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Does Working Capital Management Affect the Profitability of Property and Real Estate Firms in Indonesia?

Abstract

During 2013-2017, the increase in net profit of property companies in Indonesia was accompanied by an increase in the cash conversion cycle and net working capital ratio which indicated that performance was increasing but not in cash flow and management of working capital was not productive. The purpose of the study to determine the significant effect of working capital management on profitability and working capital element which has the dominant effect. This study used control variables of sales growth, company size, interest rate, and exchange rate. This study used a descriptive approach and panel data regression. The results showed that the Cash Conversion Cycle (CCC) had a significant negative effect on OPM, ROA, and ROE. Current asset to total assets ratio (CATAR) had a significant positive effect on ROA and ROE. Current liabilities to total assets ratio (CLTAR) have a positive effect significant to OPM and debts to total asset ratio (DTA) have a significant negative effect on OPM and ROA. While CLTAR had the most dominant effect on OPM because it has the highest estimation coefficient among others and the company more aggressive in implementing its working capital policy to achieve higher operating profit.

Keywords: Operating Profit Margin; Profitability; Return on Assets; Return on Equity; Working Capital Management

JEL Classification: C33, G31, E43, F31

Abstrak

Selama tahun 2013-2017 peningkatan laba bersih perusahaan properti di Indonesia dibarengi dengan meningkatnya siklus konversi kas dan rasio modal kerja bersih yang mengindikasikan bahwa secara kinerjanya meningkat namun tidak secara cash flow dan pengelolaan modal kerjanya tidak produktif. Tujuan penelitian adalah untuk mengetahui signifikansi pengaruh dan elemen manajemen modal kerja yang berpengaruh dominan terhadap profitabilitas. Penelitian ini menggunakan variabel kontrol pertumbuhan penjualan, ukuran perusahaan, suku bunga, dan nilai tukar Rupiah terhadap USD. Penelitian ini menggunakan pendekatan deskriptif dan regresi data panel. Hasil penelitian menunjukkan bahwa siklus konversi kas (CCC) memiliki pengaruh negatif signifikan terhadap OPM, ROA, dan ROE. Current asset to total assets ratio (CATAR) memiliki pengaruh positif signifikan terhadap ROA dan ROE. Current liabilities to total assets ratio (CLTAR) berpengaruh positif signifikan terhadap OPM dan debts to total asset ratio (DTA) berpengaruh negatif signifikan terhadap OPM dan ROA. Sedangkan elemen modal kerja yang memiliki pengaruh paling dominan terhadap profitabilitas adalah pengaruh CLTAR pada OPM karena memiliki koefisien estimasi tertinggi antara lain dan hal ini menunjukkan bahwa perusahaan lebih agresif dalam menerapkan kebijakan modal kerjanya untuk mencapai laba operasi yang lebih tinggi.

Kata Kunci: Operating Profit Margin; Profitabilitas; Return on Assets; Return on Equity; Manajemen Modal Kerja

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Working capital management is a very sensitive discipline in financial management since it involves total and composition of current assets and asset financing. The purpose of working capital management is to ensure that the company can pay its operating costs and also able to meet its short-term liability. The analysis result of profitability can be used as a benchmark or measurement of company performance from profit divided by sales results and the company's investment. Gill, Biger, & Mathur (2010) state that profitability can increase if the company can effectively manage working capital. Under this circumstance, the role of capital is very important because the larger a company, the greater capital is needed.

According to Santoso (2009), the property & real estate companies is one of the most important sectors in a nation because it can be used as a national economic health indicator, which is able to provide massive employment and a significant chain effect on other economic sectors. From the standpoint of business characteristics, the property and real estate industry is very different from other industrial sectors, as it requires too high working capital. Such industry entails land acquisition that demands large funds in considering the increasingly high land prices. In addition, it takes a long time to determine and buy new land due to legal issues, i.e., permits and so forth. After land purchase, a developer requires another long time to develop and construct buildings for production and sale. This happens because the developer needs to set up road infrastructure, channels, electricity networks, etc., which requires expensive cost (Santoso, 2009).

One of the most frequently used methods in measuring working capital is the cash conversion cycle (CCC), i.e., the total number of days between corporate cash outlay from purchasing raw materials and cash collection from finished product sales. Efficient company cash management with a shorter CCC period can increase the net value of cash flows which ultimately can generate higher returns. The

increase in net profit of property companies in Indonesia in the period of 2013-2017 coexisted with an increase in days of the cash conversion cycle. This indicates that the company's performance has indeed increased even though the company's cash flow did not perform well.

Net working capital includes all components in current assets minus all total current liabilities. Every company seeks to obtain working capital to increase its liquidity. The increase in net income of property companies in Indonesia in the period 2013-2017 coexisted with an increase in the company's net working capital ratio. This indicates that working capital management is unproductive since the greater the ratio of net working capital, the more unproductive the company in running its business due to a large number of idle assets.

Based on the background of the study, it is interesting to do further research to prove whether the working capital management affects the profitability of companies in the property and real estate sector. In addition, several studies on the effect of working capital toward company profitability have been carried out by several researchers with different results, so that it is also fascinating to take further study about it.

Table 1. Differences in Research Results about the Effect of Working Capital Management on Profitability

Researcher	Result
Enqvist, Graham, & Nikkinen (2014)	Negative
Vural, Sokmen, & Cetenak (2012)	Negative
Nwude, Agbo, & Lamberts (2018)	Negative
Ukaegbu (2013)	Negative
Dalayeen (2017)	Positive
Michello & Wanorie (2015)	Positive
Baidh (2013)	Positive
Utami & Dewi (2016)	Positive

The objectives of the study are to analyze and to obtain significant evidences on the effect of working capital management, consisting of CCC, current

asset to total assets ratio (CATAR), current liabilities to total assets ratio (CLTAR), and total debts to total assets ratio (DTA), toward profitability and working capital elements that have dominant factors on the profitability of property and real estate companies listed on the IDX in 2013-2017.

HYPOTHESES DEVELOPMENT

The most popular way of measuring working capital is CCC. According to Gitman (1974), the cash conversion cycle is very important in working capital management since each component of working capital will eventually appear in the cash cycle. Ross, Westerfield, & Jordan (2008) state that receivable turnover is associated with the average collection period (ACP). Moreover, according to Horne & Wachowicz (2012), the inventory turnover deals with how much inventory turns into accounts receivable through sales during the year. Meanwhile business debt turnover, according to Brigham & Ehrhardt (2005), is the average time turnover from purchase to payment for the purchase. One way to shorten the cash cycle is to extend the period of payment that should be paid by the company. Therefore, the company has the opportunity to use the funds for reinvestment. Based on a study by Vural, Sokmen, & Cetenak (2012), Ukaegbu (2013), Enqvist, Graham, & Nikkinen (2014), Nwude, Agbo, & Lamberts (2018), the cash conversion cycle has a significant negative effect on profitability, the higher the cash conversion cycle, the lower profitability of the company. Based on the explanation, the first hypothesis is formulated as follow:

H₁: CCC has a negative influence on profitability (OPM, ROA, and ROE)

Horne & Wachowicz (2012) affirm that working capital is classified on the basis of time, which is either permanent or temporary. Permanent working capital is the number of current assets needed by the company in a long-term period, while tem-

porary working capital is the number of current assets that varies among periods. The variable ratio of CATAR is used to measure the level of aggressiveness of working capital management. The lower CATAR ratio, the more companies implement aggressive policies; whereas the higher CATAR ratio, the more companies tend to implement conservative policies. According to studies by Padachi (2006), Garcia-Teruel & Martinez-Solano (2007), and Raheman et al. (2010), CATAR shows a significantly positive effect on the profitability. Based on the explanation, the second hypothesis is formulated as follow:

H₂: CATAR has a positive influence on profitability (OPM, ROA, and ROE)

Brealey & Marcus (2008) state that the ratio of CLTAR is used to measure the amount of financial leverage borne by the company. The asset ratio is the current debt divided by total assets. Every debt used by the company will affect debt risk and repayment. CLTAR is also used as a measure of aggressiveness in financing policy since CLTAR indicates the company's tendency to use aggressive policies. On the contrary, if the CAR ratio is low, the company will be more conservative in the implementation of working capital financing policy. According to studies by Weinraub & Visscher (1998), Nyabuti & Alala (2014), and Pais & Gama (2015), CLTAR has a significant positive effect on profitability. Based on the explanation, the third hypothesis is formulated as follow:

H₃: current liabilities to total assets ratio (CLTAR) has a positive influence on profitability (OPM, ROA, and ROE)

Financing problem is the most important factors of business involving a variety of parties, such as creditors, shareholders, and company management. According to Brigham & Houston (2010), the goal of the company considering financing decision

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is to determine the level of optimal capital structure, namely the capital structure that maximizes stock prices or company value while simultaneously minimizes the average capital cost. According to the Pecking Order Theory from Myers & Majluf (1984), if the working capital ratio gets higher, then the company's operating costs will be higher. Thus, the company's ability to generate profits will be lower and can affect the decrease in the company's profitability. According to Enqvist, Graham & Nikkinen (2014), Pais & Gama (2015), and Lyngstadaas & Berg (2016), the higher DTA ratio, the lower profitability that companies can generate, so that DTA ratio has a negative influence on profitability. Based on the explanation, the fourth hypothesis is formulated as follow:

H₄: debts to total asset ratio (DTA) has a negative influence on profitability (OPM, ROA, and ROE)

According to Sartono (2010), firm size measures the proportion of a company. Large companies will find it easier to get external loans in the form of debt or share capital. Large companies tend not to use debt because they already have large total assets that can be used to pay off the total debt. Small companies do not have financing options other than relying on bank loans. In the same way of the trade-off theory that small companies are required to increase debt in order to be able to utilize the amount of debt into income with the aim to increase the total assets of the company. According to Baidh (2013) and Nwude, Agbo, & Lamberts (2018) and firm size has a negative effect on profitability; the greater the number of company assets, the less productive the company assets are used in their operational activities, which eventually leads to the decrease of profitability. Based on the explanation, the fifth hypothesis is formulated as follow:

H₅: firm size has a negative influence on profitability (OPM, ROA, and ROE)

Sales growth is an increase in the number of sales from year to year (Suzana & Azlina, 2013). It has a strategic influence on companies because the growth of sales is visible along with the increase in market share. This condition eventually has an impact on increasing sales from companies, with the result of the increase in profitability of the company (Pagano & Schivardi, 2003). As stated in Deloof (2003), Garcia-Teruel & Martinez-Solano (2007), and Raheman et al. (2010), sales growth (SG) has a significant positive effect on the profitability of the company. The higher company's sales growth, the higher company's profitability is. Based on the explanation, the sixth hypothesis is formulated as follow:

H₆: SG has a positive influence on profitability (OPM, ROA, and ROE)

Suhardi (2007) asserts that the interest rate is an economic indicator that connects the monetary sector with the real sector because interest rate control is a tool for monetary policy and investment climate. The interest rate is a measure of investment profits that can be obtained by investors from risk-free assets or either a measure of capital costs that must be spent by companies to use funds from investors. According to research findings by Andriyani & Armereo (2016) and Wiradharma & Sudjarni (2016), interest rates (IR) has a positive effect on company performance. Nonetheless, it is different from Octafia (2013) stating that there is a significant negative relationship between interest rates and stock returns in property companies in the short term. Meanwhile, in a study by Suyati (2015), the interest rates do not affect the stock returns of property companies. Based on the explanation, the seventh hypothesis is formulated as follow:

H₇: the average IR on consumer loans affects profitability (OPM, ROA, and ROE)

Adiningsih (1998) argues that the IDR exchange rate is the value of Rupiah against other cur-

Table 2. Sampling Criteria

Criteria	Total
Property and real estate companies listed on the Indonesia Stock Exchange during the 2013-2017 research period	48
Property and real estate companies that consistently publish quarterly financial reports on the Indonesia Stock Exchange during the 2013-2017 research period	14
Companies that have negative cash conversion cycles (CCC) during the 2013-2017 study period	5
Total Samples	29

Table 3. Research Variables

Variable type	Proxy	Measurement	Reference
Working Capital Measurement	Cash Conversion Cycle (CCC)	CCC = DAR (number of days account receivable) + DOI (number of days inventory) – DAP (number of days account payable)	Enqvist, Graham, & Nikkinen (2014), Ukaegbu (2014)
Working Capital Policy	Current asset to total asset (CATAR)	Current Assets/Total Assets	Padachi (2006); Garcia-Teruel & Martinez-Solano (2007)
	Current liabilities to total asset (CLTAR)	Current Liabilities/Total Assets	Weinraub & Visscher (1998); Pais & Gama (2015)
Working Capital Loans Policy	Debts to total asset (DTA)	Debts/Total Assets	Enqvist, Graham, & Nikkinen (2014); Pais & Gama (2015); Lyngstadaas & Berg (2016)
Internal factor control variables	Firm size	SIZE = Ln total assets for the current year	Baidh (2013); Nwude, Agbo, & Lamberts (2018)
	Sales growth (SG)	SG = (Sales of the current year - sales of the previous year) / Sales of the previous year	Deloof (2003); Garcia-Teruel & Martinez-Solano (2007)
External factor control variable	Interest rate (IR)	IR = % average interest rate for mortgage loans	Andriyani & Armereo (2016); Wiradharma & Sudjarni (2016)
	Rupiah exchange rate	IDR = Mid-quarter exchange rate - middle rate of previous quarter) / middle quarter rate of previous quarter	Iba & Wardhana (2012); Suyati (2015)
Bound Variables: Profitability	Operating profit margin (OPM), ROA, ROE	OPM = Operating / Sales Profit	Deloof (2003); Enqvist, Graham, & Nikkinen (2014); Ukaegbu (2014)
	Return on asset (ROA)	ROA = Net Profit / Total Assets	Deloof (2003); Enqvist, Graham, & Nikkinen (2014); Ukaegbu (2014)
	Return on equity (ROE)	ROE = Net Profit / Total Equity	Deloof (2003); Enqvist, Graham, & Nikkinen (2014); Ukaegbu (2014)

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rencies. The exchange rate is one of the factors that influence activities in the stock market and money market because investors tend to be very careful to make investments. According to a study by Iba & Wardhana (2012) and Suyati (2015), IDR exchange rate has a positive influence on profitability. This statement differs from a study conducted by Octafia (2013) who found that negative relationship between exchange rates and company performance occurs through an indicator of stock returns. Wiradharna & Sudjarni (2016) affirm that IDR does not affect the company's performance in stock returns. Based on the explanation, the eight hypothesis is formulated as follow:

H₈: IDR affects profitability (OPM, ROA, and ROE)

METHODS

The study uses a descriptive approach and panel data regression model with secondary data. The descriptive analysis is used to provide an overview or description of research variables, consisting of working capital management and internal variables of property and real estate companies listed on IDX from 2013-2017. The panel data regression model is used to analyze the influence of working capital management and company internal factors on the profitability of property and real estate companies. The sample of study is 29 property and real estate sub-sector companies listed on the IDX in 2013-2017. The sampling method is a purposive sampling, i.e. the sample was chosen randomly using certain considerations in accord with objectives and research problems. The criteria of sampling are displayed in Table 2.

The research variables are working capital, internal and external factors of the company, toward profitability. Those variables refer to previous studies as shown in Table 3.

The data analysis method is descriptive statistics and panel data regression. The multiple linear regression analysis in this study is used to determine the effect of working capital management on profitability. The related multiple linear regression equation is $Y = \beta_0 + \beta_1x_1 + \beta_2x_2 + \beta_3x_3 + \beta_4x_4 + e$, thus, the regression model is formulated as follow:

$$OPMit = \alpha_0 + \alpha_1CCCit + \alpha_2CATARit + \alpha_3CLTARit + \alpha_4DTAit + \alpha_5SIZEit + \alpha_6SGit + \alpha_7SBit + \alpha_8IDRit + \epsilon it \quad (1)$$

$$ROAit = \alpha_0 + \alpha_1CCCit + \alpha_2CATARit + \alpha_3CLTARit + \alpha_4DTAit + \alpha_5SIZEit + \alpha_6SGit + \alpha_7SBit + \alpha_8IDRit + \epsilon it \quad (2)$$

$$ROEit = \alpha_0 + \alpha_1CCCit + \alpha_2CATARit + \alpha_3CLTARit + \alpha_4DTAit + \alpha_5SIZEit + \alpha_6SGit + \alpha_7SBit + \alpha_8IDRit + \epsilon it \quad (3)$$

Where:

- OPM : operating profit margin
- ROA : return on asset
- ROE : return on equity
- $\hat{\alpha}_0$: constants
- β_1, β_2, \dots : regression coefficient
- CCC : cash conversion cycle
- CATAR : ratio current asset to total assets
- CLTAR : ratio current liabilities to total assets
- DTA : ratio debts to total assets
- SIZE : firm size (Ln total asset)
- SG : sales growth
- SB : average interest rate for consumer mortgage loans
- IDR : Rupiah exchange rate
- e : standard error

RESULTS

A brief account of the average performance of property & real estate companies during 2013-2017 research period can be observed from the

company's profitability using the ratios of OPM, ROA, and ROE. In addition, the ratio of net working capital to total asset ratio (NWCTR) is used to determine the level of working capital, where the net working capital ratio is obtained from total current assets minus total current liabilities divided by total assets.

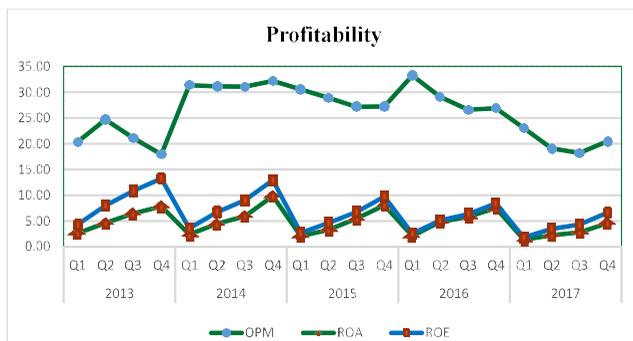


Figure 2. Property Company Profitability 2013-2017
Source: Indonesia Stock Exchange (financial processed data)

In Figure 2, the highest OPM value is 33.27 in the first quarter of 2016, while the lowest OPM value is 17.95 in 2013 quarter 4. The ROA value increased in 2014 with a value of 9.85 in the fourth quarter which was the highest value and reached the lowest value of 1.38 in the first quarter; when in fact, the highest ROE was 13.24 in the first quarter of 2013, and the lowest was 1.81 in the first quarter of 2017.

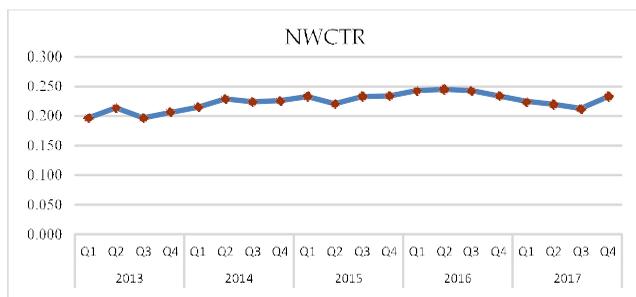


Figure 3. Property Companies Net Working Capital Ratio 2013-2017

Source: Indonesia Stock Exchange (financial processed data)

In Figure 3, the ratio of net working capital to the average property company had increased from 2013-2015 and declined in 2016, which eventually went up again in 2017. The difference in the average ratio of net working capital each year is in the range of 20 percent to 25 percent. It affirms that the property companies on average are more conservative in managing their working capital.

The descriptive analysis is used to provide an overview of research object by analyzing the profitability of the company (OPM, ROA, and ROE), working capital management (CCC, CATAR, CLTAR, DTA), other internal factors of the company such as SG and firm size, as well as the company's external factors such as IDR exchange rate against USD and the average IR on consumer loans. The number of observations used in this study was 580 from 29 property & real estate sub-sector companies listed on the IDX from 2013-2017 quarterly (29 total cross sections and 20-time series numbers). The descriptive statistics are displayed in Table 4.

Panel data regression analysis in this study used three approaches, namely OLS (ordinary least square) or PLS (pooled least square) model, FEM model (fixed effect model), and REM (random effect model) model. Analysis of regression models used E-views 8 software. For OLS or FEM models, it used the Chow test or likelihood ratio test. Among all results of the Chow test, FEM model was selected; while, the Hausman test was used to select the FEM and REM models.

Based on the results of the Hausman test both in the OPM and ROE model, the cross-section variance test is invalid. Therefore, in selecting between FEM and REM model, researchers cannot use the Hausman test. Instead, they use the alternative by comparing the adjusted R-squared value. The recommended result is FEM model. For the ROA model, based on the results of the Hausman test, the p-value is of $0.0004 < 0.05$, rejecting H_0 , accepting the FEM model.

In Table 5, the Chow test results on all mod-

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els indicate that the selected model is FEM because it has p-value $0.000 < 0.05$. Thus, the FEM model is selected for the next analysis.

To find out if the results of the regression model are free from any problems of classical assumption such as heteroscedasticity, multicollinearity, and autocorrelation, the classic assumption test is used for the FEM regression model. The results of heteroscedasticity tests on all regression models indicate that there is no heteroscedasticity which can be seen from the standardized residuals graph

that reveals no particular pattern. The autocorrelation test shows that the overall Durbin Watson model is in the range of 1.016–1.534, which refers to autocorrelation, but since the model uses cross-section weights, the assumption of autocorrelation can be ignored. The multicollinearity test among independent variables in the model show no correlation value that is greater than 0.8 among variables; this indicates that no multicollinearity problem is found in the regression model. The normality test on all models show that the Jarque-Bera probability value

Table 4. Descriptive Statistics of Property Companies

	Unit	Mean	Max	Min	Std Deviation
CCC	Day	2903	87337	10	5544
CATAR	%	0.44	1.03	0.02	0.21
CLTAR	%	0.21	0.58	0.01	0.11
DTA	%	0.40	0.78	0.03	0.16
SG	%	0.49	43.91	-0.97	3.05
SIZE	%	8.31	10.95	4.38	1.52
IDR	%	0.02	0.17	-0.06	0.05
SB	%	0.09	0.09	0.08	0.01
OPM	%	0.26	1.44	-4.00	0.38
ROA	%	0.05	0.72	-0.13	0.08
ROE	%	0.07	0.52	-0.10	0.08

Table 5. Chow Test Results

Model	Effects Test	Statistic	d.f.	Prob.	Conclusion
OPM	Cross-section F	55.105264	(28.543)	0.0000	FEM
ROA	Cross-section F	13.793516	(28.543)	0.0000	FEM
ROE	Cross-section F	12.134052	(28.543)	0.0000	FEM

Table 6. Results of Regression Panel Effect of Working Capital Management on Profitability

	OPM	ROA	ROE
Ln CCC	-0.040**	-0.020***	-0.015***
CATAR	0.059***	0.048***	0.033***
CLTAR	0.250***	0.019***	0.026***
DTA	-0.247***	-0.087***	-0.039***
Ln SIZE	-0.119***	-0.007***	-0.008***
SG	0.007***	0.003***	0.002***
SB	2.132***	1.026***	1.054*
IDR	0.008*	0.077***	0.125***
C	1.095***	0.030***	0.039***
R-squared	0.764***	0.524***	0.574***
F-statistic	48.78***	16.60***	20.32***
Prob(F-statistic)	0.000	0.000	0.000

Description: ***) significant at level 1%; **) significant at the level of 5%; *) significant at the level of 10%

is less than 0.05, but because the number of observations in this study is 580 and more than 30, then this can be ignored. After the regression model is free from classical assumption problems, it can be ready for further analysis. The following are the results of the fixed effect regression model which can be seen in Table 6.

Table 6 shows the coefficient of determination (R^2) is used to measure the diversity proportion Y (dependent variable) which is explained by X (independent variable) in the model. Meanwhile, the F test is used to test the feasibility of the overall model and regression parameters. The resulting analysis of OPM, ROA, and ROE model shows probability value (F-statistics) is $0,000 < 0.01$, meaning that the model is reasonable at the level of 1 percent.

DISCUSSION

The Effect of CCC on Profitability

Based on the results, CCC has a negative and significant influence on OPM, ROA, and ROE. The results confirm previous studies that the lower the value of the cash conversion day cycle, the higher profitability will be (Vural, Sokmen, & Cetenak, 2012; Enqvist, Graham, & Nikkinen, 2014; Ukaegbu, 2014). In the property industry, CCC coefficient value for profitability is lower than in other industries. The value of the cash conversion cycle coefficient gets lower when the property industry has a very long number of days of the cash conversion cycle; considering the length of time needed for land acquisition, preparing and making infrastructure, building properties and product selling. Therefore, change in the number of days in large cash conversion cycles is necessary to the profitability of property companies.

The Effect of Working Capital Policy on Profitability

CATAR has a significant positive effect on ROA and ROE. Meanwhile, CATAR has a positive

but not significant effect on OPM. The ratio of CATAR shows a relationship or a significant positive influence on profitability. In general terms, this shows that property companies during the period 2013-2017 mostly implemented a conservative working capital investment policy. These results confirm previous studies, e.g., Padachi (2006), Garcia-Teruel & Martinez-Solano (2007), and Wijaya (2012), if the CATAR ratio gets higher, the company will be more conservative in implementing its working capital investment policy.

Meanwhile, based on the result of the analysis, CLTAR have a significantly positive influence toward OPM on the level of 1 percent; but have no significant effect toward ROA and ROE. The ratio of CLTAR has a significantly positive relationship toward profitability. This shows that companies in the property sector during the period of 2013-2017 generally implement aggressive working capital financing policies, meaning that the company prefers to finance its working capital with short-term loans rather than long-term loans with the aim of being able to further increase its profitability. This result is similar with some previous studies, e.g., Weinraub & Visscher (1998) and Pais & Gama (2015) affirming that the higher CLTAR rati, the more aggressive the company will be in the implementation of working capital financing policy. Based on the results about CATAR and CLTAR, it shows that from 2013-2017, some property companies implemented several of working capital management policies in increasing their profitability, some of them implement conservative working capital management policies, while others implement aggressive policies in increasing profitability.

The Effect of Working Capital Loans on Profitability

Working capital loans (Debts to total asset/DTA) has a significant negative effect on profitability (OPM and ROA). Meanwhile, it has a negative

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but insignificant effect on ROE and DTA. The result of this study is in line with previous studies, e.g., Enqvist, Graham & Nikkinen (2014), Pais & Gama (2015), and Lyngstadaas & Berg (2016), showing that the higher DTA ratio, the lower profitability of company will be. It also shows that the company's cost of capital is cheaper than debt costs. Therefore, the higher use of debt, the lower the profitability of the company is, since the higher DTA, the higher interest rate on the debt costs, which eventually bring impact on the profitability of company. This is also in accordance with the pecking order theory proposed by Myers & Majluf. Companies with a low debt ratio will have a higher level of profitability since they have abundant internal financing resources which can be used for their operational activities.

The Effect of Internal and External Factors on Profitability

Firm size has a significant negative effect on OPM at a real level of 1 percent. Meanwhile, it has negative but not significant effect toward ROA and ROE. This shows that the higher number of company assets, the less productive it is. Thus, it will have an impact on the decrease in company profitability (operating profit). This result is supported by studies conducted by Baidh (2013) and Nwude, Agbo, & Lamberts (2018) who use firm size as a control variable in measuring the profitability of company.

The sales growth (SG) has a significant positive effect on OPM and ROA at a real level of 1 percent, and ROE at the real level of 10 percent. The increasing sales growth of property companies will have an impact on the increase of companies' operating profit, which will ultimately increase profitability. The result of study is supported by some previous studies, e.g., Deloof (2003), Garcia-Teruel & Martinez-Solano (2007), Enqvist, Graham, & Nikkinen (2014), and Mulyono, Djumahir, & Ratnawati (2018); in which they use sales growth as

a variable in measuring the profitability of the company.

Some external variables of the companies are average IR and IDR. IR has a significant positive effect on OPM and ROA profitability at the level of 1 percent. Meanwhile, IR has a positive effect but non-significant to ROE. The result of study goes in line with Iba & Wardhana (2012), Andriyani & Armereo (2016), and Wiradharma & Sudjarni (2016). IR has a positive and significant influence on companies performance enlisted in LQ45, finance companies, and food & beverages companies in terms of price and stock returns. However, the result of these studies are not in line with a study by Octavia (2013), saying that there is a significant and negative relationship between interest rates with stock returns in property companies in short-term; and a study by Suyati (2015) that interest rate has no effect on stock returns of property companies, because most samples of the studies evolve around companies running the development of office and shopping areas that do not use the loan mortgage system.

There are differences in the result of the study toward IR. Ideally, the higher interest rate, the lower profitability of property companies; since buyers using credit process through a bank loan mortgage will delay home purchase. Nonetheless, the result of this study shows an alternate perspective; the higher interest rate, the higher and more stable the company's profitability. These rationales are based on the results of an analysis from DBS Vickers about Indonesia Property Sector 2017, quoted from Bloomberg Finance (www.bloomberg.com), illustrating that property companies with larger land bank are more focused on selling commercial plots (block sales) when the interest rate of bank is high, because the sale can generate high profile margins above 70 percent. Furthermore companies with a larger commercial business composition have income sources from recurring income. Thus, the company does not only depend on residential

businesses that are vulnerable to lending rates changes.

IDR has a significant positive influence on the profitability of ROA and ROE at a real level of 1 percent and 5 percent; and no significant relationship on OPM. Meaning that the lower IDR exchange rate to USD, the lower performance of property companies. Since the main raw materials such as iron and steel are influenced by the exchange rate of IDR to USD, which eventually have an impact on production costs, particularly construction costs. On the contrary, if an appreciation of the IDR against the USD occurs, the amount of import spending can reduce production costs and increase company profits. This finding goes in line with other studies, e.g., Iba & Wardhana (2012) and Suyati (2015) with IDR exchange rate as a measure on the company's financial performance.

CONCLUSIONS AND SUGGESTIONS

Conclusion

The research findings about the effect of working capital management on the profitability of property & real estate companies enlisted on the IDX in 2013-2017 shows that: (1) CCC has a significant negative effect on OPM, ROA, and ROE; (2) CATAR has a significant positive effect on ROA and ROE; (3) CLTAR has a significant positive effect on OPM; and (4) DTA has a significant negative effect on OPM and ROA. The finding of the study also shows that the working capital elements have a more dominant effect on the profitability of property and real estate companies enlisted on the IDX from 2013-2017, i.e., the relationship between CLTAR and OPM since they both have the highest regression coefficient among others. The higher ratio of CLTAR indicates that that company in the property sector are more aggressive in implementing working capital policies with the aim of achieving higher operating profit.

Suggestions

Companies can achieve a higher level of profitability by managing inventory efficiently through efficient management of account receivable, i.e., accelerating the collection of cash from the collection of accounts receivable, controlling inventory value by accelerating Days Sales of Inventory (DOI). In the implementation of working capital policies, it is necessary to maintain a balance between current conditions and the level of company liquidity. The company shareholders should consider efficient working capital financing strategies to increase the company's profitability so that they could earn the expected return. It is important for banks to offer loans to property companies with high CLTAR, since the loans for working capital will be used productively to increase profitability. Furthermore, during the decision of approval, banks need to consider ratio of total debt costs (short and long-term) compared to DTA. Based on the finding of the study, the higher DTA, the higher interest rate of debts, which eventually have an impact on the decrease of profitability.

For further research, an extension of research time is needed to gain more samples and various data for the better description of changing conditions in working capital management and other related variables in companies. Besides that, samples of property companies are classified on the basis of business segment and company asset values. It is necessary to use external variables of economic growth and GDP and other measurements except OPM, ROA, and ROE in assessing company performance, such as earning per share (EPS), price earnings ratio (PER), and earnings before interest, taxes, depreciation, and amortization (EBITDA), in order to obtain more comprehensive information about the effect of working capital management on company performance.

REFERENCES

- Adiningsih, S. (1998). *Perangkat Analisis dan Teknik Analisis Investasi di Pasar Modal Indonesia*. Jakarta: PT Bursa Efek Indonesia.
- Andriyani, I., & Armereo, C. (2016). Pengaruh suku bunga, inflasi, nilai buku terhadap harga saham perusahaan indeks LQ45 yang terdaftar di Bursa Efek Indonesia (BEI). *Jurnal Ilmiah Orasi Bisnis*, 15, 44-64.
- Baidh, M. L. (2013). Effecte of working capital management on profitability of company. *Anusandhanika* 5(2), 247-251.
- Brealey, M., & Marcus. (2008). *Dasar-Dasar Manajemen Keuangan Perusahaan*. Jakarta: Erlangga.
- Brigham, E. F., & Ehrhardt, M. C. (2005). *Financial Management: Theory and Practice*. 11th Edition. Ohio: Thomson South Western.
- Brigham, E. F., & Houston, J. F. (2010). *Dasar-dasar Manajemen Keuangan*. Edisi 11. Jakarta: PT. Salemba Empat.
- Dalayeen, B. A. (2017). Working capital management and profitability of real estate industry in Jordan: An empirical study. *Journal of Applied Finance & Banking*, 7(2), 49-57.
- Deloof, M. (2003). Does working capital management affect profitability of Belgian firms? *Journal of Business Finance & Accounting*, 30(3-4), 573-588. <https://doi.org/10.1111/1468-5957.00008>
- Enqvist, J., Graham, M., & Nikkinen, J. (2014). The impact of working capital management on firm profitability in different business cycles: Evidence from Finland. *Research in International Business and Finance*, 32(8), 36-49. <https://doi.org/10.1016/j.ribaf.2014.03.005>
- Garcia-Teruel, P. J., & Martinez-Solano, P. (2007). Effects of working capital management on SME profitability. *International Journal of Management Finance*, 3(2), 164-177. <https://doi.org/10.1108/17439130710738718>
- Gill, A., Biger, N., & Mathur, N. (2010). The relationship between working capital management and profitability: Evidence from the United States. *Business and Economics Journal*, 2010: BEJ-10, 1-9.
- Gitman, L. J. (1974). Estimating corporate liquidity requirements: A simplified approach. *The Financial Review*, 9(1), 79-88. <https://doi.org/10.1111/j.1540-6288.1974.tb01453.x>
- Iba, Z., & Wardhana, A. (2012). Pengaruh inflasi, suku bunga SBI, nilai tukar Rupiah terhadap USD, profitabilitas, dan pertumbuhan aktiva terhadap harga saham perusahaan pembiayaan di Bursa Efek Indonesia. *Jurnal Kebangsaan*, 1(1), 1-6.
- Suzana, A.R., & Azlina, N. (2013). Faktor-faktor yang mempengaruhi struktur modal pada perusahaan real estate and property yang go public di Bursa Efek Indonesia. *Jurnal Ekonomi Universitas Riau*, 1-10.
- Lyngstadaas, H., & Berg, T. (2016). Working capital management: Evidence from Norway. *International Journal of Managerial Finance*, 12(3), 295-313. <https://doi.org/10.1108/IJMF-01-2016-0012>
- Michello, F. A., & Wanorie, T. O. (2015). Analyzing the effect of working capital management on the profitability of small size US healthcare companies. *International Research Journal of Applied Finance*, 6(5), 394-406.
- Mulyono, S., Djumahir, & Ratnawati, K. (2018). The effect of capital working management on the profitability. *Jurnal Keuangan dan Perbankan*, 22(1), 94-102. <https://doi.org/10.26905/jkdp.v22i1.1332>
- Myers, S. C., & Majluf, N. S. (1984). Corporate financing and investment decisions when firms have information that investors do not have. *Journal of Financial Economics*, 13(2), 187-221. [https://doi.org/10.1016/0304-405X\(84\)90023-0](https://doi.org/10.1016/0304-405X(84)90023-0)
- Nyabuti, W. M., & Alala, O. B. (2014). The relationship between working capital management policy and financial performance of companies quoted at Nairobi securities exchange, Kenya. *International Journal of Economics, Finance, and Management Sciences*, 2(3), 212-219. <https://doi.org/10.11648/j.ijefm.20140203.12>
- Nwude, E. C., Agbo, E. I., & Lamberts, C. I. (2018). Effect of cash conversion cycle on the profitability of public listed insurance companies. *International Journal of Economics and Financial Issues*, 8(1), 111-117.
- Octafia, S. (2013). Pengaruh tingkat suku bunga SBI, nilai tukar, dan jumlah uang beredar terhadap indeks harga saham sektor property dan real estate dengan pendekatan error correction model. *Jurnal Manajemen*, 2(1), 5-9.

- Padachi, K. (2006). Trends in working capital management and its impact on firms' performance: An analysis of Mauritian small manufacturing firms. *International Review of Business Research Papers*, 2(2), 45-58.
- Pagano, P., & Schivardi, F. (2003). Firm size distribution and growth. *Scandinavian Journal of Economics*, 105(2), 255-274. <http://www.jstor.org/stable/3441044>
- Pais, M. A., & Gama, P. M. (2015). Working capital management and SMEs profitability: Portuguese evidence. *International Journal of Managerial Finance*, 11(3), 341-358. <https://doi.org/10.1108/IJMF-11-2014-0170>
- Raheman, A., Afza, T., Qayyum, A., & Bodla, M. A. (2010). Working capital management and corporate performance of manufacturing sector in Pakistan. *International Research Journal of Finance and Economics*, (47), 151-163.
- Ross, S. A., Westerfield, R. W., & Jordan, B. D. (2008). *Corporate Finance Management*. International Edition. New York: McGraw Hill.
- Santoso. (2009). Pengaruh perputaran piutang dan pengumpulan piutang terhadap likuiditas perusahaan pada CV. Bumi Sarana Jaya di Gresik. *Jurnal Logos*, 6(1), 37-54.
- Sartono, R. A. (2010). *Manajemen Keuangan Teori dan Aplikasi*. Yogyakarta: BPFY-Yogyakarta.
- Utami, M. S., & Dewi, M. R. (2016). Pengaruh manajemen modal kerja terhadap profitabilitas perusahaan manufaktur yang terdaftar di Bursa Efek Indonesia. *E-Jurnal Manajemen Unud*, 5(6), 3476-3503.
- Suhardi, D. A. (2007). Pergerakan harga saham sektor properti Bursa Efek Jakarta berdasarkan kondisi profitabilitas, suku bunga, dan beta saham. *Jurnal Organisasi dan Manajemen*, 3(2), 89-103.
- Suyati, S. (2015). Pengaruh inflasi, tingkat suku bunga, dan nilai tukar Rupiah /US Dollar terhadap *return* saham properti yang terdaftar di Bursa Efek Indonesia. *Jurnal Ilmiah UNTAG Semarang*, 4(3), 70-86.
- Ukaegbu, B. (2013). The significance of working capital management in determining firm profitability: Evidence from developing economies in Africa. *Research in International Business and Finance*, 31, 1-16. <https://doi.org/10.1016/j.ribaf.2013.11.005>
- Horne, J. C. V., & Wachowicz, J. M. (2012). *Prinsip-prinsip Manajemen Keuangan*. Edisi 13. Jakarta: Salemba Empat.
- Vural, G., Sokmen, A. G., & Cetenak, E. H. (2012). Affects of working capital management on firm's performance: Evidence from Turkey. *International Journal of Economics and Financial Issues*. 2(4), 488-495.
- Weinraub, H. J., & Visscher, S. (1998). Industry practice relating to aggressive conservative working capital policies. *Journal of Financial and Strategic Decision*, 11(2), 11-18.
- Wijaya, A. L. (2012). Pengaruh komponen working capital terhadap profitabilitas perusahaan. *Jurnal Dinamika Akuntansi*, 4(1), 20-26. <https://doi.org/10.15294/jda.v4i1.1956>
- Wiradharma, M. S., & Sudjarni, L. K. (2016). Pengaruh tingkat suku bunga, tingkat inflasi, nilai kurs rupiah dan produk domestik bruto terhadap *return* saham. *E-Jurnal Manajemen Unud*, 5(6), 3392-3420.