

Liquidity And Profitability And Their Effect On Use Of Working Capital

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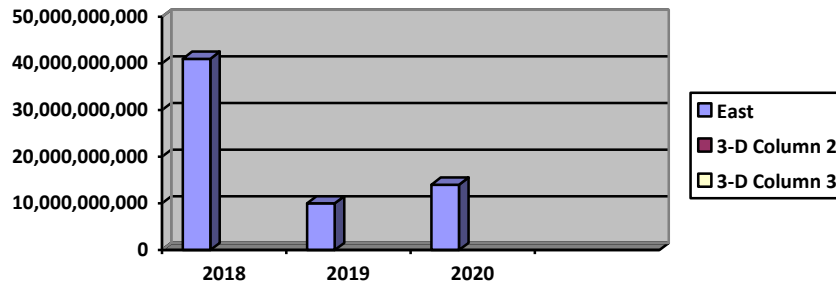
Abstract: *This study aims to analyze the impact of liquidity and profitability on the use of PDAM working capital in the city of Makassar. The research population is based on PDAM Makassar City's 2013-2020 quarterly financial statements, and the purposive sampling technique is used for the 8 years financial statements to obtain 32 research samples. By using the IBM SPSS Ver.23 application to perform multiple linear regression analysis on research statistics, hypothesis testing, and classical hypothesis tests, including the normality test, the autocorrelation test, the multicollinearity test, and the heteroskedasticity test. When testing hypotheses, the t-test, the f test, and the determinant R2 test are used. The results show that the liquidity variables have a significant positive impact on the use of working capital and the profitability variables have a negligible negative impact on the use of working capital. The adjustment of R2 is 0.285 or 28.5%, which explains the range of changes in the two independent variables, and the remaining 71.5% is explained by other variables not included in this study.*

Keywords: *Liquidity (CR), Profitability (ROE), Use of Working Capital (WCT)*

INTRODUCTION

PDAM (Perusahaan Daerah Air Minum) of Makassar City itself is one of the most successful regional companies currently in the city of Makassar. One of the factors that are the key to success is how PDAM Makassar City manages the source and use of its capital. However, based on information compiled by FAJAR.co.id with a link (New Director of PDAM Makassar Inaugurated, Leaks Become a Big Task – <https://fajar.co.id/2020/02/18>). The results of the examination of the Supreme Audit Agency (BPK), the directors for the 2015-2019 period noted a fairly large revenue leak that had an impact on reducing the amount of PDAM revenue for the current year which then resulted in a reduced net profit calculation. For example, in 2018, PDAM Makassar City paid a dividend of Rp. 41 billion, whereas in 2019, PDAM Makassar City could only deposit Rp. 10 billion only, and in 2020 PDAM Makassar City can increase profit achievement by Rp. 14 billion. Changes in the level of achievement of PDAM Makassar City looks like the following:

Figure 1: The level of achievement of PDAM Makassar City



The graph above shows that the decline in the revenue level of PDAM Makassar City occurred in 2019 with a percentage decrease of 75.6% and in 2020 it increased by 40%. This writer assumes that the decline in the level of revenue achievement of PDAM Makassar City is inseparable from the ability of PDAM Makassar City to maintain liquidity, profitability, and the use of working capital, this research is supported by past research, by (Lin Syafriati and Bibi Zia Respit, 2016) which states that liquidity and profitability affect the use of working capital.

In a Capital Company as a resource that is used every day, it must be controlled as well as possible so that it can be used for the company's needs every day. (Pertiwi, 2016)

Liquidity is the company's ability to settle short-term debt according to (Subramayam, 2010), while according to (Feed, Weston, 2010) liquidity describes the ability to pay off obligations, such as if the company gets a bill, the company will be able to pay the debt, especially debt that has matured.

Profitability For (Munawir, 2000) is the company's expertise in creating profits over a certain period as measured by the company's expertise in using its assets productively by equating profits with assets or capital.

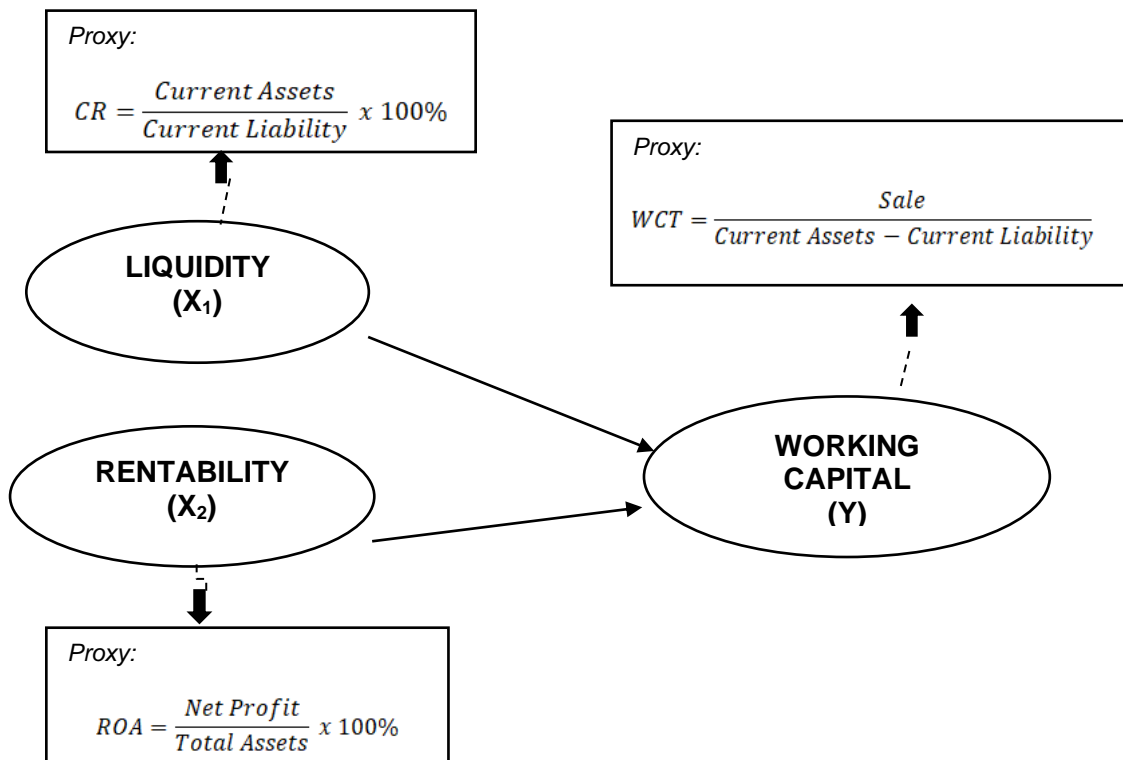
Liquidity and profitability are the factors of the highest use of working capital besides inventory, it illustrates the higher the company's cash inventory, the higher the level of liquidity, which means the company has a smaller risk. Being able to meet its financial obligations means the company has to work hard to maintain a cash supply because the more cash, the more unused funds, which reduces your profitability. However, companies should not only pursue profits because if all cash is turned over one day the company cannot pay debts that are due (Riyanto, 2014).

Conceptual Framework and Hypotheses

Conceptual Framework.

Based on the theory and past research, the conceptual framework is described below:

Figure 2 Conceptual Framework



Hypothesis

H1 = Liquidity (CR) has a positive and significant effect on the Use of Working Capital (WCT).

H2 = Profitability (ROE) has a negative and significant effect on the Use of Working Capital (WCT).

RESEARCH METHODS

Liquidity (X₁)

If a company can pay its obligations on schedule, it should be in a "liquid" state, implying that it is very good and can be clarified that the company has high enough cash or current resources that are higher than current liabilities. Furthermore, on the contrary, assuming the company cannot pay the obligations that have developed, the company is not in a "liquid" state (Kasmir, 2008). The ratio that can be used is the current ratio with the equation:

$$\text{Current Ratio (CR)} = \frac{\text{Current Assets}}{\text{Current Liability}} \times 100\%$$

Profitability (X₂)

Profitability For (Munawir, 2007) is the company's expertise in creating profits during a certain period by equating profits with assets or capital. Reliability can be measured using the formula. Profitability for (Munawir, 2007) is the company's expertise in creating profits over a certain period by equating profits with assets or capital. Reliability can be measured using the formula:

$$\text{Return On Assets (ROA)} = \frac{\text{Net Profit}}{\text{Total Assets}} \times 100\%$$

Working Capital Turnover (Y)

The process of cash turnover in working capital. Working capital turnover shows how much the company's working capital rotates in one year. If the working capital turnover period is shorter, the working capital turnover rate will be higher. (Riyanto, 2010) formulates for calculating working capital turnover as follows:

$$WCT = \frac{\text{Sale}}{\text{Current Assets} - \text{Current Liability}}$$

The place of research is PDAM Makassar City Office on Jalan Ratulangi No.03 Makassar. The length of the research is about two months (June-July) in 2021 which is used to obtain relevant data from PDAM Makassar City with the aim that it can be processed and researched properly and then the results are assessed.

The sample used in this study is the financial statements of PDAM Makassar City per quarter from 2013 to 2020 or for 8 (eight) years.

Data analysis

The analysis used in this study is multiple regression analysis which is used to analyze liquidity (X1), and profitability (X2) which is the independent variable on the use of working capital (Y), namely the dependent variable, the aim is to study the relationship of the independent variable (X) to the variable. dependent (Y).

$$Y = \alpha + \beta_1 X_1 + \beta_2 X_2 + e$$

Note :

Y	= Working Capital
X ₁	= Liquidity
X ₂	= Profitability
β ₁ - β ₂ - β ₃ - β ₄	= Regresi Coefisient
α	= Constan Value
e	= Residual Variable

RESEARCH RESULTS AND DISCUSSION

The data from this study are the financial statements of PDAM Makassar City, for the 2013-2020 period seen from quarterly reports, so the number of observations is 8 years x 4 quarters = 32 observations. Sampling was based on the balance sheet, income statement, and cash flow statements of PDAM Makassar City Company to determine the value of the liquidity ratio (CR) and Profitability (ROA) to the use of working capital. The company data are as follows:

Liquidity

The results of the current ratio (CR) for each period at the Makassar City PDAM company, during 2013-2020 are:

Table.1 Liquidity Data of PDAM Makassar City as the Sample

No	Years	Quarterly	Current Ratio (CR)
1	2013	I	1.35069
2		II	3.28442
3		III	6.19917
4		IV	7.14142
5	2014	I	2.04792
6		II	4.81403
7		III	6.66983
8		IV	9.37023
9	2015	I	2.11248
10		II	4.05444
11		III	4.74745
12		IV	6.55077
13	2016	I	1.55892
14		II	5.07314
15		III	2.17526
16		IV	7.1745
17	2017	I	1.39125
18		II	5.40636
19		III	9.1714
20		IV	12.3875
21	2018	I	6.65379
22		II	11.68426
23		III	15.68148
24		IV	21.63215
25	2019	I	2.45221
26		II	7.29329
27		III	9.72811
28		IV	16.15544
29	2020	I	2.0106
30		II	4.00006
31		III	6.71489
32		IV	10.40688
Mean			6.78420
Minimum			1.35069
Maximum			21.63215

Source: PDAM Company (2021)

Profitability

The return on assets value for each period at the Makassar City PDAM Company, during the 2013-2020 period is as follows:

Table.2 Return on Assets Data at PDAM Makassar City which became the sample:

No	Years	Quarterly	<i>Return On Asset (ROA)</i>
1	2013	I	0.02149
2		II	0.04702
3		III	0.07081
4		IV	0.06487
5	2014	I	0.0269
6		II	0.05138
7		III	0.07444
8		IV	0.09971
9	2015	I	0.05133
10		II	0.0433
11		III	0.05032
12		IV	0.04887
13	2016	I	0.02613
14		II	0.04077
15		III	0.04603
16		IV	0.04766
17	2017	I	0.00729
18		II	0.01745
19		III	0.01922
20		IV	0.01071
21	2018	I	0.01451
22		II	0.04052
23		III	0.05389
24		IV	0.03194
25	2019	I	0.00763
26		II	0.02169
27		III	0.03286
28		IV	0.03806
29	2020	I	0.00638
30		II	0.01803
31		III	0.02697
32		IV	0.04665
Mean			0.03765
Minimum			0.00638

Maximum	0.09971
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Use of Working Capital

The value of the Working Capital Turnover results for each period of the Makassar City PDAM Company, during the 2013-2020 period is as follows:

Table.3 Data on Working Capital Turnover of PDAM Makassar City Company which became the sample:

No	Years	Quarterly	<i>Working Capital Turnover (WCT)</i>
1	2013	I	2.25518
2		II	1.08333
3		III	1.18051
4		IV	1.35883
5	2014	I	4.42382
6		II	3.82391
7		III	4.80422
8		IV	1.07542
9	2015	I	2.34969
10		II	3.76488
11		III	1.03234
12		IV	1.65131
13	2016	I	4.35594
14		II	5.78081
15		III	1.89827
16		IV	1.30996
17	2017	I	2.29888
18		II	3.71179
19		III	5.0974
20		IV	3.07983
21	2018	I	4.9132
22		II	5.46561
23		III	8.14777
24		IV	6.83979
25	2019	I	1.66715
26		II	4.18578
27		III	3.41678
28		IV	2.12691
29	2020	I	3.49818
30		II	2.29772
31		III	5.54692
32		IV	4.82236
Mean			3.41452
Minimum			1.03234
Maximum			8.14777

Source: PDAM Company (2021)

Normality Test Results

The results of the Normality Test seen from the Kolmogorov-Smirnov table can be known whether or not the distribution of the data obtained is normal on the following basis:

1. Data is normally distributed if $KS > 0.05$
2. And if the value of $KS < 0.05$, it is said that the distribution is not normal

Here are the test results obtained:

**Table 4 Normality Test Results
One Sample Kolmogorov – Smirnov Test**

		Unstandardized Residual
N		32
Normals. Parameters^b	Mean	0.000000
	Std. Devices	1.56225355
		0.068
Test. Statistik		0.110
Asymp.Sig (2-Failed)		.200^{c,d}

Sources: analysis data SPSS. v23 (2021)

By looking at the results of the Kolmogorov-Smirnov (K-S) statistical test, it can be concluded that the normality test is.

Heteroscedasticity Test

In the regression model, there should be no heteroscedasticity. The basis for making decisions in this test are:

1. It is said that there is no heteroscedasticity if the significant value is > 0.05
2. It is said that there is heteroscedasticity if the significant value is < 0.05

**Table.5 Heteroscedasticity Test (Uji Glesjer)
Coefficients"**

Model		Unstandardized coefficients		Standardized Coefficients	t	Sig.
		B	Std Error	Beta		
1	(constant)	0.666	0.328		2.032	0.051
	Liquidity	0.046	0.030	0.263	1.505	1.143
	Profitability	8.712	6.705	0.227	1.299	0.204
a. Dependent Variable RES 2						

Based on table.5.7 the value of the liquidity variable (X1) = 0.143 and Profitability (X2) = 0.204, indicating that there is no heteroscedasticity because the value of X1 and X2 variables is above 0.05

Multiple Linear Regression Analysis

This method is directed to decide the extent to which the independent variable affects the dependent variable. In different regressions, there is one dependent variable and more than one independent factor. The dependent variable is the use of working capital (Y) while the

independent factors are Liquidity (X1) and Profitability (X2). The following are the results of the various analyzes carried out:

Table. 6 Multiple Linear Regression Analysis. Coefficients''

Model		Unstandardized coefficients		Standardized Coefficients	t	Sig.
		B	Std Error	Beta		
1	(constant)	3.031	0.666		4.548	0.000
	Liquidity	0.194	0.062	0.502	3.148	0.004
	Profitability	-24.699	13.630	-0.289	-1.812	0.080
a. Dependent Variable RES 2						

From the table above, by looking at the numbers in the Unstandardized Coefficients Beta segment, it tends to be seen that the computational results of the SPSS 23 program in question are obtained by the following equation: SPSS 23 program in question obtained the following equation:

$$Y = a + \beta_1 X_1 + \beta_2 X_2 + e$$

$$Y = 3.031 + 0,194 X_1 - 24,699 X_2 + 0,666$$

Keterangan :

- Y = Use of Working Capital
- X₁ = Liquidity
- X₂ = Profitability
- β₁ - β₂ = Regresi Coefficient
- α = Contanta Value
- e = Variabel Residul

The equation above can be interpreted as follows:

Constant number with a positive sign = 3.031 indicates that if there is an increase of 3.03% then the increase will be followed by an increase in other variables with the same magnitude. The liquidity coefficient is positive at 0.194 which means that every 1% expansion of liquidity will build working capital utilization by 1.94% when different factors remain consistent.

The negative coefficient of profitability is -24,699 which means that for every 1% increase in profitability, it will reduce the use of working capital by 2.46% when other variables are fixed.

Table.7 T-Test Result Coefficients''

Model		Unstandardized coefficients		Standardized Coefficients	t	Sig.
		B	Std Error	Beta		
1	(constant)	3.031	0.666		4.548	0.000
	Liquidity	0.194	0.062	0.502	3.148	0.004
	Profitability	-24.699	13.630	-0.289	-1.812	0.080

a. Dependent Variable RES 2

From the table, it is obtained t-count for each independent variable, namely liquidity of 3,148, and profitability of 1,812.

Effect of Liquidity (CR) on the Use of Working Capital (WCT)

Based on the t-test criteria in the table above, liquidity (CR) is $t\text{-count}.3.148 > t_{tab}.1.697$ and significant at the level of confidence ($\alpha=0.05$), with a significant value obtained is 0.004 by him in this study the error at the 5% level concluded that The research hypothesis is accepted. So it can be said that the liquidity ratio (CR) has a positive influence on the use of working capital (WCT).

The Effect of Profitability (ROA) on the Use of Working Capital (WCT)

Based on the t-test test criteria in the table above, Profitability (ROA) is $t\text{-count}.1.812 > t_{tab}.1.697$ and significant to confidence ($\alpha=0.05$) with a significant value obtained is 0.080, therefore in this study at an error rate of 5% it was concluded that the research hypothesis was accepted. , so it can be said that the variable Profitability (ROA) has a significant negative effect on the use of working capital (WCT).

Effect of Liquidity (CR) on the Use of Working Capital (WCT)

Based on the hypothesis, the higher the liquidity (CR), the higher the utilization of Working Capital (WCT). This shows that there is a positive relationship between Liquidity (CR) and Working Capital Utilization (WCT). The results of the regression analysis show that the variable x_1 Liquidity has a positive and significant effect on the use of working capital at PDAM Makassar City for the 2013-2020 period. The positive value of the regression coefficient of the profitability variable is 0.194, meaning that if the value of the coefficient of the other variables remains the same, the change in the profitability variable of 1 (unit) will increase the use of working capital by 0.194. So the increasing liquidity in the company will result in increased use of working capital.

Research conducted by Muhammad Safar (2016), and Lin Syafrianti (2010) also supports this research, namely that liquidity has a significant positive influence on the use of working capital. This significant result is due to the Makassar City PDAM which is used as a sample can fulfill its obligations that must be paid. The higher the use of working capital applied in the company will result in increased use of cash which has the potential to increase profitability so that the company will be able to maintain its liquidity.

The Effect of Profitability (ROA) on the Use of Working Capital (WCT)

Based on the theory, the higher the Profitability (ROE), the lower the Working Capital Use (WCT). This shows that there is a negative relationship between Profitability (ROE) and Use of Working Capital (WCT). The results of the regression analysis show that the Profitability variable (X_2) has a negative and insignificant effect on the Use of Working Capital (Y) at PDAM Makassar City in 2013-2020. This can be seen from the significance value of the t-test, namely, 0.080 above the error level (α) 0.05, and the result of the t-count value is lower than the t-tab. The negative value of the regression coefficient of the Profitability variable is 24,699, meaning that if the coefficient value of the other variables remains constant, the change in the Profitability variable of 1 unit will reduce the use of

Working Capital by 24,699. so the decrease in profitability in the company will cause an increase in the use of working capital.

This supports the hierarchical hypothesis (pecking order theory), to be more specific, organizations, in general, will decide to use their capital instead of using obligations to finance their business because they have a high rate of return (benefits) that can be used as working capital. However, the company's financial administration needs to understand the impact of the choices to be made in determining the combination of sources of subsidies. The higher level of significance is 0.080 which causes the results to be insignificant from this study. In determining the effective use of working capital by the Makassar City PDAM company, it is necessary to consider an increase in profit which will reduce the level of profitability.

CONCLUSIONS AND SUGGESTIONS

Conclusion

The conclusion of the analysis that has been carried out is as follows:

- 1). Liquidity (CR) has a significant positive effect on the use of working capital (WCT) at the Makassar City PDAM for the 2013-2020 period.
- 2). Profitability (ROA) has an insignificant negative effect on the use of Working Capital in PDAM Makassar City for the 2013-2020 period.

Suggestion

From the results of the research conducted, the following suggestions can be taken:

- 1). It is recommended that the Makassar City PDAM Director be more efficient in the use of working capital and manage it as well as possible to achieve company profits by reducing costs that are not important in the company's operational activities.
- 2). In the use of working capital, PDAM Makassar City should maximize assets as a source of working capital by using cash as best as possible.
- 3). The Makassar City PDAM company must maximize receivables so that cash conditions can be maintained as a source of using working capital so that Liquidity and Profitability are maintained.

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