The Nexus of Profitability and Leverage on Company Cash Holdings: Case Study of Banking Companies Listed on Indonesia Stock Exchange

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ABSTRACT

Cash holding is important for businesses, including those in the banking sector for operational needs and financial health. This study aims to analyse the effect of profitability and leverage on the cash holding of banking companies listed on the Indonesia Stock Exchange. This study aims to analyse the effect of profitability and leverage on the cash holding of banking companies listed on the Indonesia Stock Exchange. This study uses secondary data on banking companies listed on the Indonesia Stock Exchange and the sample of this study was 43 banking companies with an observation period from 2014 to 2017. The research method used statistics analysis a simultaneous test (t-test) with panel data regression analysis. The results of this study indicate that profitability has a positive but insignificant effect on the company's cash holding. However, leverage has a negative but insignificant effect on cash holding. The policymakers should investigate the specific conditions under which leverage impacts cash holding to develop targeted policies. Therefore, policies could encourage companies to prioritize cash holdings over external funding.

INTRODUCTION

Banks are financial institutions that have a strategic role in a country's economy. As an intermediary institution, banks function to connect parties who have surplus funds with parties who need funds, by collecting funds in the form of savings such as checking accounts, savings, and deposits, as well as distributing funds in the form of credit. In addition, banks also play an important role in facilitating the flow of payment traffic (Jatiningrum & Marantika, 2021). In carrying out their role, banks must always maintain a balance between profitability and liquidity. This balance is key to ensuring that banks can generate profits while meeting their obligations in

a timely manner. Liquidity management is one of the important aspects in banking operations. The ability of a bank to meet short-term obligations without having to sell productive assets suddenly or seek funding at high costs reflects the effectiveness of its liquidity management. Funds collected by the bank will be allocated to various types of assets, both assets that generate income (earning assets) and assets that do not directly provide income (non-earning assets). In this management, cash is one of the important components because it is the most liquid asset that can be used directly for operational needs and customer transactions. Proper cash management will provide optimal benefits for the bank, such as ensuring the availability of funds at minimal cost and maximizing profit potential through the allocation of funds to productive assets (Almilia & Silvi, 2006).

According to academic scholars, the level of bank cash holding is influenced by various factors, including profitability and leverage. Profitability reflects the bank's ability to generate profits in a certain period(Jatiningrum et al., 2021). Banks with high profitability tend to have a greater capacity to increase cash balances, either through retained earnings or through other liquidity buffers (Kusmiyati & Hakim, 2020). However, previous studies have shown mixed results regarding the relationship between profitability and cash holding. For example, (Yeboah et al., 2012) concluded that profitability has a significant positive relationship with cash position, while (Xu & Li, 2018) showed that profitability has no significant effect and even has a negative relationship with cash holding.In addition to profitability, leverage is also one of the variables that influence bank cash holding policy. Leverage reflects the level of debt used in a bank's funding structure. Banks with high leverage tend to have the capacity to obtain external funding more easily and cheaply, allowing them to reduce the amount of cash held. However, high leverage can also increase liquidity risk, especially if the bank faces short-term debt repayment pressures. Research by (Ogundipe et al., 2012) found that leverage has a significant effect on cash holding, while research by Jamil et al. (2016) stated otherwise, that leverage does not have a significant effect on cash holding policy.

Based on several previous studies and the discussion above this study aims to analyze the effect of profitability and leverage on the level of cash holding in banks listed on the Indonesia Stock Exchange (IDX) during the period 2014-2017. This study is expected to provide theoretical and practical contributions to understanding the factors that influence cash holding management in the banking sector. From a theoretical perspective, this study can be a reference for the development of financial accounting studies, especially those related to liquidity management and cash holding policies. Meanwhile, in practice, the results of this study are expected to be a guide for banks in determining more effective and efficient cash management policies, as well as providing additional information for investors in making investment decisions.

Understanding the relationship between cash holdings and business value, where a conflict of interest may arise due to the division of ownership (principal) and control (agent) in an organisation, requires an understanding of agency theory. Financial statements made using accounting figures are supposed to reduce conflicts between interested parties, according to (Jensen & Meckling, 1976). In this context, cash holdings are closely related to agency theory, where high cash holdings can trigger agency conflicts because managers as agents have the potential to misuse these liquid assets for personal gain. According to (Chen et al., 2020), cash holdings are the most liquid assets and the most vulnerable to misuse. This theory suggests that a company can be viewed as a contractual relationship between resource owners and managers, such as between shareholders and managers, and between lenders and shareholders (Jinkar,

2013).

      Furthermore, which is the document "Internationally Convergence of Capital Measurement and Capital Standard - A Revised Framework" issued by the Basel Committee on Banking Supervision, aims to improve the safety and soundness of the international financial system by emphasizing risk-based capital calculations, supervisory processes, and market discipline. The implementation of Basel II in G10 countries is planned for the end of 2006, although other countries have different priorities. A survey conducted in August 2004 showed that Indonesian banks generally understand the objectives and benefits of Basel II, although there are still challenges in implementing risk management and information technology infrastructure.

      In the context of cash holdings, the amount of cash a company has to run its operations is very important. Cash is the most liquid asset, but it has a lower rate of return than other investments. Therefore, companies must manage cash holdings efficiently to avoid missing investment opportunities or liquidity problems. Cash holdings can be measured by the ratio of cash and cash equivalents to total assets. Profitability, which measures a company's ability to generate profits from its business activities, is important. Profitability ratios, such as Return on Assets (ROA), are used to evaluate a company's performance, where good performance will be reflected in management's ability to maximize profits (Kusmiyati & Hakim, 2020).

      There are conflicting arguments regarding the relationship between cash holding and firm performance. Leverage, which measures how much a firm uses debt to finance its assets, also affects cash holdings. The debt-to-total-assets ratio indicates the firm's leverage level, where high debt usage can increase profitability but also increase risk (Adi et al., 2020). Previous studies have shown a relationship between cash holdings and various factors, such as profitability, firm size, and debt structure. For example, (Borici & Kruja, 2016)) found that certain variables influence the cash holdings decisions of non-financial firms, while (Ginglinger & Saddour, 2007) showed that firms with strong shareholder rights tend to have higher cash holdings. A study by (Ogundipe et al., 2012) found that cash flow, net working capital, and profitability significantly affect cash holdings in Nigeria.

      The framework of this study shows that cash holding is a ratio that compares the amount of cash and cash equivalents with the company's total assets. Good cash holdings management can provide benefits, such as trade discounts and the ability to meet unexpected cash needs. Financial managers play an important role in determining the optimal level of cash holding. High profitability can increase cash holding because retained earnings can be used as a buffer, as explained by (Yeboah et al., 2012) which shows that banks with high profitability tend to have larger cash holdings. On the other hand, high leverage can reduce cash holding, because companies can use debt to meet funding needs, as found by (Ferreira & Vilela, 2004). Based on this framework, the research hypothesis is formulated as follows:

H1: It is suspected that there is an effect of Profitability on Cash Holding
H2: It is suspected that there is an effect of Leverage on Cash Holding.

RESEARCH METHOD

      Research methodology is an important part of a study that explains how the study is conducted to achieve the stated objectives. In this study, the object studied is the characteristics inherent in the research subject, which in research terminology is referred to as the research variable (Nuryaman et al., 2015). The object of this study includes Profitability and Leverage on Cash Holding in banking companies listed on the Indonesia Stock Exchange (IDX) during the period 2014-2017.

This study uses banking samples listed on the Indonesia Stock Exchange with the following criteria. This study uses banking samples listed on the Indonesia Stock Exchange with the following criteria.

Table.1 Research Sampling Criteria

No.	Sample Criteria	Total
1.	Company no de-*listing* in observation period 2014-2017	46
2.	Banking companies listed on the Indonesia Stock Exchange that do not meet the research variable criteria	(1)
3.	Financial Statement Non-audited in the Observation Period	(2)
Total Banking Companies as Research Sample		**43**

source: ***www.idx.co.id***

The research method used in this study is the verification method. The verification method is a study included in hypothesis testing, which aims to explain the nature of a particular relationship or determine differences between groups (Sekaran, 2013). This study aims to re-examine the results of previous studies in order to verify the truth of the results. In this study, there are three operationalized variables, namely the dependent variable (cash holding) and two independent variables (profitability and leverage). The ratio, given as a percentage (%), between the company's cash and cash equivalents and its non-cash assets is used to measure the dependent variable, cash holding. Return on assets (ROA) is used to assess the independent variable of profitability, while the ratio of total debt to total assets is used to quantify leverage.

Operational Variables and The Measurements Variables
Table 2. Variables and Measurements

No	Variables	Definition	Measurement
1	Dependent Variable **Cash holdings**	refers to a company's liquid assets, including currency, bank accounts, and marketable securities. It measures a company's ability to pay short-term obligations with its current assets, including cash.	Current Ratio: Calculated by dividing current assets by current liabilities (Xu & Li, 2018)
2	Independents Variables **Profitability**	The ability of a business to turn a profit in relation to its costs is measured by profitability. It shows how well a company turns costs into revenue for its owners. Return on assets (ROA), a financial statistic that gauges a company's profitability in relation to its total assets, is used in this study as a proxy for profitability. Net income is divided by average total assets to determine ROA.	*Return On Asset* $= \dfrac{\text{Net Income}}{\text{Average Total Aset}}$ (Adi et al., 2020)
3	**Leverage**	refers to the extent to which a company uses debt to finance its assets. This ratio indicates the proportion of a company's assets that are financed through debt, as opposed to equity. A higher ratio suggests greater financial risk, as it indicates that a larger portion of the company's assets is funded by creditors.	$Leverage = \dfrac{\text{Total Debt}}{\text{Total Asset}}$ (Jatiningrum et al., 2016; Jatiningrum & Marantika, 2021)

Analysis Method

This study uses panel data analysis. Panel data is a combination of cross-section data with time series data. The use of panel data can explain two types of information, namely information between units (cross sections) on differences between subjects, and information between times (time series) that reflects changes in the subject of time. Statistical tools in the analysis using E Views. EViews is a powerful software used for statistical analysis, particularly in econometrics. EViews supports ordinary least squares (OLS) and other methods like robust standard errors and weighted least squares.

RESULTS AND DISCUSSION

In order to give general information about the sample's characteristics, descriptive statistical analysis is reported as the average, standard deviation, maximum value, and lowest value. Table 3 shows descriptive statistics for the variables Profitability, Leverage, and Cash Holding.

Table 3. Descriptive Statistics

	CASH_HOLDING	PROFITABILITY	LEVERAGE
Mean	0.179164	0.644873	0.806949
Median	0.151703	0.854255	0.850824
Maximum	2.796865	11.04600	0.947937
Minimum	0.000166	-11.72767	0.000864
Std. Dev.	0.215279	2.054344	0.175985
Skewness	10.70895	-1.717638	-3.536772
Kurtosis	129.1429	15.98206	14.87985
Jarque-Bera	117323.8	1292.401	1370.022
Probability	0.000000	0.000000	0.000000
Sum	30.81618	110.9181	138.7953
Sum Sq. Dev.	7.925039	721.6762	5.295994
Observations	172	172	172

Source: reviews output 9

Based on Table 3, shows that variable projected profitability through return on assets (ROA) has an average of 0.644873, which shows the average profit clean compared to total assets during the period 2014-2017 is 0.65% per year. The standard ROA deviation of 2.054344 indicates that during a four-year observation, there is a deviation of ROA variation from the average by 2.05%. The average value is small compared to the standard deviation showing that the difference between ROA between company banking listed on the Indonesia Stock Exchange is relatively small and tend to be similar. As long as period observation, the lowest ROA was recorded by PT Bank of India Indonesia Tbk (BSWD) with a value of -11.73%, while the highest ROA was achieved by PT Bank Panin Dubai Syariah Tbk (PNBS) with a value of 11.05%.
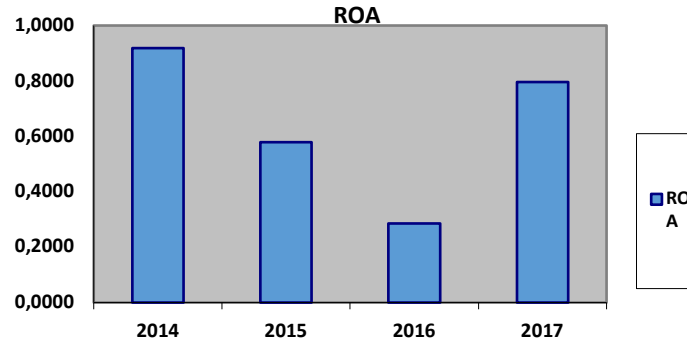
Figure 1. ROA

Based on Figure 1, the Profitability variable has an average calculation (mean) of 0.644873, which means 0.65 % of the profit owned by the company. on utilization of the assets it owns. This portion shows that on average the company has a high level of return profit positive loss against assets owned by the company. The Leverage variable projected with the debt to asset ratio has an average calculation (mean) of 0.806949, which means that the company own percentage high debt in do management operational company.

Table 4. Multicollinearity Test Results

Coefficients ª

Model	Collinearity Statistics	
	Tolerance	VIF
1 (Constant)		
Profitability	.948	1,054
Leverage	.948	1,054

a. Dependent Variable: Cash_Holding

Based on the table above, it can be concluded that there is no multicollinearity problem. In the Profitability variable (X1), the Variance Influence Factor (VIF) value of 1.054 is smaller than 10. In the Leverage variable (X2), the Variance Influence Factor (VIF) value of 1.054 is smaller than 10. Autocorrelation means the existence of a correlation between one observation member and another observation at different times. In the context of the least squares (OLS) approach, autocorrelation refers to the correlation between two or more residuals. It is a fundamental premise of the OLS residuals approach that no residual is related to any other residual. Using the Durbin-Watson approach, the autocorrelation test result is as follows.

Table 5. Autocorrelation Test Results

Model Summary

Model	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	-0.011	0.2163018	1.757

a. Predictors: (Constant), Leverage, Profitability
b. Dependent Variable: Cash Holding

From the Table 5 above, the value of d is 1.757. This value is then compared with the

values of d $_L$ and d $_U$ in the Durbin-Watson table. For α = 0.05, k = 2 and n = 172, obtained d $_L$ = 1.7271 and d $_U$ = 1.7 741. Since d $_L$ < U < d$_U$, it is concluded that the model is not known to contain autocorrelation.

Table 6. The result of Panel Data Regression Results Using the *Common Effect Model*

Dependent Variable: CASH_HOLDING
Method: Panel Least Squares
Sample: 2014 2017
Periods included: 4
Cross-sections included: 43
Total panel (balanced) observations: 172

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.210332	0.081029	2.595776	0.0103
PROFITABILITY	0.000466	0.008274	0.056260	0.9552
LEVERAGE	-0.038997	0.09 6590	-0.403734	0.6869

R-squared	0.001101	Mean dependent variable	0.179164
Adjusted R-squared	-0.010721	SD dependent var	0.215279
SE of regression	0.216430	Akaike information criterion	-0.205808
Sum squared residual	7.916317	Black criterion	-0.150909
Log-likelihood	20.69945	Hannan-Quinn criteria.	-0.183534
F-statistic	0.093100	Durbin-Watson stat	2.206945
Prob(F-statistic)	0.911149		

Source: Processed results Eviews 9

Based on the data in the table above, the equality panel data regression for the study:

$$Y = 0.2103 + 0.0005 \, X1 - 0.0390 \, X2 \tag{1}$$

The equation interprets:

The coefficient intercept in the regression model is 0.2103 which shows that at the time Profitability and Leverage were The same at zero, then Cash Holding in the company banking period 2014 to 2017 it increased by 0.2103. Coefficient regression Profitability of 0.0005 indicates that if regression Profitability increases as big as One unit, then Cash Holding in the company banking period 2014 to 2017 will increase by 0.0005 with assumption variable other considered constant. Coefficient regression Leverage of -0.0390 indicates that in the composition Leverage increases as big as One unit, then Cash Holding in the company banking period 2014 to 2017 will down of 0.0390 with assumption variable other considered constant.

Table 7. The Results Study

Variables	Sig	Alpha	t count	t table	Criteria Significance
Profitability	0.9552	0.05	0.0563	1.97 4	No Significant
Leverage	0.6869	0.05	-0.4037	1.97 4	No Significant

Source: Processed results Eviews 9

Based on Table 7, presents the calculated t value for Profitability is 0.0563. Because the calculated t for Profitability more smaller than 1.974 then H0 is accepted, meaning that the projected profitability with return on assets is partially influential positive and Not significant to Cash Holding. Calculated t value for Leverage of -0.4037. Because the t count for Leverage

more smaller from 1.97 4 then H0 is accepted, meaning that Leverage has a partial negative effect No significance against Cash Holding.

Based on Figure 1, part of big company banking listed on the Indonesia Stock Exchange for the 2014-2017 period shows positive profitability, indicating that the average company produces profit from the activity of its operations. However, research shows that measured profitability with return on assets (ROA) has a influence positive that is not significant against cash holding. This is due to the complex management of high assets, ineffectiveness, and inefficiency in producing cash availability, so that profit No ensures adequate cash holding. Research This is different from (Yeboah et al., 2012) and (Ogundipe et al., 2012) who found a connection significant between ROA and cash holding. Based on Figure 4.2, the average leverage of 0.806949 shows a large portion of debt in the company capital structure, with low data variability. Research results show leverage is an influential negative However No significance on cash holdings. The higher the leverage, cash availability increases Because used For fulfilling obligation term short. Management's lack of finances effectively causes funding to not be utilized optimally to generate returns, which increases the debt burden and reduces cash holding. Research This is contradictory to (Ozkan & Ozkan, 2004) findings show that leverage has an effect negative on cash holding.

CONCLUSION

The results of the study on the effect of Profitability and Leverage on Cash Holding in banking companies listed on the Indonesia Stock Exchange during 2014-2017 show that Profitability, as measured by Return on Asset, has a positive but insignificant effect on Cash Holding, while Leverage, which is projected through the Debt to Asset Ratio, has a negative and also insignificant effect on Cash Holding. Based on these findings, it is recommended that companies evaluate cash flow projections, especially those related to operational cash flow, and consider the proportion of cash on hand concerning profit achievement. In addition, companies need to improve control and supervision in financial funding activities to anticipate loss conditions and take quick corrective actions. For further research, it is recommended that researchers increase the number of samples and replace indicators that can affect Cash Holding, so that they can obtain better predictors and provide more beneficial results for economic development in Indonesia, especially for companies listed on the Indonesia Stock Exchange.

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