THE EFFECT OF WORKING CAPITAL MANAGEMENT ON COMPANY PROFITS AND VALUES
(STUDY OF CEMENT COMPANIES LISTED ON THE INDONESIA STOCK EXCHANGE)

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ABSTRACT

This study aims to examine the effect between working capital management on firm value in cement companies listed on the Indonesia Stock Exchange (BEI) in the 2012-2017 period, both directly and indirectly through profitability. This study was used by a quantitative approach. Sampling using the saturated sample method. There are 6 cement companies that fulfill the sample category. Furthermore, Partial Least Square (PLS) was used for the analysis and testing of hypotheses, then multiple tests for profitability variables as mediation. The results are showed that working capital that is managed very effectively and also can improve to financial performance, such to increase company value. The results of mediation testing shown that profitability mediates are positively affect between working capital management on firm value. This explains that the implementation of good working capital management can increase profits generated by the company, so the value of the company also increases which eventually investors respond positively.

Keywords: working capital management, profitability, company value.

INTRODUCTION

Conventionally, corporate financial performance appraisals focus on long-term financial decisions such as investment decisions, capital structure, dividends, and other (Chowdhury, et al., 2018). Besides that the actual long-term decisions short-term decisions such as current assets are an important element of the total assets that need to be carefully analyzed and managed (Sin, et al., 2017). It was said that current assets used for company operational activities are not less than 1 (one) year and are always associated with company liquidity, operational efficiency, risk level, profitability level (Jakpar, et al., 2017). It also said that current assets were likened to the lifeblood of a company (Afrifa and Padachi, 2016).

Working capital is one form of investment that is classified in short-term financial decisions where companies use it to finance daily operational activities in one year (Cumbie and Donnellan, 2017). For further research, explained by Cumbie & Donnellan (2017) stated that the definition of working capital always involves use on current assets and current debt, because working capital management involves two basic things such as determining the appropriate amount of working capital and how working capital is financed. The working capital component was consists of cash needed in operations, accounts receivable, inventories, debts paid to suppliers or trade payables and accrual debt (Afrifa and Padachi, 2016). However, there are also opinions that the main components of working capital are receivables, inventories and trade payables, while cash is not included because it was considered in the financing cycle component (Sunday, 2017).

Profitability is defined as the end result of a number of policies and decisions made by the company. It was showing to combine the effects between liquidity, asset management, and debt on operating results (Alsartawi, 2019). Alsartawi (2019) also provided that an explanation to facilitate understanding about profitability can be expressed as the company's ability to generate profits from operational activities through using assets. Profitability is different from company margins. If margin shown the income ratio to business volume such as sales or production, profitability is a ratio of profit to capital that must be invested to produce profit (Alsartawi, 2019).

Firm value shown that the present value of expected cash flows, discounted at a level that reflects both a project risk of the company and the financing mix used to project finance (Rasyid, et al., 2018). Management which aims to maximize the value of the company must know the expected value relationship with three main financial decisions, such as investment, dividend distribution and financing (Cherya, et al., 2018). Basically, the value of the company reflects to the impact between three financial decisions made by the company concerned. There are several approaches in determining the company value. One easy approach is through relative valuation or through market value. Market values provide an indication of how investors respond to the company's past performance and future prospects (Lin, et al., 2016).

Working capital must be managed properly and adjusted to the company's needs. Working capital requirements will vary depending on company characteristics (Ukaegbu, 2014). The company's working capital in the industrial, retail and service sectors will differ from each other. Companies in the industrial sector usually focus more on purchasing raw materials with a long credit payment range. There is a production process, while companies engaged in retail or retail trade buy more large inventory items for resale, but with a low level of debt to suppliers. It was also different from companies in the service sector that buy inventory without carrying out the production process. Determining working capital in accordance with needs about the main task of company managers involved by working capital management.

In theory, working capital management can be interpreted as how companies manage their working capital which involves managing current assets and current debt (Lyngstadaas and Berg, 2016). Working capital management can be linked to
profitability and firm value, because it was related to achieving to the main objectives of financial management (Shah & Arif, 2018). Basically, working capital management theory focuses on a tradeoff between profitability and the risk associated with the level of current assets and current debt (Abuzayed, 2012). The main objectives of working capital management are the same as financial management objectives, such as maximizing the value of shareholder wealth (Lyngstadaas and Berg, 2016).

Furthermore, Lyngstadaas & Berg (2016) was explained that good working capital management should be able to dramatically reduce the need for investment in operating capital, so free cash flow and firm value will be increase. Thus, companies need to implement working capital management efficiency in order to reduce the investment costs incurred, so many profits will be increase. An increasing of profits generated by the company due to the efficiency of working capital management also caused by the company's value to increase it (Almeida and Eid, 2014).

Eventually, how the application for working capital management on a company can be measured by the concept of the cash cycle (Rasyid, et al., 2018). Furthermore Rasyid, et al. (2018) explained that the cash cycle was defined as the number of days, when a company pays for purchases of raw material inventory until a company obtains cash from the sale of the finished product. Companies with good working capital management have shorter cash cycles, meaning that companies can minimize the time between cash disbursements for raw materials and cash collection from sales made (Caballero, et al., 2014).

The most frequently used by measurement in working capital management research for the cash change cycle (Afrifa and Padachi, 2016). Afrifa and Padachi (2016) explained that besides use a cash conversion cycles, receivables collection days (days of sales outstanding), inventory conversion periods (days of sales inventory), and debt payment periods (days of payable) can also be used to measure management working capital related to managing trade receivables, then inventories and trade payables. Whereas, the three measurements are components of the cash conversion cycle.

In accordance with agency theory and signaling theory, between working capital management, profitability and corporate value, there is a relationship that influences one another (Brigham and Houston, 2018). Where, the main goal of working capital management is to maximize the company value (Shah & Arif, 2018). Efficiency in working capital management in addition to increase profitability and also increase a company value (Rasyid, et al., 2018). In the study also founded that the use of excess working capital can reduce profits and also reduce the company value then provided by the market (Almeida and Eid, 2014). If some of these statements are related to the concept of Fama and French (2000) that the relationship of profitability with firm value, a new relationship can be taken that increases the company's ability to generate profits, because it was supported by efficiency in working capital management and to increase a company value.

This research was conducted at companies manufacturing basic and chemical industrial sectors with the cement sub-sector. The level of cement consumption in Indonesia has increased from period to period, which shown that the results of the cement industry are growing rapidly in Indonesia. Whereas, this is in accordance with government programs for all regions in Indonesia, which showed by a remarkable increase in infrastructure development, except Kalimantan. This is due to the rolling realization for the government budget about infrastructure, the construction of a million houses, and the regional government development budget (www.industri.bisnis.com, accessed on May 1, 2019).

A domestic cement consumption, cement production has also increased, which is the company's inventory is not more than one year old, so that the company's attention to managing working capital, besides that higher than other manufacturing companies. This shown that working capital as an important component in the cement industry in Indonesia has special characteristics compared to other industries. This special characteristic can be seen from the side of the large amount, which is indicated by the amount of its current assets which is greater than its fixed assets.

A conducive business climate provided that opportunities for companies is growth. Companies in the cement industry sector in Indonesia certainly receive a significant impact because this sector is influenced by the purchasing power of the people affected to the level condition of GDP growth, interest rates, and the country's macroeconomic performance (Moeljadi, 2017). For external conditions are very supportive, companies in the Indonesian cement industry sector are trying to take advantage an existing opportunities in order to earn profits by increasing sales, the average level of sales for cement sector companies increased by approximately one trillion each year from 2012 to 2017. However, usually companies need greater working capital when developing their business, especially to increase sales (Sunday, 2017). This also happened to companies in the cement sector. The cement company was chosen as the object of research in this study due to the following reasons:

a. A cement company is a manufacturing company with a large production scale, so it was required by a large working capital.

b. Cement is a necessity in the development process that continues to be realized by the Indonesian government, a cement stock in the warehouse does not settle too long.

c. In different line, with sales that continued to increase from year to year during the research year, the net profit for the cement company also increased.

d. The value of shares for cement companies during the research period, the trend is always increasing from year to year.

Days of sales outstanding (periods of change in receivables), days of sales inventory (periods of changes in inventory), days of payable (periods of payment of debt) are used as variables that represent working capital management. Return on assets (ROA) was used as a proxy for profitability variables, while Tobin's Q is used as a proxy for firm value variables. These variables are also chosen by referring to prior research considerations. The concept of a cash conversion cycle is the measurement most often used by research (Afrifa and Padachi, 2016) and can measure the company's working capital management comprehensively (Jakpar, et al., 2017), but this study focuses on its components.
HYPOTHESIS DEVELOPMENT

Referring to agency theory and signaling theory, between working capital management, profitability and corporate value, so there is a relationship between each other (Brigham and Houston, 2018). Where, the main goal of working capital management is to maximize the company value (Shah & Arif, 2018). Efficiency in working capital management in addition to increase the profitability that also increase to company value (Rasyid, et al., 2018). According to Fama and French (2000) related that the relationship between profitability with firm value, a new relationship can be taken that increases the company's ability to generate profits, because it was supported by efficiency in working capital management and to increase company value.

Previous studies related to working capital management have been carried out in various models, which shown the pros and cons of research findings, especially in their effects on financial performance. Empirically, theories are stated that working capital management efficiency can increase to company profitability and supported by findings that the cash conversion cycle has a significant negative effect on profitability (Ukaegbu, 2014; Agha, 2014; Afrifa & Padachi, 2016; Sin, et al., 2017; Jakpar, et al., 2017).

The results were indicated that the more efficiently a company manages its working capital, the more it increases profitability, which is characterized by the shorter cash conversion cycle. In contrast to the results of other studies which shown an opposite that the cash change cycle has a significant positive effect on profitability (Enqvist, et al., 2014; Caballero, et al., 2014; Lyngstadaas & Berg, 2016; Wiyono, 2017) which shown inefficiency management of a company's working capital. However, the longer the cash conversion cycle might increase to the profitability as long as the cost of increasing working capital investment does not outweigh the benefits (Afrifa and Padachi, 2016).

H1: Days of sales outstanding has a significant effect on profitability
H2: Days of sales inventory has a significant effect on profitability
H3: Days of payable has a significant effect on profitability

Days of Sales Outstanding (DSO) is the average time taken by a company to convert accounts receivable to cash by collecting accounts receivable from its customers. So, a company receives cash from the collection. Days of outstanding sales are measured by the amount of many company's trade receivables divided by net sales and the results of these calculations are multiplied by 365. The final results of the outstanding days of sales are continuous data in units of days.

\[
\text{Days of Sales Outstanding} = \frac{\text{Account Receivable}}{\text{Sales}} \times 365
\]

(Afrifa & Padachi, 2016)

Days of Sales Inventory (DSI) is the average time required for a company to sell its finished inventory. Days of sales inventory is measured by the total inventory of the company's finished goods divided by cost of goods sold and the results of calculations that are multiplied by 365. The final results of the days of sales inventory are continuous data in units of days.

\[
\text{Days of Sales Inventory} = \frac{\text{Inventory}}{\text{Cost of Sales}} \times 365
\]

(Afrifa & Padachi, 2016)

Days of Payables (DOP) is the average time needed to purchase raw materials and payments. Days of payables are measured by the amount of the company's trade payables divided by cost of goods sold. There is a result about calculations that multiplied by 365. A final result on the days of payables calculation is continuous data in units of days.

\[
\text{Days of Payables} = \frac{\text{Account Payables}}{\text{Cost of Sales}} \times 365
\]

(Afrifa & Padachi, 2016)

Profitability is the company's ability to generate profits from operational activities. Profitability is proxied by Return on Assets (ROA) that calculated by net income divided and average total assets. Whereas, the average total assets are obtained from the total assets at the beginning of the year plus the total assets at the end of the year, then the sum is divided by two. The final result of ROA calculation is percentage data.

\[
\text{Return on Assets} = \frac{\text{Net Income}}{\text{Average Total Assets}}
\]

(Alsartawi, 2019)

Company value is an assessment of the company's past performance and future prospects through work capital management considerations. Tobin's Q (TQ) is calculated through the market value of the company divided by the book value on the company's assets. The market value of a company is calculated by multiplying a number of shares outstanding and a stock price. The final result of Tobin's Q calculation is percentage data.

\[
\text{Tobin's } Q = \frac{\text{Market Value of The Firm}}{\text{Book Value of Firm}}
\]

(Rasyid, et al., 2018)
There are many studies proved that effective and efficient working capital management can increase profitability, including Agha (2014), Caballero, et al. (2014), Enquist, et al. (2014), Ukaegbu (2014), Afrifa & Padachi (2016), Lyngstadaas & Berg (2016), Jakpar, et al. (2017), Sin, et al. (2017), Wiyono (2017). Nevertheless, Abuzayed (2012), Yazdanfar & Ohman (2014), Sunday (2017) stated that effective and efficient working capital management had no effect on profitability. Thus, it can be concluded that there is no clarity regarding the relational relationship between working capital management and profitability. Furthermore, working capital management and profitability (Almeida & Eid, 2014; Wasiuzzaman, 2015; Lin, et al., 2016; Sabrin, et al., 2016; Cumbie & Donnellan, 2017; Moeljadi, 2017; Sudiyatno, et al., 2017; Altaf, 2018; Rasyid, et al., 2018; Shah & Arif, 2018) are said to have a positive influence on firm value.

Based on this relationship, this study was develops a model to provide solutions to the research gap by placing profitability as a mediating variable in the effect of working capital management on firm value.

H4: Profitability can mediate the effect between Outstanding Days of Sales and Company Value
H5: Profitability can mediate the effect between Days of Sales Inventory and Company Value
H6: Profitability can mediate the effect between Days of Payable and Company Value

METHODODOLOGY

This type of research is explanatory through a quantitative approach. This research was conducted by a cement company listed on the Indonesia Stock Exchange (IDX) for six periods (2012-2017). In this study a non probability sampling approach was used with the saturated sample method, meaning that all populations, six companies, were used as research samples. Data collection was used by the documentation method. Hypothesis testing and analysis using Partial Least Square (PLS) and for mediating variable tests using the Sobel test.

RESULTS

The days of sales outstanding variable has an average of 47 days with a standard deviation of 17.185. Generally, the days of sales outstanding policy was implemented by the company that already good, where a cement industry taken about 47 days to convert its receivables into cash back. The days of sales inventory variable has an average around 61 days with a standard deviation of 31.738. In this case, the days of sales inventory policy implemented by the company that already good, where a cement industry taken about 61 days to convert its inventory into cash back. The days of payable variable has an average of 69 days with a standard deviation for 30.349. So, the days of payable policy implemented by a company that already good, where a cement industry taken about 69 days to hold cash and to pay off current debt.

The profitability variable has an average of 12.89% with a standard deviation for 5.019. This means that an ability of the cement industry can generate profits from total assets around 12.89%. The company value variable has an average for 6.16% with a standard deviation such 6.318. Companies with Tobin's Q > 1 value indicated that the shares are eligible to be purchased.

The results of the linearity test with the curve test shown that the relationship between independent variable and dependent variable is linear as indicated by the probability value of each relationship that is smaller than alpha 5% (0.05), so the linearity assumption is fulfilled. The next step is to test the hypothesis for the relationship between the dependent and independent variables developed according to the model. T-statistics are used to determine significant or insignificant and about accepted or rejected. If the T-statistic is more than t-table 1.96, the hypothesis is accepted.

Based on data analysis, the path coefficient obtained by table 1. Table 1 shown that the effect between days of sales outstanding (X1) and profitability (Z) has a value for -0.098 with a T-statistic of 6.644. The relationship between days of sales inventory (X2) and profitability (Z) has a value of 0.018 with a T-statistic of 7.560, while days of payable (X3) with profitability (Z) -0.089 with a T-statistic of 5.627.

| Table 1. Test the Influence of Variables with Path Analysis |
|---|---|---|---|---|
| Hypothesis | Effect | Coefficient | Standard Error | T-Statistic | Results |
| 1 | X1 – Z | -0.098 | 0.052 | 6.649 | Significant |
| 2 | X2 – Z | 0.018 | 0.050 | 7.560 | Significant |
| 3 | X3 – Z | -0.089 | 0.073 | 5.627 | Significant |
| 4 | X1–Z–Y | -0.5102 | 0.064 | 4.146 | Significant |
| 5 | X2–Z–Y | 0.6145 | 0.058 | 3.305 | Significant |
| 6 | X3–Z–Y | 0.7231 | 0.030 | 2.065 | Significant |
Meanwhile, indirectly effect for outstanding days of sales with the company value through profitability is -0.5102 and T-statistics is 4.146. The days of sales inventory indirectly effect to the company value through profitability 0.6145 and T-statistics 3.305. The days of payable indirect effect to the company value through profitability is 0.7231 and T-statistic is 2.065. Therefore, it can be concluded that all hypotheses are accepted as expected.

DISCUSSION

The Effect between Days of Sales Outstanding (DSO) on Profitability
The results were indicated that the variable days of sales outstanding significantly negative effect on profitability, which is proxied by the ratio of return on assets (ROA). This negative effect also indicated that the faster a receivables collection period undertaken by the company, the more profitability (ROA) of the company, and vice versa, the longer a receivables collection period will reduce to the profitability (ROA) of the company. The results are consistent with research conducted by Altaf (2018), Rasyid, et al. (2018), and Shah & Arif (2018) stated that there is a significant effect between days of sales outstanding and company profitability. However, in previous studies the effect for days of sales outstanding was positive, while it was showed by a negative or inversely correlated direction. Afrifa & Padachi (2016) explained that at a certain time a company can increase working capital and profit rate as long as the benefits outweigh the implicit costs. For further explained by Afrifa & Padachi (2016) said that to provide good service and maintain good relations with customers, companies can increase the amount of credit to customers.

The Effect between Days of Sales Inventory (DSI) and Profitability
The results were indicated that the variable days of sales inventory significantly positively influences a profitability proxied by the ratio of return on assets (ROA). So, the company policy in determining for technical production and the period of inventory sales affect to the level of profitability (ROA) on a company. This positive effect between the period of inventory conversion and a profitability (ROA) of company, such as the period of inventory conversion will reduce a profitability (ROA) for company. In addition, this significant influence shown that cement companies in Indonesia pay attention to inventory management in increasing to sales. The results are in accordance with research conducted by Cumbie & Donnellan (2017), Moeljadi (2017), and Sudiyatno, et al. (2017) that there is a significant effect between days of sales inventory and company profitability. However, in previous studies the effect between the inventory conversion period was negative, while the results showed a positive or directly proportional relationship direction.

The Effect between Days of Payables (DOP) and Profitability
The results were indicated that the days of payable variable has a significant negative effect on profitability proxied by the ratio of return on assets (ROA). This negative effect also shown that the longer on a period of debt repayment will reduce a profitability (ROA) for the company. In this case, the faster for a period of debt repayment will increase to the profitability (ROA) on company. In addition, this significant effect shown that cement companies in Indonesia with high levels of profitability do not need more time to pay off their current debts. The results are consistent with research conducted by Afrifa & Padachi (2016), Lyngstadaas & Berg (2016), and Jakpar, et al. (2017). From this statement, it can be concluded that the postponement of debt payments by the company shown that a condition of the company's profitability is not good and companies that have good profitability will prefer to pay their debts faster. Afrifa & Padachi (2016) have another opinion that the company might choose to pay its debt more quickly because there are discounts from suppliers.

The Effect between Outstanding Days of Sales (DSO) and Company Value through Profitability
Tested by fourth hypothesis shown that days of sales outstanding has a significant negative effect on firm value through profitability. The results are in line with previous studies conducted by Altaf (2018), Rasyid, et al. (2018), and Shah & Arif (2018) which stated that in accordance with the company's main objective of maximize the value of shareholder wealth. A higher level of profitability because it implements efficiency in working capital management through the efficient use of receivables, so the company value will also increase. This study proved that there is a significant effect of profitability and mediated by the relationship between variables. Suddenly, this test strengthens about the direct relationship between days of sales outstanding on firm value.

The Effect between Days of Sales Inventory (DSI) and Company Value through Profitability
The fifth hypothesis testing shown that days of sales inventory has a significant positive effect on firm value through profitability. The results are in line with previous studies conducted by Altaf (2018), Rasyid, et al. (2018), and Shah & Arif (2018) which stated that in accordance with the company's main objective to maximize the value of shareholder wealth. A higher level of profitability because it implements efficient working capital management through efficient use for inventories, the company's value will also increase. This study proved that there is a significant effect on profitability that mediated by the relationship between variables. So, this test strengthens to the direct relationship between days of sales inventory on firm value.

The Effect between Days of Payable (DOP) and Company Value through Profitability
The sixth hypothesis testing shown that days of payable has a significant positive effect on firm value through profitability. The results are in line with previous studies conducted by Altaf (2018), Rasyid, et al. (2018), and Shah & Arif (2018) which stated that in accordance with the company's main objective to maximize the value of shareholder wealth. A higher level of profitability because it implements working capital management efficiency through delays in debt payments, the company value will also increase. This study proved that there is a significant effect on profitability that mediates the relationship between variables. So, this test strengthens the direct relationship between days of sales inventory on firm value.
CONCLUSIONS AND SUGGESTIONS

Conclusion
The results of this study was indicated that working capital management has an effect on profitability and firm value. An application for good working capital management was makes profitability increase and get a profit from the company value. Profitability can indirectly support for implementation of working capital management and company value. This reflects the assumptions of investors to companies that apply good working capital management and also increase the company value because of the profit generated very high.

Suggestion
There are limitations in this study such as for other information that is not published in the company’s annual report, so it cannot be included in the data processing and analysis of each variable relationship. The results are not representative enough to represent all public companies in Indonesia. Therefore, further research can re-examine this research model in different research contexts and perspectives then use with different measurement models. For cement companies, it must be able to carry out effective and efficient working capital management to increase profits, so many company's value is better. The results also contribute to the importance of working capital management in the cement sub-sector in increasing profits and also company value.

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