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FACTORS WHICH INFLUENCE LIQUID ASSETS IN SHARIA BANKS: A CASE STUDY OF PT BANK SYARIAH MANDIRI 2016-2017

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ABSTRACT

Banks manage liquidity carefully because of differences in fund tenor collected and channeled. Meanwhile, at the same time, it must fulfill transaction needs, reserve requirement, current liabilities, and be cautious in facing sudden liquidity needs. Therefore, bankshold a sufficient amount of liquid assets. Liquidity management tends to be a trade-off. On one side, insufficient liquid assets can cause banks to be unable to carry out transactions with its customers or fulfill its maturity obligations. On another side, high liquid assets can result in a lost opportunity, because the liquid assets do not provide a return. The purpose of this research is to analyze what factors influence the level of banks liquid assets. This research was conducted using a dual regression model to analyze the variables studied, with a case study of PT Bank Syariah Mandiri from 2016-2017. The dependent variable was the level of liquid assets. Meanwhile, the independent variables were the amount of third party funds, financing growth, financial market access between banks, current liabilities, and previous month profit. The research results reveal that two variables are statistically significant towards bank liquid assets, which are third-party funds and previous month profit. Third-party funds and previous month profit have a positive and significant influence towards liquid assets. Meanwhile, the other variables do not significantly determined liquid assets.

Kata Kunci: Liquidity; liquid assets; third-party funds

I. INTRODUCTION

Banking, including sharia banking, has challenges in managing liquidity. The problem with banking liquidity especially occurs because of differences in time periods between third-party funds (TPF) time periods with the financing time periods (maturity mismatch). The liquidity problem can also arise from various other factors, such as the type of transactions, size of the bank, the financial instrument availability, or access to the financial market.

Bank liquidity tends to be unstable. A bank transforms assets from third-party funds and financial capital to become financing. By having a return payment schedule from financing with various tenors from short-term to long-term, then a bank is exposed to liquidity risks whenever there is a bank rush where funds are suddenly drained from a

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bank. Liquidity difficulties in a particular bank can be escalated by spreading to another bank, so that it causes systematic risk. Liquidity problems can suddenly influence liquidity spiral, which causes a liquidity crisis and a financial crisis. Learning from history, a banking crisis is especially caused by a bank liquidity crisis that can result in bank payment failures towards the majority of its obligations (Wuryandani, 2014).

II. LITERATURE REVIEW

Problems of Managing Bank Liquidity

Liquidity needs to be managed continuously, so that a bank can reach an optimal liquidity level. The main problems with liquidity are seen from two aspects, an overabundance and a lack of liquidity. A bank must be able to avoid having an excess of liquidity as it will be disadvantageous. Likewise, a lack of liquidity will disrupt banking operational activities.

On one side, banks faces liquidity risks where liquidity can be defined as banks' ability to fulfill its responsibilities, especially for short-term funds (Ikit, 2018). On another side, not all liquidity assets produce revenue or returns for banks. Therefore, one of the problems with sharia banks is determining the level or size of liquid assets that do not produce any returns. Liquidity assets which can be categorized as not producing returns are cash, current accounts at central bank/Bank Indonesia (BI), and current accounts at other banks. Although they do not provide returns, these liquid assets must be provided by the bank to do withdrawals and deposits by customers, fulfill transactions with other domestic and overseas banks, do clearing needs, and fulfill reserve requirement regulations from BI. This research attempts to explain the factors which influence the level of liquid assets.

Managing Liquidity In Sharia Banks In Indonesia

In the sharia banking industry in Indonesia, liquidity management is unique because sharia banking has several limitations. First, sharia banks in Indonesia are in a dual banking system (conventional and sharia), where in conducting their activities, sharia banks must follow all monetary and banking finance policies. Until June 2018, the total sharia banking assets reached 5.67% with a value of Rp. 433trillion from the total national banking assets of Rp. 7,650trillion (OJK, 2018). Second, the sharia banking industry is relatively new, so that the current regulations have only been effective since the first sharia bank was established in 1992. Third, sharia banking must pay attention to sharia aspects in engaging in its activities, where liquidity management must face liquidity activities and instruments that are not always shariah compliant. Fourth, the amount and volume of business between shariah (peer) banks is suspected of not being strong enough to support each other in liquidity management. As of now, there are 34 BUS and UUS recorded with an asset range between Rp. 776 billion (PT BPD Yogyakarta Administrative District) and Rp. 92.97trillion (PT Bank Syariah Mandiri). Meanwhile, there is a total of 115 national commercial banks, where from a ranking of 1 until 13 based on assets are conventional commercial banks (OJK, 2018).

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Regulations Related With Bank Liquidity

The banking liquidity problem is also observed by regulators in Indonesia and international regulators. It is reflected in various standards and regulations related with liquidity, including for sharia banking. These include stipulations about sharia monetary operations, Sharia Bank of Indonesia deposit facilities (Fasilitas Simpanan Bank Indonesia Syariah/FASBIS), Mudharabah investment certificates between banks (Sertifikat Investasi Mudharabah Antarbank/SIMA), and sharia short-term financing facilities (Fasilitas Pendanaan Jangka Pendek Syariah). Recently in April 2018, BI released a new regulation about Macroprudential Intermediary Ratio and Macroprudential Liquidity Buffer for Conventional and Sharia Banking. It regulates banking financing to funding ratio and its relation to statutory reserve requirement.

Besides regulations established by regulators in Indonesia, there are also stipulations about liquidity in the form of international regulations or standards from the Bank for International Settlement (BIS) and the Islamic Financial Service Board (IFSB). The Basel Committee on Banking Supervision (BCBS) from BIS intermittently issues standards and publications, such as A Framework for Measuring and Managing Liquidity (1992), Sound Practices for Managing Liquidity in Banking Organisations (2000), The Management of Liquidity Risk in Financial Groups (2006), and Principles for Sound Liquidity Risk Management and Supervision (2008). Most recently, in Basel III, BCBS published The Liquidity Coverage Ratio (2013) and The Net Stable Funding Ratio (2014). As for IFSB, it most recently published IFSB-12, which discusses liquidity in Guiding Principles on Liquidity Risk Management for Institution Offering Islamic Financial Services (2012).

In following up on the stipulation of Basel III to strengthen banking liquidity, OJK arranged stipulations about bank liquidity in 2015 through POJK No. 42/POJK.03/2015 regarding Obligations to Fulfill the Liquidity Coverage Ratio (LCR) for Commercial Banks and POJK No. 50/POJK.03/2017 regarding Obligations to Fulfill the Net Stable Funding Ratio (NSFR) for Commercial Banks. Regulation about LCR requires banks to provide high quality liquid assets to anticipate net outgoing cash flow needs for the next 30 days in a stress scenario condition. As for the regulation about NSFR requires banks to provide stable funds in the form of liability and capital, to finance activities for assets and off-balance sheet accounts. This NSFR stipulation means that banks are requested to adjust financing tenors with funding tenors. Whenever banks plan to provide long-term financing, then banks must use long-term funding as well.

Research Objectives

Overall, this research strives to discover which variables have dominant influence on the sharia bank liquid assets, especially liquid assets that relatively do not provide returns to the bank. Besides that, other goals which would like to be achieved are to find out how factors like TPF amount, instrument availability in the form of securities that can be converted to become cash without loss of value, bank profit, market access between banks and funding resources, current liabilities, and financing/loan growth, influence the level of liquid assets of PT Bank Syariah Mandiri (BSM).

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Previous Research

Martawireja (2007) conducted research on the factors which influence the level of liquidity of Bank Syariah Mandiri (2004-2006). The study revealed that there are factors that affect bank liquidity (liquidity buffer level), such as TPF amount, asset availability to be immediately converted to become cash, loan growth, market access between banks, current liabilities, and bank profit. The results from this research reveal that there are two variables which are statistically significant towards the bank liquidity buffer level, meaning TPF and assets that can be readily converted to become cash. TPF has a positive influence towards the liquidity buffer owned by a bank, while the asset availability that is readily converted to become cash has a negative influence on the bank liquidity buffer. Meanwhile, other variables do not have a statistical effect on the bank liquidity buffer.

Nadia (2010) analyzed the factors which influence the level of liquidity of Bank Syariah Mandiri (2007-2009). The dependent variable in the research was bank liquidity in the form of a liquidity buffer. Meanwhile, the independent variables were the amount of TPF, asset availability readily converted to become cash, financing growth, market access between banks, current liabilities, and bank profit. These research results show that all the variables are simultaneously significant towards the bank liquidity buffer level. Partially, there are five variables which have a negative correlation towards the liquidity buffer. Then the current liabilities variable statistically does not influence the bank liquidity buffer level.

Natsir (2012) conducted research on bank liquidity in several regional development banks (BPD) from 2006-2010. One of the parameters used for the liquidity level was the cash ratio in the 11 BPD banks researched. The cash ratio data of the banks studied had great variety between banks in the same annual period or for the same banks in a different period. In the research period (2006), the lowest cash ratio was BPD DKI with a value of 22%, while the cash ratio of BPD Riau had a value of 88%. The cash ratio differences from year to year are highly varied. For instance, the lowest cash ratio of BPD Papua was 26% (2010), while the highest cash ratio was 94% (2007). This reveals that various factors influence the level of bank liquidity.

Bathaluddin, Adhi P, and A.W. (2012) conducted research on the excess liquidity especially on banking industry and its impact on monetary policy on Indonesia from 1997-2010. The result shows that the excess liquidity on bank with their precautionary motive is significantly determined by the volatility of money demand, volatility of economic growth, the bank cost of the bank, and also the lag of excess liquidity, which conform its persistence.

Wuryandani, Ginting, Iskandar, and Sitompul (2014) conducted research on bank liquidity, precautionary bank liquidity, and involuntary liquidity provision. It mentioned that behavior of asset and liabilities management in Indonesian banking indicated a surplus liquidity. The study was done on national banking data from January of 2002 until November of 2011. The results revealed several things. Liquidity for precautionary needs is more influenced by bank operations. Then involuntary liquidity is influenced by the condition of the financial system and macro economy. In small scale banks,

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liquidity is more affected by minimum mandatory current account stipulations. Meanwhile, the level of BI interest rate does not have much of an effect on bank liquidity.

Bank Liquidity

An understanding of bank liquidity is:

Liquidity is the ability of a bank to fund increases in assets and meet obligations as they come due, without incurring unacceptable losses (Bank for International Settlement, 2008).

Liquidity is a bank's capacity to fund increases in assets and meet both expected and unexpected cash and collateral obligations at reasonable costs and without incurring unacceptable losses. (Kumar, 2013).

The condition where a bank is not in a liquid position can be understood through a definition of liquidity risk:

- a. Liquidity risk is the potential loss to an institution offering Islamic financial services arising from their inability either to meet their obligations or to fund increases in assets as they fall due without incurring unacceptable costs or losses (IFSB, 2005).
- b. Liquidity risk is a risk that results from a bank's inability to fulfill due date obligations from the source of cash flow financing and/or from the high-quality liquid assets that can be used, without disrupting the bank's financial condition and activities (OJK, 2016).

Bank liquidity shows a bank's ability to provide cash to meet its required payment responsibilities (IBI, 2016). From an asset perspective (cash balances and account balances at BI and others), liquidity is the ability to change all the assets to become cash. Meanwhile, from a liability perspective (clearing account, bank account, and fixed deposit), liquidity is the ability to fulfill funds through increasing the liquidity portfolio (Arifin, 2009).

A sharia bank can be considered as being liquid whenever (Rusyamsi, 1999); 1) It can maintain reserve requirement according to central bank regulations; 2) It can keep current accounts at correspondent banks. Current accounts at corresponding banks are accounts that can be maintained at corresponding banks with amounts that are determined based on a minimum balance; and 3) It can keep a sufficient amount of cash to fulfill cash withdrawals.

The need for liquidity management has long been observed and become an object of study to overcome critical problems, whether in conventional banks or sharia banks. In sharia banks, this liquidity is arranged by maintaining the sharia principles by avoiding usury. Emphasizing the sharia aspect is important in managing sharia bank liquidity. Liquidity is affected by several things, such as (Arifin, 2003); 1) The level of volatility from customers savings; 2) Asset availability which can be readily converted to become cash; 3) Market access between banks and other financial resources, including lending facilities from the central bank; and 4) The bank's commitment to customers or other parties to provide financing or investments.

Liquidity is very significant for banking, so that BCBS released The Liquidity

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Coverage Ratio (LCR), in which improving bank liquidity that is encouraged by BCBS has several advantages, including (BCBS, 2013); 1) It stimulates strengthening bank sustainability in its liquidity risk profile. This is done by having high quality liquid assets (HQLA) available; 2) It improves banking ability to be able to better absorb shocks arising from financial and economic stress. Thus, reducing the risk of spill over from the financial sector to the real economy.

Liquidity Measuring Instrument

In referring to previous research, the bank liquidity ratio can include several measurements like (Aspachs, 2005; van Greuning, 2009; Natsir, 2010; Boen, 2008; Kumar, 2013; IBI, 2016, & BI, 2018):

- a. Measuring a bank's ability to repay its obligations or customers' savings that have already due with its current liquid assets; or comparing the liquid assets that it possesses with the liabilities that become due; or comparing between liquid assets and TPF that become due, is referred to with the term cash ratio.
- b. Measuring a bank's ability to repay its liabilities with the cash assets it possesses, is referred to as quick ratio.
- c. Measuring a bank's ability to repay its liabilities with securities, is referred to with the term investing policy ratio.
- d. Measuring a bank's ability to repay its liabilities by retracting its credit that had previously been disbursed by the bank, is referred to as banking ratio.
- e. Measuring a bank's ability to fulfill credit requests with the bank's available assets; or comparing between the size of credit that was given by the bank with the size of the total assets that are owned by the bank, is called loan to assets ratio.
- f. Measuring the level of fund investing liquidity in securities, is referred to with the term investment portfolio ratio.
- g. Comparing the amount of credit given by the bank with the funds received by the bank which depicts the bank's ability to repay funds withdrawn by depositors by relying on the credit given as a source of liquidity, is referred to as loan to deposit ratio.
- h. Comparing the amount of credit given by the bank and investment in securities to third party fund/deposit and securities issued (loan), is referred to as macroprudential intermediary ratio or financing to funding ratio.
- i. Comparing volatile liability with total liability. The volatile liability component consists of depositors' funds (deposits) as well as borrowings and bills payable that have a due date within one year.
- j. Comparing assets which are marketable with the amount of volatile liability, which is called volatility coverage.
- k. Comparing the amount of assets which are marketable with all the kinds of TPF (deposit, saving account, current accounts), referred to as bank run.
- l. The liquidity ratio above can describe the factors considered and affect the bank's liquidity position.

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Non-Earning Liquid Asset

Liquidity and profit have opposing sides. The higher the liquidity level, it means the greater the amount of unproductive funds. This means that funds are not channeled maximally, and in the end the bank cannot maximize its profit. Liquidity availability means cost expenditures in the form of (Yamin, 1993); 1) Costs due to holding liquidity assets (cost of maintaining the level of liquidity); and 2) Costs to cover risks whenever there is a lack of liquidity (risk of insufficient liquidity).

To fulfill liquidity, a bank must have non-earning assets in the form of cash or a cash equivalent. Liquidity and profitability in liquidity management are always in opposition, in that (Yamin, 1993); 1) Whenever limited liquid assets are held, then the liquidity costs can be suppressed, but the liquidity disruption risks become greater; 2) Whenever rather large liquid assets are held, then liquidity costs become bigger, but liquidity disruption risks become smaller.

Non-earning assets in sharia banks that arise from transactions or because of obligations have a unique risk that only occurs in sharia banks, which is called Rate of Return Risk (Risiko Imbal Hasil). A Rate of Return Risk is a risk that results from a change to the yield level that is paid by the bank to customers, because there is a change in the yield level that is accepted by the bank from financing/investment, which can influence TPF bank customer behavior.

The liquid assets that are certainly owned by the bank are cash, current accounts in Bank Indonesia, as well as current accounts in other banks. These three kinds of liquid assets have the highest level of liquidity. Cash or a cash equivalent is a liquid asset that does not produce returns or only produces very small returns. In banks, these liquid assets are in the form of:

- a. Available cash in the bank. This cash originates from customers' deposits and withdrawals that must have its amount maintained, so that the bank can serve customers' needs. This bank cash can be in the form of cash availability at the teller, cash in vaults, cash in ATM machines, cash in transit, or petty cash for bank operations. These assets do not produce any returns and incur costs.
- b. Current accounts in the central bank. These clearing accounts are mandatory as a part of having a minimum amount of primary reserves requirement. Besides current accounts, a bank is required to arrange its balances in the central bank as the clearing payment. This asset does not produce any returns. In contrast, if a bank violates its reserve requirement limit, then the bank will be incurred with a sanction by the central bank.
- c. Current accounts in other banks. These current accounts are a part of a bank's needs to do activities between banks like transfers (besides through the central bank), import export activities, or other business activities. These current accounts produce very low returns and incur costs. In sharia banks, whenever these clearing accounts are opened in a conventional bank that provides interest, then this interest can not be considered as a revenue.

Therefore, one of the focuses of a bank's liquidity management is to handle the amount of the liquid asset level in the form of cash and a cash equivalent (current

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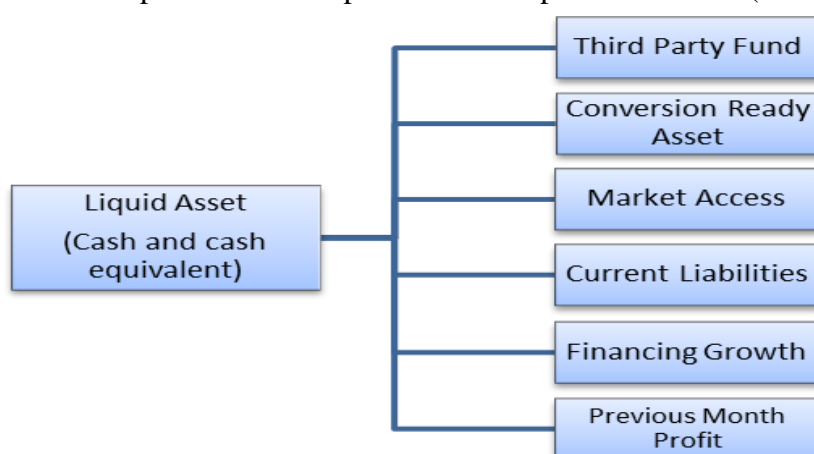
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account) that does not generate any returns. Whenever the cash and the cash equivalent are too large to the point that it remains idle, it will be unprofitable to the bank. An ideal bank's liquidity is a liquidity that create optimum revenue and prevent liquidity risk (Wuryandani, 2014).

Theoretical Framework

Based on the theoretical framework above, a theoretical framework can be outlined where the dependent variable is BSM liquid assets in the form of cash and a cash equivalent, while the independent variables are third-party funds, assets ready converted to become cash, access towards the money market between banks and other financial resources, including the lender of the last resort (LLR) central bank facility, and financing/investments. The understanding of every kind of dependent variable as factors which influence the liquidity asset level are:

- Third-party funds consist of customers' deposit in the form of current accounts, saving account, and time deposits, with akad mudharabah (partnership contract) and akad wadiah (entrust contract).
- Conversion-ready asset refer to readily converted assets to become cash consisting of FASBIS, SBIS (securities issued by BI), SIMA, securities that are owned, and other funding placement in BI and other banks besides current accounts.
- Market access refer to financial resources consist of borrowing instruments from BI, including bank liabilities, and securities that are issued, including the lender of the last resort facility from the central bank.
- Current liabilities are comprised of liability instruments like spot and forward, acceptance liabilities, deposit insurance, deferred tax liabilities, and other liabilities.
- The financing growth arise from financing disburse that are consist of accounts receivable financing, profit sharing financing, ijarah (rent) financing, and equity participation.
- Previous month profit is the net profit from the previous month (M-1).



Pictures 1. Research Hypothesis

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III. METHOD

This research used an analytical descriptive method with a quantitative approach. The research methodology used was as follows:

- The dependent and independent variables were grouped in this research.
- The research variables used were variables from 2016 and 2017 that were taken from a BSM monthly published report of that period.
- A regression method was used to see what variables influenced or did not influence the bank liquid assets to look for a similar model that could depict the relationships between dependent variables and independent variables. The regression method used an SPSS 21.00 program.
- An analysis and an interpretation of the regression processed results were done through a statistical test.

The period chosen was from the 2016 and 2017 period (24 months), as the BSM financial report data was considered suitable to be used as data because: 1) The 2015 period was the year when the sharia banking industry made a recovery from 2014. The year 2014 was the first time in Indonesian Islamic Bank's development periode, the market shares of Islamic banks experienced a negative growth of 4% (Anwar, 2018). In 2014, BSM experienced a business loss which was continued with a sharp increase in profit in the 2015 financial report; 2) In 2015, the BSM financial report experienced an accounting policy change that resulted in an adjustment of costs and profit balance that corrected the company profit loss of 2014 from the total net profit of Rp. 71,778,420,782.00 to become a loss of Rp. 44,810,812,120.00. This can be seen in the 2015 Annual Report of PT Bank Syariah Mandiri.

Both items made the research was focused in 2016-2017, when the banking condition did not experience a significant increase, and there were no accounting policy changes.

IV. RESULT AND DISCUSSION

An analysis was carried out on the data processed output using an SPSS 21.0 application as seen below.

Table 1: Descriptive Statistics

	Mean	Std. Deviation	N
Liquid Assets	5874709.79	1141278.823	24
Third Party Fund	69012053.04	4691407.868	24
Conversion Ready Asset	16571033.08	1684797.688	24
Market Access	952832.71	117439.515	24
Current Liabilities	1697535.29	129573.738	24
FinancingGrowth	400291.29	927926.535	24
Previous Profit	29751.25	55275.550	24

Source: Processed data, 2017

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Correlation

The tables below shows the correlation between variables and the statistical significance:

Table 2: Correlations

	LA	TPF	CRA	MA	CL	FG	PP	Sig.
LA	1.000	.783	.543	.118	.129	.092	.228	-
TPF	.783	1.000	.803	.317	.039	.183	-.077	.000
CRA	.543	.803	1.000	.440	-.012	-.136	-.282	.003
MA	.118	.317	.440	1.000	-.246	.106	.200	.291
CL	.129	.039	-.012	-.246	1.000	.010	.217	.274
FG	.092	.183	-.136	.106	.010	1.000	.328	.335
PP	.228	-.077	-.282	.200	.217	.328	1.000	.142

Source: Processed data, 2017

Analysis of the correlation between variables as revealed in Table 2 above is as follow:

1. There is a rather strong correlation between the third-party funds (TPF) variable and the conversion ready asset (CRA) variable with the liquid asset (LA) variable (correlation above 0.5).
2. The market access variable (MA), current liabilities variable (CL), and financing growth variable (FG), along with previous month profit (PP) have a weak correlation with the liquid asset (LA) variable (correlation below 0.5).
3. To determine whether the correlation between variables is significant, it can be seen in the Sig. value of each variable. The third-party funds (TPF) variable and conversion ready asset (CRA) variable have a Sig. value of 0.000 and 0.003, which is smaller than 0.05. This implies that TPF variable and CRA variable have a significant statistical correlation towards the liquid assets variable. Other variables such as market access, current liabilities, financing growth, dan previous month profit do not have significant statistical correlation.

Variables Selection

The backward method started by entering all variables. Model 1 above has all independent variables, then analyzed. All variables that are not significant offitting the regression model were removedone by one. The second model stated that the variable removedis the conversion ready asset (CRA) variable.

The backward method continued in the third model that stated the current liabilities (CL) was removed. In the fourth model, financing growth (FG) was removed.

Thus, after going through 4 stages, the independent variables that are eligible to be included in the regression model are TPF, MA, and PP variables.

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Model	R	R ²	Adj R ²	SE of the Estimate	DW	F	F Sig.
1	.880 ^a	.775	.696	629607.448		9.762	.000 ^b
2	.880 ^b	.775	.713	611872.529		12.404	.000 ^c
3	.878 ^c	.772	.724	599921.804		16.060	.000 ^d
4	.862 ^d	.742	.704	621290.478	1.159	19.204	.000 ^e

a. Predictors: (Constant), Previous profit, Third Party Fund, Current Liabilities, FinancingGrowth, MarketAccess, ConversionReadyAsset

b. Predictors: (Constant), Previous profit, Third Party Fund, Current Liabilities, FinancingGrowth, MarketAccess

c. Predictors: (Constant), Previous profit, Third Party Fund, FinancingGrowth, MarketAccess

d. Predictors: (Constant), Previous profit, Third Party Fund,MarketAccess

e. Dependent Variable: Liquid Assets

Source: Processed data, 2017

Coefficient of Determination

Analysis of the coefficient of determination as shown in Table 4 above is as follows;

- As mentioned above, there are 4 stages of analysis, where at each stage there are variables that must be removed from the regression. In the table above, Model 1 shows Adjusted R square is 0.696. Then in the second model, by removing the CRA variable (see b Predictor below the table), then Adjusted R square became 0.713 or there was an increase of 0.017. On the third model, it was found that Adjusted R square increased by 0.011 to 0.724;
- In the fourth model or the last model, Adjusted R square decreased from the third model by 0.020 to 0.704. The higher the Adjusted R square is better for the regression model because the independent variable can explain more about the dependent variable. This means that 70.4% of the liquid assets variable can be explained by the TPF, market access, and previous month profit variables. Meanwhile, the remaining 29.6% is explained by other reasons. Keeping in mind that R² was adjusted with a range between 0-100%, it can be said that all the free variables can adequately explain the liquid asset variable.

Besides analysis of the coefficients of determination above, an explanation can also be seen from Table 4, the *Standard Error of the Estimate* column. From the model above, there was a decrease in Standard Error of The Estimate, from 629607,448 (Rp62.9 billion) in Model 1 to 621290.478 (Rp62.1 billion) in Model 4. It shows the *Standard Error of the Estimate* value is smaller than the liquid assets standard deviation of 1141278.823 (Rp114.12 billion). Therefore, the regression model is better in acting as a liquid assets predictor compared to the average liquid assets itself.

Autocorrelation

One of the instruments to test the autocorrelation is by using the Durbin Watson

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(DW) value. A general auto-correlation occurs in the time series data. The DW value, as seen in Table 4 above, depicts a value of 1.159. Based on the DW table of $\alpha = 5\%$, with an observation total of $n=24$ and $k=6$, then the values $d_L = 0.8371$ and $d_U = 2.035$ are obtained. If compared with the DW value = 1.159, then this value is between the d_L value and the d_U value. Based on the rules of using the DW test, whenever $d_L \leq d \leq d_U$, then no conclusions can be drawn.

Anova or F test

Also, can be seen from Table 4, the Anova test or F test, the F count in Model 1 is 9.762. Meanwhile, an F table with v_1 numerator 6 dan v_2 denominator 17 in $\alpha = 5\%$ is 2.70, which means that the F count > F table. Furthermore, the F count in Model 4 is 19.204. Meanwhile an F tabel with v_1 numerator 3 dan v_2 denominator 20 in $\alpha = 5\%$ is 3,10. Since the F count > F table, it can be concluded that H_0 can be rejected, which means that there is a linear relationship in the regression model proposed. The Sig. value can also be compared with the significance degree Sig. $0.000 < \alpha 0.05$. Since the Sig. value is smaller than 5% in all models, it can be concluded that H_0 is rejected, which implies that there is a linear relationship in the regression model put forward.

Table 5: Collinearity Statistics and Collinearity Diagnostics

Variable	Collinearity Statistics	
	Tolerance	VIF
(Constant)		
Third Party Fund	.879	1.137
Market access	.849	1.178
Previous profit	.938	1.066

Source: Processed data, 2017

Multicollinearity

In general, there is no collinearity if the VIF value approaches 1. There are also those who have confidence in that if the VIF value is greater than 5, then the variable will have a multicollinearity issue with the other free variables (Nachrowi, 2006, p. 102). If seen in Table 5, then all the free variables have VIF approaching 1 and are below 5, which means there is no multicollinearity.

Regression Equation Model

The regression model coefficients can be seen in the following table:

Table 6: Coefficients

Variable	Coefficient	Std. Error	T test	Sig
(Constant)	-7024076.169	1970351.557	-3.565	.002
Third Party Fund	.215	.029	7.290	.000
Market access	-2.233	1.197	-1.865	.077
Previous profit	7.072	2.420	2.922	.008

a. Dependent variable: Liquid assets

Source: Processed data, 2017

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In the table above, in the *Unstandardized Coefficient* column, there is a regression equation:

$$Y = -7024076.169 + 0.215X_1 - 2.233X_2 + 7.027X_3$$

where:

Y = Liquid assets

X₁ = Third Party Fund

X₂ = Market Access

X₃ = Previous Month Profit

This equation means:

1. The intercept value reveals that without there being a change in the free variables, then the liquid asset will be reduced by Rp. 70.24 billion.
2. A marked - (negative) regression coefficient means that when the market access are reduced, then the liquid assets will increase.
3. A marked + (positive) regression coefficient means that if third party fund and previous month profit increase, then the liquid assets will increase.

Next, a t test was conducted to test the constant significance and the independent variables based on the probability. If the probability > 0.05 H₀ is accepted, and if the probability < 0.05 H₀ is rejected.

Therefore, it can be concluded that the Sig. value for the constant, third party fund and previous month profit variables are all smaller than 0.05. This means that H₀ is rejected. This implies that the third-party funds and previous month profit variables statistically and significantly influence the liquid assets variable. Meanwhile, the market access variables do not have a statistical influence on the liquid assets variable, because they have a Sig. value greater than 0.05.

V. CONCLUSIONS, SUGGESTIONS AND LIMITATIONS

Conclusion

The research results of the factors which affect the bank liquid assets variable are :

1. The regression test results found that the third-party funds, conversion ready asset, financing growth, current liabilities, and previous month profit variables have significant influence on the liquid assets variable.
2. Variable selection using the backward method up to the fourth model, where regression equation is obtained which consists of three variables, namely third-party funds, market access, and previous month profit.
3. The t test results revealed that the third-party funds and previous month profit variables have a statistical and significant influence on the liquid asset variable. In contrast, the conversion ready asset, market access, financing growth, and current liabilities variables do not have a statistical or significant influence towards the liquid assets variable.

Suggestion

Departing from the conclusions above, the bank must emphasize its focus on the movement or pattern of third-party funds and profits from month to month because they have a significant effect on liquid assets banks.

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Limitation

This study took a relatively short observation period, namely 2016-2017. This study also focused on internal bank factors, excluding external factors such as economic conditions that allegedly influenced the formation of the bank liquid assets. Further research can be done by expanding the model in analyzing the formation of liquid assets, analyzing the influence of economic factors, and expanding the length of the observation period.

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Mendeskripsikan hasil temuan penelitian dalam bentuk tabel dan deskripsi serta mendeskripsikan pembahasan hasil penelitian lebih mendalam khususnya dalam dampaknya dengan obyek penelitian.

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