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## Factors Affecting Credit Risk of The Bank During Covid-19 Pandemic

Amir Bahrin, Nazirah Aziz, Nur Syuhada Jasni

Faculty of Accountancy, Universiti Teknologi MARA, Selangor Campus, Malaysia.

Corresponding Author's Email: nazirahaziz@uitm.edu.my, amirbahrin@gmail.com, nursy168@uitm.edu.my

### Abstract

The Covid-19 pandemic has triggered banks and financial institutions to maintain solid credit ratings and reserve levels to mitigate the consequences of economic downturns. Banks have been collaborating with the regulator to ensure that affected borrowers and staff continue to receive support in navigating the challenging economic climate. This study investigates the influence of loan moratorium, staff advance, and bonus incentives given by the bank to their staff; on the bank's credit risk during Covid-19. This study employed a quantitative method to achieve the objectives of the research. A set of questionnaires was distributed to the executive to senior executive-level staff at the bank's headquarters office in Kuala Lumpur. Out of 200 surveys distributed, 136 returned for further analysis. Multiple Linear Regression analysis was employed to test the data. This study revealed that loan moratoriums, staff advances, and bonus incentives impacted the bank's credit risk. This outcome demonstrates the bank's credit risk was affected during the Covid-19 pandemic. The findings and recommendations of this study will assist bank credit analysts and top management in evaluating financial incentives that affect bank credit risk. Further research should include other factors influencing the bank's credit risk. Hence, it may adequately address the risks and anticipated outcomes affecting the financial service.

**Keywords:** Credit Risk, Loan Moratorium, Staff Advance, Bonus Incentive, Covid-19

### Introduction

It has been reported in the BNM annual report that Malaysia's household debt is one of the highest in the world, at 90% when compared to more developed nations such as the following: Germany holds a 55% stake, the US holds an 85% stake, Hong Kong holds an 82.75% stake, and Singapore holds a 65% stake. The governor of Malaysian Central Bank (BNM), Datuk Nor Shamsiah Mohd Yunus, remarked that a targeted approach to loan repayment help was preferable since it gave borrowers the option of receiving tailored support to their specific financial situations. Additionally, BNM emphasised at the time that borrowers were making informed choices about debt management based on their financial situation, since many are not seeking a moratorium and do not want a one-size-fits-all solution<sup>1</sup>.

<sup>1</sup>[https://www.nama.com.my/PRINT\\_NEWS/2021/02/12/20210212\\_N60\\_NST\\_BZ\\_19\\_BW\\_TARGETED~APPROACH~BETTER~THAN~AUTOMATIC~BLANKET~MORATORIUMS.JPG](https://www.nama.com.my/PRINT_NEWS/2021/02/12/20210212_N60_NST_BZ_19_BW_TARGETED~APPROACH~BETTER~THAN~AUTOMATIC~BLANKET~MORATORIUMS.JPG)

The BNM governor stated in a virtual press conference held on May 11, 2021 that following the re-imposition of the nationwide MCO 3.0, a blanket loan moratorium may still not be the best solution, as all banks already have payment assistance plans available to borrowers who have lost their jobs or experienced a reduction in income. She went on to add that borrowers can also approach the multiple channels that have been set up if they require advice or further assistance. Unlike the previous MCO in 2020, nearly all economic sectors are allowed to operate<sup>2</sup>. BNM also reiterated these sentiments in a press release dated May 12, 2021, stating that its member banks continue to make repayment assistance available to affected borrowers. Borrowers who needed assistance were encouraged to contact their banks early to discuss repayment assistance options<sup>3</sup>.

The banking industry actively reaches out to borrowers in various ways and has conducted more than 150 engagement sessions, including repayment assistance campaigns across the country and direct engagements with various stakeholder groups, including SME associations and their staff. The financial sector, particularly banks, is expected to play a key role in absorbing the shock by supplying much-needed funding (Acharya & Steffen, 2020; Borio, 2020).

Banks have simplified the application process and enabled the entire process to be done online to ease the application process. The banks are concerned to the predicament of their borrowers who have been adversely affected by the COVID-19 outbreak and have been collaborating with the regulator to ensure that affected borrowers and staff continue to receive support. A more accessible financial system can reduce informal loan sources such as money lenders (Mogaji, 2020). Since the commencement of the COVID-19 pandemic, banks have aided borrowers and employees in navigating the difficult economic climate. They continue committed to assisting borrowers and staff and the economy in general in navigating out of the pandemic.

According to BNM's Financial Stability Review for First Half 2020, banks reported a considerable decline in profits from domestic banking activities during the first half of the year, pulled down by higher margin compression and increased provision for credit losses. As a result of the relief measures implemented, business loan impairment ratios have remained low and stable at 2.5 percent for non-financial corporates.

As a result of government and bank relief efforts, households have maintained acceptable levels of financial and liquid financial assets, which are 2.2 and 1.4 times their debt, respectively. Furthermore, BNM indicated in its assessment that local banks' credit expenses could rise to RM29 billion in 2020 and 2021 as a result of increased expected loan impairments. According to Finance Minister Tengku Datuk Seri Zafrul Abdul Aziz, the banking sector is likely to lose RM6.4 billion between April and September, which equates to around RM1.06 billion per month under Malaysian Financial Reporting Standards (MFRS).

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<sup>2</sup>[https://www.nama.com.my/PRINT\\_NEWS/2021/05/12/20210512\\_N60\\_BOR\\_BZ\\_2\\_BW\\_MCO~3.0~BLANKET~LOAN.JPG](https://www.nama.com.my/PRINT_NEWS/2021/05/12/20210512_N60_BOR_BZ_2_BW_MCO~3.0~BLANKET~LOAN.JPG)

<sup>3</sup><https://www.abm.org.my/media-room/press-releases/item/1030-repayment-assistance-continues-to-be-available>

According to the Finance Minister, banks could lose RM79 billion in capacity to issue loans during the six-month blanket moratorium period, also known as "modification loss." The decline in banks' capacity to distribute fresh loans totaling RM79 billion to borrowers (individuals and enterprises) is known as "modification loss." This is the total amount that banks can lend to individuals and businesses over a six-month period in a regular business situation. Profits are retained as capital for lending and dividends to shareholders to ensure the financial viability of banks. Due to the fact that Malaysian institutional investors own a significant portion of the banks' equity, the profits generated by these investors trickle back to the public in the form of dividends for those who rely on these investments for long-term returns to meet their financial obligations and retirement years (for example, *Amanah Saham Bumiputera* (ASB) unit holders, Employee Provident Fund (EPF) and *Tabung Haji* members and government pensioners). He highlighted that if a bank is unable to acquire capital, it may be obliged to scale back or possibly cease lending.

Banks must be allowed to raise their capital to provide loans that will aid the country's recovery. With the imposition of a new loan embargo on June 28, 2021, the recognition of non-performing loans (NPLs) will be delayed until 2022, potentially increasing the time required for banks' credit costs and profitability to normalise. According to Fitch Ratings, the banking system's NPL ratio is anticipated to increase only slightly by end-2021, from 1.6 percent in May 2021 to less than 2.5 percent by year's end. It is obvious that a loan ban will place a strain on the bank and its ability to extend further credit to help the economy recover. However, many banks has extended loan moratorium to the bank workers with broader relief and relaxation. Besides that, the bank will grant staff advances at no interest to support them during a pandemic. Advances of up to three months' Basic Salary are also available and are repayable over a nine-month period with no interest. Apart from that, the bank also gave bonus incentives to their staff in order for them to stay motivated as a frontline and exhaustive duty that they remain in operation during MCO.

The relief program introduced by the ministry couple with the unprecedented moratorium and wavering policy has pushed staff to remain longer in office and abandon their family and kids at home. While the bank wishes to remain competitive among financial institutions, it must compensate its employees fairly or talent will go. Numerous financial companies appear to have begun offering competitive salaries in order to avoid disrupted operations and talent drains. Already, the bank has divided activities and reduced physical attendance; losing talent will only further disrupt operations.

The broad objective of this study is to determine how Loan Moratorium, Staff Advance, and Bonus Incentive will affect the bank's credit risk.

Specifically, this study's objectives are as follows

RO1: To study the effect of Loan Moratorium on the credit risk of the Bank during Covid-19

RO2: To study the effect of staff Advance on the credit risk of the Bank during Covid-19.

RO3: To study the effect of Bonus Incentive on the credit risk of the Bank during Covid-19.

This study will significantly benefit bank credit analysts and higher-level management, such as decision makers, by assisting them in evaluating financial incentives that affect bank credit risk. Furthermore, it will provide alternatives and comparisons regarding the most effective

and proactive strategies to aid workers with financial burdens associated with the Covid-19 epidemic. It is worth noting that loan moratoriums and restructurings pose significant risks to ASEAN's banking systems, including Malaysia, and should be closely monitored going forward, as even if 10% of such loans default, this could have a material effect on non-performing loans (NPLs), particularly in Malaysia. Due to the fact that these loans are not categorised as non-performing loans, they create a shadow asset quality risk and muddy the waters regarding asset quality issues.

## Literature Review

### ***Credit Risk***

On the study of credit risk, International financial institutions made up five assessment indicators: capital adequacy, asset quality, management, earnings, and liquidity (CAMEL). CAMEL rating system is a set of standardized and institutionalized indexes of a comprehensive rating system currently used by the Comptroller of the Currency Administrator of National Banks directly at the business and credit condition of commercial banks and other financial institutions (Jia et al., 2012). The McKinsey Global Institute and Oxford Economics have developed a set of economic scenarios to help analyze the risk. In McKinsey's executive survey on these scenarios, the scenario that has consistently attracted a high share of votes suggests hefty GDP contractions as mentioned in (Koulouridi et al., 2020).

In the case of Malaysia, however, Bank Negara Malaysia has adopted a new methodology for assessing credit risk. Banking institutions, insurers, takaful operators, and financial holding corporations are all affected. The updated standard results from the bank's extensive evaluation of the existing regulatory framework, including the Best Practices for Credit Risk Management recommendations. The revised standard aims to improve credit risk management practises across the industry, taking into account changes in the size and diversity of product offerings, the financial system's increased internationalisation, and the growing role of domestic capital markets as a source of alternative financing. The standard also addresses requirements that will support the effective implementation of the Malaysian Financial Reporting Standards 9: Financial Instruments (MFRS 9) by financial institutions and promote alignment with prudential objectives as stated under Bank Negara Malaysia under Credit Risk 2020.

Preliminary lending targets for 2021 across banks, as revealed by Bank Negara Malaysia in its Financial Stability Review-Second Half of 2020, suggest that the banking system will be more than capable of supporting credit demand consistent with predicted GDP growth. This is supported by banks' ability to lend, which is based on robust capital, funding, and liquidity buffers. Increased credit risks rising impairments, and other related costs are raising risk aversion and may influence bank lending decisions. Banks are being more cautious in meeting the demand for new credit due to the highly unpredictable economic future and its reliance on the success of vaccinations and the evolution of the virus. In 2021, increased repayment risks and an uncertain macroeconomic outlook will continue to weigh on loan conditions.

### ***Loan Moratorium***

A *loan moratorium* refers to a legal, authorized period allowing borrowers to delay the payment of money due on specific loan instalments. In Hidayat et al (2020) stated that COVID-19 pandemic had caused an abnormal increase in loan risk in Indonesia. As a result, *Otoritas*

*Jasa Keuangan*, OJK issued a loan restructuring policy to overcome this risk. Therefore, loans with the potential to be NPL are restructured and performed to reduce impairment expenses and maintain the CAR ratio.

However, Zunic et al (2021) stated otherwise, although non-performing loans are expected during a crisis, the COVID-19 pandemic was actually has a negative connection with non-performing loans. Collins (2018) suggested that a longer time horizon increases the period over which borrowers can access formal and informal liquidity, including adding to income or income sources or liquidating other assets. Given Provided more time for borrowers to evaluate the costs and benefits of curing a loan in default. Dendramis et al (2018) opined that a loan moratorium can cause a large shift in delinquencies of existing loans and can substantially increase the rate of loans default. It will eventually enhance the recessionary and financially distressed conditions of the economy.

In Malaysia, governor Datuk Nor Shamsiah Mohd Yunus argued that a targeted approach to loan repayment assistance was preferable since it allowed borrowers to receive assistance tailored to their specific financial circumstances.

### ***Staff Advance***

The bank granted advances or loans to their staff after recording profits and gains from their performance. The bank typically offers attractive staff loans or advances with attractive interest or longer tenure. Ying (2016) described incentive compensations as volume and performance incentives. The author further claimed that incentive contracts had been shown to have mixed impacts on the assessment of credit risk and loan decisions depending on the relative salience of gains and losses.

When commercial banks make loans to individuals and legal entities, the credit risk involved is characterized by the following quantitative parameters: risk as to the probability of the borrower's failure to repay the loan; acceptable risk; average risk; possible losses given loan default; the average value of losses; the maximum allowable losses; the number of loans made by the bank; the number of different loans made by the bank.

The bank used the same procedure to provide credit to their employees but with more attractive interest rates up to zero percent. The primary factor with the highest default values in repayment is economic characteristics, such as the loan amount and earnings (Konovalova et al., 2016).

The bank's management conducts a performance analysis both externally, via the Central Risk Office, and internally, via an analysis of the trend of debits and credits on the accounts of companies that use a specific internal office for credit control. This office uses a significant number of indicators calculated on performance data and the information requested from customers regularly to grant loans, including staff (Cincinelli and Piatti, 2021).

### ***Bonus Incentive***

Disemadi and Shaleh (2020) stated that Pandemic COVID-19 has the potential to disrupt banking performance. Thus, numerous financial companies appear to have begun offering competitive salaries to avoid disrupted operations and talent drains. The bank has divided

activities and reduced physical attendance; losing talent will only result in disruption of operations and a decline in the bank's performance.

Hamzah et al (2018) stated that Employee performance could be improved through increased employee compensation and better implementation of HR development. To retain the entire operation and non-disruptive daily transactions, the bank took countermeasures to keep their employee from career hopping by giving good bonuses. Sembiring, Fatihudin, Mochklas, and Holisin (2020), support the statement above and state that banking companies during the Covid-19 pandemic conditions should be more concerned about remuneration, whether in the form of salaries, incentives, benefits, bonuses, commissions, as well as benefits to be fairer to improve employee performance.

Effing et al (2014) suggested that bonus pay is a form of risk-sharing between employees and the bank during the pandemic. In the presence of financial frictions that make external borrowing prohibitively expensive, the ideal contract between shareholders and employees entails some risk sharing, with incentive pay as a buffer against adverse earnings shocks. This will eventually convert into operational leverage, where the risk of lost labor is not an option in industries with a high labor intensity and recruiting is expensive

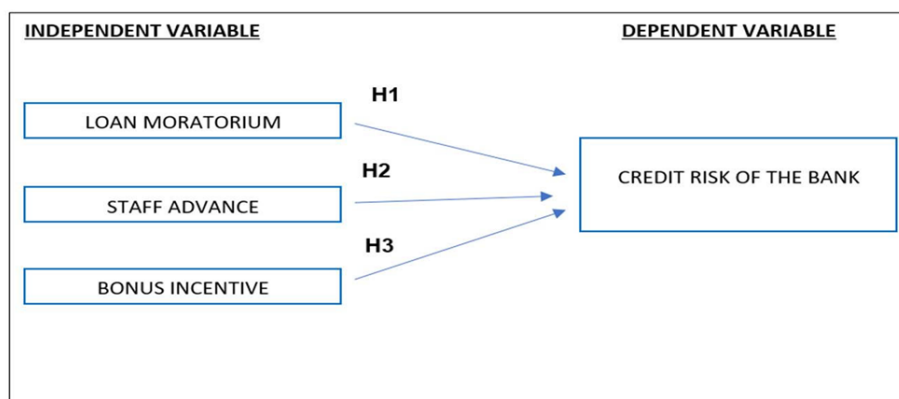


Figure 1: Research framework

### Hypotheses Development

The hypothesis for this study is developed based on the literature review of each independent variable and previous research studies related to similar topics. Three hypotheses were developed for this study, representing the relationships between independent variables and the dependent variable.

#### ***Loan Moratorium and Bank's Credit Risk***

The study conducted by Taufiq et al (2021) stated that the COVID-19 pandemic had caused an abnormal increase in loan risk. Therefore there could be high non-performing loan repayment than should be reported and affected the bank's credit risk. This study was again supported in finding by Zunic et al (2020) where there is a low record in non-performing loans due to the moratorium granted by the bank. Dendramis et al (2018) opined that a loan moratorium could cause a significant shift in existing loans' delinquencies and substantially

increase the rate of loan default. It will eventually enhance the recessionary and financially distressed conditions of the economy.

Based on the arguments above, this study hypothesized that

H1: There is a positive relationship between Loan Moratorium and the bank's credit risk during COVID-19.

### ***Staff Advance and Bank's Credit Risk***

The study conducted by Ying (2016) claimed that incentive contracts have been shown to have mixed impacts on assessment of credit risk and loan decisions depending on the relative salience of gains and losses. When commercial banks make loans to individuals and legal entities, the credit risk involved is characterized by the following quantitative parameters: risk as to the probability of the borrower's failure to repay the loan; acceptable risk; average risk; possible losses given loan default; the average value of losses; the maximum allowable losses; the number of loans made by the bank; the number of different loans made by the bank. The bank used the same procedure to provide credit to their employees but with more attractive interest rates up to zero percent. In Konovalova, et al (2016), the primary factor with the highest default values in repayment is the economic characteristics, such as the loan amount and earnings.

The Bank in Malaysia granted advances or loans to their staff after recorded profits and gains from their performance. The bank will generally offer attractive staff loans or advance with attractive interest or longer tenure. During the Covid 19 period, more staff advance is provided to the staff to alleviate difficulty in staff cash flow.

As a result of the studies conducted above, the following hypothesis was developed:

H2 : There is a positive relationship between Staff Advance and credit risk of the bank during COVID-19.

### ***Bonus Incentive and Bank's Credit Risk***

Bonus incentive is a way to give appreciation to staff but during Covid 19 it was used as a tool to retain staff so as not to disrupt the operation of the bank. This was stated in the studies conducted by (Disemadi and Shaleh, 2020; Hamzah et al., 2018; Sembiring et al., 2020).

Effing et al (2014) suggested that bonus pay is a form of risk-sharing between employees and the bank during the pandemic. In the presence of financial frictions that make external financing costly, the optimal contract between shareholders and employees involves some degree of risk sharing whereby bonus pay partially absorbs negative earnings shocks. This will later translate into operational leverage where the risk of labour loss is not an option for high labour intensity sectors where recruiting is costly.

As a result of the studies conducted above, this study hypothesized that

H3 : There is a positive relationship between Bonus Incentive and credit risk during COVID-19.

### **Methodology**

This study employed a quantitative method to determine the relationship between independent and dependent variables. Both the independent variables and dependent



variables for this study are listed earlier and the aim of this study is to find out the relationship between them.

The population for this study is the executives and senior executives from various departments stationed at one of the bank's headquarters in Kuala Lumpur. By researching the sample, researchers should be able to generate generalisable conclusions about the target population. Simple random sampling was employed to select the sample.

**Data Collection Procedures**

For this research, the data collected was primary data. In order to collect the data, questionnaires were developed and distributed using Google form. The surveys was emailed to the target respondents. Online forms have been shown to be more compatible with the digital world since they reduce the probability of uncompleted questions being missed instead of manual questionnaires, which run the danger of human error, causing respondents to miss specific questions.

**Measurement of Variables**

Table 1 below presents the measurement of the variables of the study. Items measuring the dependent variable, credit risk, were adopted by (Hidayat et al., 2020). This study also adapts items developed by Hidayat et al (2020) to measure loan moratorium. 5-items developed by Konovalova (2016) were designed to measure staff advance. This study refers to Effing et al (2014) to design items measuring bonus incentives.

Table 1  
*Measurement of the study*

Variables	Measurement	Source
Credit Risk	During Covid-19 period, the bank faced liquidity issues. The bank recorded low profits during Covid-19. The bank experienced higher non-performing loan (NPL) during Covid-19. Interest rate cut is associated with the bank's financial performance during Covid-19. The bank has eased the lending policy to Borrowers during Covid-19 period.	Hidayat et al (2020)
Loan Moratorium	1. I am the recipient of the Blanket Loan Moratorium. 2. I did apply for the staff extended Loan Moratorium program. 3. Loan Moratorium for staff is longer than what is offered to non-employee. 4. I will pay my loan as soon as my Loan Moratorium ends. 5. Loan Moratorium for staff is interest free and more attractive.	Hidayat et al (2020)
Staff Advance	1. I did apply for staff advance during Covid-19. 2. The amount of staff advance is the same offered prior to pandemic. 3. The repayment of staff advance is via salary deduction.	Konovalova et al (2016)

	4. My credit exposure increased when I took staff advance.	
	5. I am able to repay the staff advance.	
Bonus Incentive	1. I received bonus incentive during Covid-19. 2. Bonus incentive is expected during Covid-19. 3. Bonus incentive extended to all employee (i.e contract and permanent staff) during Covid-19. 4. Bonus incentive is lesser than prior to the pandemic. 5. Bonus incentive is paid late during Covid-19.	Effing et al (2014)

## Analysis and Findings

### Demographic Profile

The demographic profile of the respondents was collected in Section A of this study's questionnaire. The SPSS descriptive analysis frequency function was used to find the frequency distributions of the data collected. The results are presented in Table 2 below.

Table 2  
*Profiles of Respondents*

Type	Description	Frequency	Percentage (%)
Age	Below 20 years old	1	0.7
	21 - 29 years old	43	31.6
	30 - 39 years old	76	55.9
	40 - 49 years old	16	11.8
Gender	Male	79	58.1
	Female	57	41.9
Religion	Islam	51	37.5
	Christian	31	22.8
	Buddha	39	28.7
	Hindu	13	9.6
	Others	2	1.5
Education	SPM	1	0.7
	STPM/Diploma/Matriculation	16	11.8
	Bachelor Degree	82	60.3
	Master	36	26.5
	Professional certificate	1	0.7
Experience	Below 1 year	10	7.4
	2 - 3 years	56	41.2
	4 - 5 years	46	33.8

Table 2 above presents the profiles of the respondents. The most age recorded was between 30 - 39 years old, with 76 (55.9%) individuals. Based on gender, most responses were from male respondents, who recorded 79 (58.1%), and the remaining 57 (41.9%) responses were from female staff. Meanwhile, most of the respondents hold a Bachelor's degree (60.3%). 26.5% of the respondents have a Master's degree (26.5%), while the rest of the respondents hold STPM/Diploma/Matriculation (11.8%), SPM, and Professional (0.7%), respectively. Working experience from 2 – 3 years with 56 (41.2%) shows the highest response followed by 4-5 years with 46 (33.8%), more than five years recorded 24 (17.6%) whereas below one year recorded 10 (0.7%).

### ***Descriptive Analysis***

All the data for each variable was initially evaluated using descriptive analysis. The respondents selected their options from a five-point Likert scale, with 1 indicating strong disagreement and 5 indicating strong agreement. The results are disclosed in Table 3.

Table 3

#### ***Descriptive Statistics of Variables***

<b>Descriptive Statistics</b>					
	N	Minimum	Maximum	Mean	Std. Deviation
CRISK	136	2.00	5.00	4.4662	.82769
LMORA	136	1.00	5.00	4.4235	.89445
STAFF	136	1.00	5.00	4.4176	.90741
BONUS	136	1.00	5.00	4.1500	.71170
Valid N (listwise)	136				

The results in Table 3 above indicate that the mean score of CRISK was 4.4662, with a standard deviation of 0.82769. The mean score shows that most respondents were agreed with the statements. The statements for this variable were about the bank's credit risk during Covid-19. This outcome demonstrates that most executives to senior executive staff agreed that the bank's credit risk was affected during the Covid-19 pandemic. The result is a proponent of the steps taken by the government to impose a large-scale lockdown where most businesses were forced to temporarily shut down to curb the spread of Covid-19.

Table 3 also exhibits that the mean score of LMORA was 4.4235, with a standard deviation of 0.89445. The mean score shows that most respondents were agreed with the statements. The statements for this variable were about the effect of the Loan Moratorium on the bank's credit risk during Covid-19. This finding demonstrates that most executive and senior executive staff members agreed that loan moratorium granted by the bank to their staff affected the bank's credit risk during the Covid-19 pandemic. The loan moratorium affects the collection of the bank in terms of income. Although the financial statement shows healthy cash flow, this is just a buffer for the non-performing loan. What is more worrying is the auto moratorium granted to all Malaysians in the first phase of the Movement Control Order.

Table 3 also presents that the overall mean score of STAFF is 4.4176, with a standard deviation of 0.90741. The mean score shows that most respondents agree with the statements. The statements for this variable were about Staff advance. The result of the individual statements' descriptive analysis shows that most executive to senior executive level staff agreed that staff advance granted by the bank to their staff affects the bank's credit risk during the Covid-19 pandemic. The provision of staff advance is usually offered to the bank's staff at no-interest payment. The short-term assistance gives no income to the bank but will need more cash reserve from the bank to accommodate this mode of service.

Table 3 indicates that BONUS mean score was 4.1500, with a standard deviation of 0.71170. The mean score shows that most respondents agree with the statements. The statements for this variable were about the volume of the task during work from home. The result of the individual statements' descriptive analysis shows that most executive to senior executive-level staff agreed that Bonus Incentive granted by the bank to their staff affected the bank's credit risk during the Covid-19 pandemic. The Bonus Incentive is the prerogative of the bank to be distributed to their staff based on the Bank's performance and their staff performance. However, most staff is now over-reliant on this incentive, and they presume that Bonus Incentive is necessary. Otherwise, they will consider leaving, although most agreed that bank's credit risk is affected. Bonus must be retained assuming that bank's staff remain working or business as usual during the pandemic.

**Reliability Analysis**

Cronbach's alpha was used to determine the reliability of the variable measurements in this study. The general rule is that the closer alpha is to one, the more trustworthy the variables' internal consistency. Alpha values less than 0.60 are considered poor, those between 0.70 and 0.80 are considered acceptable, and those greater than 0.80 are considered exceptional (Bougie & Sekaran, 2019). The subsections that follow cover the specifics of the tests.

Table 4  
*Reliability analysis*

	Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
CRISK	.968	.970	5
LMORA	.966	.968	5
STAFF	.968	.970	5
BONUS	.966	.968	5

Based on table 4 above, the dependent variable, the Credit Risk of the Bank, measurement reliability score is 0.968. It means that 96.8% of the variance in the score is a reliable variance. It also indicates 96.8% consistency in this study's measurement. In other words, the data contain a 3.2% of error variance. Therefore, the responses for all items in the dependent variable were reliable for data analysis.

Table 4 shows that the reliability test score for Loan Moratorium is 0.968. It means that 96.8% of the variance in the score is a reliable variance. It also indicates 96.8% consistency in this study's measurement. In other words, the data contain a 3.2% of error variance. Therefore, the responses for all items in this variable are reliable for data analysis.

Table 4 indicates that the score of the reliability test for Staff Advance is 0.966. It means that 96.6% of the variance in the score is a reliable variance. It also indicates 96.6% consistency in this study's measurement. In other words, the data contain a 3.4% of error variance. Therefore, the responses for all items in this variable are reliable for data analysis.

Referring to Table 4 above, the score of the reliability test for the Bonus Incentive is 0.966. This indicates that this variable is 96.6% consistent in this study. This shows a small amount of 3.4% error in this data variance which shows that all items in this variable are reliable for further analysis.

**Correlation Analysis**

Correlation analysis determines the degree to which two numerically measured continuous variables are related. In this study, the Pearson correlation matrix with a significance level of  $p=0.05$  displayed the direction, strength, and significance of relationships between the variables. The results of this analysis are shown in Table 5 below and are discussed further in the relevant subsections.

Table 5  
*Correlation Analysis of CRISK with LMORA, STAFF, and BONUS*

		CRISK	LMORA	STAFF	BONUS
CRISK	Pearson Correlation	1	.896**	.859**	.785**
	Sig. (2-tailed)		.000	.000	.000
	N	136	136	136	136
LMORA	Pearson Correlation	.896**	1	.907**	.687**
	Sig. (2-tailed)	.000		.000	.000
	N	136	136	136	136
STAFF	Pearson Correlation	.859**	.907**	1	.770**
	Sig. (2-tailed)	.000	.000		.000
	N	136	136	136	136
BONUS	Pearson Correlation	.785**	.687**	.770**	1
	Sig. (2-tailed)	.000	.000	.000	
	N	136	136	136	136

\*\* . Correlation is significant at the 0.01 level (2-tailed).

According to Table 5, the Pearson correlation ( $r$ ) between CRISK and LMORA is 0.896 at  $p=0.00$  significant level, indicating a strong, positive relationship between the credit risk and loan moratorium. Table 5 exhibits the Pearson correlation ( $r$ ) between CRISK and STAFF is 0.859 at a  $p=0.00$  significant level, indicating a strong, positive relationship between the credit risk and staff advance. Referring to Table 5, the Pearson correlation ( $r$ ) between CRISK and BONUS is 0.785 at a  $p=0.00$  significant level, indicating a strong, positive relationship between credit risk and bonus incentives.

**Multiple Regression Analysis**

The results of the multiple regression analysis for this study are shown in Table 6 below.

Table 6

*Multiple regression analysis*

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.926 <sup>a</sup>	.857	.853	.31685

a. Predictors: (Constant), LMORA, STAFF and BONUS

b. Dependent Variable : CRISK

The R<sup>2</sup> value shown in Table 6 is 0.857. This value indicates that LMORA, STAFF, and BONUS together account for 85.7% of the variation in CRISK. The remaining 14.3% of the variation in CRISK could be explained by other factors not included in this study.

Table 7

*Multiple regression coefficients*

Model		Unstd Coefficients		Std Coefficients	t	Sig.	95.0% Confidence Interval for B	
		B	Std. Error	Beta			Lower Bound	Upper Bound
1	(Constant)	.150	.167		.902	.369	-.179	.480
	LMORA	.630	.073	.680	8.669	.000	.486	.773
	STAFF	.376	.060	.324	6.261	.000	.257	.495
	BONUS	.376	.060	.324	6.261	.000	.257	.495

a. Dependent Variable: CRISK

The regression coefficients in Table 7 represent the linear relationship between the independent and dependent variables. According to Table 7, LMORA has a significant positive influence on CRISK (B = 0.630; p = 0.000, < 0.05) followed by STAFF and BONUS (B = 0.376; p = 0.000, < 0.05). The p-value of 0.000 complies with the general rule for regression analysis, which states that the p-value should be lower than 0.05. As a result, the null hypothesis for H1, H2, and H3 are rejected, suggesting that loan moratorium, staff advance, and bonus incentives positively impact credit risk. In other words, H1, H2, and H3 state that loan moratorium, staff advance, and bonus incentives have a significant positive effect on credit risk are supported.

### Discussion of Findings

This study aimed to examine the effect of loan moratorium, staff advance, and bonus incentives on the bank's credit risk during covid-19. Three main factors were identified based on previous literature to reflect real-time practice. Loan Moratorium, Staff Advance, and Bonus incentives were the factors selected as the predictor to determine their effect on the bank's credit risk during the pandemic.

Hypothesis 1 was developed to find the relationship between credit risk and loan moratorium. The correlation results on these variables showed an association between credit risk and loan moratorium. Further regression analyses to test relationships between the two variables indicate a significant influence. Thus, this study found that the loan moratorium the government offered during the period influenced the bank's credit risk. This finding demonstrates that the loan moratorium granted by the Bank to their staff affected the bank's

credit risk during the Covid-19 pandemic. The loan moratorium affects the collection of the Bank in terms of income. This finding is in line with past studies by Zunic et al (2020); Collins et al (2018); Dendramis et al (2018) show that there is a relationship between Loan Moratorium and Credit Risk.

The second hypothesis was developed to test the relationship between staff advance and bank's credit risk. The correlation results showed that credit risk is positively correlated with staff advance. Based on the regression analysis, this study found that the staff advances influence the bank's credit risk. Hence, this study found that the staff advance granted by the bank to their staff affects the credit risk of the bank during the Covid-19 pandemic since the bank needs to use more cash reserve to accommodate this mode of assistance. This finding is consistent with previous research by Cincinelli et al (2021); Ying (2016); Konovalova et al (2016), which shows that there is a relationship between credit risk and staff advance.

Hypothesis 3 was developed to measure the relationship between credit risk and bonus incentives. The correlation results show an association between credit risk and bonus incentives. The regression analysis also indicates that Bonus Incentive granted by the bank to their staff affected the bank's credit risk during the Covid-19 pandemic. The Bonus Incentive is the privilege of the bank to be distributed to their staff based on the Bank performance and their staff performance. Bonus incentives are provided to the staff to enhance their motivation as they remain working during the pandemic. Previous study by Effing et al (2014); Sembiring et al (2020); Hamzah et al (2018) are also in line with this finding.

To summarize, the multiple regression analysis supports this study's hypotheses. Since the regression coefficients indicate a strong and positive association exists between all variables, these findings imply that the bank's credit risk is impacted by its decision to implement a loan moratorium, staff advance, and bonus incentive program for its employees during Covid-19.

### **Recommendations to the Banks and Financial Institutions**

This study found that loan moratorium, staff advance, and bonus incentive have affected the bank's credit risk during Covid-19. Based on these findings, there are a few recommendations to be considered by the banks and financial institutions.

Firstly, it is recommended that the bank reviews its loan moratorium program given to all their staff. Already the Loan Moratorium was extended to the public up to 6 months on an auto basis; extending the auto loan moratorium to the staff will only cause low collection repayment and impact Bank revenues. The recommendation by governor Datuk Nor Shamsiah Mohd Yunus for a targeted approach in loan repayment assistance was better as it put the choice in the hands of the borrowers where they would be able to obtain tailored assistance to meet their financial circumstances. Moreover, over the six-month blanket moratorium period, banks could incur RM79 billion loss in capacity to provide loans, otherwise known as "modification loss". "Modification loss" is the reduction in the banks' capacity to disburse new loans worth RM79 billion to the borrowers such as individuals and businesses. This amount is the total banks can lend individuals and businesses in a normal business situation over the six months. Granting further moratorium with excessive flexibility to the bank's staff will only impair Bank agility and affect its creditworthiness.

Secondly, the bank could consider implementing background checks and credit checks on its employees when they get staff advances, similar to the approach used by the credit risk department. Staff advance drew on a sizable cash reserve from the bank to cover the expense. While it is acknowledged that staff advances are repaid through salary deduction, the bank must exercise caution and due diligence when issuing loans to their employees to ensure timely payback.

Finally, the bank needs to consider giving a justifiable bonus incentive during the pandemic. The bank needs to stop giving the incentive to retain their staff from career hopping to ensure their operation is not disrupted. A justification based on bank's performance and staff performance is the only key indicator of giving bonus incentives. The pandemic that halted the economy at this moment needs the bank to be more responsible for their expenses.

### ***Limitations of Current Research***

A few limitations of this study are worth mentioning. First, the bank seems reluctant to share data with the researcher because of the sensitive data. The bank was afraid that any misinformation would affect the investor confidence in the bank. The bank also believed that any assistance given by the bank to their staff was exclusive and confidential within their organization. The human resource department also deemed that any assistance to any staff was of the bank's discretion and non-negotiable, nor should it be disputed by other staff. However, after a few consultations and negotiations, the researcher has trimmed much data that is deemed sensitive to be excluded in this research.

The second issue was that the Google Form questionnaires received a low response rate. It is intended to get 200 responses, but the researcher received just 136. Since the study was conducted at one of the bank's headquarters in Kuala Lumpur, the results also cannot be generalized to other groups, such as banks and financial institutions.

The third limitation was that only three independent variables were used in this analysis to find the effect on the credit risk. The variables are the observable characteristics that can change throughout the study. With the time restriction of the analysis, the researcher could not add more variables that could apply to the dependent variable.

### ***Suggestions for Future Research***

Future research should use specific samples from the Bank staff. For example, the sampling can be extended to executive up to manager level across all departments and across Klang Valley branches.

Second, a virtual interview instead of a mail survey, a Google Form questionnaire, and a better way of collecting samples are suggested in future research. In this study, the staff did not respond to answer the questionnaire as quickly as possible. This virtual interview would ensure that more respondents respond to the research questions without avoiding them.

Finally, more related variables that may be important to the dependent variable must be applied to future analysis. Either qualitative or quantitative can be the variables. The significance of dependent and independent factors is that they lead the researchers to pursue



their studies with full curiosity. Since they drive the research study, dependent and independent variables are essential.

### Conclusion

The COVID-19 pandemic has caused great uncertainty in global financial markets. Covid-19 triggered a multidimensional crisis in many sectors, including the health and economy sectors, such as banks. It has been reported that banking performance since the outbreak of COVID-19 has experienced the same structure as the global financial crisis (Aldaroso et al., 2020). As a result, there are limitations in increasing bank lending as COVID-19 affects borrowers' ability to repay loans. This will increase the volume of unpaid credit if the pandemic continues. So that, in the end, it can reduce bank liquidity, income, and capital (Hardianti & Aziz, 2021). The occurrence of bad credit cases in several banks is a symptom that bank operations are in bad condition. The present study examines the factors affecting banks' credit risk during the COVID-19 pandemic. Based on the 136 responses from the executive to senior executive-level staff located in one of the bank's headquarters offices in Kuala Lumpur, the findings of this study revealed that loan moratorium, staff advance, and bonus incentives positively related to the bank's credit risk. This study contributes to future researchers through similar landscape research in the Malaysian financial service. This study also provides several recommendations to the bank and financial institutions in managing credit risk. Limitations of the present study and suggestions for future research are also addressed in the final section of this study.

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