The Impact of Working Capital Management toward Profitability on Food and Beverage Companies Listed in Indonesia Stock Exchange

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ABSTRACT

The purpose of this research is to investigate the impact of working capital management on companies' profitability. This research consists of two different variables of working capital management chosen to be examined; they are working capital turnover and cash conversion cycle. Meanwhile, profitability is measured using ROA. This research adopts a quantitative method of research approach to test the hypothesis. The objects of this research are food and beverages companies which are seventeen companies listed in Indonesia Stock Exchange during 2010-2014. The method used to pick samples is judgement sampling. The number of samples chosen in this research are twelve companies. The result of the study shows that there is a statistically significant impact between working capital management measured using working capital turnover and cash conversion cycle on profitability of companies measured using ROA.

Keywords : Working Capital Management, Working Capital Turnover, Cash Conversion Cycle, Profitability, Return on Assets

1. INTRODUCTION

Profitability is a company's ability in gaining profit related to sales, total assets, and capital. For a company, the matter of profitability is very important. Within a steady profitability, a company will be able to maintain the continuity of its business. On the contrary, if a company is unable to produce a satisfactory profitability, the company will not be able to maintain its business continuity.

ROA is the ratio of profitability measurement that is often used by financial managers to measure the whole effectiveness in generating profit with the assets available (Horne and Wachowicz, 2005: 226). By knowing the ratio, it will be known whether a company is efficiently utilizing its assets in operational company activities. Return on assets provide a better measure for the profitability of company because it shows the effectiveness of management in using assets to generate revenue. ROA is calculated by dividing the net profit before tax into total assets of a company. A high profitability will be able to support operational activities maximally.

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Food and beverage companies are companies highly needed by society because people certainly need food and drink that can not be produced everyday. The more increasing the people growth is, the more increasing their need of food and beverage is. A positive growth experienced by food and beverage industries in Indonesia makes this industry sector as the business sector that is quite profitable. It is due to a very huge opportunity owned by the company and the potential market keeps growing year by year. Therefore, this sector has a stiff competition among companies of food and beverage in Indonesia. Food and beverage industry is faced with a crucial decision to increase profitability through proper management.

The level of profitability can be affected by many factors. One of them is working capital. One of the efforts made by a company is that every company should be able to optimize each resource optimally to produce a competitive and comparative advantage for the company itself. If the company wants to operate optimally, the company must ensure the availability of sufficient capital to fund all operational activities. Working capital is one of important components in running the company's activities.

Working capital management is the financial management for a company's daily operations. Given the short-term nature, frequently the discussion of working capital have been relatively neglected. In fact, a poor working capital management can affect a company to be unable to meet maturing obligation. So that, it can impact on financial distress. Measuring the success of working capital management can use working capital turnover ratio. By using this ratio, it can be known the effectiveness of the use of working capital in a particular period; that is whether the company utilizes its working capital well or not so that it can generate profit for the company or even vice versa. The greater the ratio of working capital turnover is, the faster working capital turnover is. It means the management of working capital is getting more effective in the company.

In addition to working capital turnover, to measure the working capital management of food and beverage companies, it can also use cash conversion cycle. Cash conversion cycle is a measurement of working capital management that is often used. Cash conversion cycle is the period between the cash outlay for purchasing raw materials and the cash received from the sale of finished goods.

Based on the explanation above and given the importance of working capital as well as the profitability of company’s continuity, the writer is interested to analyze the effect of working capital management on the profitability of food and beverage companies listed in Indonesia Stock Exchange 2010-2014.

2. LITERATURE REVIEW

2.1. Working capital

In daily operational activities of a company, the capital has a major role so that the company survival is assured. Gibson (2009: 206) states that "The working capital of a business is an indication of the short-run solvency of the business". It means that working capital in business indicates the ability to pay a short-term debt of a company. While working capital according to Horne and Wachowicz (2005:308) has two concepts; they are net working capital and gross working capital. Net working capital is current assets minus short-term liabilities while gross working capital is a company's investment in current assets (such as cash and marketable securities, accounts receivable, and inventory).

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In this research, the authors use the concept of qualitative working capital or net working capital where the formula for calculating qualitative working capital according to Horne and Wachowicz (2005:308) is set as herein under:

Net Working Capital = Current Assets – Current Liabilities

2.2. Working Capital Turnover

Working capital is always in a state of turning over or operating within a company as long as the company is in business situation. Gibson (2009:224) states that "Working capital turnover is relating sales to working capital gives an indication of the turnover in working capital per year". Working capital turnover ratio is the ratio linking sales to working capital which can give an indication of working capital turnover during a certain period of time. According to Suad Husnan and Enny Pudjiastuti (2004: 166), "Working capital turnover is the ratio used to indicate how many times the working capital turn over in a period of time (usually in a year)".

The formula to calculate working capital turnover is as follows (Gibson, 2009:224):

$$\mathbf{WCT} = \frac{\mathbf{Sales}}{\mathbf{Average\ \ Working\ \ Capital}}$$

2.3. Cash Conversion Cycle

An effective working capital management in a company can be seen from the indicator of cash conversion cycle (DELOOF, 2003).

According to Brigham et.al (2011: 648), "All firms follow a" working capital cycle "in the which they purchase or produce inventory, hold it for a time, and then sell it and receive cash. This process is known as the cash conversion cycle (CCC)." Cash conversion cycle is the process in which a company buys or produces inventory, waits for some time, and then sells it, and receives cash. Those processes consist of inventory conversion period, account receivable collection period, and debt suspension period.

Brealey et.al (2001:169) states that "The length of time between the firm's payment for its raw materials and the collection of payment from the customer is known as the firm's cash conversion cycle." So, cash conversion cycle is the length of time between company payment for raw materials and payment collection from customers. The longer the production process is, the more money that the company uses for the inventory spend. Similarly, the longer the time it takes for customers to pay their bills is, the higher the amount of receivable is. On the other hand, if the company can defer the payment for the raw materials then it can reduce the amount of cash required.

The formula to calculate cash conversion cycle according to Brigham et.al (2011:649) is as follows:

$$CCC = \quad DSO + DSI - DPO$$

The formula to calculate the three components that make up cash conversion cycle can be calculated as follows (Brigham, 2011:650):

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$$\text{DSO} = \frac{Account\ Receivable}{Sales} \text{ X 365 Day}$$

$$\text{DSI} = \frac{Inventory}{Cost\ ooods\ Sold} \text{ x 365 Day}$$

$$\text{DPO} = \frac{Account\ Payables}{Cost\ of\ Goods\ Sold} \text{x 365 Day}$$

2.4. Return on Assets (ROA)

ROA shows the efficiency of company to manage all assets to generate revenue. Gibson (2009:299) states that "Return on assets measures the firm's ability to Utilize its assets to create profits by comparing profits with the assets that generate the profits". ROA measures company's ability to utilize its assets to generate profit by comparing earning with income-producing assets. In addition, Ross et.al (2002: 49) say that "Return on Assets is one common measure of managerial performance is the ratio of income to average total assets, both before tax and after tax". Return on Assets is a measure commonly used in management's performance by dividing revenue with total asset average. Meanwhile, according to Susan Irawati (2006:59), it is stated that "Return On Assets is an ability of company (company assets) with all capital working on it to generate operational company income (EBIT) or the ratio of operational income with their own capital and foreign capital used to generate profit, and expressed as percentage.

The following is the calculation of ROA according to Ross et al (2002:49):

$$\textbf{ROA} = \frac{\textbf{EBIT}}{\textbf{Average Total Assets}} \textbf{ x 100\%}$$

2.5. Framework

Profitability as a company's ability to obtain profit related to sales, total assets, and equity is often used to measure the efficiency of the use of capital within the company by comparing the income with the capital used in its operation. The company's ability to survive in competition with other companies sue the company to improve profitability continuously. According to Susan Irawati (2006:89), it is stated that "The level of profitability would be affected by working capital investment." So that, one of factors that may affect the profitability of company is managing or working capital management.

Working capital management shows the time needed by the company started when a company invests its cash as working capital until the company receives cash back as the result of sale. To assess the effectiveness of working capital, it can use working capital turnover ratio. Gibson (2009:224) says that "working capital turnover ratio is the ratio linking sales to working capital which can give an indication of working capital turnover during a certain period of time."

An effective working capital management in a company can also be seen from the indicator of cash conversion cycle (DELOOF, 2003). Cash conversion cycle represents the time taken by a company started by the time the company spends cash for purchasing raw materials until the company receives cash from the sale of finished goods.

Padachi (2006) also states that profitability decreases in a line with increasing the time of cash conversion cycle. It means a company can raise profitability by shortening the time period of cash conversion cycle.

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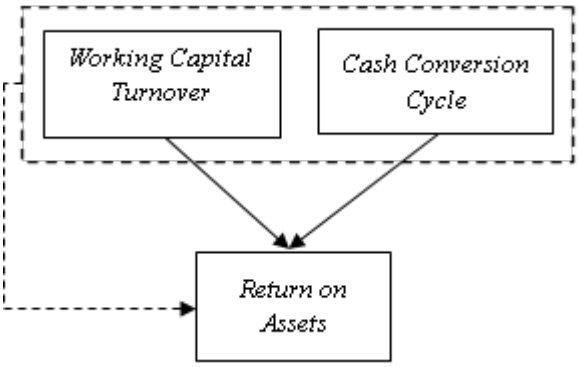

2.6. Hypothesis

Based on the framework above, the hypothesis in this research is that working capital and cash conversion cycle turnover significantly effect return on assets (ROA) on the food & beverage companies in Indonesia Stock Exchange 2010-2014.

3. RESEARCH METHODS

Type of research

The type of this research is descriptive and verified analysis with quantitative approach. The target population in this research are the companies in food and beverage industry listed in Indonesia Stock Exchange as many as seventeen companies and the samples are twelve companies.

The data used in this research are secondary data. In this research, secondary data are obtained in the form of documentation. This research uses panel data regression. Panel data are data that have a number of cross sections and time series. The data are collected in a time span through many individuals.

The data analysis technique used in this research is statistical analysis method using Eviews 8.0. software. In testing the hypothesis, it uses F test to test simlutaniously and t test to test partially.

4. RESEARCH RESULT

4.1. Chow test

Redundant Fixed Effects Tests

Equation: Untitled

Test cross-section fixed effects

Effects Test	Statistic	d.f.	Prob.
Cross-section F	10.631792	(10,40)	0.0000
Cross-section Chi-square	68.735822	10	0.0000

Based on the output table above, it appears that the value is prob. Chi-square equals to 0.0000. Because the value of chi-square probability <0.05, it can be concluded that the model used is fixed effect model.

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4.2. 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	4.799683	2	0.00907

According to the table above, it appears that the value is prob. The Chi-square value for estimation result of Hausman test is at 0.0095. Because the probability value (0.0095) <0.05, it can be concluded that the approach is better using fixed effect model.

4.3. Effect of Working Capital Turnover (X_1) and Cash Conversion Cycle (X_2) to Return on Assets (Y)

To determine the effect of working capital turnover, cash conversion cycle, and ROA, it is used a panel data regression analysis with the following equation:

$$\hat{Y} = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \varepsilon$$

The results of Eviews software processing toward multiple regression analysis are presented as follows:

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-2.148628	0.899655	-2.388280	0.0217
WCT	0.025808	0.089735	0.287605	0.7751
CCC	-0.041818	0.186382	-0.224366	0.8236

Based on the calculation table above, it is obtained the form of linear regression equation as follows:

$$Y = -2{,}148628 + 0{,}025808X1 - 0{,}041818\ X2$$

From the panel data regression equation above, it is obtained the constant value at the amount of -2.148628. That is, if the variable Return on Assets (Y) is not affected by both independent variables, the size of average percentage of ROA will be -2.148628.

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The regression coefficient of X_1 variable that is 0.025808 implies that for each additional working capital turnover as much as one unit will cause an increase of ROA which is 0.025808. The regression coefficient of X_2 independent variable is negative. It indicates that the direction that is not unidirectional between cash conversion cycle and ROA. The regression coefficient of X_2 variable that is -0.041818 implies that for each additional cash conversion cycle as much as one unit will cause decline in ROA which is 0.041818.

4.3.1 Simultaneous Hypothesis Testing (F Test)

To determine whether the influence of free variables in together with bound variables is significant or not, it is used F test.

R-squared	0.766429	Mean dependent var	-2.291782
Adjusted R-squared	0.696357	S.D. dependent var	0.588394
S.E. of regression	0.324227	Akaike info criterion	0.794409
Sum squared resid	4.204930	Schwarz criterion	1.277688
Log likelihood	-8.051832	Hannan-Quinn criter.	0.980255
F-statistic	10.93783	Durbin-Watson stat	1.872451
Prob(F-statistic)	0.000000		

Based on the table above, the value of prob F obtained is 0.000000. Because the value of F arithmetic 0.000000 <0.05 then Ho is rejected. It can be concluded that simultaneously there is a significant influence from working capital turnover variable and cash conversion cycle variable toward Return on Assets.

4.3.2 Testing Partial (t test)

To determine whether the influence of free variables partially toward bound variables is significant or not, it is used t test.

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-2.148628	0.899655	-2.388280	0.0217
WCT	0.025808	0.089735	0.287605	0.7751
CCC	-0.041818	0.186382	-0.224366	0.8236

Based on the above table results are as follows:

1. For working capital turnover variable (X_1), it is obtained that t value is 0.287605 and p-value is 0.7751. Because the p-value (0.7751)> 0.05 then H_0 is accepted. Therefore, it can be concluded that working capital turnover has no partially significant impact on ROA.
2. For cash conversion cycle variable (X_2), it is obtained that t value is -0.224366 and p-value is 0.8236. Because the p-value (0.8236)> 0.05, then H_0 is accepted. Therefore, it can be concluded that cash conversion cycle has no partially significant impact on ROA

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4.3.3 Coefficient of Determination

To determine the influence of independent variables on ROA, it is used the coefficient of determination.

R-squared	0.766429	Mean dependent var	-2.291782
Adjusted R-squared	0.696357	S.D. dependent var	0.588394
S.E. of regression	0.324227	Akaike info criterion	0.794409
Sum squared resid	4.204930	Schwarz criterion	1.277688
Log likelihood	-8.051832	Hannan-Quinn criter.	0.980255
F-statistic	10.93783	Durbin-Watson stat	1.872451
Prob(F-statistic)	0.000000		

Based on the result of Eviews output above, it is obtained that Adjusted R-Squared value is 0.696357. It shows that the contribution of working capital and cash conversion cycle turnover on ROA is at the amount of 69.63%, while the remaining 30.37% is the contribution of other variables beside independent variables studied.

5. CONCLUSION

Based on the research conducted with research subjects as many as twelve food and beverage companies listed in Indonesia Stock Exchange, in accordance with the criteria assigned, and the data used by the financial statement in 2010-2014, to see the impact of working capital turnover and cash conversion cycle on Return on Assets, it is concluded that working capital turnover and cash conversion cycle are simultaneously influenced significantly on Return on Assets. Partially working capital turnover and cash conversion cycle are not influenced significantly on ROA.

The value of contribution of working capital turnover and cash conversion cycle on Return on Assets is 69.63%. It means that profitability measured using ROA is influenced by working capital turnover and cash conversion cycle. Meanwhile, the remaining 30.37% of ROA is influenced by other factors beside what are used in this research.

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