

AN EXAMINATION OF THE INFLUENCE WORKING CAPITAL MANAGEMENT ON CASH FLOW IN CONSUMER GOODS INDUSTRY

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ABSTRACT

This research examines the working capital management which represented by Cash Conversion Cycle (CCC) in consumer goods industry and tries to determine its relationship with the cash flow earned by the companies which represented by Operating Cash Flow to Sales Ratio (OCFSR). The model in this study includes profitability and firm size on the effort to control for other factors that may give impact to cash flow earned by the companies. The data are taken from listed consumer goods companies in Indonesia Stock Exchange (IDX) period 2006. Consumer goods industry is one of the most important in Indonesia as it offers human basic needs. The relationships among variables in this study are investigated by correlation and regression analyses. The results indicated that there is significant negative relationship between the CCC and OCFSR. On the other hand ROA has significant positive relationship with OCFSR, and firm size has no significant relationship with OCFSR.

Keywords: working capital management, cash flow, consumer goods industry, firm size

1. INTRODUCTION

Cash flow plays important role in business life. Poor cash flow is one of the main reasons for business failures. Without cash, it is impossible to purchase raw materials or new equipment and pay staff wages. Anyone who runs a print firm should be concerned with their cash flow. Cash flow helps business to grow and maintain their sustainability. The faster a business expands the more cash it will need for working capital and investment. The cheapest and best sources of cash exist as working capital right within the business.

During the last decade, there has been an increased interest in working capital internationally. Good management of working capital will generate cash and help improve profits and reduce risk. The levels of accounts receivable, inventories and short-term debt affect the liquidity position of the firm significantly.

Working capital management is the part of corporate finance. The corporate finance can be categorized into three main domains, which are: capital budget, capital structures and working capital (Chiou, Chen, & Wu, 2006). Capital budget and capital structures are the source of long-term capital. On the other hand, working capital is a source of short-term capital. Working capital indicates the company's efficiency, liquidity and short-term health. According to Block and Hirt (2005), *working capital management involves the financing and management of the current assets of the firm*. Sufficient long term investment may lead to the success of the firm. However, short term investment will ensure whether the company can get to the long term.

Adequate working capital will generate a competitive advantage as it will facilitate rapid growth, because financial institutions tend to lend funds to companies with efficient working

capital. It will also minimize unexpected events that might cripple the company (Burand, 2007).

A significant development in corporate financial management over recent years has been an increased emphasis on liquidity and the management of operating cash flows. Maintaining corporate liquidity means managing the Net Working Capital in a manner that adjust to changes in the company's level of business activity caused by factors such as rapid growth, economic cycles, or random events. The Cash Conversion Cycle (CCC) is a working capital evaluation technique which depicts a company's average liquidity position. It can be used to evaluate changes in circulating capital and thereby facilitate the monitoring and control of its components.

The CCC approach has been introduced by Hager (1976) and has been recommended by Largay and Stickney (1980), Kamath (1989), and others. The CCC is one of several measures of management effectiveness. The method purpose is to measure, in days, the average length of time between the outflow of cash associated with the purchase of productive inputs for a particular good or service and the inflow of cash associated with the sale of the output and the resulting collections of accounts receivable. Generally, the lower CCC is better for the company.

The purpose of this study is to examine the influence of cash conversion cycle as an indicator of the company's liquidity on cash flow and to observe the other factors, which are profitability and firm size, that affect cash flow, so that we will identify the most important variable that affects cash flow, and therefore the liquidity of the firm, in purpose to business growth and sustainability.

The problem statements are:

1. Does working capital management represent by CCC influence Operating Cash Flow to Sales Ratio (OCFSR) as indicator of cash flow in sampled companies?
2. Does CCC the one and only that effect OCFSR in sampled companies?
3. How many days of CCC, consumer goods companies listed in Indonesia Stock Exchange (IDX) hold? Does it vary from company to company within industry?

2. LITERATURE REVIEW

Working Capital Management

Generally, the term working capital refers to a company's investment in current assets - cash, short-term securities, accounts receivable and inventories. However, for the purposes of working capital management, the more descriptive term is Net Working Capital, which refers to the current assets minus the current liabilities, which are typically accounts payable and other obligations due within one year. Also, since resource investments in Net Working Capital have a life-span of less than one year, they can be thought of as the capital that circulates through the company concurrent with the company's operating cycle. Therefore, Net Working Capital represents the liquidity margin that is available to meet the cash demands generated by the operating cycle. It is also explained as follows: "*Working capital represents the excess of current assets over current liabilities and is an indicator of the firm's ability to meet its short term financial obligations.*" (Brealey & Myers, 2002 cited in Seidman, 2004)

The importance of working capital is defined by Wild, Subramanyam, and Halsey (2004), as follows: "It is important as a measure of liquid asset that provide a safety cushion to creditors. It is also important in measuring the liquid reserve available to meet contingencies and the uncertainties surrounding a company's balance of cash and outflows."

Current asset are defined by Spiceland, Sepe, and Thomassini (2000) as: "cash and several other assets that are reasonably expected to be converted to cash or consumed within the coming

year, or within the normal operating cycle of the business if that's longer than one year. According to Weygandt, Keiso, and Kell (1996), current liability is stated as follows: "*Current liability is a debt that can reasonable be expected to be paid from the existing current assets or through the creation of other liabilities, and within one year of operating cycle.*"

The Cash Conversion Cycle (CCC)

The issue of a The Cash Conversion Cycle (CCC) is initially presented by Hager (1976), Richard and Laughlin (1980) suggested that a CCC analysis should be used to supplement the traditional but static liquidity ratio analysis because it provides dynamic insight. *The CCC is defined as the length of time between the payment of the payables and the collection of receivables.* (Richards and Laughlin, 1980).

The CCC is a working capital evaluation technique that recognizes the dynamic nature of the circulating capital and facilitates the analysis of its individual components. Basically, the CCC, which mirrors the operating cycle, measures the interval between the time cash expenditures are made to purchase inventory for use in the production process and the time that funds are received from the sale of the finished product. This time interval is measured in days and is equal to the net of the average age of the inventory plus the average collection period minus the average age of accounts payable. Using the cash management concept of float, the CCC could be referred to as a company's "Net Liquidity Float" because it measures the float associated with the time that company resources (i.e., cash) are invested in current assets offset by the float associated with the time that the investment is being financed by trade credit (Schilling, 1996).

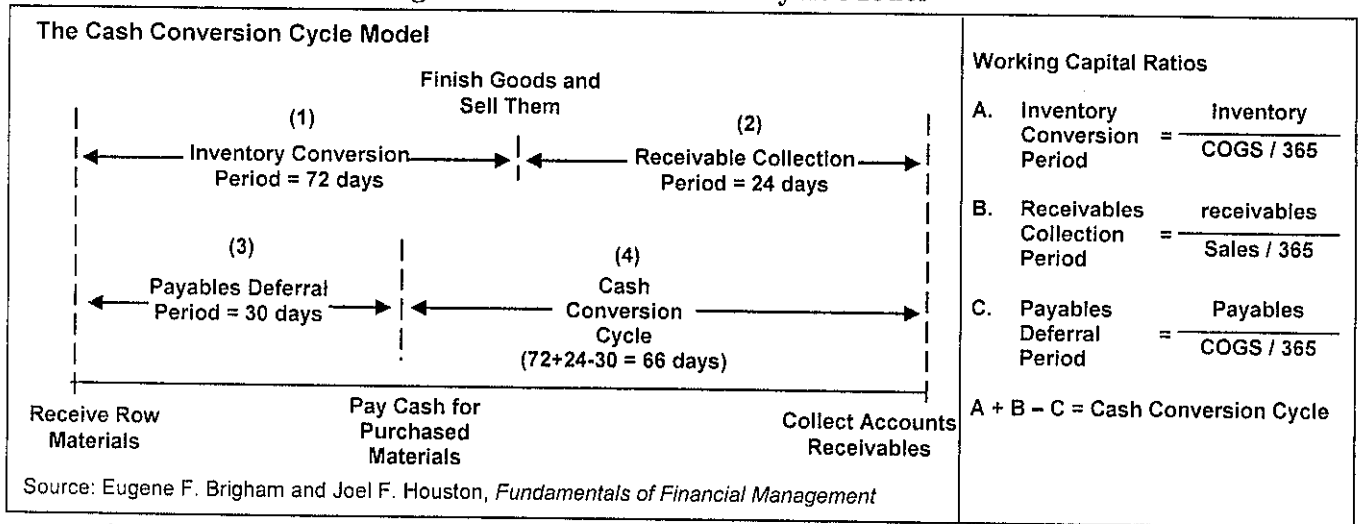
The importance of CCC is because it represents the number of days a firm's cash remains tied up within the operations of the business. It is also a powerful tool for assessing how well a company is managing its working capital. The lower the CCC, the healthier a company generally is. The higher the CCC is often a warning sign that the business may be facing a cash flow crunch.

The CCC is simply the duration of time it takes a firm to convert its activities requiring cash back into cash returns. The CCC is composed of the three main working capital components: Inventory Conversion Period (ICP), Receivables Conversion Period (RCP) and Payables Deferral Period (PDP). The CCC is equal to the time it takes to sell inventory and collect receivables less the time it takes to pay your payables, or: $CCC = ICP \text{ plus } RCP \text{ less } PDP$.

- ICP is time between purchase of raw material, production of the goods or service and the sale of the product. The Calculation of ICP is inventory divided by (cost of goods sold/365).
- RCP is time between sales of the final product on credit and cash receipts for the accounts receivable. The Calculation of RCP is receivables divided by (sales/365).
- PDP is time between purchase of raw material on credit and cash payments for the resulting accounts payable (AP). The Calculation of PDP is AP divided by (cost of goods sold/365).

Figure 1 which describe about Cash Conversion Cycle Model which developed by Schilling (1996).

Figure 1. Cash Conversion Cycle Model



Source: Schilling (1996)

Operating Cash Flow to Sales Ratio (OCFSR)

Spiceland, Sepe, and Thomassini (2000) describe cash and cash equivalents as follows: "Cash includes currency and coins, balances in checking accounts, and items acceptable for deposit in these accounts, such as checks and money orders received from customers. Cash equivalents include such things as certain money market funds, short term certificates of deposit, treasury bills, and commercial paper. To be classified as cash equivalents, these investments must have a maturity date no longer than three months from the date of purchase. Cash flow is a term that refers to the amount of cash being received and spent by a business during a defined period of time, sometimes tied to a specific project.

Operating cash flow is a life blood of a company and the most important barometer that investors have. Operating cash flow is defined as cash received or expended as a result of the company's core business activities. This is the key source of a company's cash generation.

The operating flows are the net generated from operations which are net income and changes of working capital. By taking net income and making adjustments to reflect changes in the working capital accounts in the balance sheet (receivables, payables, inventories) and other current accounts, the operating cash flow section shows how cash was generated during the period. (Wayman, 2008).

Operating Cash Flow to Sales Ratio (OCFSR) describes how many dollars of cash the company gets for every dollar of sales. This ratio expressed as a percentage of a company's net operating cash flow to its net sales.

Profitability is the primary goal of all business ventures. Without profitability the business will not survive in the long run. Increasing profitability is one of the most important tasks of the business manager. Return on Assets (ROA) is one of the profitability ratios. This ratio indicates how profitable a company is relative to its total assets. *The ROA ratio illustrates how well management is employing the company's total assets to make a profit* (Loth, 2007). The higher the return, the more efficient management is in utilizing its asset base. The ROA ratio is calculated by comparing net income to total assets, and its expressed as a percentage.

The study of Chiou, Chen, and Wu (2006) use total asset as a measure of firm size.

Schroeder, Clark, and Cathey (2005) explain the definition of asset as: *“Probable future economic benefits obtained or controlled by particular entity as a result of past transactions or events. An asset has three essential characteristics: (1) it embodies a probable future benefit that involves a capacity, singly or in combination with other assets, to contribute directly or indirectly to future net cash inflows; (2) a particular enterprise can obtain the benefit and control other’s access to it; and (3) the transaction or other event giving rise to the enterprise’s right to or control of the benefit has already occurred.”*

The hypotheses that will be tested in this research are as follows:

- H_0 : No relationship between the dependent variable (OCFSR) and the independent variables (CCC, ROA, and firm size).
- H_1 : There is relationship between the dependent variable (OCFSR) and the independent variables (CCC, ROA, and firm size).

3. RESEARCH METHOD

The aim of this research is to investigate the influence of some key factors on OCFSR of IDX listed companies in consumer goods industry. The author uses the framework for this research as follows:

1. Gather data on 2006 annual report of sample companies, which are IDX listed companies in consumer goods industry.
2. Compute OCFSR of each sample company based on 2006 annual report.
3. Calculate CCC, ROA and firm size of each sample company based on 2006 annual report.
4. Compile the calculation data of sample companies.
5. Perform Descriptive Statistic. It shows the minimum, maximum, average and standard deviation of the samples.
6. Perform Correlation Analysis which are Pearson Coefficient of Correlation and Spearman Rank Correlation.
7. Perform multiple regression analysis. The data will be regressed with SPSS 16 software. The output of SPSS will show three tables, which are model summary, ANOVA and coefficients.
 - 7.1. Model summary shows R square which describes the capability of independent variables (CCC, ROA and firm size) in explaining dependent variable (OCFSR).
 - 7.2. Table ANOVA that stands for Analysis of Variance or *F*-statistic shows whether all independent variables (CCC, ROA, and firm size) simultaneously influence toward dependent variable (OCFSR).
 - 7.3. Table Coefficients or *t*-statistics shows whether each independent variable individually explain dependent variable.
8. Perform Classical Assumption Test to find that the data is valid, so the result of regression analysis can be used to decision making.

The independent variables are CCC, ROA, and firm size. Dependent variable is OCFSR. Each of the independent variables effects towards OCFSR will be investigated.

4. RESULT FINDINGS AND DISCUSSION

Table 1 shows the results of dependent variable (OCFSR) and independent variables (CCC, ROA, and firm size) of IDX listed companies in consumer goods industry.

Table 1. The Calculation of Variables

No	Company	Company Name	OCFSR	CCC	ROA	Firm Size
1	ADES	Ades Waters Indonesia Tbk	(0.96)	72.33	(0.55)	233,253
2	AISA	Tiga Pilar Sejahtera Food Tbk	(0.01)	117.83	0.00	363,933
3	AQUA	Aqua Golden Mississippi Tbk	0.03	87.14	0.06	795,244
4	CEKA	Cahaya Kalbar Tbk	0.14	112.78	0.05	280,807
5	DAVO	Davomas Abadi Tbk	0.04	107.26	0.07	2,707,801
6	DLTA	Delta Djakarta Tbk	0.03	142.76	0.07	577,411
7	INDF	Indofood Sukses makmur Tbk	0.07	63.24	0.04	16,112,493
8	MLBI	Multi Bintang Indonesia Tbk	0.19	66.60	0.12	610,437
9	MYOR	Mayora Indah Tbk	0.01	108.11	0.06	1,553,377
10	PSDN	Prasidha Aneka Niaga Tbk	0.01	78.12	0.04	288,085
11	SHDA	Sari Husada Tbk	0.24	62.35	0.27	1,250,092
12	SKLT	Sekar Laut Tbk	0.02	53.19	0.05	94,770
13	SMAR	SMART Tbk	0.08	47.78	0.12	5,311,931
14	STTP	Siantar TOP Tbk	0.03	76.86	0.03	467,491
15	SUBA	Suba Indah Tbk	(0.40)	(876.66)	(0.07)	793,953
16	TBLA	Tunas Baru Lampung Tbk	0.31	77.83	0.03	2,049,163
17	ULTJ	Ultra Jaya Milk Tbk	0.02	111.57	0.01	1,249,080
18	BATI	BAT Indonesia Tbk	(0.17)	360.14	(0.10)	611,963
19	GGRM	Gudang Garam Tbk	0.07	228.18	0.05	21,733,034
20	HMSP	HM Sampoerna Tbk	0.12	125.53	0.28	12,659,804
21	RMBA	Bentoel International Inv. Tbk	(0.04)	133.03	0.06	2,347,942
22	DVLA	Darya-Varia Laboratoria Tbk	0.10	165.68	0.09	557,338
23	INAF	Indofarma Tbk	0.07	(9.98)	0.02	686,937
24	KAEF	Kimia Farma Tbk	0.06	42.13	0.03	1,261,225
25	KLBF	Kalbe Farma Tbk	0.11	105.55	0.15	4,624,619
26	MERK	Merck Tbk	0.19	154.74	0.31	282,699
27	PYFA	Pyridam Farma Tbk	(0.04)	214.19	0.02	83,127
28	SCPI	Schering Plough Indonesia Tbk	(0.11)	307.71	(0.03)	98,874
29	SQBI	Bristol-Myers Squibb Ind. Tbk	0.19	165.26	0.21	207,136
30	TSPC	Tempo Scan Pacifik Tbk	0.09	62.15	0.11	2,479,251
31	MRAT	Mustika Ratu Tbk	0.01	240.93	0.03	291,769
32	TCID	Mandom Indonesia Tbk	0.09	156.39	0.15	672,197
33	UNVR	Unilever Indonesia Tbk	0.19	23.75	0.37	4,626,000
34	KDSI	Kedawung Setia Industrial Tbk	0.17	203.45	0.00	439,737
35	KICI	Kedaung Indah Can Tbk	(0.05)	230.59	(0.11)	140,214
36	LMPI	Langgeng Makmur Industri Tbk	0.02	270.68	0.01	508,865

Operating Cash Flow to Sales Ratio (OCFSR) is equal to Operating Cash Flow divided by Sales. Cash Conversion Cycle (CCC) is equal to Inventory Conversion Period (ICP) plus Receivables Collection Period (RCP) minus Payables Deferral Period (PDP). Return on Assets (ROA) is equal to Net Income divided by Total Assets. Firm Size is Total Assets (round up to the near million rupiah). ICP is equal to Inventory divided by (COGS/365). RCP is equal to Receivables divided by (Sales/365). PDP is equal to Payables divided by (COGS/365).

Source: Research data

Descriptive Statistical Analysis Results

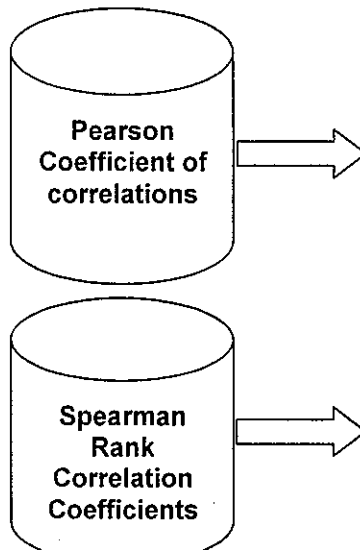
Descriptive statistics are used to describe the condition of consumer goods companies in term of CCC, ROA, firm size and OCFSR. It shows minimum, maximum, average and standard deviation of the variables. The results of descriptive statistics are shown as follows:

- The mean CCC in sample companies is 132.1629 days. The minimum CCC in the sample companies is minus 9.98 days and the maximum one is 360.14 days. The minimum and the maximum CCC in consumer goods companies are from Indofarma Tbk and BAT Indonesia Tbk respectively.
- The average ROA in sample companies is 0.0792 with the minimum and maximum of minus 0.11 and 0.37. The lowest and highest ROA is Schering Plough Indonesia and Unilever Indonesia Tbk respectively.
- The average for firm size in consumer goods companies is IDR 2,588,966.04. The minimum and maximum firm size is IDR 83,127 and IDR 21,733,034 respectively. Gudang Garam Tbk is the largest firm size in consumer goods industry. However, Pyridam Farma Tbk has the smallest firm size.
- The average OCFSR is 0.666. The lowest and the highest OCFSR are minus 0.17 and 0.31 respectively. Tunas Baru Lampung Tbk is the firm that gained the highest OCFSR and BAT Indonesia is the firm that gained the lowest one.

Correlation Analysis Results

Correlation analysis is applied to analyze the relationship between variables. This research uses Pearson Coefficient of Correlation and Spearman Rank Correlation Coefficients in order to measure the strength of association between two variables. The result of correlation matrix is shown in Table 2.

Table 2. Correlations



	OCFSR	CCC	ROA	FS
OCFSR		—☆☆	⊕☆☆	
CCC	—☆☆		—☆	
ROA	⊕☆☆	—☆		
FS				

	OCFSR	CCC	ROA	FS
OCFSR		—☆	⊕☆☆	
CCC	—☆		—☆	—☆
ROA	⊕☆☆	—☆		⊕☆
FS		—☆	⊕☆	

Relationship: Yes No

☆☆ Significant at the level 0.01 (2-tailed) ⊕ Positive
 ☆ Significant at the level 0.05 (2-tailed) — Negative

Source: Research data

Table 2 shows that the correlation between variables in the sample companies using Pearson Coefficient of Correlations indicates several significant correlations between variables. OCFSR are negatively related by less than 1% level towards CCC and positively related by less than 1% level towards ROA. The relationship concludes that the lower the days of CCC, the higher the OCFSR. And the higher the ROA, the higher the OCFSR. There is also direct relationship between ROA and CCC. CCC is negatively related by less than 5% level towards ROA. There is possibility that the lower the days of CCC, the higher the ROA. Meanwhile firm size has no significant correlations with other variables, including OCFSR.

Table 2 also shows that the correlation between variables in the sample companies using Spearman Rank Correlations Coefficients. The result indicates several significant correlations between variables. OCFSR are negatively related by less than 5% level towards CCC, positively related by less than 1% level towards ROA. The relationship concludes there are possibilities that the lower the days of CCC, the higher the OCFSR. The higher the ROA, the higher the OCFSR. There are also direct relationship between CCC, ROA and firm size. CCC is negatively related by less than 5% towards ROA and firm size. It shows there is possibility that the lower the days of CCC, the higher ROA and firm size. Meanwhile ROA is positively related by less than 5% level towards firm size. There is possibility that the higher the ROA, the larger the company's assets.

Regression Analysis Results

Regression analysis is used to analyze the relationship between independent variables and dependent variable. Table 3 shows the results of regression analysis. The *F* test conducted to determine whether there is a significant relationship between the dependent variable and the set of independent variables simultaneously. Because there are three independent variables, the null and alternative hypotheses are as follows:

H_0 : no relationship between the dependent variable (OCFSR) and the independent variables (CCC, ROA, and firm size).

H_1 : there is relationship between the dependent variable (OCFSR) and some of the independent variables (CCC, ROA, and firm size).

This null hypothesis is tested with an *F* test with $\alpha = 5\%$ with the result in Table 3.

Table 3. Model Summary and ANOVA
Model Summary^b

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.709 ^a	.503	.454	.0725

a. Predictors: (Constant), Firm Size, ROA, CCC

b. Dependent Variable: OCFSR

Operating Cash Flow to Sales Ratio (OCFSR) is equal to Operating Cash Flow divided by Sales. Cash Conversion Cycle (CCC) is equal to Inventory Conversion Period (ICP) plus Receivables Collection Period (RCP) minus Payables Deferral Period (PDP). Return on Assets (ROA) is equal to Net Income divided by Total Assets. Firm Size is Total Assets (round up to the near million rupiah). ICP is equal to Inventory divided by (COGS/365). RCP is equal to Receivables divided by (Sales/365). PDP is equal to Payables divided by (COGS/365).

ANOVA^b

Model	Sum of Squares	df	Mean Square	F	Sig.
1 Regression	.160	3	.053	10.130	.000 ^a
Residual	.158	30	.005		
Total	.317	33			

a. Predictors: (Constant), Firm Size, ROA, CCC

b. Dependent Variable: OCFSR

Operating Cash Flow to Sales Ratio (OCFSR) is equal to Operating Cash Flow divided by Sales. Cash Conversion Cycle (CCC) is equal to Inventory Conversion Period (ICP) plus Receivables Collection Period (RCP) minus Payables Deferral Period (PDP). Return on Assets (ROA) is equal to Net Income divided by Total Assets. Firm Size is Total Assets (round up to the near million rupiah). ICP is equal to Inventory divided by (COGS/365). RCP is equal to Receivables divided by (Sales/365). PDP is equal to Payables divided by (COGS/365).

Source: Research data

Table 3 shows that the F statistic given in the ANOVA summary is 10.130. With level of significance is 5%, because the p -value = 0.000 < 0.05, hence H_0 rejected and we conclude that CCC, ROA and firm size have significant relationship toward OCFSR simultaneously. Furthermore the relationship is shown by R^2 is 50.3%. The adjusted R^2 on this test, however, shows that the independent variable can explain 45.4% movement of OCFSR, and the remains which is 54.6% explained by another factors outside this model.

This result is consistent with Wayman (2008) statement that the operating cash flows are the net generated from operations which are net income and changes of working capital. By taking net income and making adjustments to reflect changes in the working capital accounts in the balance sheet (receivables, payables, inventories) and other current accounts, the operating cash flow section shows how cash was generated during the period. However this relationship indicates that CCC, ROA and firm size are not the only factors that affect OCFSR, there are some other factors that can affect OCFSR. To improve cash flow earned by the company, the business people should aware not only to working capital management, profitability and firm size. The other factors beside these three factors should also be considered. If they only conscious with these independent variables, they only get less than a half factors (45.4%) that generate cash flow.

The t test conducted to determine whether there is a significant relationship between the dependent variable and each of independent variables. By comparing significant value, each independent variable will be analyzed one by one. Table 4 shows the results of t test.

Table 4. Coefficients^a

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	
	B	Std. Error	Beta			
1	(Constant)	.0533	.1371			
	CCC	-.0003	.0002	-.278	-1.916	.065
	ROA	.5016	.1351	.539	3.713	.001
	Firm Size	.0012	.0096	.018	.125	.901

a. Dependent Variable: OCFSR

Operating Cash Flow to Sales Ratio (OCFSR) is equal to Operating Cash Flow divided by Sales. Cash Conversion Cycle (CCC) is equal to Inventory Conversion Period (ICP) plus Receivables Collection Period (RCP) minus Payables Deferral Period (PDP). Return on Assets (ROA) is equal to Net Income divided by Total Assets. Firm Size is Total Assets (round up to the near million rupiah). ICP is equal to Inventory divided by (COGS/365). RCP is equal to Receivables divided by (Sales/365). PDP is equal to Payables divided by (COGS/365).

Source: Research data

The *t* test result creates regression equation as follows:

$$OCFSR_i = 0.0533 - 0.0003 CCC_i + 0.5016 ROA_i + 0.0012 FS_i$$

(.389) (-1.916) (3.713) (.125)

From the regression equation above, assuming all independent variables are zero, the predicted OCFSR will be 5.33%. Furthermore the test result shows, assuming the constancy of ROA and firm size, every single day decrease of CCC will increase OCFSR 0.03%. Assuming the constancy of CCC and firm size, every single percent increase of ROA will increase OCFSR 50.16% holding everything else constant. Assuming the constancy of CCC and ROA, every single rupiah increase of firm size will increase OCFSR 0.12%.

Moreover the regression equation above indicate that even though the companies have zero working capital, profitability and firm size movement, they still have ability to earn cash flow (5.33%). This test is in line with the *F* test result in Table 3, that some other factors exist to generate cash flow.

The Coefficients in Table 4 shows that CCC *p*-value = 0.065. Because Sig. > 5% and < 10%, hence in level of significant 10%, the conclusion can be made that CCC with level of confidence 90% has significant weak relationship toward OCFSR. These results are consistent with the view that the shorter the period between production and sale of product the larger firm's cash flow. Delaying payment to suppliers and selling of receivables is some ways that can be used to shorten the days of CCC. Working capital is also important part of a cash flow improvement. Nevertheless the limitation of CCC component which are only a part of current asset (inventory and accounts receivables) and a part of current liabilities (accounts payable) describe the significant weak relationship toward OCFSR.

The Coefficients in Table 4 also shows that ROA *p*-value = 0.001. Because Sig. < 5%, hence in level of significant 5%, the conclusion can be made that CCC with level of confidence 95% has significant strong relationship toward OCFSR. As profitability increases significantly, there is high possibility to collect large amount cash flow from the remaining between revenues and costs. In result, there will be a higher cash flow earned by the companies. However there is still

room to generate cash flow even though a company lack of profitability. Vice versa a profitable company still could encounter cash flow problem. Although closely related, cash flow and profitability are different. A cash flow statement lists cash inflows and cash outflows while the income statement lists income and expenses. A cash flow statement shows liquidity while an income statement shows profitability (Hofstrand, 2006). The Coefficients shows that Firm Size p -value = 0.901. Because Sig. > 10%, hence the conclusion can be made that Firm Size is not has significant relationship toward OCFSR.

To obtain the objective of regression analysis, the regression model must meet the classical assumption requirements, which are normality, homoscedasticity and independence of errors. On the other word, the regression model must free of multicollinearity, autocorrelation, heteroscedasticity. Regression model also must have normality.

Multicollinearity occurs when there is correlation between independent variable in regression model. To identify multicollinearity in this research, the author uses the Table 5.

Table 5. Output of Multicollinearity Test (VIF) Coefficients^a

Model	Correlations			Collinearity Statistics	
	Zero-order	Partial	Part	Tolerance	VIF
1					
CCC	-.509	-.330	-.247	.784	1.276
ROA	.661	.561	.478	.785	1.274
Firm Size	.288	.023	.016	.845	1.184

a. Dependent Variable: OCFSR

Operating Cash Flow to Sales Ratio (OCFSR) is equal to Operating Cash Flow divided by Sales. Cash Conversion Cycle (CCC) is equal to Inventory Conversion Period (ICP) plus Receivables Collection Period (RCP) minus Payables Deferral Period (PDP). Return on Assets (ROA) is equal to Net Income divided by Total Assets. Firm Size is Total Assets (round up to the near million rupiah). ICP is equal to Inventory divided by (COGS/365). RCP is equal to Receivables divided by (Sales/365). PDP is equal to Payables divided by (COGS/365).

Source: Research data

The computation of Variance Inflation Factor (VIF) in Table 5 shows there are no independent variables which have VIF value more than 5. VIF value of the independent variables is in the range of 1.184 – 1.276. Moreover tolerance value of the independent variables is near to 1. So this is indicates multicollinearity is not presence among the independent variables.

**Table 6. Output of Multicollinearity Test
Correlations**

		CCC	ROA	Firm Size
CCC	Pearson Correlation	1.000	-.417*	-.332
	Sig. (2-tailed)		.014	.055
	N	34.000	34	34
ROA	Pearson Correlation	-.417*	1.000	.331
	Sig. (2-tailed)	.014		.056
	N	34	34.000	34
Firm Size	Pearson Correlation	-.332	.331	1.000
	Sig. (2-tailed)	.055	.056	
	N	34	34	34.000

*. Correlation is significant at the 0.05 level (2-tailed).

Operating Cash Flow to Sales Ratio (OCFSR) is equal to Operating Cash Flow divided by Sales. Cash Conversion Cycle (CCC) is equal to Inventory Conversion Period (ICP) plus Receivables Collection Period (RCP) minus Payables Deferral Period (PDP). Return on Assets (ROA) is equal to Net Income divided by Total Assets. Firm Size is Total Assets (round up to the near million rupiah). ICP is equal to Inventory divided by (COGS/365). RCP is equal to Receivables divided by (Sales/365). PDP is equal to Payables divided by (COGS/365).

Source: Research data

Table 6 shows that there is significant correlation between CCC and ROA which is minus 0.417. But the correlation is still below 80%, so this indicates that there is no serious multicollinearity.

Autocorrelation occurs when data are collected over sequential periods of time because a residual at any one point in time may tend to be similar to residuals at adjacent points in time. Autocorrelation can be detected and measured by using the Durbin-Watson statistic. Table 7 shows the result of autocorrelation test with Durbin-Watson statistic.

**Table 7. Durbin Watson
Model Summary^b**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.709 ^a	.503	.454	.0725	2.089

a. Predictors: (Constant), Firm Size, ROA, CCC

b. Dependent Variable: OCFSR

Operating Cash Flow to Sales Ratio (OCFSR) is equal to Operating Cash Flow divided by Sales. Cash Conversion Cycle (CCC) is equal to Inventory Conversion Period (ICP) plus Receivables Collection Period (RCP) minus Payables Deferral Period (PDP). Return on Assets (ROA) is equal to Net Income divided by Total Assets. Firm Size is Total Assets (round up to the near million rupiah). ICP is equal to Inventory

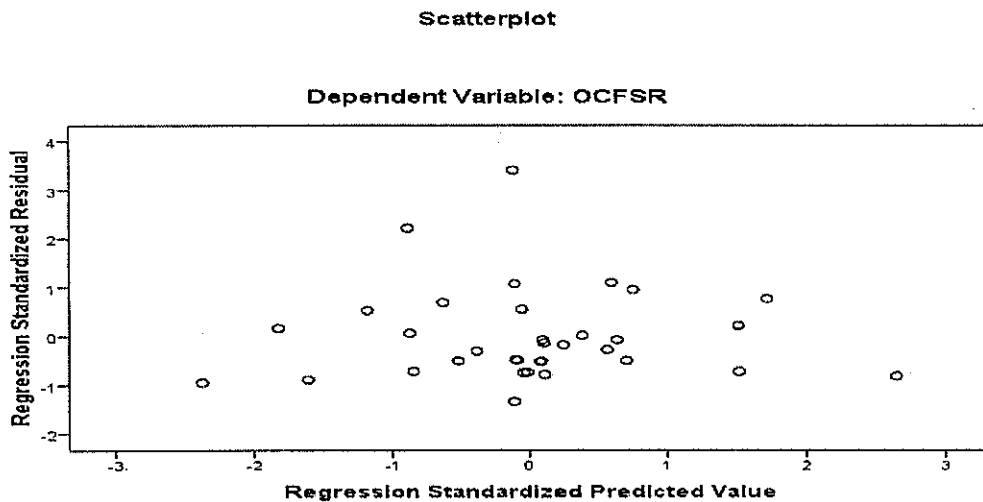
divided by (COGS/365). RCP is equal to Receivables divided by (Sales/365). PDP is equal to Payables divided by (COGS/365)

Source: Research data

This research uses observation data (N) = 34 and 3 independent variables and $\alpha = 0.05$. Critical Values d_L and d_U of the Durbin-Watson statistic D table shows $d_L = 1.27$ and $d_U = 1.65$. Column Durbin-Watson on Table 7 shows the value of $D-W = 2.089$. So $D > d_U > d_L$ ($2.089 > 1.65 > 1.27$), the conclusion can be made that this regression model free of autocorrelation.

Heteroscedasticity test is to prove whether in the error in this regression model vary the dissimilar amount when the independent variable is a low value as when it is a high value. Heteroscedasticity can be detected from a plot of the residual with independent variable. Figure 1 shows the result of heteroscedasticity test.

Figure 1. Scatterplot Graphic of Regression Model



Source: Research data

The Scatterplot Graphic of regression model on Figure 1 shows the plots appear broaden in the random are, above and below null on Y axis. So the conclusion can be made, there is no heteroscedasticity in this regression model.

Normality test is to prove whether this regression model has normal distribution. Graphic analysis, histogram graphic and normal probability plot, can be used to detect whether the residual has normal distribution. Table 8 and Figure 2 shows the result of normality test.

Table 8. One-Sample Kolmogorov-Smirnov Test

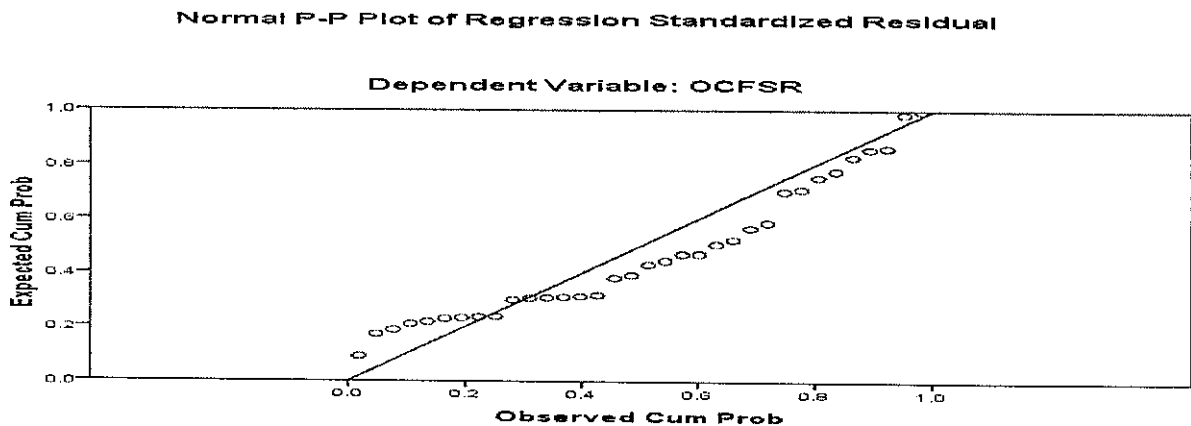
		OCFSR
N		34
Normal Parameters ^a	Mean	.0666
	Std. Deviation	.0980
Most Extreme Differences	Absolute	.105
	Positive	.093
	Negative	-.105
Kolmogorov-Smirnov Z		.612
Asymp. Sig. (2-tailed)		.847

a. Test distribution is Normal.

Source: Research data

Table 8 shows that Kolmogorov-Smirnov value in OCFSR column is 0.612 with probability 0.847 (Asymp. Sig. (2-tailed)) or $p > 0.05$, hence the result shows that the data variable of OCFSR in 34 samples meet the requirement of normality test.

Figure 2. Normal P-Plot Graphic of Regression Model



Source: Research data

Figure 2 shows that normal p-plot graphic also shows data the data appear around the diagonal line and follow the line. So the conclusion can be made, this regression model meets the assumption of normality.

5. CONCLUSIONS AND RECOMMENDATIONS

Conclusion

Based on the result in this research, the conclusions can be made as follows:

- The three factors which are Cash Conversion Cycle (CCC), Return on Assets (ROA) and firm size have influence Operating Cash Flow to Sales Ratio (OCFSR) of the consumer goods companies that listed in Indonesia Stock Exchange (IDX) for period 2006. They are simultaneously having significant relationship toward OCFSR with level of significance 5%, but the relationship is only 45.4% (Adjusted R^2).

- Regression model test result: Only CCC and ROA that partially have significant relationship towards OCFSR of sample consumer goods companies. CCC has negative significant weak relationship towards OCFSR with level of confidence 90%. ROA has positive significant strong relationship with level of confidence 95%. Meanwhile firm size partially has no relationship towards OCFSR of the consumer goods companies that listed in IDX period 2006.
- Correlation matrix result: Pearson Coefficient of Correlations indicates that OCFSR of sample consumer goods are negatively related by less than 1% level towards CCC and positively related by less than 1% level towards ROA. This correlation matrix also shows direct relationship between ROA and CCC. ROA is negatively related by less than 5% level towards ROA. Firm size has no significant correlations with other variables, including OCFSR of the consumer goods companies that listed in IDX period 2006. Meanwhile Spearman Rank Correlations Coefficients shows that OCFSR of sample consumer goods companies are negatively related by less than 5% level towards CCC, positively related by less than 1% level towards ROA. This correlation matrix 4.12 also shows direct relationship between CCC, ROA and firm size. CCC is negatively related by less than 5% towards ROA and firm size. Meanwhile ROA is positively related by less than 5% level towards firm size.
- The average CCC of consumer goods companies listed in IDX is 132.16 days. The lowest CCC is food and beverage companies with average CCC 87.56 days and the highest one is house ware with average CCC is 234.91 days.

Recommendations

Recommendations for future research are as follows:

- The result of this research shows that CCC as representation of working capital management has significant relationship towards OCFSR but not very strong. In the next research can be considered to use another approach of working capital management, to find its relationship towards cash flow. The components of CCC which are Accounts Receivable, Inventories and Accounts Payable have many limitations compare to the other method of working capital management. It will be better if the next research test another approach of working capital management that covered wider account of financial aspect (current assets and current liabilities).
- The stakeholders which have interest on the company performance must pay attention to the other factors that can affect improvement of cash flow beside working capital management. Profitability, financing, other assets and liabilities, cash control need to be considered by stakeholders as well as working capital management.

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