HOW THE IMPACT CASH CONVERSION CYCLE AND LIQUIDITY ON PROFITABILITY?

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Abstract

The purpose of the research aims to analyze the effect of Cash Conversion Cycle (CCC) and liquidity against company profitability. This research focus on consumer goods listed in Indonesia Stock Exchange for period 2014-2018. This study use an associative method, which aims to explain the causal relationship between one variable that affects other variables. Data were retrieved from consumer goods companies listed on the Indonesia Stock Exchange during the period 2014 – 2018 and used 35 consumer goods companies. The type of data use secondary data sourced from Indonesia Stock Exchange in financial statement data. The data analysis method uses multiple linear regression. The independent variable in this research are Cash Conversion Cycle (CCC) and Liquidity, the dependent variables are Net Profit Margin and Return on Equity. The results finds that CCC and liquidity had a significant effect on net margin profitability (NPM), but CCC and liquidity has no effect on return on equity (ROE).

Keywords : Cash Conversion Cycle, Liquidity, Net Profit Margin, Return on Equity

1. Introduction

Working Capital Management (WCM), withinvestment and financing decisions, is importantkey for financial managers who have the goal in maximizing their company's value. Workingcapital management is very essential due to directly affects the company's liquidity and profitability (Murugesu, 2013). Managing liquidity is mentioned as the most important issues in financial management due to involving a strong relationship between risk and return associated with managing assets and short term liabilities (Anser dan Malik, 2013). Working capital fulfil short-term financial needs of the company and working capital management has an important role on the profitability and risk of the company, as well as on the value of the company (Smith, 1980). Profitable firms or unprofitable firms, regardless the size and nature of the business, require measurement of working capital due to working capital is a life-giving force for every economic activity. Working capital management as one of the most important functions of company managers (Achchuthan and Kajamanthan, 2013).

It can't be denied the importance matters in efficient working capital management is given a firm's viability relies on the financial managers ability to effectively manage receivables, inventory and payables. Managing each of firm/s current asset (inventory, account receivable, marketable securities and cash) and current liabilities (notes payable, accruals and account payable) is the goal of working capital management to achieve balance between profitability and risk that contributes positively to a firm's value. There are two basic ways in assessing a company's working capital management. (1) Balance sheet's concept and explore current liabilities, and (2) Cash conversion cycle's concept. CCC is a useful and standard measure of the efficiency of a company in the management of its working capital (Attari and Raza, 2012). In textbook, working capital management context is mentioned as Cash Conversion Cycle (Keown et al., 2003; and Bodie and Merton, 2000). The Cash Conversion Cycle (CCC) is tools as a comprehensive measurementworking capital as it showing the time gapamong in sales collection of finished goods and expenditure of purchasing raw materials (Padachi, 2006, p. 49). Being measurement of working capital management, cash conversion cycle needs to be explored how it affect company profitability. Today, due to technological advances and changes in the world economy and increasing competition among companies, each company is trying to increase profitability, companies are now trying hard to bring CCC to a more optimal level (Anser dan Malik, 2013).

This study focused on consumer goods industry, it is considered that the consumer goods industry is one of the most important sectors in the national economy. The contribution of consumer goods sector to gross national product in quarter II year 2019 amounted 7.99% higher than economic growth rate of 5.02% in the same period. In addition, in the consumer goods sector Indonesia has the potential for the growth of the environment because it is supported by abundant natural resources and large domestic demand. Therefore, a number of producers are still confident and optimistic to increase investment and expand to meet market demands, both in domestic and export. The consumer goods sector contributed to the increase in investment value of USD323 million (PMA) and Rp12,3 trillion (PMDN) in the quarter II of 2019. Total Labor absorption of food and beverage industry reached 1.2 million people.

Previous studies on the relationship between liquidity, networking capital, cash conversion cycle, firm size related to profitability but there is no conclusive evidence that shows a negative or positive relationship between cash conversion cycle and profitability. Previous study Kaur and Singh (2016), Panigrahi (2013) found a positive relationship between CCC and profitability, while others Oseifuah and Gyekye (2016), Anser and Malik, (2013) found a negative relationship between cash conversion cycle and profitability. Previous study found inconsistency results, other studies Hemalatha and Kamalavalli (2017), Kechukwu and Nwakaego (2016) even found no relationship between CCC and profitability. By taking into different relationship cash conversion cycle and profitability, this study identify the impact of cash conversion cycle towards profitability on consumer goods.

2. Literature Review

The CCC concept was initiated by Richards and Laughlin (1980) who recommended it as a strong measure to test how effectively the company manages its working capital. The cash conversion cycle (CCC) is the length of time between paying working capital and collecting cash from working capital sales (Brigham and Houston, 2007). The Cash Conversion Cycle (CCC) is used as a comprehensive measure of working capital as it shows the time lag between expenditure for the purchases of raw materials and the collection of sales of finished goods (Padachi, 2006, p. 49). Cash conversion cycle It measures the length of time between actual cash expenditures on productive resources and actual cash receipts from the sale of products or services Eljelly (2004, p.50). the longer the customer pays their bills, the higher the value of accounts receivable.

Cash conversion cycle is likely to be positive or negative results. The number of days a company must borrow or tie up capital while awaiting payment from a customer, it indicates positive results. But if the number of days a company has received cash from sales before it must pay its suppliers, it indicates negative result (Hutchison et al., 2007, p.42). The ultimate goal is having low CCC, if possible negative. Because the shorter days in CCC, the more efficient the company in managing its cash flow. A firm can reduce its need for working capital by (Bodie and Merton, 2000, p.90):

a. Reduce the number of days for goods are held in inventory. It can be accomplished with improving by controlling inventory or having deliver raw material when it need for production process.
b. Speed up the collection for receivable.
c. Extend the outstanding payable days.

Liquidity refers to the ease for transferring the assets into cash, the ratio of liquidity, especially focused on cash flows. The indicator for measuring the company's ability to fulfill its short-term obligations is Liquidity. Achieving the using of effective assets is liquidity management (Robinson et al., 2015). The liquidity ratio used in this study is the current ratio (CR), which is a measurement of the company's ability to pay short-term liabilities, which are dictated by the ratio of current asset ratios to current liabilities. The higher the current ratio indicates the high liquidity of the company, so the company has a greater capacity to meet the short-term obligations. In contrast, a decrease in current ratio illustrates the liquidity deficit and part of a fixed asset financed by short-term debts. Liquidity deficits can lead to decreased company's energy, thereby affecting profitability (Robinson et al., 2015).

The most important goal of the company's establishment is profitability. Measuring company's ability to achieve profit by using profitability ratio. Profitability is the ratio in evaluating company's ability in achieving profit within a certain period of time (Kasmir, 2014). Profitability indicate in measuring the company's ability to profit from a wide range of corporate capabilities in terms of sales, assets, and capital. The higher the profitability ratio, the higher the profit will earned by the company. Ajanthan

(2013) confirms that profitability is a measure of the amount of income a company exceeds the cost incurred. The profitability ratio is used to evaluate the management's ability in generating revenue. Profitability refers to the ability of the company to

generate profit as a refund of the invested money; The profitability ratio reflects the company's competitive situation reflecting the success or failure of the company (Robinson et al., 2015). In this study the ratio measurement of profitability using Net Profit Margin (NPM) and Return on Equity (ROE). NPM ratio is the ability in selling for generating the gross profit. High NPM ratio indicate for high selling price and low cost for production. High selling price indicate that the company's product has competitive advantage. Company profitability will increase when the product is competitive (Robinson et al., 2015).

3. Methodology

This study uses quantitative methods using explanatory research. The exploitation study is a study aimed for explaining the causal relationship between one variable affecting other variables through hypothesis testing (Cooper and Schindler, 2014). This research uses data of consumer goods company listed on Indonesia Stock exchange for five years (2014-2018). Data is derived from the company's financial statements published on the Indonesia Stock Exchange (website idx.co.id). Research aims to test CCC's influence and liquidity of profitability. Data were obtained from the financial statements provided by the Indonesian Stock Exchange's website.

The population in this research is all consumer goods company listed on Indonesia Stock Exchange period 2014-2018. The sample selection process uses a non-probability sampling method with a purposive sampling technique. Purposive sampling is a technique of sampling sample with certain criteria or consideration set by the researcher. The samples in this study are consumer goods companies that fulfill the following criteria :1) consumer good companies listed in BEI for period 2014 to 2108; 2) the companies financial statements present the complete financial data necessary for calculating the variables; 3) the consumer goods company published financial report 2014 – 2018; 4) the consumer goods company that did not delisted during the period 2014-2018. This research uses CCC and CR variables as independent variables, and NPM and ROE as dependent variables.

Table3.1Variable Measurement

Variable	Sub Variable	Measurement
Working Capital Management	Cash Conversion Cycle (CCC)	Accounts Receivable Collection Period + Average Inventory Investment Period – Debt Payment Period
Liquidity	Current Ratio	CR = Current Assets / Current Liability
Profitability	NPM	ROA = Sales /Net Income
Profitability	ROE	ROE = Net Income / Total Equity

In this study, the analysis techniques used multiple linear regression analyses. However, prior to multiple linear regression tests first tested the classical assumptions by testing the normality, heteroskedastisity, and autocorrelation. The following are multiple linear regression models for the hypotheses 1, 2, 3 and 4.

$NPM = \beta 0 + \beta 1\ CCC + \beta 2\ LIQ + \varepsilon \ldots\ldots (1)$
$ROE = \beta 0 + \beta 1\ CCC + \beta 2\ LIQ + \varepsilon \ldots\ldots (2)$

Description :

NPM	:Net Profit Margin
ROE	:Return on Equity
B0, β1, β2, β3, β4	:Independent variable regression coefficient
CCC	: Cash Conversion Cycle
LIQ	: Liquidity

4. Result and Analysis

Data analysis activities aim to answer the problem formulation and perform calculations to test the hypotheses that have been presented. Prior to multiple regression tests and hypotheses. First, researchers conducted a classical assumption test. Here are the classic assumption testing results in this study:

4.1 Normality Test

The purpose of normality testing is determining whether the population of data is of normal distribution. In this study test normality using the method Kolmogorov-Smirnov with provisions if asymptotic significance in greater than 5%, then distributed data is normal. The normality test results can be seen in the following table.

Table 4.1.1 Model 1 for Normality test results

One-Sample Kolmogorov-Smirnov Test		
		Unstandardized Residual
N		175
Normal Parameters[a,b]	Mean	0
	Std. Deviation	0,29231902
Most Extreme Differences	Absolute	0,289
	Positive	0,289
	Negative	-0,15
Test Statistic		3,828
Asymp. Sig. (2-tailed)		0,091
a. Test distribution is Normal.		
b. Calculated from data.		
c. Lilliefors Significance Correction.		

According to table 4.1.1, the test result of normality on the model 1 indicates the significant value for the unstandardized residual of 0.091 is greater than 0.05, it can be concluded that the data on the Model 1 regression in the research is under normal distribution. Below, the test result of the normality of the Model 2 can be seen in the following table 4.1.2

Table 4.1.2Model 2 normality test results

One-Sample Kolmogorov-Smirnov Test		
		Unstandardized Residual
N		175
Normal Parameters[a,b]	Mean	0
	Std. Deviation	0,37777833
Most Extreme Differences	Absolute	0,247
	Positive	0,247
	Negative	-0,142
Test Statistic		3,267
Asymp. Sig. (2-tailed)		0,082
a. Test distribution is Normal.		
b. Calculated from data.		
c. Lilliefors Significance Correction.		

Based on table 4.1.2, the test result of normality on the Model 2 indicates that the significant value for the unstandardized residual is 0.082 greater than 0.05, it can be concluded that the data on the Model 2 regression in the research distribution is normal.

4.2 Multicollinearity test

This analysis aims to determine the presence of linear links between free variables in a regression model. A good Model should not occur correlation between independent variables. Multicolinearity testing can be obtained by calculating the VIF (Variance inflammatory drugs Factor) and toll (tolerance). If the value of VIF above 10 and the toll below 0.10, there isa multicholinerity. Multicolinearity test results can be seen in the following table 4.2.1.

Table 4.2.1 Model 1 Multicollinearity Test results

No	Variable	Tolerance > 0,1	VIF < 10
1.	Cash Conversion Cycle (CCC)	0,897	1,115
2.	Liquidity	0,897	1,115

Model 1 multicolinearity test results show that between independent variables does not correlated or does not occur multicolinearity on regression models because each independent variable obtains a VIF value of < 10 and Tolerance > 0.1. Next, the test results of the Multicolinearity Model 2 as follows.

Table 4.2.2 Model 2 Multicollinearity Test results

No	Variable	Tolerance > 0,1	VIF < 10
1.	Cash Conversion Cycle (CCC)	0,897	1,115
2.	Liquidity	0,897	1,115

The Multicollinearity test of the Model 2 indicates that between independent variables does not correlated or does not occur multicollinearity on the regression model because each independent variable obtains a VIF value of < 10 and Tolerance > 0.1.

4.3 Heteroscedasticity Test

Heteroscedasticitytest aims to test whether in regression model occurs variance inequality of the residual one observation to another observation. If the variance of the residual an observation of different observations is called heteroscedasticity. A good regression Model is the one that does not occur heteroscedasticity (Ghozali, 2013:139). To know whether or not the symptoms of heteroscedasticity is through the glacier test. In the glacier test the regression of the fault is triggered against each suspected free variable. From the results of the test will be decided, if the significance number > 0.05 at the level of confidence 95%, then there is no heteroscedasticity. The results of heteroscedasticity test are as follows:

Table 4.3.1 Test results Heteroskedastisity Model 1

No	Variable	Significant > 0.05	Description
1.	Cash Conversion Cycle	0,500	No heteroscedasticity relat
2.	Liquidity	0,410	No heteroscedasticity relat

The test result heteroscedasticity Model 1 indicates that the two independent variables do not experience the problem of heteroscedasticity, because the entire independent variable has a significant value greater than 0.05.

Table 4.3.1 Test results Heteroskedastisity Model 2

No	Variabel	Significance > 0,05	Description
1.	Cash Conversion Cycle	0,480	No heteroscedasticity relation
2.	Liquidity	0,301	No heteroscedasticity relation

In Model 2, the result is similar with Model 1.The test result heteroscedasticity Model 2 indicates that the two independent variables do not experience the problem of heteroscedasticity.

4.4 Autocorrelation test

The autocorrelation test aims to test whether in a linear regression model there is a correlation between disruptor errors in the T-1 (previous) period. Test autocorrelation in this study using Durbin-Watson test (DW). No autocorrelation can be detected if:

a. If d < DL, there is a positive autocorrelation if D > (4 – DL), means there is an negative autocorrelation
b. If du < D is < (4 – DL), it means there is no autocorrelation
c. If the DL is < D < du or (4 – du), it means that it cannot be concluded

The autocorrelation test calculation result of each free variable shows the following:

Table 4.4.1 Model 1 Autocorrelation test results

N K = 2	DW Count	4-dU	4-dL	Dw table Lower limit (DL)	DW table Upper Limit (du)	Conclusion
175	1,906	2,294	2,254	1,746	1,706	Have Autocorelation

Based on the results of the autocorrelation test of Model 1 with Durbin Watson, the results were derived that (1.746) du < D (1.906) < (4 – DL) (2.294). These results can mean that the data in this regression model does not occur autocorrelation.

Table 4.4.2 Model 2 Autocorrelation test results

N K = 2	DW Count	4-dU	4-dL	Dw table Lower limit (DL)	DW table Upper Limit (du)	Conclusion
175	1,864	2,294	2,254	1,746	1,706	Have Autocorrelation

Based on the results of the autocorrelation test of Model 2 with Durbin Watson, the results obtained that (1,706) du< D (1.864) < (4 – DL) (2.294). These results can mean that the data in this regression model does not occur autocorrelation.

4.5 Double Linear Regression Test

Multiple regression test results are as follows:

Table 4.5.1 RegressionTest Result Model 1

Dependent Variable / Independent Variable	NPM (Y1)		
	β	t	Sig
Model 1			
CCC (X1)	0,200	2,629	0,009
CR (X2)	0,209	2,757	0,006
R2	0,10		
F (Sig.)	10,684 (0,000)		

The results of multiple linear regression tests in table 4.5.1, informing the CCC and CR variables to have a significant positive effect on net profitability margin (NPM), and contributions of the magnitude of CCC and CR influences against NPM by 10%, and in tandem CCC and CR proved to be influential for NPM.

Table 4.5.2RegressionTest Result Model 2

Dependent variables / Independent variables	ROE (Y2)		
	β	t	Sig
Model 1			
CCC (X1)	-0,068	-0,858	0,392
CR (X2)	-0,140	-1,768	0,079
R2	0,019		
F (Sig.)	2,695 (0,07)		

The results of multiple linear regression tests in table 4.5.2, informing the CCC and CR variables to have no effect on return on equity (ROE), and the contributions to the impact of CCC and CR influences on the ROE by 1.9%, as well as CCC and CR jointly proved to have no effect on ROE.

4.5 Hypothesis Test.

The decision-making based on the significance value, if the value is significantly smaller than the error rate of 5% (sig. < 0.05) then Ho is rejected. The

results of these tests can be briefly seen in the following table:

Table 4.5.1 Partial hypothesis test result (Test T) Model 1 (NPM)

No	Variable	T count > t table	Sig.< 0,05	Conclusion
1.	Cash Conversion Cycle	2,629 > 1,974	0,009	Hypothesis Accepted
2.	Liquidity	2,757 > 1,974	0,006	Hypothesis Accepted

First hypothesis (CCC to NPM). Based on table 4.5.1, obtained T-statistical value (2.629) > T-table (1.974) and significance value of 0.009 < 0.05, then hypothesis 1 received. Thus, CCC has significant positive effect on NPM. Second hypothesis (CR to NPM). Based on table 4.5.2 obtained T-statistical value (2.757) > T-table (1.974) and significance value of 0.006 < 0.05, then hypothesis 2 received. Thus, CR has significant positive effect on NPM.

Table 4.5.2 Partial hypothesis test result (Test T) Model 2 (ROE)

No	Variable	T count > t table	Sig.< 0,05	Conclusion
1.	Cash Conversion Cycle	-0,858 < 1,974	0,392	Hypothesis rejected
2.	Liquidity	-1,768 < 1,974	0,07	Hypothesis rejected

Third hypothesis (CCC against ROE). According to table 4.5.2, the T-Statistic value is obtained (-0.858) < T-table (1.974) and the significance value of 0.392 > 0.05, the hypothesis 3 is rejected. As such, CCC has no effect on ROE. Fourth hypothesis (CR against ROE). Fourth hypothesisaccording to table 4.5.2, obtained T-statistical value (-1,768) < T-table (1.974) and the significance value of 0.07 > 0.05, then the 4 hypothesis is rejected. As such, CR has no effect on ROE.

Based on the results of the hypothetical evidence, the following is spelled out in order of discussion:

(1) CCC influence and liquidity against Net Profit Margin (NPM). The first and second hypothesis results show that CCC and liquidity have an effect on NPM in consumer goods companies. The results of this study supporting CAM and Ozbek Research (2015) found there were significant positive influences between CCC and NPM. The result is also in line with Kaur and Singh (2016), Panigrahi (2013) has found a positive relationship between CCC and profitability. The positive relationship between the CCC and the liquidity to the profitability can be explained that during the short CCC cycle there will be an increase in the due date which then impacts the increase in the company's sales which in turn will increase the company's profit. However, the increase in the due date will increase the company's loss due to potential bad credit occurrence. The company's managers must analyse the cost of investing in debt and profit levels as a result of the company bearing bad debt while attempting to improve the CCC. Otherwise, the CCC upgrade will cause the company to face cash flow and financial costs caused by bad debt.

(2) CCC and liquidity impact on Return on Equity. The third and fourth hypothesis results show that CCC and liquidity have no effect on Return on Equity in consumer goods companies. The results of this study in line with the research of Hemalatha and Kamalavalli (2017) who found CCC had no effect on profitability. The results of this study also supported the research of Kechukwu and Nwakaego (2016) which found that there was no link between CCC and profitability. Meanwhile, judging from the direction of relations, CCC and liquidity are negatively related to profitability, which means the shorter the CCC cycle will be the higher the profitability level in the consumer goods company. These results in line with the research of Raheman and Nasr (2007) found there was a negative relationship between CCC and profitability.

The results explained that with the increasing CCC cycles can decrease the profitability of consumer goods companies, as well as the otherwise shorter CCC can increase the profitability of the company, these findings indicate that CCC is very important for consumer goods companies, because CCC showed the liquidity of companies where liquidity describes the company's ability to fulfill its obligations that are immediately due. Consumer goods companies, with shorter CCC periods indicate the performance level of the company very well. According to García-Teruel and MartínSolano, (2007) The CCC's shortening can improve and improve profitability, CCC described The liquidity of The company The Trade-off theory said that companies with high liquidity rates have the potential to increase profitability, in other words there is a negative relationship between the CCC and the profitability. By accelerating the cash conversion cycle without disrupting the operationalization the company will increase the profit, because the longer the cash conversion cycle is the greater the cost needed. The same result was also discovered by Akinlo, (2013) to shorten the CCC to increase the company's profitability. Furthermore, there was a negative relationship between the liquidity with the ROE in the consumer goods company. These results can be explained that if the company holds a large amount of cash or the company has too high liquidity level, then the potential risk experienced by the company is the high cost of capital that should be borne by the

company because it saves the cash. Thus, the higher the liquidity then the greater the cost of the company's capital, which will eventually lower the profitability of the company.

5. Conclusion and Suggestion

The results of this study concluded that:
(1)Cash conversion cycle has significant positive effect on net profit margin,
(2) Liquidity has significant positive effect on net profit margin,
(3)Cash conversion cycle has no effect on return on equity,
(4) Liquidity has no effect on return on equity.
The right advice is referred to by researchers, among others: important for consumer goods companies to maintain CCC at the optimum level that is shorten CCC, but also does notignore the potential costs and losses incurred on the CCC and have excessive liquidity. Thus, the profitability of the company can be increased.

Furthermore, it is advisable to study will come to include other variables that can affect the profitability of the company, e.g. debt ratio variables, company ownership, and expanding research objects such as involving mining industry, property, Automotive. As well as data observation can be extended period up to 10 (ten) years to get a deeperresults.

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