

A STUDY OF THE IMPACT OF ALMA TO PROFITABILITY DURING THE COVID-19 PANDEMIC

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ABSTRACT

In 2020, Indonesia's banking sector faces a highly challenging short-term outlook due to the disruption caused by the Covid-19 pandemic. During the economic uncertainty, managing cash collection and liquidity management may be crucial to Bank performance. Therefore, to be resilient and survive against COVID-19, Asset and Liability Management (ALMA) plays a key role in the banking industry to mitigate financial risk resulting from mismatch of assets and liabilities. The purpose of this research is to analyze the bank's financial performance during Covid-19 pandemic and to examine the relationship between ALMA and profitability of Commercial Banks in Indonesia as the short-term impact of COVID-19 in 2020. The study focuses on commercial Bank based on Group of Business Activities (BUKU). The methodology of this research is a quantitative and qualitative approach. The result of the study indicates a statistically significant relationship for most asset and liability management primary variables, such as Capital Adequacy Ratio (CAR), Cost to Income Ratio (BOPO) and Loan to Deposit Ratio (LDR). Net Interest Margin (NIM) does not have a significant relationship toward Return on Asset (ROA). This study will contribute as an empirical analysis to highlight the relationship of capital adequacy, operational efficiency, and liquidity management with profitability of commercial Bank Indonesia.

Keywords: ALM, Profitability, Covid-19 Impact, Banks.

INTRODUCTION

The 2019 coronavirus (COVID-19) pandemic in 2020 has disrupted business operations in all industries. The business impact of the COVID-19 pandemic continues to evolve and has an uncertainty in markets including in banks in Indonesia. In the third quarter of 2020, Indonesia's economy contracted by 3.49% compared to the prior year.

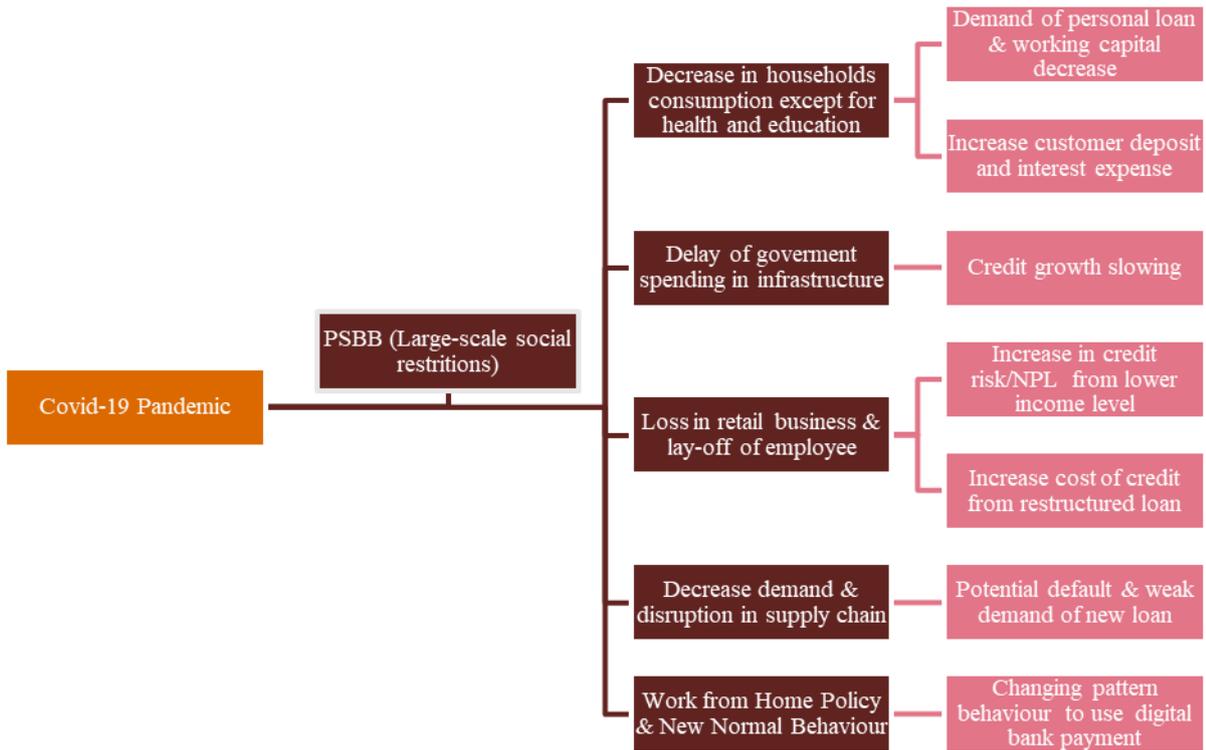
Indonesia officially confirmed the first Covid-19 cases in March 2020 and in the subsequent weeks a partial lockdown was implemented across the Indonesia archipelago. Indonesia's new Covid-19 cases continue trending upwards despite the government social distancing program. The first large-scale social restrictions (PSBB) is April 2020 in Jakarta, where all workplaces, except those in essential sectors such as financial, fuel, food, water, logistic and communication must remain closed and work from home policies. Continuing by PSBB Transitional in June 2020 until September 2020, during this transition period businesses are allowed to open with a 50% capacity as well as restrictions on foreign travel remain.

Indonesia's banking sector faces a highly challenging short-term outlook due to the disruption caused by the Covid-19 pandemic. Ongoing PSBB and other government social distancing programs are impacting on trade and manufacturing, resulting in a sharp recession in 2020, which will weigh on consumer and investor confidence. As such, the loan growth is expected to be considerably weaker, while the number of loan delinquencies is expected to rise as the pandemic continues through the remaining months of 2020. Solid capital adequacy ratios should, however, enable the banking sector to withstand the short-term downturn (Fitch Solutions, 2020).

The economy downturn due to government social distancing program has put pressure on bank's profitability, which affected by weaker revenue (interest income) as impacted of decrease in loan growth particularly as management of Bank is more conservative to disburse a new loan since the repayment capacity from individual and business is not good during the pandemic. For example in retail business, the unemployment in small business has an impact on the declining ability of debtors to repay the obligation to the Bank.

As illustrative, we have summarized the following Covid-19 pandemic impact to bank business Indonesia:

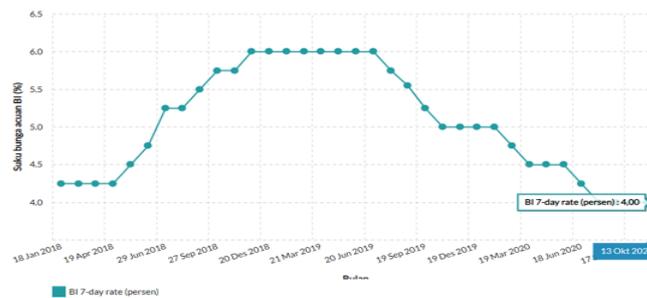
Figure 1: Impact of COVID-19 to Banking Industry in Indonesia



Source: Author’s Analysis, 2020

Further, the low interest rate scenario is also reducing the main banking profitability to generate interest income. The Indonesia Central Bank’s Board of Governors agreed in October 2020 to hold the Bank Indonesia Reverse Repo Rate at 4% while also maintaining the Deposit facility (DF) and Lending Facility (LF) rates at 3.25% and 4.75% (Bank Indonesia, 2020). This is the lowest rate compared to the last 5 years, which indirectly will lower deposit and lending rates to the Bank.

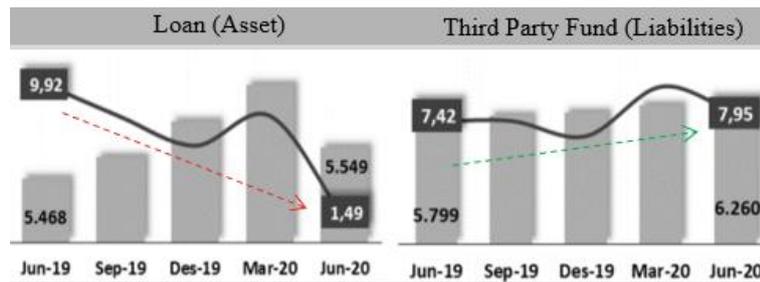
Figure 2: Bank Indonesia Reverse Repo Rate



Source: (Bank Indonesia, 2020)

The Covid-19 pandemic has also exposed an excess of liquidity. The intermediation function of banks is still weak due to limited credit growth in line with weak domestic demand as a result of depression due to continuing Covid-19 pandemic. OJK reported in the first half 2020, credit only growth 1.49%, meanwhile growth in Third party Funds (TPF) was recorded at a higher rate of 7.95%. It shows that the deposit from customers is not yet channelled to the real sector in the form of credit, but remains circulated to other marketable securities and money market instruments.

Figure 3: Indonesia Bank' Performance



Source: (OJK, Laporan Profil Industri Perbankan Triwulan II 2020, 2020)

During the economic uncertainty, managing cash collection and liquidity position may be crucial to Bank performance. Hence, to be resilient and survive against COVID-19, Asset and Liability Management (ALMA) plays a key role in the banking industry. ALMA is a practice used by financial institutions to mitigate financial risks resulting from a mismatch of assets and liabilities.

The objective of ALMA is to make the portfolio consistent, coordinated, and integrated from the side of assets and liability in order to maximize profit so the management decisions of assets and liabilities can be integrated. If a bank is not concerned about ALMA principles in its operational activity, then it is expected to have a bad performance. Applying ALMA principles in operational banking makes management can anticipate the volatility changes of level of market interest, structure of funding sources, increment of capital requirements, tighter competition, the development of information systems, the increasing role of banks, the availability of funds in the money market, changes in the composition of bank assets, the increment of performance, and increment of overhead costs (Sapto J, 2015).

Indonesia's banking sector is regulated by the Financial Services Authority (OJK), while monetary policy is developed by Bank Indonesia (BI). OJK is the primary regulatory authority for the supervision of the entire financial services industry in Indonesia, including the banking sector. OJK regulates, investigates, and imposes sanctions on financial institutions that are in violation of regulations. BI is mainly responsible for the monetary sector, and its objective is to achieve and maintain the stability of the rupiah. OJK will typically coordinate with BI in relation to the monetary sector and work with LPS in regard to the guarantee of bank deposits and the management of failing banks.

The landscape of banks in Indonesia is based on BUKU Classification, where BUKU is the Indonesian acronym for "Commercial Bank based on Business Activities". There are four categories bank in Indonesia based on 2012 BI regulation: a) Bank BUKU 1, are banks with core capital less than one trillion rupiah; b) Bank BUKU 2, are banks with core capital of between one and five trillion rupiah; c) Bank BUKU 3, are banks with core capital between five and thirty trillion rupiah; d) Bank BUKU 4, are banks with core capital at least thirty trillion rupiah.

The form of commercial bank Indonesia are Conventional Bank and Islamic Bank, where Conventional Banks are banks that conduct business activities based on conventional principles and, Islamic Banks are Banks that conduct business activities based on Sharia Principles. As of September 2020, there are 96 Conventional Banks in Indonesia and 14 Islamic Banks in Indonesia, with almost 96% of bank assets coming from Conventional Banks and 4% from Sharia Banks.

Despite the large number of Banks, the Indonesia Banking Industry is dominated by only a few large players in BUKU 4 such as Bank Mandiri, Bank Rakyat Indonesia, Bank Central Asia, and Bank Negara Indonesia. These four banks or big players holding more than half of banking assets in the country. As of September 2020, the following are the distribution of the number of bank and commercial bank assets.

Table 1: Number of Commercial Bank and Bank Asset as of September 2020

Group of Bank	< Rp. 1 Trillion	Rp. 1 s.d 10 Trillion	Rp. 10 s.d 50 Trillion	> Rp. 50 Trillion	Total of Bank (numbers)	Banks Assets in (Rp Billion)	% Asset Composition
BUKU 1	1	9	0	0	10	41,822	0%
BUKU 2	0	16	38	0	54	938,482	10%
BUKU 3	0	0	4	21	25	2,645,879	29%
BUKU 4	0	0	0	7	7	5,060,452	56%
BUKU 1 SHARIA	1	3	0	0	4	16,019	0%
BUKU 2 SHARIA	0	2	4	1	7	171,849	2%
BUKU 3 SHARIA	0	0	1	2	3	187,288	2%
Total	2	30	47	31	110	9,061,792	100%
Commercial	1	25	42	28	96	8,686,636	96%
Shariah	0	2	5	3	10	359,137	4%

Source: (OJK, Data Processed 2020)

As of September 2020, the net profit of banks in Indonesia have been a sharp drop in Net Profit fell by -27.6% year on year as a consequence of decreasing net interest income and slow growth in credit channelling. The loan growth stood in 0.4% year on year. The following are the performance of Commercial Indonesia's Bank as of September 2020.

Table 2: Financial Performance of Commercial Bank in Indonesia as of September 2020

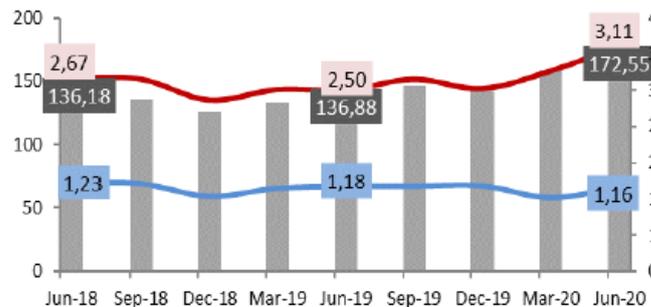
(Rp Billion)

Group of Bank	Credit	% YoY	Net Interest Income	% YoY	Net Profit	% YoY
BUKU 1	24,564	-36.0%	1,305	-33.5%	297	-179.1%
BUKU 2	564,913	-0.4%	29,097	-2.0%	5,639	-25.2%
BUKU 3	1,619,453	-7.5%	64,921	-11.6%	21,250	-20.5%
BUKU 4	3,152,150	4.9%	171,021	0.8%	55,848	-30.2%
BUKU 1 SHARIA	11,253	5.0%	391	-8.3%	84	-16.4%
BUKU 2 SHARIA	109,257	-18.6%	4,425	-52.0%	635	-68.0%
BUKU 3 SHARIA	120,445	63.7%	9,701	129.3%	1,963	125.1%
Total	5,602,034	0.4%	280,862	-2.7%	85,123	-27.6%

Source: (OJK, Data Processed 2020)

The non-performing loan (NPL) ratio is continue creeping up as the Covid-19 pandemic hurts business and jobs, gross NPL ratio rose to 3.11% in July 2020, which the highest it has been in over previous year. No doubt that to the impact the Covid-19 outbreak has had on general movement and tourism which impacted to repayment capacity from lower income and further deterioration in the banking sector's asset quality.

Figure 4: Ratio Trend of Gross and Net NPL



Source: (OJK, 2020)

OJK recorded increasing trend in gross NPL ratio in last during Covid-19 with wholesale & retail and manufacturing and processing industry being the largest NPL contribution. To control and manage the increase in NPL, OJK has issue banking policy relaxation through restructuring program to debtors impacted by COVID-19 especially to micro, small and medium entity (MSME) as stipulated in POJK 11/POJK.03/2020 "National Economic Stimulus as a Countercyclical Policy on Impact of the Spread of Coronavirus Disease 2019".

The outbreak of the Covid-19 pandemic presents a significant challenge for the Indonesia economy. Commercial banks are struggling to maintain their profitability and manage their assets and liability along with the decline in economic activity caused by the pandemic. With the anticipation of a prolonged impact in addition to the economic downturn, commercial banks must strengthen their resilience in asset and liability management capacity to address the latest economic conditions. If the commercial banks could not respond appropriately and not survive in this Covid-19 pandemic situation, then it will trigger a financial crisis in Indonesia since the commercial banks play an important role in the financial system and the economy.

There are three main questions that will be answered with this research, those are:

1. What is the commercial bank's profitability during Covid-19 pandemic?
2. What is the relationship between ALMA (asset and liability management) to profitability of Commercial Banks in Indonesia during Covid-19 pandemic?
3. Which selected ALMA primary variables have a significant relationship toward profitability of Commercial banks in Indonesia during Covid-19 pandemic?

The main objective for this final project is to analyze the bank's financial performance during Covid-19 pandemic and to examine the relationship between asset-liability management and profitability of Commercial Banks in Indonesia as the short-term impact of COVID-19 in 2020. Furthermore, this research will give some financial recommendations to the Bank's management, regulator, and other stakeholders on how to manage the ALMA to maximize their profit and survive against Covid-19 pandemic.

LITERATURE REVIEW

According to Society of Actuaries, ALMA is about: 1) Coordinating decision on asset and liabilities; 2) An ongoing process aiming to the company's financial objectives subject to its risk tolerances; 3) The sound of management of the finances of any company that invest to meet (Society of Actuaries, 2003).

The ultimate aimed of an effective ALMA practice is profitability within an acceptable level of risk to the bank. ALMA also becomes the main principle in every banking management and supervisor, Bank regulators have the same goal in making sure banks do not take risks that are inappropriate for their size, capital, and other factors. The Basel Committee on Banking Supervision (BCBS) in regulatory infrastructure in the US and Europe has adopted ALMA principles into five elements, it's called CAMELS, which consist of a) Capital Adequacy b) Asset Quality c) Management quality d) Earnings performance e) Liquidity. CAMELS is already used in the international banking industry in the controlling banking system.

In the existing literature, the proper ALMA has a direct impact on the overall performance of banks. It further examined the differences in ALMA-profitability relationships across different categories according to ownership status (domestic and foreign banks) and profit levels; high-profit banks and low-profit banks (Owusu FB, Alhassan AL, 2020).

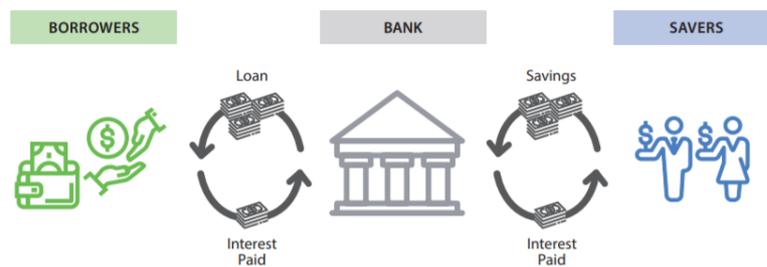
Banks generate revenue from interest income, which are generated from lending and interest and interest-earned assets from their placement in marketable securities and other financial instruments. Banks also generate revenue from fees and commission from transactional banking and trading income.

The main resources of bank profit is the spread between interest rate charged to borrowers and the cost of funds from interest rate of financial products from depositors, including savings accounts and time deposits.

(Reserve Bank of Australia, 2020) Banks collect savings from households and businesses (savers) and use these funds to make loans to those who want to borrow (borrowers). Banks must pay interest on the funds that they collect from savers, which is one of their main funding costs. On the other hand, banks receive interest from loans that they make to borrowers and this is a large part of their revenue. From the perspective of a bank:

- Funding costs are the interest rates paid to savers
- Lending rates are the interest rates paid by borrowers

Figure 5: Banks' Funding Costs and Lending Rates



Source: Reserve Bank of Australia, 2020

Bank profit depends on many factors, starting with the volume of interest and non-interest revenue and going on to the level of operating expenses, loan-loss provisions, and other spending. These elements are interrelated, if revenue increases, this does not directly increase the bank profit. A convenient way of tracking back profitability is to look at a bank's profitability ratio (The Hong Kong Institute of Bankers, 2018).

(Lee, 2018) Profitability is critical to the long-term survival of commercial banks especially in the changing environment of the banking industry. The study reveals that total loan to total assets, bank equity to total assets, loan to deposits have a significant positive associate with bank profitability.

The types of profitability ratios are usually Return on Asset (ROA) and Return on Equity (ROE). Profitability ratio which has strong and representative banking business model is ROA, because banks are running their function as intermediary between a borrower who receives a loan from a bank and a saver who deposits money in a bank. A positive ROA suggests that the Bank can use assets effectively to generate income. According to the Hong Kong Institute of Bankers, the higher the ratio, the more efficient the bank is in making productive use of its assets. A ROA of better than 1% is considered as a strong performance.

The return on asset (ROA), often called the return on investment (ROI) measures the overall effectiveness of Company in generating profit with its available assets. The higher the firm's return on total assets the better (J. Gitman, 2012).

Previous research indicates The ALMA variables such as LAR, capital leverage, operating expenses, interest income, and CAR sensitivity have a significant effect on BEP and ROE. Meanwhile LDR, NPL, the FBI have no impact on profitability (Sapto J, 2015).

Wahyudi made a study in Islamic Banking to find the relationship CAR, NPF, FDR, BOPO and Inflation toward Bank's profitability, found that Statistical test results show simultaneously CAR, FDR, NPF, BOPO and Inflation have an impact on ROA even during the Covid-19 pandemic (Wahyudi, 2020).

Based on author's literature review, the proxy of ALMA and profitability in financial ratio are as follow:

Table 3: Summary of Literature Review

Variable name	Concept	Measurement	References
Profitability	The higher profit is considered a strong performance.	Return on Asset	(Nathan, 2020) (Belete, 2013)
ALMA Primary Variables			
1.Capital Adequacy	The higher banking's capital will affect the better bank's ability to bear any potential risk.	Capital Adequacy Ratio	(Wahyudi, 2020) (Maulida, 2017)
2.Operational Efficiency	a mechanism to address the risk faced by a bank due to mismatch income and cost of operational	Cost to Income Ratio	(Wahyudi, 2020) (Ramadhani, 2020)
3.Liquidity Risk	a mechanism to address the risk faced by a bank due to mismatch deposit and loan.	Loan to Deposit Ratio	(Sapto J, 2015) (Pramitasari, 2020)
4.Interest Rate Risk	a mechanism to address the risk faced by a bank due to mismatch of changes of interest rate	Net interest margin	(Amelia Jovita, dkk, 2017)

Source: Author's, 2020

From above table, it can be seen the bank's profitability would be proxied by Return on Asset (ROA) is the impact of ALMA practice in each of group business activities to Capital Adequacy, Operational Efficiency, Liquidity Risk and Interest Rate Risk.

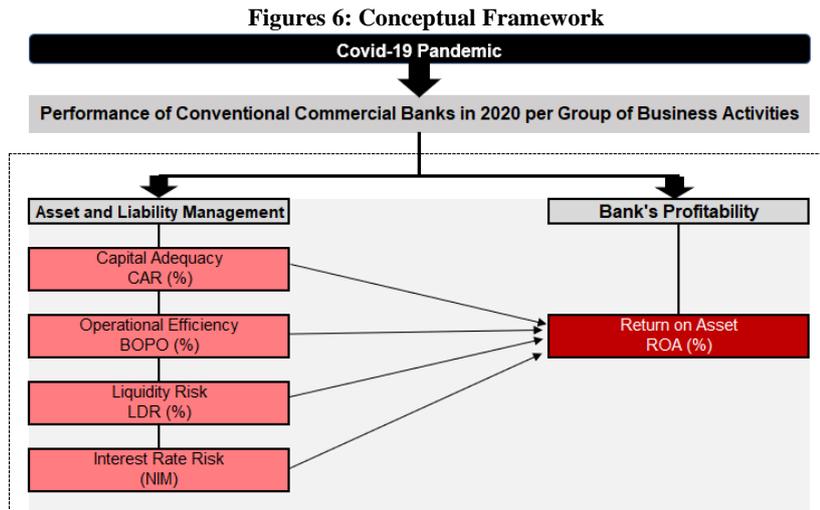
The author set components profitability (ROA) as dependent variable and asset liability management (CAR, BOPO, LDR and NIM) as independent variable.

Table 4: Operational Definition Variables and Measurement

Variable	Variable	Proxy	Measurement (%)	Notation	Symbol
Dependent Variable	Profitability	Bank's Profit	Net Income / Equity	ROA	Y
Independent Variables	ALMA	Capital Adequacy	Capital / Risk-Based Weighted Assets x100%	CAR	X1
	ALMA	Operational Efficiency	Operational Cost / Operational Income	BOPO	X2
	ALMA	Liquidity Risk	Credit / Third Parties Fund	LDR	X3
	ALMA	Interest Rate Risk	Net Interest Income / Average Total Earning Assets	NIM	X4

Source: Author's, 2020

The theoretical framework will be explained by the figure below:



Source: Author's, 2020

METHODOLOGY

The methodology of this research is a quantitative and qualitative approach. Secondary and primary data are combined to support the analysis of this research. Secondary data collected by summarize the selected financial ratio from Indonesia Banking Statistic from OJK Report. Then, continue by FGD (focus group discussion) with experts in banking to reconfirm the result of study.

The research sample was a performance indicator of Indonesia bank from January 2020 until September 2020. The sampling technique is non-random sampling with the method of purposive sampling. There are 4 group of business activities which eligible for this research:

Table 5: Sample of Group Business Activities Bank

No	Group of Business Activities	BUKU
1	Commercial Conventional Banks - Group of Business Activities 1	BUKU 1
2	Commercial Conventional Banks - Group of Business Activities 2	BUKU 2
3	Commercial Conventional Banks - Group of Business Activities 3	BUKU 3
4	Commercial Conventional Banks - Group of Business Activities 4	BUKU 4

Source: Author's, 2020

We do not include the commercial sharia banks in this study because the total asset is small, only 4% from the banking industry and have specific performance indicators which different measurement with conventional banks.

FINDINGS AND ARGUMENTS

The data research will be processed using descriptive analysis and the hypothesis will be tested using multiple linear regression analysis with SPSS application (25 version). Table 5 presents a summary statistic of the key variables. The table shows one income measurement and various assets and liabilities included in this study. From 36 observations in 2020, the mean ROA for the sample banks is 1.420 with a standard deviation of 1.068. ROA ranges from a minimum -0.990 to a maximum of 3.2538, it can be informed that the banks are mostly profitable.

Table 6: Descriptive Statistic

	N	Minimum	Maximum	Mean	Std. Deviation
ROA	36	-.99028	3.25388	1.4202224	1.06897319
CAR	36	18.93302	30.00729	25.1791915	3.30491216
BOPO	36	77.74222	111.02060	90.9038445	8.58397197
LDR	36	79.52307	101.00411	89.8642332	6.13469107
NIM	36	3.53967	5.66106	4.4967757	.54506841
Valid N (listwise)	36				

Source: Author's, 2020

Based on assumption test, data test using the Kolmogorov-Smirnov that all variables have a significant value in $\alpha=20\%$ (0.200), means above the sig.level ($\alpha=5\%$), so that means the data is normally distributed and the requirement for the regression model has already fulfilled. According to the below table 3 out 4 independent variables (CAR, BOPO, LDR) less than 0.05 meaning that independent variables mostly have significant effect toward dependent variable Return on Asset (ROA), only NIM variable has probability of significance higher than 0.05 meaning that NIM have insignificant effect toward to ROA.

Table 7: Bank Partial Hypothesis Test (T-test) result Coefficients^a

Model		Unstandardized Coefficients		Standardized	t	Sig.
		B	Std. Error	Coefficients Beta		
1	(Constant)	8.017	1.542		5.199	.000
	CAR	-.105	.027	-.326	-3.949	.000
	BOPO	-.083	.010	-.667	-8.486	.000
	LDR	.043	.011	.249	4.080	.000
	NIM	-.067	.115	-.034	-.580	.566

a. Dependent Variable: ROA

Source: Author's, 2020

Based on SPSS application, the result of multiple regression analysis as informed below:

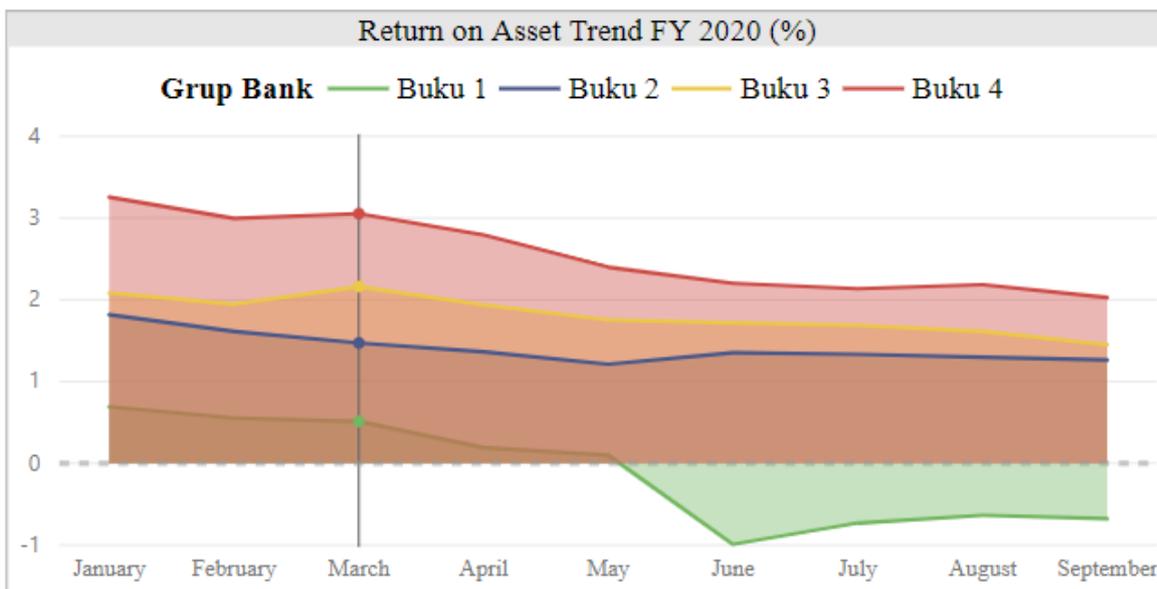
$$Y_1 = 8,017 - 0,105X_1 - 0,083X_2 + 0,043X_3 - 0,067X_4$$

The interpretation of the multiple regression equation above:

- α = Value α is 8,017 and it is positive, this indicates that if the independent variable is zero (0), then there will be an increase in ROA of 8,017.
- β_1 = The Capital Adequacy Ratio (CAR) regression coefficient value of 0,105 has a negative direction of relationship. Therefore, if variable CAR (X_1) increases by 1 (one) unit while other variables are constant, then the variable Return on Asset (ROA) of Commercial Bank in the 2020 period will decrease 0,105.
- β_2 = The Operational Expense to Operational Income (BOPO) regression coefficient value of 0,083 has a negative direction of relationship. Therefore, if BOPO (X_2) increases by 1 (one) unit while other variables are constant, then the variable Return on Asset (ROA) of Commercial Bank in the 2020 period will decrease 0,083.
- β_3 = The Loan to Deposit Ratio (LDR) regression coefficient value of 0,043 has a positive direction of relationship. Therefore, if variable LDR (X_3) increases by 1 (one) unit while other variables are constant, then the variable Return on Asset (ROA) of Commercial Bank in the 2020 period will increase 0,043.
- β_4 = The Net Interest Margin (NIM) regression coefficient value of 0,067 has a negative direction of relationship. Therefore, if variable NIM (X_4) increases by 1 (one) unit while other variables are constant, then the variable Return on Asset (ROA) of Commercial Bank in the 2020 period will decrease 0,067.

In general, banking resilience was yet maintained differently in each BUKU. Bank BUKU 1 had one of the worst performances out of all asset and liability management key ratios and profitability. The Return on Asset in Bank BUKU 1 is falling dramatically from May 2020 to June 2020 into negative ROA. From ROA Trend in 2020 denotes that from March 2020 until September 2020.

Figure 7: Return on Asset of Year 2020



Source: OJK, Data Processed by Auhor's

To reconfirm the result of the study based on secondary data, the author did focus group discussion with 4 respondents in banking expert. Below are the respondent general profiles:

Table 8: Banking Expert FGD Respondent Profile

Criteria	Description
Background	: Accounting, Finance and Risk Management
Gender	: Female
Year of Experience	: 5-10 years in banking industries
Behaviours	<ul style="list-style-type: none"> - Understand the business model in banking - Aware about Covid-19 impact in banking industry - Experienced in the financial services industry. - Representative from small and big banks in Indonesia

Source: Author's, 2020

The fieldwork FGD is 13 February 2021. Please refer to the following summary of FGD Result. Authors divided into three categories.

Table 9: Summary of FGD Result

Criteria	Result
1. Commercial Bank's Profitability during Covid-19 pandemic	In the short term, the covid-19 pandemic impacted as mildly negative in profitability. Most of the bank is still able to generate the profit in 2020, but the profit growth is lower than prior year. But, in the long term, the commercial may be to negative impact as increased cost of credit, cost of deposit and cost of operation.
2. Commercial Bank's ALMA during Covid-19 pandemic	<ul style="list-style-type: none"> - Covid-19 has put pressure in ALMA primarily due to excess of bank liquidity. - Regulation has significantly influenced a bank's liquidity risk, therefore the Bank treasury must change in how to balance their liquidity risk in other money markets.
3. Relationship between ALMA primary variables toward profitability of commercial banks in Indonesia during Covid-19 pandemic	<ul style="list-style-type: none"> - During the pandemic situation, the ability to react quickly and decisively is a key to survive in this condition. The effectiveness of ALMA decisions will impact the profitability, particularly in liquidity management and operational management. - Measuring and managing liquidity risk is one of the most crucial activities of commercial banks during the pandemic. - Larger bank found to be more cost efficient than smaller bank as their capacity to able in automation process and some cost efficiency initiative

Source: Author's, 2020

CONCLUSION

Based on the results of the data analysis and review literature, it can be concluded as follows:

1. The performance of commercial banks during Covid-19 pandemic is considered strong performance, on average ROA is 1.4%. However, banking profitability was yet maintained differently in each BUKU. Bank BUKU 1 is considered weak performance with negative ROA during Covid-19 pandemic. The Return on Asset in Bank BUKU 1 is falling dramatically from May 2020 to June 2020 into negative ROA.
2. Asset and liability management has a relationship to profitability of commercial banks in Indonesia during Covid-19 pandemic from January 2020 – September 2020 observations period. The regression results indicate that Loan to Deposit Ratio (LDR) positively contribute to profit but Capital Adequacy Ratio (CAR), Cost to Income Ratio (BOPO) and Net Interest Margin (NIM) negatively contributes to the profit. The dependent variable of this study (Return on Asset) can be explained 93.9% by independent variable Capital Adequacy Ratio (CAR), Cost to Income Ratio (BOPO), Loan to Deposit Ratio (LDR) and Net Interest Margin (NIM), while remaining 6.1% can be explained by variables outside of this research.
3. The study found statistically significant relationships for most asset and liability management primary variables, such as Capital Adequacy Ratio (CAR), Cost to Income Ratio (BOPO) and Loan to Deposit Ratio (LDR). Net Interest Margin (NIM) does not have a significant relationship toward Return on Asset (ROA).

THEORETICAL CONTRIBUTIONS

a. Theoretical implication

This research will contribute additional theory to the literature that analyzes the ALMA and bank's profitability. Most of previous literature Return on Equity (ROE) and Net Interest Margin (NIM) to measure the bank's profitability indicator. To cope with the business model in commercial banks Indonesia, ROA will demonstrate the profitability performance of banks, because commercial banks are focused on loan growth and small contributions from fee-based income. Therefore, ROA was considered as important as ROE in measuring bank profitability.

This model result is similar with some previous research, ROA is more useful when assessing the profitability (Harun, 2016). Furthermore, the research also contributes some primary variables as proxy Asset Liability Management which covers CAR ratio in measurement Capital Adequacy, BOPO ratio in Operational Efficiency, LDR ratio in Liquidity Risk.

b. Practical implication

This result of this research may help policy makers and regulators (BI and OJK) to guide them to help commercial banks to address liquidity and funding challenges during Covid-19 pandemic. As seeing that Loan to Deposit Ratio (LDR) has positive and significant toward Return on Asset (ROA) should have taken action to manage liquidity of commercial banks in a way to maintain the stability of national economies.

For shareholders, this result study can be utilized to maximize the return of assets. The Bank profitability is positively affected by LDR and negatively affected by BOPO ratio. The shareholders can consider their investee has strong performance is the ROA positive and above 1%.

For creditors and debtors will also be able to observe how banks manage and function as intermediaries of money. In this Covid-19 Pandemic, Bank in condition an excess liquidation trap, hence in the long-term of Covid-19 Pandemic the interest rate of deposit or saving account may be cut or lower. Hence, the return of deposit or saving account for creditor's side will be lower than usual. On other hand, this low interest rates during Covid-19 pandemic will benefit debtors to proposed new loans to Bank.

MANAGERIAL CONTRIBUTIONS

This study will increase awareness of performance of BUKU 1. Their performance in 2020 indicates that they cannot compete with several big banks in Indonesia evidenced by negative growth in loan and deposit in nine months in 2020. For Bank BUKU 1, the Covid-19 pandemic must serve as a best time for small banks to reassess their business model and technology infrastructure.

The larger banks in Bank BUKU 3-4 have been found to be more cost efficient than Bank BUKU 2, the above findings suggest that for the same product in loan and deposit, larger banks can offer lower prices to their customers than smaller banks. Therefore, to the extent smaller banks should apply an efficiency program for example more saving the acquiring client cost by enhancing their automation capability; consider to close some office branch closure to save operational cost.

Going forward after Covid-19, commercial banks should anticipate a potential impact of Non-Performing Loan (NPL) of their loan and asset portfolio, particularly from Covid-19 Loan Restructuring.

LIMITATION AND FUTURE RESEARCH

This study only examined the variable in the short-term period from January to September 2020. The sample size used for the study is restricted to four group bank classification in Indonesia (Bank BUKU 1, BUKU 2, BUKU 3 and BUKU 4).

In the future, it is suggested to expand the literature until the end of Covid-19 pandemic in Indonesia to see how long commercial banks in Indonesia recover to normal business activities. Also, future research should consider observing asset-liability management at the individual banking level.

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