

Assets Effectiveness on Profitability of Manufacture Industry Listed on Indonesia Stock Exchange Years 2010-2011

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Abstract- This research was conducted to determine influence of working capital toward firm's performance. The subjects of this research were all of the companies in the manufacturing industry its listed on The Indonesia Stock Exchange from 2010 until 2011. The objects in this research were Cash Conversion Cycle (CCC), Current Ratio (CR), Net Working Capital Turnover (NWCT), and Return on Assets (ROA).

The aim of this research was find the influence of Cash Conversion Cycle (CCC), Current Ratio (CR), Net Working Capital Turnover (NWCT), and Return on Assets (ROA) on the framework of the firm theory. The analysis used multiple line argression method. Sampling was conducted with purposive sampling method with Ordinary Least Squares (OLS) test. This study used analysis tool of the ordinary Least square (OLS) models. This tool used to test the influence Cash Conversion Cycle (CCC), Current Ratio (CR), Net Working Capital Turnover (NWCT), and Return on Assets (ROA) as proxy of the firm performance.

The result of the research in partially indicates were cash conversion cycle (CCC) influence negative effect on the return on assets (ROA), Current ratio (CR) and net working capital turnover (NWCT) influence positive effect on the return on assets (ROA). All variables together have influence on the return on assets (ROA)

Index Terms— Profitability of manufacturing industry in Indonesia, asset effectiveness on profitability of manufacturing industry

JEL Classification: G39

I. INTRODUCTION

1. Background

Indonesia's economic performance in 2012 was progressing very rapidly. This is evidenced from the gross domestic product (GDP) in Indonesia, which increased by 2.8% from the first quarter to the second quarter of 2012. The increase in GDP procured, including the manufacturing sector increased by 3.49%. The decrease occurred only in the mining sector by 0.6%. Economic growth creates new opportunities for companies in the country to develop their businesses in order to become a better business.

Financial performance of a company can provide profitability for the company (Fred Weaver, 2007 in Sutanto and Pribadi, 2012:290). Increase profit can be achieved by increasing sales and improving working capital and effectiveness (Scherr(1989) in Quayyum, 2012:58).

Smith (1980 in Sen and Oruç, 2009:109) says that working capital management affect profitability of the firm, its

risk, trus its value. The optimal working capital management can contribute positive effect on firm value. On the other hand, efficiency management of working capital is an important component of the general strategy aiming at increasing the market value (Howorth&Westhead:2003; Deloof:2003; Afza&Nazir:2007 in Sen and Oruç, 2009:109).

Scherr (1989 in Quayyum, 2012:58) says that cash conversion cycle is the primary measure of working capital efficiency. Cash conversion cycle consists of three parts receivable collection period, inventory conversion period, and payables deferral period.

Munawir (2010 in Sutanto and Pribadi, 2012:290) said that there are some ratios that can be used to measure the efficiency of working capital on profitability. The ratios are current ratio and networking capital turnover.

2. Resaerch problem

Based on the back ground, the problem research will be looked into, namely:

- Is there any influence between the cash conversion cycle and profitability in the manufacturing industry on BEI during 2010-2011.
- Is there any influence between liquidity and profitability in the manufacturing industry on BEI during 2010-2011.
- Is there any influence between net working capital and profitability in the manufacturing industry on BEI during 2010-2011.
- Are there any influence between the cash conversion cycle, liquidity, net working capital turnover and profitability in the manufacturing industry on BEI during 2010-2011.

3. The Purpose and Benefits of research

The purpose of this research was conducted to determine the effect of the cash conversion cycle, liquidity, and net working capital turnover to profitability in manufacturing company.

The benefits of this research include practical benefits for the reference in the development of knowledge and reference for researchers. The practical benefits expected to be material evaluation for companies in managing the company's operations.

II. STUDY OF THEORY AND HYPOTHESES

1. Literature review

Every company has a goal to be achieved. One of the goals of the company is to maximize shareholder's prosperity by maximizing value of the company (Sartono, 2001:9). Value of a firm is the price that must be paid by the prospective buyer if the company is sold (Husnan and Pujiastuti, 1996:7). Higher value of the company, can create greater prosperity will be received by shareholders. Husnan and Pujiastuti (1996:7) also said that indicator of value of the firm can be seen from the company's stock price traded on the stock exchange. High stock prices will make firm value increases and effect on increasing shareholder prosperity. Good performance of the company will be achieved if the company can work effectively and efficiently.

Profitability ratio is the ratio used to measure company's ability to generate performance (Sartono, 2001:122). Brealey and Myers (2000:828) said that the company's performance can be measured by the proxy of profitability ratios is return on assets (ROA). Quayyum (2012:60) said the return on asset (ROA) can be calculated using the formula (1).

$$\text{Return on Assets} = \frac{\text{Net Income}}{\text{Total Assets}} \quad (1)$$

Brigham and Houston (2001:150) said that working capital is a company's investment in short-term assets, is cash, marketable securities, inventory and accounts receivable. Riyanto (1983:11) defined working capital as total current assets or the excess of current assets on current liabilities. Sawir (2005:129) defined working capital funds should be available to fund their daily operations.

Working capital is owned by a company must be used effectively and efficiently in order to obtain an optimal profit. The effectiveness of working capital can be measured using the cash conversion cycle (Scherr, 1989 in Quayyum, 2012:58). Cash conversion cycle is the period between the payment of raw materials for the production of the company until sales billing [(Brealey, Myers and Marcus, 2008:141), Besley and Brigham (2005); Sartono (2001:484)]

Brigham, Gapenski and Ehrhardt (1999:868) said that cash conversion cycle (CCC) consists of three parts, the receivable collection period, inventory conversion period, and the payables deferral period. Receivables collection period is the average length of time of required to convert receivables into cash. Inventory conversion period is the average length of time required to convert materials into finished goods and then to sell those goods, is calculated by dividing inventory on hand by sales per day. Payables deferral period is the average length of time between the purchase of materials and labor and the payment of cash for them. These three variables can be calculated using the formula (2), (3), (4) and (5).

$$\text{Cash Conversion Cycle} = \text{Receivable collection period} + \text{Inventory conversion period} - \text{Payables deferral period} \quad (2)$$

$$\text{Receivable collection period (RCP)} = \frac{\text{Average account receivable}}{\text{Sales} / 360} \quad (3)$$

$$\text{Inventory conversion period (ICP)} = \frac{\text{Average inventory}}{\text{Sales} / 360} \quad (4)$$

$$\text{Payables deferral period (PDP)} = \frac{\text{Average account payable}}{\text{cost of goods sold} / 360} \quad (5)$$

Brigham and Houston (2001:202) said that the cash conversion cycle (CCC) can be shortened by reducing the inventory conversion period by processing and selling goods more quickly, by reducing the receivable collection period by speeding up collection, and by lengthening the payables deferral period by slowing down the firm's own payments.

Munawir (2010 in Sutanto and Pribadi, 2012:290) said that the efficiency working capital on profitability can be seen from the liquidity and net working capital turnover. Horne and Wachowicz (1997:135) describes that liquidity is the company's ability to change assets into cash without significant price reductions. Riyanto (1983:18) and Horne and Wachowicz (1997:136) explains that liquidity can be measured by using a proxy current ratio, is the ratio between current assets and current liabilities by the formula in equation (6).

$$\text{Current Ratio} = \frac{\text{Current Asset}}{\text{Current Liabilities}} \quad (6)$$

Net working capital is the surplus of current assets over the short term liabilities and represents the liquidity margin available to meet the cash demands in order to maintaining the daily operations and benefit from the profitable investment opportunities (Schilling, 1996; Yadav, Kamath and Manjrekar, 2009; Padachi et al., 2008 in karaduman et al., 2011:62). Munawir (2007 in Sutanto and Pribadi, 2012:294) said that the net working capital turnover is a ratio that shows the relationship between working capital to sales and shows the number of sales that can be obtained by the company (the rupiah/IDR) for each rupiah (IDR). Net working capital turnover can be calculated by the formula (7).

$$\text{Net Working Capital Turnover} = \frac{\text{Sales}}{\text{Working Capital Average}} \quad (7)$$

2. The Relationship between the research variables and hypotheses

a. The Relationship between Cash Conversion Cycle and Return on Assets

Saghir, Hasmini, and Hussain (2011) revealed that the shorter the time of the cash conversion cycle (CCC) that produced by a company, it will affect for the increase in profits obtained by the company, and vice versa. Brigham and Houston (2001:202) and Chawla et al. (2010) said that the company should be able to shorten the cash conversion cycle (CCC) without interrupting the operation of the company. Because if company can shorten the CCC, then it will increase profits.

Mohamad and Saad (2010) examined the relationship component of working capital management on the performance of manufacturing companies listed on Bursa Malaysia during the period 2003-2007. Profitability measured using return on assets (ROA) and return on investment capital (ROIC). And firm value is measured using TobinQ (TQ). Management of working capital is measured using the cash conversion cycle (CCC), current ratio (CR), current assets to total assets ratio (CATAR), current liabilities to total assets ratio (CLTAR), and debt-to-asset ratio (DTAR). The results show that there is a significant negative relationship between the variable component of working capital management and corporate performance as measured by using the profitability and firm

value. Emamgholipourarchi (2012) examined in Tehran Stock Exchange (TSE) on the period 2006-2010, and Saghir, Hasmini, and Hussain (2011) researched on the Karachi Stock Exchange (KSE) during the period 2001-2006, examined the same variables and give the same result.

Hypothesis1: The cash conversion cycle (CCC) negatively affect to profitability

b. The Relationship between Current Ratio and Return on Assets

Mehmet (2009 in Sutanto and Pribadi, 2012:294) states that the greater value of the current ratio will affect the company's return. The higher of current ratio indicates presence excess working capital because is needed now, resulting in idle funds. This will result inefficiencies due to working capital because working capital can be used to increase profits through other lucrative investments. In the end, this could affect the return on asset impairment. Saghir, Hasmini, and Hussain (2011) states that companies with high liquidity in working capital, it will have low profitability and low risk.

Aminatuzzahra (2010) conducted a study to examine the effect of variable current ratio, debt to equity ratio, total asset turnover and net profit margin on return on equity in manufacturing companies amount 51 companies listed in the Indonesia Stock Exchange during period 2005-2009. The results showed a positive relationship between the current ratio, debt to equity ratio, total asset turnover, net profit margin on return on equity. Nugroho (2011) conducted a study on current ratio, net working capital turnover, size, and leverage on return on assets. The results showed no significant relationship between current ratio and return on assets.

Hypothesis2: Current ratio negatively affect to profitability

c. The relationship between the Net Working Capital Turnover and Return on Assets

Mubiatingrum (2007 in Sutanto and Pribadi, 2012:295), Rahman (2011) and Sutanto and Pribadi (2012:294) suggests that the net working capital turnover positively affects the return on assets, because more effectively a company manages its working capital.

Sutanto and Pribadi (2012) examined the effect of variables current ratio, receivable turnover and net working capital turnover on return on assets. The results showed a positive relationship between net working capital turnover and return on assets, Similar results were obtained by Nugroho (2011).

Hypothesis3: The net working capital turnover positive effect on return on assets

Hypothesis4: Cash conversion cycle, current ratio, and net working capital turnover all affect to return on assets

III. RESEARCH METHODOLOGY

1. Subject and Object of Research

Subjects in this study are all companies listed on the manufacturing industry in Indonesia Stock Exchange (IDX) on period 2010-2011. Objects in this study are cash conversion

cycle (CCC), current ratio (CR), net working capital turnover (NWCT), and return on assets (ROA).

2. Operationalization of Variables

Operationalization of the variable is a proxy to measure the variables in this study. The variables used in this study are:

a. The dependent variable

Dependent variables used in this study is the return on assets (ROA). ROA using equation 1 (Quayyum, 2012:60).

b. The independent variable

The independent variables in this study consists of the cash conversion cycle (CCC), current ratio, and net working capital turnover (NWCT). To measure the cash conversion cycle (CCC) used equation (2), (3), (4) and (5). current ratio (CR) is calculated by equation (6), and net working capital turnover (NWCT) calculated by equation (7).

3. The Research Design

This research is descriptive and perificative research, which is to see the effect of the independent variables with the dependent. The data used secondary data. Data were analyzed using multiple linear regression analysis. It use samples of all firms in the manufacturing sector are listed in the Indonesia Stock Exchange (IDX) period 2010-2011. The methodology research used Ordinary Least Squares (OLS). The test is performed F-test, t-test and test R^2 with 95% confidence level. Sampling method used is the method nonprobability (purposive sampling) technique. The data criteria of this sample are as follows:

a. Companies in the manufacturing industry that go public and listed on the Indonesia

Stock Exchange (IDX) of at least 2010 and was registered until 2011.

b. Companies that publishes financial report for 2 consecutive years full of years 2010 2011

4. Statistical Analysis

a. Descriptive statistics

Descriptive statistics provide an overview or description of the data without the intent to make the conclusion that the generally accepted view of the value of the minimum, maximum, mean, and standard deviation, skewness, and kurtosis.

b. Validation of the model

To determine whether the model built is fit. The model fit is the model that satisfies the classical assumptions. These assumptions consist of: test multicollinearity, heteroscedasticity test, and test for normality.

c. Multiple regression analysis

Analysis tools are used to estimate the model equation in this study is multiple regression analysis method. Statistical models to study the form that explains the effect of independent variables on the dependent with equation (8) as follows:

$$ROA = \beta_0 + \beta_1 (\text{LnCCC}) + \beta_2 (\text{CR}) + \beta_3 (\text{NWCT}) + e(8)$$

Description:

β_0 = constant

β_1 = partial regression coefficient of LnCCC

β_2 = partial regression coefficient of CR

β_3 =partial regression coefficient of NWCT

d. Analysis of statistical hypothesis

After obtained an equation regression model and test a number of classical assumptions, then the next step is to test the hypothesis established in research and to see the level of significance. For statistical tests were done using t-test (partial test) and test-F (test simultaneously).

e. The coefficient determination (Value of R^2)

Value of R^2 (coefficient determination) was used to determine the amount of the contribution (influence) give by the independent variable on the dependent variable. Small

Value of R^2 indicate the ability of the independent variables in explaining the variation in the dependent variable is very limited. The coefficient of determination is one of the criteria to determine a good model.

IV. ANALYSIS AND DISCUSSION

1. Descriptive Statistics

Table 1 present descriptive statistical analysis. The results of descriptive statistical analysis indicate all variables are not normal.

Table 1. Descriptive Statistic All Variables Research

	ROA	LnCCC	CR	NWCT
N	254	254	254	254
Minimum	-,7558	,0000	,0459	-3309,2399
Maximum	3,4748	7,5000	108,4921	581,5023
Mean	,081974	3,761890	2,985588	-5,630561
Std. Deviation	,2514344	1,574851	8,409221	219,4875306
Skewness	9,558	-1,191	10,451	-13,521
Kurtosis	132,234	1,108	119,591	205,112

Based on Table 1 are known that all variables are not normally distributed.

2. Assumptions Classic test

a. Normality test

Normality test using Kolmogorov-Smirnov test (K-S) presented on Table 2. On Panel A Table 2 indicate all variables

are not normal distribution. There are 254 data. In order to be a normal data, all outliers data are removed (Ghozali, 2005). Panel B result After the data outliers are removed. It has 106 data. The results that data model is normally distributed.

Table 2. One-Sample Kolmogorov-Smirnov Test

Panel A	Unstandardized Residual
N	254
Kolmogorov-Smirnov Z	3,527
Asymp. Sig. (2-tailed)	,000
Panel B	Unstandardized Residual
N	106
Kolmogorov-Smirnov Z	1,040
Asymp. Sig. (2-tailed)	,230

presented on Table 3. VIF value indicated there are not multicollinearity problem.

b. Multicollinearity test

Multicollinearity can be viewed by using the Variance Inflation Factor (Values of VIF) Values. The result of this test

Table 3. Multicollinearity test

Model	Collinearity Statistics	
	Tolerance	VIF
LnCCC	,971	1,030
CR	,977	1,023
NWCT	,990	1,010

c. Heteroscedasticity test

Heteroscedasticity test used Glejser test. The result presented on Table 4. This value indicated all independent variables in this study do not have heteroscedasticity problem.

Table 4. Heteroscedasticitytest

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	,092	,019		4,792	,000
LnCCC	-,007	,004	-,179	-1,806	,074
CR	,001	,003	,042	,429	,669
NWCT	,000	,002	,020	,205	,838

a. Dependent Variable: ABSRES

3. Analysis of Statistics hypothesis

Statistics model equation, the value of t-sig., F-sig., And the coefficient determination (R^2), presented as follows:

$$ROA = 0,085 - 0,017 LnCCC + 0,020 CR + 0,007 NWCT$$

t sig. 0,06 0,000**
0,024*
F sig. = 0,000
 $R^2 = 0,234$

Based on the regression coefficient equation, the relationship with the dependent variable and independent variables can be concluded that the in partially Cash Conversion Cycle (CCC) have a negative significant effect on return on assets (ROA). Current ratio (CR) and Net working capital turnover (NWCT) have a positive significant effect on return on assets (ROA). The independent variables over all have significant effect to dependent variable. Independent variables contributed by 23.4% effect on the dependent variable, the remaining 74.6% is influenced by other variables not examined.

4. Discussion

Based on the test results of t-test and F test show all research hypothesis were accepted. , the cash conversion cycle (CCC) has a negative effect on return on assets (ROA). The results is consistent with Mohamad and saad (2010) which states there is negative a significant relationship between the cash conversion cycle (CCC) and return on assets (ROA). The results also supported by Pouraghajan and Emamgholipourarchi (2012), and Saghir, Hasmini and Hussain (2011)).

Current ratio (CR) has a positive effect on return on assets (ROA). These findings have significant influence. Even though, this result contrary to the hypothesis research. On hypothesis research it has negative effect. However, this results supported by Horne and Warchowicz (1997), Zubairi (2010), and Pouraghajan and Emamgholipourarchi (2012), which states there are positive relationship between current ratio (CR) and return on assets (ROA).

The explanation of this case was said by Horne and Warchowicz (1997). They said that companies with has higher liquidity than its industry average, if liquidity increase, the profits made by the company will increase. The results of this study indicate that the current ratio (CR) has right skewness (Table 1). It indicate more of samples have current ratio (CR) value higher than industry average.

Net working capital turnover (NWCT) has a positive effect on return on assets (ROA). This is supports the

hypothesis of this study. These findings strengthen the results of research conducted by Sutanto and Pribadi (2012) and Nugroho (2010). This finding explains the working capital turnover began when the cash invested in working capital components until the return into cash. He said that the shorter period of working capital turnover, so the faster-moving, more effective use of working capital, which can make increases profitability. Higher working capital turnover indicates faster funds or cash invested in working capital return into cash, this means corporate profits can be more quickly accepted (Tunggal in Nugroho, 2011).

Based on the test results on the effect of the cash conversion cycle (CCC), current ratio (CR), and net working capital turnover (NWCT) in over all against the return on assets (ROA) indicates that the all independent variables significantly influence on return on assets (ROA).

Variable cash conversion cycle (CCC), current ratio (CR), and net working capital turnover (NWCT) contributed 23.4% of the return on assets (ROA). It shows that in investing, investors need to know the effectiveness of the use of working capital held by the company for working capital affects the profits to be received by the company.

V. CONCLUSIONS AND RECOMMENDATIONS

1. Conclusion

Based on theoretical study, framework, hypothesis, analysis, and discussion of it then to answer the problem formulation in this study, it can be concluded that:

a. Cash conversion cycle (CCC) negatively affect to the return on assets (ROA) in manufacturing companies on BEI (IDX) during 2010-2011.

b. Current ratio (CR) positive effect to return on assets (ROA) in manufacturing companies on IDX during 2010-2011.

c. Net working capital turnover (NWCT) positive effect on return on assets (ROA) in manufacturing companies on IDX during 2010-2011.

d. In simultaneous, Cash conversion cycle (CCC), current ratio (CR), and net working capital turnover (NWCT) positive effect on return on assets (ROA) in manufacturing companies on IDX during 2010-2011.

2. Suggestion

Based on these results, it can be given some suggestions for the company as well as for further research, that is:

a. For future studies, to examine the relationship variables influence liquidity to profitability, need to be added dummy variable for current ratio. That is above and below the industry average.

b. It is recommended for further research to examine other industries besides manufacturing industry are used as research subjects.

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