

Hospital Financial Performance: Perspective Cash Conversion Cycle

(Study at Regional Public Service Agency Hospital in East Nusa Tenggara Province)

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Abstract:- This study aims to explore the direct and indirect effects of Cash Conversion Cycle on Financial Performance with Debt as moderating variables of Regional Public Service Agency for the 2014 – 2018 periods. The research method used in this research is quantitative methods. The sample of this study was 6 hospitals. The analysis in this study uses Eview analysis 10. The results of the analysis show that Cash Conversion Cycle affects directly Financial Performance and debt can moderate the Cash Conversion Cycle on Financial Performance.

Keywords:- Cash Conversion Cycle, Debt, Financial Performance.

I. INTRODUCTION

Hospitals are health service institutions for the community in the clinical medical field and their management is very unique because on the one hand as a Regional Public Service Agency it is given the flexibility of management as a business unit, but on the other hand it has a social mission. Therefore, to maintain the balance of the situation and demands of the community that are often faced, the decision makers in the field of health services, especially hospitals, must really understand that hospital management is carried out professionally by paying attention to economic principles properly so that the hospital can operate more effectively and efficiently so that the hospital's financial performance is better in line with the goals and objectives of the establishment of the Regional Public Service Agency.

The Financial Management Pattern of Regional Public Service Bodies provides flexibility in financial management because society and the world are moving dynamically, so that government agencies carrying out public services need to follow this dynamism. This flexibility requires good governance in order to provide added value to the community, government, investors, leaders and employees of the Regional Public Service Agency and other stakeholders. This is in line with the objective of establishing a Public Service Agency, namely to provide more flexibility to work units that earn revenue from services to manage existing resources so that service delivery to the community becomes more efficient and effective (Minister of Home Affairs Regulation Number 61 of 2007).

In the health service sector, one of the components that can be used to measure the quality of hospital services and performance is efficiency. This is consistent with the view of Donabedian (2003) in Irwandy (2019) which states that "the components of health service quality consist of efficacy, effectiveness, efficiency, optimality, acceptability, legitimacy and equity". Efficiency is the optimal use of a hospital's input to be able to produce maximum output by considering the resources it has. Therefore, the performance assessment of hospitals as public sector institutions is absolutely necessary to assess how successful the mission of the public sector can be achieved, the increase in the achievement of the hospital's goals as a public service and whether regional financial resources have been implemented as expected or not.

Flexibility is given to Regional Public Service Bodies in the framework of planning and budget execution, including revenue and expenditure management, cash management, and procurement of goods/services as well as accountability. Therefore, hospitals are required to conduct performance appraisals to assess how services are provided to the community, including financial performance with the flexibility that has been given. This is in line with Mahmudi (2005) view which states that "performance measurement is one of the important elements of an organization's management control system, which can be used to control activities and each activity must be measured in order to know the level of efficiency and effectiveness.

One of the factors that affect the financial performance of the hospital is the Cash Conventional Cycle (CCC). In this study, the CCC the researchers mean is the average time it takes from the payment for the purchase of hospital operational materials to the collection of accounts receivable related to patient services. Therefore CCC is very useful for the hospital in calculating how long it will take the hospital cash back as well as a comprehensive instrument on working capital. Brigham and Houston (2011) explain that "CCC is better if the time is shorter, which means that the time period required in the production cycle is shorter, whether it is related to the process of inventory, accounts receivable and company debt in generating cash inflows for the company".

II. LITERATURE REVIEW AND FORMULATION OF HYPOTHESES

➤ *Agency Theory*

Agency theory according to Jensen and Mackling (1976) is "a contract under one or more involving agents to perform several services for them by delegating decision-making authority to agents."

Agency theory explains that the company holding cash is not to maximize the welfare of the principal, but rather focuses on the precautionary motive, but on the other hand it can be used as managerial discretion (Ozkan, 2004). but Drobotz (2006), also explains that "managers can hold cash that is Many are for the sake of their own interests. This creates opportunities for conflict between the principal and the agent".

➤ *Trade-Off Theory*

This theory states that a company has an optimal level of debt and tries to adjust its actual debt level towards the optimal point, when the company is at a level of debt that is too high (over levered) or too low (under levered). In a stable condition, the company will adjust its level of debt to its long-term average level of debt.

Based on the trade-off theory, the company's main motive for owning cash is just in case. If the company has cash, then the company does not need to liquidate or sell its assets to finance profitable investments. In addition, having cash can also prevent companies from financial distress due to binding financial obligations (Azmat, 2014).

➤ *Cash Conversion Cycle*

Costa (2014) states that "The cash conversion cycle is a measure of how a company can immediately receive cash through sales, which is stated in the sum of the time needed to convert the company's receivables into cash (Days Sales Outstanding) and the time needed to convert raw materials into finished goods and sell them (Days Inventory Outstanding) minus the average period from the purchase of raw materials and use of labor until the payment (Days Payable Outstanding).

Cash Conversion Cycle (CCC) is used as a measure of risk related to liquidity management, namely the time it takes from purchasing raw materials through the production process to turning it into cash (Keown et al., 2003). CCC has been considered the basis for working capital management (Jose et al, 1996); Deloof, 2003 in Ohman 2014) involves three components, namely inventory, accounts receivable and accounts payable, with a focus on the balance of these elements (Charitou and Lois, 2012). An efficient cash conversion cycle provides better control for managers over short-term investments that can affect risk, profitability and firm value (Ohman, 2014).

➤ *Debt*

Welch (2011) states that financial debt is a ratio defined as the total long-term debt (DLTT) and debt in current liabilities (DLC) divided by total assets, which is

called Debt To Assets Ratio (DTA) is a debt ratio used to measure the ratio between total debt and total assets.

Cleverley (1990) argues that "high performing hospitals are not afraid to use debt in their capital structure, but they use significantly less debt than low performing hospitals and high performing hospitals have set aside larger reserves to assist them in their efforts. Maintain debt levels and generate a large amount of investment income".

➤ *Financial Performance*

Financial Performance is a financial ratio that measures the ability of a company to generate profits with a certain amount of capital. The ratio can also provide an overview of the company's control in making financial decisions (Horne & JR, 2005). Furthermore, Horne revealed that financial performance is a financial position and achievements that a company can obtain at a certain time.

➤ *Efficiency*

Measurement of efficiency requires a comparison between input and output. An organization is said to be efficient if it is able to produce a larger output with the same input, or produce the same output with a reduced input. This seems to imply that the measurement of hospital efficiency is very simple by only considering two variables, namely input and output (Mortimer and Peacock, 2002).

➤ *Hypothesis*

The hypothesis in this study is as follows:

H1: Cash Conversion Cycle has a direct effect on financial performance at the Regional Public Service Agency Hospital in East Nusa Tenggara Province.

H2: Debt has a direct effect on financial performance at the Regional Public Service Agency Hospital in East Nusa Tenggara Province.

H3: Debt can moderate the effect of cash conversion cycle on financial performance at the Regional Public Service Agency Hospital of East Nusa Tenggara Province.

III. RESEARCH METHODS

➤ *Location and Research Design*

This research was conducted at the Regional General Hospital of the Regional Public Service Agency in East Nusa Tenggara Province. This type of research is causality research, explanatory or confirmatory research.

➤ *Population and Sample*

The population in this study was all 12 hospitals of the Regional Public Service Agency of East Nusa Tenggara Province. The data needed is hospital financial report data for 2014-2018. Sample of six hospitals with the sampling technique is purposive sampling method, namely the determination of the sample based on the criteria determined by the researcher, namely the regional general hospital in the province of East Nusa Tenggara, the hospital is a Regional Public Service Agency, the location of the hospital is on the island of Timor and Flores. , data is easy to trace or data is available. Hospital financial reports have been audited and data taken is 5 years, from 2014 to 2018.

➤ *Data analysis*

The data analysis used is the verification analysis carried out with panel data regression models and

Moderated Regression Analysis using the Microsoft Office Excel 2010 and Eviews 10 applications.

IV. DATA ANALYSIS

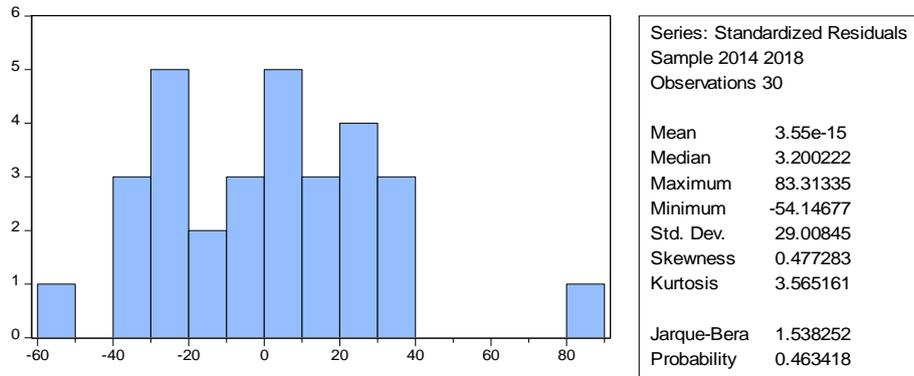


Figure 1 Normality Test

The normality test table above shows that the Jarque-Bera probability value of 0.463418 is greater than 0.05, meaning that the data are normally distributed.

	CH	CCC	NWC	DEBT	SA
CCC	-0.230385	1.000000	-0.115945	0.481716	-0.137440
DEBT	0.311952	0.481716	0.110455	1.000000	-0.181617

Table 1 Multikolinearitas Test

Based on table 1 above, showing the multicollinearity test results above with a correlation value of less than 0.8, the model is free from multicollinearity as or it can be concluded that there is no multicollinearity problem in the research variables. With this result, one classic assumption test has been fulfilled.

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-161.6594	147.8910	-1.093099	0.2852
CCC	0.708016	0.571541	1.238785	0.2274
DEBT	-394.7447	721.6645	-0.546992	0.5894

Table 2 Common Regression Methods/Pooled Ordinary Least Square

Table 2 presents the results obtained cash conversion cycle is 0.708016 and Debt is -394,7447, then the equation of the pooled least square estimation model is as follows:

$$FP = -161.6594 + 0.708016CCC - 394.7447DEBT$$

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	104.9707	117.4933	0.893418	0.3828
CCC	0.814659	0.189704	4.294370	0.0004
DEBT	-1303.116	282.3462	-4.615313	0.0002

Table 3 Result Regresi Fixed Effect Method analysis

Table 3 presents the results obtained cash conversion cycle is 0.814659 and Debt is -1303,116. While the probability value for cash conversion cycle is 0.0004 and Debt is 0.0002, then the panel data regression equation is based on beta efficiency as follows:

$$FP = 104.9707 + 0.814659CCC - 1303.116 DEBT$$

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-161.6594	44.21569	-3.656155	0.0012
CCC	0.708016	0.170876	4.143441	0.0004
DEBT	-394.7447	215.7596	-1.829558	0.0798

Table 4 Random Effect Regression Method

Table 4 presents the results obtained cash conversion cycle is 0.708016 and Debt is -394.7447. Then the form of panel data regression equation based on beta efficiency is as follows:
 $FP = -161.6594 + 0.708016CCC - 394.7447DEBT$

Redundant Fixed Effects Tests			
Equation: Untitled			
Test cross-section fixed effects			
Effects Test	Statistic	d.f.	Prob.
Cross-section F	49.899664	(5,19)	0.0000
Cross-section Chi-square	79.452170	5	0.0000

Table 5 Chow Test Results

The chow test in table 5 shows the two probability values of cross section F and chi square which are smaller than Alpha 0.05, thus rejecting the null hypothesis. So it shows that the fixed effect is the best model to use or it can be said that the chow test chooses the fixed effect. Based on the results of the Chow test which rejects the null hypothesis, the data testing continues to the hausman test.

Correlated Random Effects - Hausman Test			
Equation: Untitled			
Test cross-section random effects			
Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Cross-section random	249.498319	5	0.0000

Table 6 Hausman Test Results

The Hausman test in table 6 shows the value of chi square statistics on random cross-section = 249.498319 with a value of $p = 0.0000 < 0.05$, this means that accepting H1 and rejecting H0, the method chosen is the fixed effect. So based on the Hausman test, the best model to use is a model using the fixed effect model method, thus the Lagrangian Multiplier test is no longer

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	104.9707	117.4933	0.893418	0.3828
CCC	0.814659	0.189704	4.294370	0.0004
DEBT	-1303.116	282.3462	-4.615313	0.0002

Table 7Result Equation 1 Panel Least Squares

Based on the results of multiple regression analysis in table 7 above, the coefficients for the independent variables are $CCC = 0.814659$ and $Debt = -1303.116$, with an intercept / constant of 104.9707. So that from these results the regression equation model is:
 $Y (FP) = 104.9707 + 0.814659CCC - 1303.116DEBT + e$

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	87.54811	119.2955	0.733876	0.4725
CCC	0.947958	0.237228	3.995976	0.0008
DEBT	-897.0372	516.2081	-1.737743	0.0993
CCC_DEBT	-2.808234	2.984633	-0.940898	0.3592

Table 8ResultEquation 1Moderated Regression Analysis

Based on the results of multiple regression analysis in table 8 above, the coefficients for the independent variables are $CCC = 0.947958$ and $Debt = -897.03728$, $CH_Debt = -2.808234$ with an intercept / constant of 87.54811. So that from these results the regression equation model is:

$$Y(FP) = 87.54811 + 0.947958 CCC - 897.03728DEBT - 2.808234CCC_DEBT$$

Variable	Coefficient	Std. Error	t-Statistic	Prob.
Periods included: 5				
C			0.893418	0.3828
CCC	0.814659	0.189704	4.294370	0.0004
DEBT	-1303.116	282.3462	-4.615313	0.0002

Table9T TestResult of Equation 1

Based on the results of the calculation of table 9, the estimation result of the cash conversion cycle variable has a t-statistic of 4.294370 and a probability value of 0.0004. The probability value is smaller than $\alpha = 5\%$ indicating that accepting H1 means that the cash conversion cycle variable has a significant effect on financial performance, thus it means that hypothesis 1 is accepted because in this study it was found that the cash conversion cycle had a significant effect on financial performance.

The estimation results of the debt variable have a t-statistic of -4.615313 and a probability value of 0.0002. The probability value is smaller than $\alpha = 5\%$ indicating that accepting H1 means that the debt variable has a significant effect on financial performance, thus it means that hypothesis 2 is accepted because in this study it was found that debt had a significant effect on financial performance.

R-squared	0.941038	Mean dependent var	146.3443
Adjusted R-squared	0.910005	S.D. dependent var	119.4643

Table 10 Determination Coefficient Test (R^2)

Table 10 also shows the value of the coefficient of determination (Adjusted R Square) of 0.910005. This means that variations in changes in financial performance are caused by two independent variables (predictors), namely the cash conversion cycle, debt, and the interaction between cash holding and debt in the model of 91, 0005%, while the rest is explained by other variables outside of this research model.

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	87.54811	119.2955	0.733876	0.4725
CCC	0.947958	0.237228	3.995976	0.0008
DEBT	-897.0372	516.2081	-1.737743	0.0993
CCC_DEBT	-2.808234	2.984633	-0.940898	0.3592

Table 11 T Test Result of Equation 2

Based on the calculation results in table 11, the estimation results of the interaction variable between cash conversion cycle and debt have a regression coefficient of -2.808234 with a probability of 0.3592. The probability value above $\alpha = 5\%$ indicates that the interaction variable between cash conversion cycle and debt does not have a significant effect on financial performance, thus hypothesis 3 is rejected because in this study it was found that debt could not moderate the effect of cash conversion cycle on financial performance.

R-squared	0.943802
Adjusted R-squared	0.909459

Table 12 Determination Coefficient Test (R^2)

Table 12 also shows the value of the coefficient of determination (Adjusted R Square) of 0.909459. This means that variations in changes in financial performance are caused by two independent variables (predictors), namely cash cash conversion cycle, debt, and the interaction between cash conversion cycle and debt in the model of 90.9459%. While the rest is explained by other variables outside this research model.

V. DISCUSSION

➤ Analysis of the Effect of Cash Conversion Cycle on the Financial Performance.

Based on the results of the calculation of table 9, the estimation result of the cash conversion cycle variable has a t-statistic of 4.294370 and a probability value of 0.0004. The probability value is smaller than $\alpha = 5\%$ indicating that accepting H1 means that the cash conversion cycle variable has a significant effect on financial performance, thus it means that hypothesis 1 is accepted because in this study it was found that the cash conversion cycle had a significant effect on financial performance.

Pecking order theory supports the results of this study which explains that cash ownership in terms of information asymmetry illustrates that when operating cash flows are high, the cash conversion cycle time is shorter. With a short CCC, the hospital will have sufficient cash to meet

operational costs for the smooth running of hospital services, pay debts and other expenses. This will have an impact on the company's financial performance. (Myers & Majiuf, 1984).

➤ Analysis of the Effect of Debt on the Financial Performance

Based on the calculation of table 9, the estimation results of the debt variable have a t-statistic of -4.615313 and a probability value of 0.0002. The probability value is smaller than $\alpha = 5\%$ indicating that accepting H1 means that the debt variable has a significant effect on financial performance, thus it means that hypothesis 2 is accepted because in this study it was found that debt had a significant effect on financial performance.

This research also supports agency theory which states that one way that can be used to overcome or rather minimize conflicts of interest that occur between principals

and agents, as stated by Bathala (1994) is debt because debt is a source of corporate funding, which can be used. As capital that can improve company performance. Trade off theory also supports this research which shows that the use of debt that exceeds a certain threshold can reduce firm value. This means that the hospital must be able to manage existing debt properly in order to improve the company's financial performance.

➤ *Analysis of the Effect of Cash Conversion Cycle on the Financial Performance with debt as a moderating variable*

Based on the calculation results in table 11, the estimation results of the interaction variable between cash conversion cycle and debt have a regression coefficient of -2.808234 with a probability of 0.3592. The probability value above $\alpha = 5\%$ indicates that the interaction variable between cash conversion cycle and debt does not have a significant effect on financial performance, thus hypothesis 3 is rejected because in this study it was found that debt could not moderate the effect of cash conversion cycle on financial performance.

VI. CONCLUSION

Based on the results of research and discussion of hospital financial performance, it can be concluded as follows the estimation result of cash conversion cycle variable has a regression coefficient of 0.814659 with a probability of 0.0004. The probability value below $\alpha = 5\%$ indicates that the cash conversion cycle variable has a significant effect on financial performance. The estimation results of the debt variable have a regression coefficient of -1303, 116 with a probability of 0.0002. The probability value below $\alpha = 5\%$ indicates that the debt variable has a significant effect on financial performance.

The estimation result of the interaction variable between cash conversion cycle and debt has a regression coefficient of -2.808234 with a probability of 0.3592. The probability value above $\alpha = 5\%$ indicates that the debt variable cannot moderate the effect of the cash conversion cycle on financial performance.

LIMITATIONS AND SUGGESTIONS

This research was built with limitations that can be used as a reference for further researchers, namely the hospitals that are sampled are only regional general hospitals that have become Regional Public Service Bodies in Timor Island and Flores in NTT Province, so they do not reflect the overall financial performance of hospitals in East Nusa Tenggara Province, The author has limited time and funds to take samples of all Regional Public Service Bodies in the Province of East Nusa Tenggara because of the very large area consisting of several remote islands with difficult conditions after being exposed to the corona virus outbreak and measurement of indicators in each variable is not all used in this study, so it needs to be developed in further studies.

Based on the results of this study, the regional public service agency hospitals of East Nusa Tenggara Province must pay more attention to optimal cash conversion cycle and debt management in order to improve financial performance, so that the goals and objectives of establishing a Regional Public Service Agency in the hospital are given flexibility in financial management can be achieved. Furthermore, it is also necessary to carry out further research in all hospitals in NTT Province, both government and private hospitals and can also use the same variables but with a qualitative approach.

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