and discusses the research results. Section 6 concludes the research problem and makes recommendations.

2. Literature Reviews and Hypothesis Development

Berger and DeYoung (1997) proposed the "bad luck" hypothesis and concluded that the uncertainty of the external environment increases risk on banking activities. When the operating environment is very volatile, commercial banks have to incur more administrative costs and the costs of loan processing, and default risks are likely to increase, thereby reducing the bank's ability to grow loans (Berger & DeYoung, 1997).

Disemadi and Shaleh (2020) believed that the spread of the Covid-19 epidemic has negatively affected the activities of economic sectors, including bank lending and financial stability. The study by Elnahass et al. (2021) provided empirical evidence on the negative impact of the Covid-19 outbreak on the efficiency of the commercial banking system, thereby affecting global financial stability. Noor (2020) found a statistically significant negative effect from the outbreak of the Covid-19 pandemic on the ability of small companies to repay principal and interest, while this ability is in the same direction as loan supply. Mano et al. (2021) indicated that the increase in debt financing of many firms will significantly increase the likelihood of defaulting on repayment commitments during a period of economic decline. Therefore, these results infer that lending growth of commercial banks may be negatively related to the Covid-19 pandemic.

In the context of the Covid-19 epidemic negatively affecting economic activities, companies need to have more capital to maintain their operating activities. Beauregard et al. (2020) found that loans to small businesses or farms grew rapidly during the first 6 months of the onset of the Covid-19 pandemic. They were expected to support liquidity and to maintain operating activities of firms. Mano et al. (2021) concluded that commercial banks are a buffer for liquidity of the private sector and the economy during the pandemic, in which lending is one of the important and useful solutions to support the operating activities of entitites in the early stages of the pandemic. It allows companies to get through the Covid-19 shock smoothly and they are less negatively impacted by the pandemic, so it contributes to reducing the pessimistic view of the entities and enabling them to recover faster. Appiah-Otoo (2020) indicated that the increase in cases or deaths identified by the Covid-19 pandemic significantly increases domestic credit in China. In addition, this author also asserted that the response of domestic credit to the Covid-19 shock is positive in both the short and long term.

Approaching the perspective of the government's dominant role in the financial system, stemming from the negative effects of the pandemic crisis, an expansionary monetary policy through a credit channel can be selected to support sectors in the economy (Ciccarelli et al., 2015), and it increases loans to customers of commercial banks (Bernanke & Gertler, 1995). Similarly, Demirgüç-Kunt et al. (2021) argued that the easing of mone-

ISSN 2819-5793

tary policy and loan support programs reduced the adverse impact of the Covid-19 crisis, but their impact vary considerably among banks and among countries.

The empirical study of Nufus et al. (2021) confirmed that the Covid-19 pandemic negatively affects the credit allocation for medium-sized enterprises, while the credit allocation for the micro and small companies have not increased or decreased by the emergence of the Covid-19 pandemic. Dursunde Neef and Schandlbauer (2021) provided empirical evidence that greater exposure to Covid-19 exposure leads to a relative increase in loans from low-cap banks for the purpose of supporting borrowers and the expectation of minimizing the possibility of loss, while high-cap banks decreased lending because of a significant increase in delinquent loans and banks needed to restructure their loan portfolio. Kolleshi and Bozdo (2021) found that the Covid-19 pandemic has a positive impact on the level of loan backlogs of banks due to payment delays. And it also has a negative impact on new loans because the credit risk of borrowers increases, and the controls of the banking system becomes tighter than before. Therefore, commercial banks are more cautious when making credit approvals.

Since the outbreak of the Covid-19 pandemic in Vietnam, Directives 15/CT-TTg, 16/CT-TTg and 19/CT-TTg on disease control have been issued by the Government (The Prime Minister of Vietnam, 2020a, 2020b, 2020c). They have negative impacts on companies' operating activities. For companies allowed to operate during this period, they had to accept some additional costs, such as the cost of quick-testing kits, the cost of "3 on-site" (production, isolation, and eating and sleeping on the spot). These have a strong impact on the capital needs of enterprises. However, the principle of repayment of loans is not guaranteed because of the presence of the Covid-19 pandemic, this leads commercial banks to tend to reduce loan growth. Therefore, the authors formulated the research hypothesis as follows:

Hypothesis H_1: The Covid-19 pandemic has a negative impact on loan growth of commercial banks in Vietnam.

3. Research Model

To test the above hypothesis, the authors used a research model with the dependent variable being loan growth (LGR), the independent variable being the Covid-19 pandemic (COVID), and the control variables (CONTROL). The regression equation was set up as follows:

$$LGR_{i,t} = \sigma + \beta.COVID_t + \alpha_j.CONTROL_{j,i,t} + \varepsilon_{i,t}$$

Where: σ is the constant, ε is the error, β is the regression coefficient of the COVID variable, α is the regression coefficient of the control variables, j is the order of each control variable, and i and t represent each commercial bank and each year, respectively. Table 1 summarizes the variables in our model and specific measurement methods of variables.

4. Research Data and Method

The authors used the purposive sampling method and identified a research sample of 25 commercial banks (see Table 2) over a 12-year period, from 2010 to 2021. Accordingly, our research data consists of 300 observations for each variable, and it is in the form of a balanced panel. The criteria to be considered when selecting a sample include:

- The bank has financial statements for all years during the research period.
- All financial statements have been independently audited.
- The auditor does not have any objection regarding the information under audit.

With panel data, the authors selected estimation methods such as the fixed effects model (FEM) and the random effects model (REM). Then we used the Hausman test to choose between FEM and REM. The null hypothesis is that the preferred model is REM; the alternate hypothesis is that the model is FEM. In addition, we also checked the multicollinearity, the autocorrelation and the heteroscedasticity. Accordingly, there is the heteroscedasticity problem in our model, and we fixed it by using the generalized least squares (GLS) regression model (Baltagi, 2008; Greene, 2018; Gujarati, 2008; Susmel, 2015). Finally, we used the robust model to check the stability of the model.

ISSN 2819-5793
© TMU's JTS

Table 1: *The variables and their measurement*

Symbol	Variable name	Measurement	Empirical studies
LGR	Loan growth	Loan growth ratio: $\frac{\text{Increase/ (Decrease) in loans to customers}}{\text{Customer loan balance at the beginning of the year}}$	Wijayanti and Mardiana (2020), Pasaribu and Mindosa (2021), Rossi et al. (2021)
COVID	Covid-19 pandemic	Dummy variable, it is equal to 1 for 2020 and 2021, and 0 otherwise.	Nufus et al. (2021), Kolleshi and Bozdo (2021)
DGR	Deposit growth	Deposit growth ratio: $\frac{\text{Increase/ (Decrease) in customer deposit balance}}{\text{Customer deposit balance at the beginning of the year}}$	Pasaribu and Mindosa (2021)
LIQ	Liquidity	Liquid asset ratio: $\frac{\text{Liquid assets}}{\text{Total assets}}$	Dursun-de Neef and Schandlbauer (2021)
CAP	Bank capital	Equity ratio: $\frac{\text{Equity}}{\text{Total assets}}$	Dursun-de Neef and Schandlbauer (2021), Pasaribu and Mindosa (2021), Rossi et al. (2021)
PROF	Profitability	Return on equity: $\frac{\text{Earnings after taxes}}{\text{Average equity}}$	Wijayanti and Mardiana (2020), Pasaribu and Mindosa (2021), Rossi et al. (2021)
RISK	Credit risk	Non-performing loan ratio: $\frac{\text{Customer loan balance of group 3-5}}{\text{Total customer loan balance}}$	Kolleshi and Bozdo (2021), Wijayanti and Mardiana (2020)
SIZE	Bank size	The natural logarithm of total assets	Dursun-de Neef and Schandlbauer (2021), Pasaribu and Mindosa (2021), Rossi et al. (2021)

Source: Compiled by the authors

5. Findings and Discussions

5.1. Descriptive Statistics and Correlation Analysis

The results of descriptive statistics of variables are showed in Table 3, except for the variable COVID. We have chosen to present the mean, the maximum value, the minimum value, the standard deviation, and the number of observations. The variable LGR is represented by the rate of increase (decrease) of outstanding loans to customers during the year, the average value is 22.87%, indicating that commercial banks in Vietnam tend to expand loans to customers during the period 2010-2021. This is the foundation to increase interest income and improve the profitability of banks.

Table 4 presents the correlation coefficients matrix, and the variance inflation factors (VIFs). The variable LGR has a positive correlation with the variable PROF and the variable DGR at the statistical significance level of 1%. Meanwhile, the positive correlation coefficients between the variable LGR with the variable CAP and the variable LIQ, or the negative correlation coefficients between the variable LGR with the variable RISK and the variable SIZE did not guarantee statistical significance at the level of 1%, 5% and 10%. Considering the correlation coefficients among the explanatory variables, positive values range from 0.0098 to 0.4693, and negative values range from -0.6490 to -0.0596. These results are less than 0.8, indicating that the

ISSN 2819-5793
© TMU's JTS

Table 2: *Commercial banks in the research sample*

No.	Symbol and Full name	
1	ABB	An Binh Commercial Joint Stock Bank
2	ACB	Asia Commercial Joint Stock Bank
3	BAB	Bac A Commercial Joint Stock Bank
4	BID	Bank for Investment and Development of Vietnam
5	CTG	Vietnam Joint Stock Commercial Bank for Industry and Trade
6	EIB	Vietnam Commercial Joint Stock Export-Import Bank
7	BVB	Viet Capital Commercial Joint Stock Bank
8	HDB	Ho Chi Minh City Development Joint Stock Commercial Bank
9	KLB	Kien Long Commercial Joint Stock Bank
10	LPB	LienViet Post Joint Stock Commercial Bank
11	MBB	Military Commercial Joint Stock Bank
12	MSB	Vietnam Maritime Commercial Joint Stock Bank
13	NAB	Nam A Commercial Joint Stock Bank
14	NVB	National Citizen Commercial Joint Stock Bank
15	OCB	Orient Commercial Joint Stock Bank
16	PGB	Petrolimex Group Commercial Joint Stock Bank
17	SSB	Southeast Asia Commercial Joint Stock Bank
18	SGB	Saigon Bank for Industry and Trade
19	SHB	Sai Gon - Ha Noi Commercial Joint Stock Bank
20	STB	Saigon Thuong Tin Commercial Joint Stock Bank
21	TCB	Vietnam Technological and Commercial Joint Stock Bank
22	TPB	Tien Phong Commercial Joint Stock Bank
23	VCB	Joint Stock Commercial Bank for Foreign Trade of Vietnam
24	VIB	Vietnam International Commercial Joint Stock Bank
25	VPB	Vietnam Prosperity Joint Stock Commercial Bank

Source: Compiled by the authors

multicollinearity is not a serious problem in the model (Gujarati, 2008; Hair et al., 2006). In addition, the non-seriousness of multicollinearity is also confirmed based on the VIFs in Table 4 ranging from 1.1352 to 2.4033, they are less than 10 (Hair et al., 2006).

Table 3: *Summary of Descriptive Statistics*

Variables	Mean	Maximum	Minimum	Std. Dev.	Observations
LGR	0.2287	4.2447	-0.7038	0.3070	300
DGR	0.2221	2.9088	-0.5743	0.3055	300
LIQ	0.1817	0.6104	0.0450	0.0861	300
CAP	0.0940	0.2756	0.0411	0.0397	300
PROF	0.1098	0.3033	-0.5633	0.0847	300
RISK	0.0208	0.0658	0.0001	0.0106	300
SIZE	8.0385	9.2147	6.7618	0.5107	300

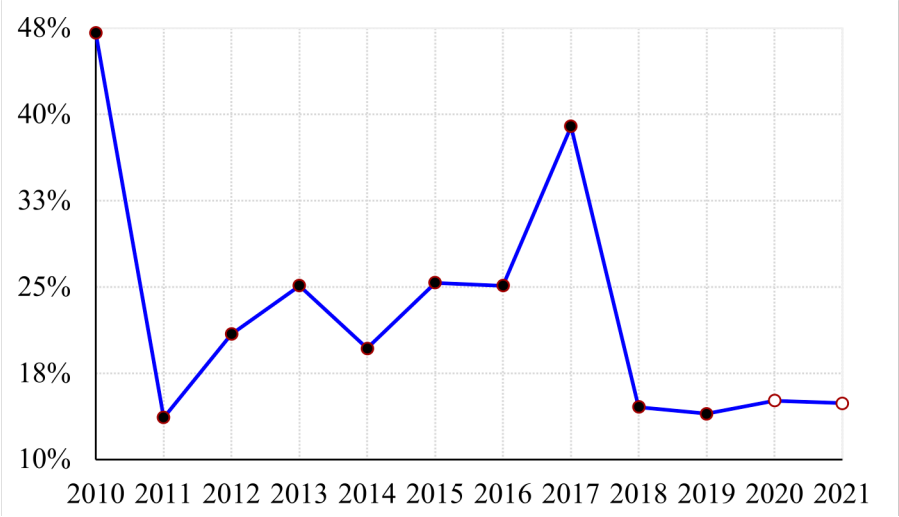
Source: The authors' process

ISSN 2819-5793
© TMU's JTS

Table 4: *Correlation Coefficients Matrix and VIFs*

	LGR	DGR	LIQ	CAP	PROF	RISK	SIZE
SIZE	-0.0774^{ns}	-0.1835***	-0.2114***	-0.6490***	0.4693***	-0.2462***	1.0000
RISK	-0.0465^{ns}	0.0098^{ns}	0.0357^{ns}	0.2294***	-0.2807***	1.0000	
PROF	0.1598***	0.1044*	-0.0596^{ns}	-0.2087***	1.0000		
CAP	0.0364^{ns}	0.1789***	0.0523^{ns}	1.0000			
LIQ	0.0609^{ns}	0.2961***	1.0000				
DGR	0.7281***	1.0000					
LGR	1.0000						
VIFs		1.1848	1.1507	1.8510	1.4384	1.1352	2.4033

, **, * Significant at 0.10, 0.05 and 0.01, respectively*
^{ns} denotes not significant.
Source: The authors' process

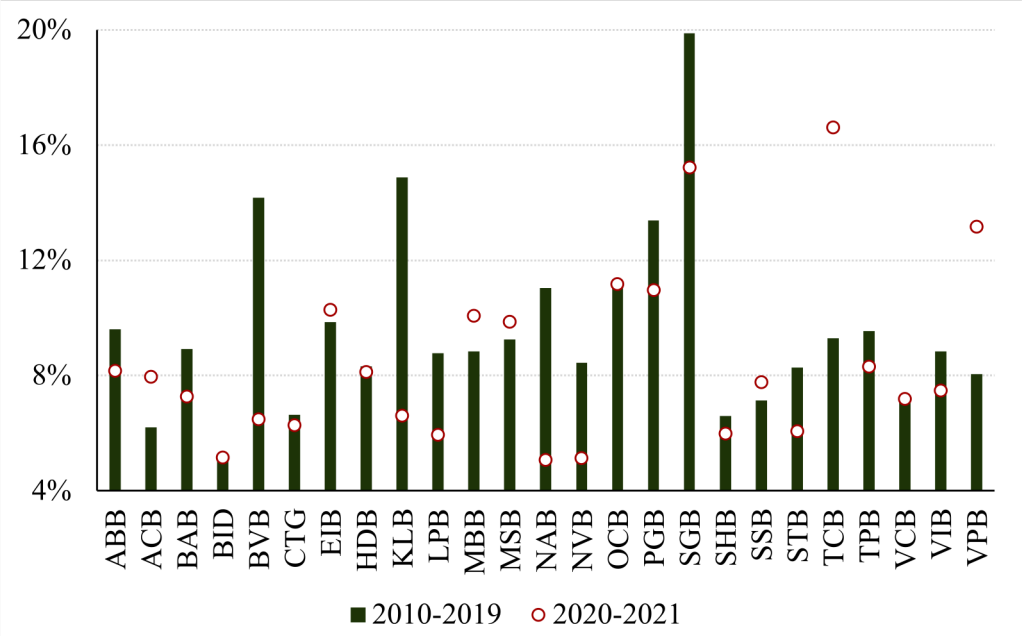


Source: The authors' process

Figure 1: *Loan growth before and during the Covid-19 pandemic*

Figure 1 and Figure 2 below present the loan growth of banks in the context of the Covid-19 pandemic and before. Figure 1 depicts the increase (decrease) of customer loans of the whole sample during the Covid-19 pandemic (see white markers) and before this pandemic (see black markers). According to Figure 1, banks' loan growth rates outperformed for many years before the Covid-19 pandemic. The loan growth rate during the Covid-19 period reached about 15%, and it was lower than many previous years. In addition, Figures 2 depicts the increase (decrease) of customer loans of each commercial bank during the Covid-19 pandemic (see white markers) and before the pandemic (see black bars). We found that the average annual loan growth rate during the Covid-19 pandemic period (2020-2021) was lower than the previous period (2010-2019) at many commercial banks, including ABB, BAB, BID, BVB, CTG, HDB, KLB, LPB, NAB, NVB, OCB, PGB, SGB, SHB, STB, TPB and VIB. In which, this decline was very evident at BVB, KLB, NAB and SGB. The loan growth rate was significantly higher during the Covid-19 pandemic than before at 2 commercial banks, namely TCB and VPB.

ISSN 2819-5793



Source: The authors' process

Figure 2: *Loan growth of each bank before and during the Covid-19 pandemic*

5.2. Regression Analysis and Discussions

To test the hypothesis above about the impact of the Covid-19 pandemic on loan growth of commercial banks in Vietnam, the authors used the regression model for panel data including the REM and the FEM; the estimation results are showed in Table 5. We used the Hausman test to choose between FEM and REM. The p-value of this test is 0.0044, less than 0.05, confirming that the FEM is more suitable than REM with a 95% confidence level. The FEM regression results only indicate individual differences, showing that there is no autocorrelation in this model (Hair et al., 2006; Susmel, 2015). Based on the FEM regression result in Table 5, the authors used the Wald test to identify the heteroskedasticity problem. According to Greene (2018), the p-value of this test is less than 5% (see Table 5), so we confirmed that there is the heteroskedasticity in our model. To fix this problem, the authors used the GLS regression model, the findings are showed in Table 5. In addition, we also used the Robust FEM to evaluate the stability of the model, the outputs are showed at the final column in Table 5.

We compared the estimation results between GLS model and Robust FEM model (see Table 5), showing that the impact of the Covid-19 pandemic and other factors on the loan growth of commercial banks in Vietnam is consistent. The R-squared reported in the GLS model and the Robust FEM model are 56.14% and 64.03%, respectively. Therefore, we decided that these findings are final.

According to the GLS and Robust model, the regression coefficients of the variable COVID are -0.0388 and -0.0383, respectively. This result indicated that commercial banks tend to reduce loan growth during the Covid-19 pandemic, which is consistent with the changing situation of loan growth rates shown in Figures 1 and 2 above. It also implied that the loan growth rate of commercial banks in Vietnam is negatively impacted by the Covid-19 pandemic with the confidence level of 95%, and it supported our hypothesis H_1. In addition, this finding is consistent with the empirical evidence found by Nufus et al. (2021), Dursun-de Neef and Schandlbauer (2021). It implied that during the disruption of the Covid-19 pandemic in Vietnam, The Government issued Directive No.

ISSN 2819-5793
© TMU's JTS

Table 5: *The Output of Regression Estimations*

Independent variables and Tests	Dependent variable: LGR			
	FEM	REM	GLS	Robust FEM
COVID	-0.0500^{ns} (0.0389)	-0.0539* (0.0326)	-0.0388** (0.0167)	-0.0383** (0.0164)
DGR	0.7949*** (0.0448)	0.7767*** (0.0410)	0.5618*** (0.0342)	0.4680*** (0.0207)
LIQ	-1.0750*** (0.1841)	-0.6407*** (0.1434)	-0.2997*** (0.0777)	-0.3619*** (0.0722)
CAP	-1.2698** (0.5273)	-1.0360*** (0.3946)	-0.8567*** (0.2275)	-0.8168*** (0.1986)
PROF	0.3426* (0.1839)	0.3259** (0.1632)	0.3096*** (0.0995)	0.2301*** (0.0821)
RISK	-1.2432^{ns} (1.3439)	-0.7244^{ns} (1.1599)	-1.4002** (0.6399)	-1.8691*** (0.5838)
SIZE	-0.1015^{ns} (0.0770)	-0.0549^{ns} (0.0350)	-0.0575*** (0.0172)	-0.0557*** (0.0176)
C	1.1792* (0.6513)	0.6996** (0.3057)	0.6842*** (0.1573)	0.7073*** (0.1539)
R-squared	0.6227	0.5770	0.5614	0.6403
Hausman Test	20.6205 [0.0044]			
Wald Test	773.6988 [0.0000]			

, **, * Significant at 0.10, 0.05 and 0.01, respectively; ^{ns} denotes not significant*
z-statistics are reported in parentheses; p-value of tests in square brackets.
Source: The authors' process

15/CT-TTg, Directive No. 16/CT-TTg and Directive No. 19/CT-TTg on prevention and control of Covid-19, which have negatively impacted the operating activities of companies. Tan and Tran (2020) reported that the extent of sales drop is extensive, and companies had to reduce operating hours, reduced demand, and disrupted inputs. These problems lead to a decrease in firms' capital requirements. Anh and Anh (2022) concluded that firms have reduced the level of using financial leverage to combat the Covid-19 pandemic. (Saxena and Roy (2021) affirmed that the Covid-19 pandemic has negatively affected all people; and the level of consumption went down considerably because people are confined to their houses. Besides, the principle of repayment of both principal and interest is not guaranteed in the presence of the Covid-19 pandemic. Noor (2020) found this problem from the case of small companies, and it leads commercial banks to tend to limit loan growth. This finding also implied the ineffectiveness of the expansionary monetary policy through the bank credit channel of the Government in supporting firms and people to overcome the pandemic.

We also found that the customer deposit growth (the variable DGR) has a positive effect on the loan growth of commercial banks in Vietnam; this result is similar to the study of Pasaribu and Mindosa

ISSN 2819-5793

(2021). The profitability (the variable PROF) has a positive effect on the loan growth of commercial banks in Vietnam, this is empirical evidence supporting the research results of Wijayanti and Mardiana (2020), Pasaribu and Mindosa (2021), Rossi et al. (2021). The liquidity (the variable LIQ) has a negative effect on the loan growth of commercial banks in Vietnam, this relationship is consistent with the finding of Dursun-de Neef and Schandlbauer (2021). The bank capital (the variable CAP) has a negative effect on the loan growth of commercial banks in Vietnam, this finding supported the conclusion of Dursun-de Neef and Schandlbauer (2021), Rossi et al. (2021), Pasaribu and Mindosa (2021). The credit risk (the variable RISK) has a negative effect on the loan growth of Vietnamese commercial banks, it is consistent with the assertion of Wijayanti and Mardiana (2020), Kolleshi and Bozdo (2021). Finally, the bank size (the variable SIZE) has a negative effect on the loan growth of Vietnamese commercial banks, it is similar to the finding of Dursun-de Neef and Schandlbauer (2021), Rossi et al. (2021), Pasaribu and Mindosa (2021).

6. Conclusion and Recommendation

The Covid-19 pandemic is a matter of global concern, and the commercial bank's loans are one of the important ways to support firms and people to get through the crisis. Therefore, we investigated the impact of the Covid-19 pandemic on the loan growth of commercial banks in Vietnam. Based on descriptive statistics analysis, we found that the loan growth rate tends to decrease during the Covid-19 pandemic period compared to the previous period. Then we also found a negative correlation between the Covid-19 pandemic and commercial banks' loan growth. Finally, according to regression results, we confirmed that the Covid-19 pandemic has a negative impact on the loan growth of commercial banks in Vietnam.

Our findings above implied that the outbreak of the Covid-19 pandemic reduces the repayment capacity and creates barriers for companies and citizens to access credit from commercial banks. Bank managers are interested in adjusting activities closely related to loan growth policies based on the decrease in capital needs of companies and people due to the Covid-19 crisis. The Government needs to focus on assessing the effectiveness of expansionary monetary policies to support companies and people through bank credit channels in the context of the Covid-19 pandemic crisis. Because of the financial difficulties caused by the Covid-19 pandemic, companies and people need external financial support, especially from the Government, to survive and be able to recover from the epidemic.

We provided reliable evidence of the direct impact of the Covid-19 pandemic on commercial banks' loan growth, which stakeholders can refer to make relevant decisions. However, further studies may additionally assess the indirect impact of the Covid-19 pandemic on loan growth of commercial banks.◆

***References*:**

1. Anh, V. T. T., & Anh, T. N. T. (2022). *The effect of covid-19 pandemic on firms: Evidence from Vietnam.* Journal of Science and Technology (The University of Danang), *20*(6.1), 108–112.

2. Appiah-Otoo, I. (2020). *Does COVID-19 affect domestic credit? Aggregate and bank level evidence from China*. Asian Economics Letters, 1(3), 18074.

3. Baltagi, B. H. (2008). *Econometric Analysis of Panel Data*. New York: John Wiley.

Beauregard, R., Lopez, J. A., & Spiegel, M. M. (2020). *Small business lending during covid-19*. FRBSF Economic Letter, 2020, 35.

3. Berger, A. N., & DeYoung, R. (1997). *Problem loans and cost efficiency in commercial banks*. Journal of Banking & Finance, *21*(6), 849–870.

4. Bernanke, B. S., & Gertler, M. (1995). *Channel of Monetary Policy*. The Journal of Economic Perspectives, *9*(4), 27–48.

5. Ciccarelli, M., Maddaloni, A., & Peydró, J. L. (2015). *Trusting the bankers: A new look at the credit channel of monetary policy.* Review of Economic Dynamics, *18*(4), 979–1002.

6. Demirgüç-Kunt, A., Pedraza, A., & Ruiz-Ortega, C. (2021). *Banking sector performance during the covid-19 crisis.* Journal of Banking & Finance, *133*, 106305.

7. Disemadi, H. S., & Shaleh, A. I. (2020). *Banking credit restructuring policy amid COVID-19 pandemic in Indonesia*. Jurnal Inovasi Ekonomi, *5*(2), 63–70.

8. Dursun-de Neef, H. Ö., & Schandlbauer, A. (2021). *COVID-19 and lending responses of European banks.* Journal of Banking & Finance, *133*, 106236.

9. Elnahass, M., Trinh, V. Q., & Li, T. (2021). *Global banking stability in the shadow of Covid-19 outbreak*. Journal of International Financial Markets, Institutions and Money, *72*, 101322.

10. Giese, J., & Haldane, A. (2020). *COVID-19 and the financial system: a tale of two crises. Oxford Review of Economic Policy,* 36 (Supplement_1), S200–S214.

11. Greene, W. H. (2018). *Econometric Analysis (8th Edition)*. New York: Pearson.

12. Gujarati, D. N. (2008). *Basic Econometrics (5th Edition)*. United States: McGraw-Hill Education.

13. Hair, J. F., Black, W. C., Babin, B. J., Anderson, R. E., & Tatham, R. L. (2006). *Multivirate Data Analysis*. New Jersey: Pearson Education Inc.

14. Kolleshi, M., & Bozdo, A. (2021). *Measuring the Effect of Covid-19 on Bank Lending: Empirical Evidence from Albania.* Economicus, 20, 101–120.

15. Levine, R., Lin, C., Tai, M., & Xie, W. (2021). H*ow did depositors respond to COVID-19?* The Review of Financial Studies, 34(11), 5438–5473.

16. Mano, R., Anamali, A., & Shosha, B. (2021). *Covid-19, Business Failure and Bank Loan Collapse: Albanian Case*. Universal Journal of Accounting and Finance, 1058–1066.

17. Mersha, D., & Worku, A. (2020). *Effect of COVID-19 on the Banking Sector in Ethiopia.* Horn of African Journal of Business and Economics (HAJBE), 28–38.

18. Noor, F. A. (2020). *Effect of covid-19 on loan repayment of small businesses in kenya: A case study of Eastleigh business community.* European Journal of Business and Strategic Management, 5(2), 1–14.

19. Nufus, E. H., Zuhroh, I., & Suliswanto, M. S. W. (2021). *Analysis of COVID-19 impact on micro, small, and medium enterprises (MSMEs) credit distribution in East Java Banks.* Journal of Accounting and Investment, 22(2), 342–360.

20. Pasaribu, P., & Mindosa, B. (2021). T*he Bank Specific Determinants of Loan Growth and Stability: Evidence from Indonesia.* Journal of Indonesian Economy and Business, 36(2), 93–123.

21. Rossi, S., Borroni, M., Piva, M., & Lippi, A. (2021). *Abnormal Loan Growth and Bank Profitability: Some Evidence from the Recent Crisis*. International Journal of Business and Management, 14(7), 1–36.

22. Saxena, A., & Roy, M. S. (2021). *Covid-19 is Deadly! Long Live the King, Corporate Cash Holdings!* Applied Finance Letters, 10, 78–92.

23. Seelye, N., & Ziegler, P. (2020). I*mpacts of COVID-19 on banking.* Available at SSRN 3645556.

24. Susmel, R. (2015). Panel Data Models, Lecture 15. Ph.D. *Econometrics I Course, University of Houston.*

25. Tan, S., & Tran, T. (2020). *Impacts of COVID-19 on Firms in Vietnam. In Report No. 2: Results from the 2nd Round of COVID-19 Business Pulse Survey*. World Bank, Washington, DC.

26. *The Prime Minister of Vietnam*. (2020a). Directive No. 15/CT-TTg dated March 27, 2020 on climax stage of Covid-19 control effort.

27. *The Prime Minister of Vietnam*. (2020b). Directive No. 16/CT-TTg dated March 31, 2020 on implementation of urgent measures for prevention and control of Covid-19.

28. *The Prime Minister of Vietnam.* (2020c). Directive No. 19/CT-TTg dated April 24, 2020 on a new stage of prevention and control of Covid-19.

29. Wijayanti, E., & Mardiana, M. (2020). *Loan growth and bank profitability of commercial banks in Indonesia. Indonesian Journal of Accounting and Finance, 17*(1), 38–52.

30. *World Health Organization.* (2020). Listings of WHO's response to COVID-19. https://www.who.int/news/item/29-06-2020-covid-timeline (accessed April 19th, 2022).

ISSN 2819-5793

Summary

Mục tiêu của nghiên cứu là đánh giá tác động của đại dịch Covid-19 đến tăng trưởng cho vay của các ngân hàng thương mại tại Việt Nam. Nhóm tác giả sử dụng phương pháp chọn mẫu có mục đích và lựa chọn được mẫu nghiên cứu bao gồm 25 ngân hàng trong giai đoạn 12 năm, từ năm 2010 đến năm 2021. Kết quả hồi quy theo GLS và Robust FEM đã chỉ ra rằng đại dịch Covid-19 tác động ngược chiều đến tăng trưởng cho vay của các ngân hàng thương mại. Mối quan hệ này hàm ý rằng sự bùng phát của đại dịch Covid-19 làm giảm khả năng hoàn trả và tạo ra rào cản trong việc tiếp cận tín dụng ngân hàng của các công ty và người dân, nhu cầu sử dụng vốn của khách hàng giảm trong giai đoạn đại dịch Covid-19 cũng chính là lý do dẫn đến ngân hàng giảm cho vay, và Chính phủ cần tập trung đánh giá hiệu quả của chính sách tiền tệ mở rộng thông qua kênh tính dụng ngân hàng trong bối cảnh khủng hoảng bởi đại dịch.

LE HOANG VINH

1. Personal Profile
- Name: ***Le Hoang Vinh***
- Date of birth: 19th May, 1982
- Title: Ph.D.
- Workplace: University of Economics and Law, Vietnam National University, Ho Chi Minh City, Vietnam
- Position: Lecturer

2. Major research directions
- Financial Analysis
- Financial Management
- Tax Policy Analysis
- Derivatives Finance
- Risk Management
- Behavioral Finance

3. Publications the author has published his works
Journal of Eastern European and Central Asian Research
Journal of Asian Finance, Economics and Business
Journal of Trade Science
Journal of Asian Business and Economic Studies
Journal of Economics and Development
Journal of International Economics and Management
The Asian Journal of Economics and Banking
Banking Science and Training Review
Banking Review
Journal of Finance & Accounting Research