



# **THE WORKING CAPITAL POLICY TOWARDS PROFITABILITY IN MANUFACTURING COMPANIES LISTED IN THE INDONESIA STOCK EXCHANGE (BEI)**

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## **Abstract**

*Working capital is an issue that is often faced by a company, as almost all the attention to manage working capital and current assets are a substantial part of the asset. Working capital policy determines the size of current assets to be retained by a company. This study aims to analyze the effect of working capital policy towards profitability based on specific characteristics of manufacturing firms. The study population was all manufacturing firms listed at the Indonesia Stock Exchange during five financial years 2011 to 2015. The data was collected using purposive sampling method. The data analysis technique used is the panel data regression with Eviews 9. This study shows that aggregately, the profitability of manufacturing companies positively influenced significantly by working capital investment policy and working capital turnover, and otherwise influenced negative significantly by the size of the firm and its leverage. If specified according to the characteristics of the manufacturing companies, profitability on a agroindustry manufacturing company and non-agroindustry company equally affected by the significant positive based on investment policy and negative significant by firm size. Aggressive*

*working capital financing policy has significant negative effect on the profitability of agroindustry manufacturing and reverse significant positive effect on non-agroindustry manufacturing companies.*

*Keywords: Aggressive, conservative, panel data, profitability, working capital policy*

## **INTRODUCTION**

In general, the purpose of a company is to improve the wealth or well-being of the owner, to maintain viability and seek to be able to develop (Waryati, 2010). In conducting its business activities the company needs funds. The source of funds can come from their own capital or loans. The funds can be used for corporate investment activities and operations. The funds used for operating activities commonly referred to as working capital (Dwijayanti and Trijatmiko, 2013).

The main reason why important working capital are discussed in an effort to increase the profitability of the company: first, working capital is part of the company's short-term financing, which is consistent with the company's short-term goal of increasing profitability. Second, based on the work function, working capital is flexible, varied and rotating relatively quickly (Syamsuddin, 2007). Financial managers are dedicating most of the time to manage and determine the working capital policy. Working capital policy is a fundamental decision with respect to the number of each category of current assets acquired and how these will be financed by the company (Brigham and Houston, 2006). Working capital contributes substantial proportion to the company's financial needs, especially in developing countries. Working capital tends to be an important way of facing financial constraints that may affect the company's behaviour (Chan, 2010).

Management may choose the composition of financing in accordance with company policy. Working capital financing policy is a policy relating to determining the type of source of funds, short or long term, and how much each source of funds that will be used to finance working capital (Miswanto, 2012). Sinaga (1999) explains that the expenditure patterns of permanent assets should be used with funding from the inside or from long-term loans. While the temporary current assets financed with short term funding (Miswanto, 2012).

Each company has a different financing decision. Financing decisions are influenced by many factors, such as the characteristics of the company or industry and economic conditions. Each company has different characteristics for different industries, thus financing decisions between companies or other industries with a different one (Widarti and Sudana, 2014). The success in the management of working capital policy reflects the maximum supervision of the current assets and current liabilities to increase profitability (Yuliati, 2013).

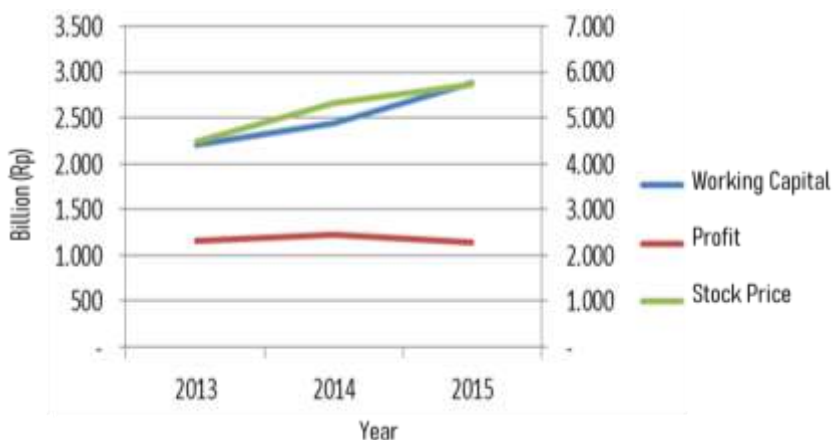
## Statement of the Problem

Working capital policy involves the determination of the size of current assets to be retained by the company (Hanum, 2008). The lack of explanation of the factors that influence the policy of working capital and a lack of management skills to plan and manage the components of working capital which could lead to insolvency-not able to provide long term liquidity and bankruptcy (Gill *et al.*, 2010). Therefore, it is important for companies to seek to minimize risk and improve overall performance by understanding the functions and drivers factors of working capital to formulate strategies effective working capital management (Karina, 2012).

Working capital requirement in service companies is relatively lower than industry companies. This is due to disbursement of investments in inventory and receivables at service companies are relatively fast. In contrast to industrial companies that require substantial working capital because investment in current assets is quite large with relatively low inventory and receivable turnover rates. Manufacturing companies need more attention to the management of their assets in order to be more efficient. This is because the proportion of current assets of a manufacturing company is usually more than half of its total assets.

In Figure 1 we can see how the trend moving average of working capital, profits and stock prices of companies manufacturing during the period 2013-2015. Working capital of manufacturing firms tend to have increased every year, and followed rising stock prices. As with the profitability of which the movement tends to be stable. This shows an increase in working capital, which has not been followed by an increase in the profits of a company. The funding decision is influenced by many factors, including the characteristics of the company and economic conditions, so that funding decisions between companies or other industries with a different one (Widarti and Sudana, 2014).

Figure 1: Trends of average working capital, profit and stock price of manufacturing company in 2013-2015



Source: Indonesia Stock Exchange (data processed)

## LITERATURE REVIEW

### Theoretical Review

Working capital is the whole current assets that can be used as cash, or funds that must be available to finance the operations of the company daily (Sawir, 2005). The working capital policy is a part of working capital management which is one of the important aspects of the entire company's spending management. According to Brigham and Daves (2007) working capital policy is concerned with decisions relating to current assets and how to finance the current assets.

The working capital investment policy is concerned with determining the aggregate amount and composition of investment in current assets, which might be different for each company. While working capital financing policy is concerned with determining the proportions of short term and long term finance used by a company. There are three types of funding policies related to the use of short term financing or long term to finance investments of current assets or fixed assets. First, matching financing policy which the firm finances long term assets (fixed assets and all permanent current assets) with long term sources of funds (long term debt and equity). Second, aggressive financing policy when the firm finances all temporary current assets and some of its permanent current assets with short term sources of financing. This approach relies more heavily on short term financing than do the other approaches. Third, conservative financing policy is the firm finances long term assets, all permanent current assets, and some temporary current assets with long term sources of funds. This approach relies more heavily on long term financing than do the other approaches (Brigham and Daves, 2007).

### Empirical Literature

Research on the influence of working capital policy on profitability has been done much. Most of the study discussing policy selection for corporate working capital found different results among others. As well as research conducted by Pai and Kishore (2014) and Noreen and Omar (2014) found that there is a positive relationship between profitability and aggressive investment working capital policy. In the study of Pai and Kishore (2014), the research object that entered in the sample consist of five varied sectors listed on the Bombay Stock Exchange, while Noreen and Omar (2015) in his research using a sample manufacturing company.

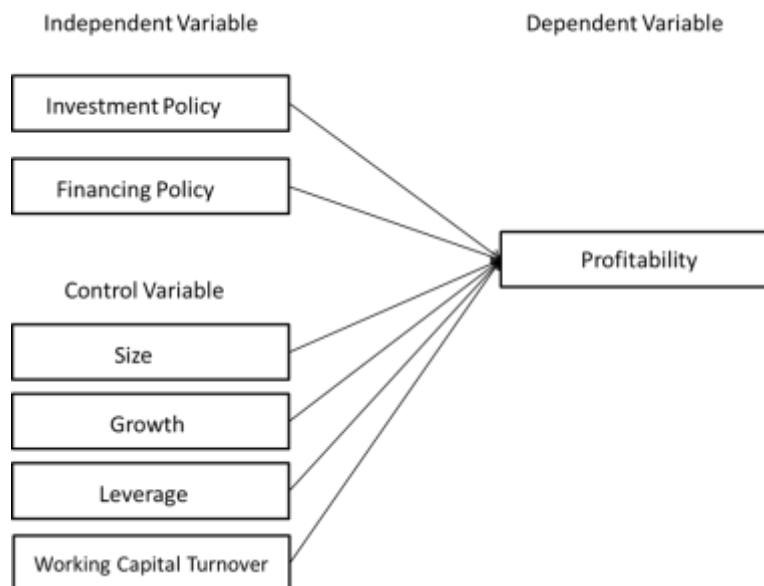
Instead found a negative relationship between the company's profitability and the working capital policy of aggressive financing on the study of Javid and Zita (2014) suggesting that aggressive investment and financing policies negatively affect to the profitability of cement companies in Pakistan. Further study conducted by Kungu *et al.* (2014) shows that there is a

positive relationship between performance and the level of working capital of the industry when the company implements a moderate financing and investment strategy.

### Conceptual Framework

The conceptual framework illustrates the association between the dependent and the independent variable. There are seven variables consisting of one dependent variable, two independent variables and four control variables, as shown in Figure 2.

Figure 2: The conceptual framework



### Hypotheses

Based on the theory and previous research hypothesis proposed in this study are as follows:

H1 : Working capital investment policy has a positive effect on profitability.

H2 : Working capital financing policy has a positive effect on profitability.

H3 : The size of the company has a positive effect on profitability.

H4 : The company's growth has a positive effect on profitability.

H5 : Leverage has a negative effect on profitability.

H6 : Working capital turnover has a positive effect on profitability.

### RESEARCH METHODOLOGY

This study uses secondary data overall. Secondary data were obtained by collecting historical data including a manufacturing company's financial statements during the period 2011-2015 in Indonesia Stock Exchange (IDX), the stock price data and other financial websites to support

the study. This study using purposive sampling technique, which chose the company based on the following criteria: (1) Company listed on the Indonesia Stock Exchange which publish the complete annual financial statements as of December 31 of the year 2011 to 2015; (2) The Company did not undertake mergers and acquisitions during the years 2011-2015; (3) The Company did not experience any delisting (out of BEI) in the period 2011-2015; (4) The Company has a financial report in Rupiah currency. Based on the criteria above, the samples in this study were 430 consisting of 86 issuers for the period of 2011-2015. Samples in this study consist of various sub sectors are cement, chemical, plastic & packaging, livestock feed, pulp & paper, machinery & heavy equipment, automotive, textiles & garments, footwear, food & beverages, pharmaceuticals and others.

The model equations in this study is the development of the Pai and Kishore (2014), Afza and Nazir (2009) in their study only focuses on one policy that is aggressive working capital policy. Following the model in this study:

$$\text{PROFIT}_{it} = \alpha + \beta_1 \text{IP}_{it} + \beta_2 \text{FPDUM}_{it} + \beta_3 \text{SIZE}_{it} + \beta_4 \text{LEV}_{it} + \beta_5 \text{GROWTH}_{it} + \beta_6 \text{WCTO}_{it} + E_{it}$$

Where:

PROFIT <sub>it</sub>	= ROA (percentage)
IP <sub>it</sub>	= The ratio of working capital investment (percentage)
FPDUM	= Financing policy patterns ( 1= aggressive, 0= conservative)
SIZE <sub>it</sub>	= Firm size (percentage)
LEV <sub>it</sub>	= Leverage (percentage)
GROWTH <sub>it</sub>	= Sales growth (percentage)
WCTO <sub>it</sub>	= Working capital turnover (time)
i	= Companies listed on the Indonesia Stock Exchange (i=1,2,..n)
t	= Series year 2011-2015 (t=1,2,..5)
α	= Intercept
β	= Coefisien
E <sub>it</sub>	= Error for individuals to - i and time to - t

## RESULTS AND DISCUSSION

Table 1 shows the proportion of the number of companies adopting an aggressive and conservative policies of each characteristic of the manufacturing company. Based on a whole manufacturing companies, most companies are adopting a conservative policy in both the investment policy and financing policies. Then, based on agroindustry manufacturing classification, it is known that more than 50% of companies implementing conservative policies in both the investment and financing policies.

Furthermore, based on the classification of non-agroindustry manufacturing, companies are implementing aggressive policies exist only in the range of less than 25% of the total. This indicates that most manufacturing companies, the proportion of current assets is greater than its fixed assets. Thus liquidity was also great. As for the financing of its investment activities, the majority of manufacturing companies the proportion of long-term debt and a larger capital in financing assets.

Table 1: The proportion of companies that implement policies according to the characteristics

Category	Investment policy (%)		Financing policy (%)	
	aggressive	conservative	aggressive	conservative
Aggregate	38	62	17	83
Agroindustry	42	58	19	81
Non-agroindustry	36	64	16	84

### Working Capital Policy to Profitability

Table 2 shows the results of the testing indicate that discuss how to influence policy and its working capital control variables on the profitability of manufacturing firms in the aggregate, and based on the classification of agroindustry and non-agroindustry manufacturing companies.

Table 2: The results of the panel regression models

Variable	ROA ( aggregate )		ROA (agro)		ROA (non-agro)	
	Coef	Prob	Coef	Prob	Coef	Prob
IP	0.1484	0.0000	0.0669	0.0000	0.3530	0.0007
FPDUM	-0.0029	0.5186	-0.0254	0.0017	0.0214	0.0034
SIZE	-0.1320	0.0000	-0.0214	0.0000	-0.0820	0.0000
LEV	-0.0497	0.0009	0.0086	0.0521	-0.4077	0.0000
GROWTH	0.0002	0.6720	0.0001	0.1752	0.0000	0.9561
WCTO	0.0001	0.0522	0.0000	0.0016	0.0001	0.1357
C	3.8355	0.0000	0.6635	0.0000	2.5821	0.0000
R-squared		0.9313		0.9683		0.8040
Adjusted R-squared		0.9128		0.9592		0.7467
Prob(F-statistic)		0.0000		0.0000		0.0000
Durbin-Watson stat		1.8654		1.6724		1.9492
Model selection condition H0 ( p-valued > 0.05)						
Hausman Test						
H0 : REM	REM	0.8328			REM	0.8552
H1 : FEM			FEM	0.0019		

Description :  $\alpha = 5\%$

In determining the best model, first tested Hausman. Based on the results of Hausman test showed that REM approach is considered better than FEM approach. But besides using Hausman test, there are several considerations to choose whether to use FEM or REM. If we believe that the unit cross section we choose in the study were drawn at random then we must use a fixed effect. The researchers assume that the FEM is more appropriate to be selected and further illustrate the diversity of profitability. Estimates on Fixed Effect method (fixed effects) in this research is done by using a weighted (cross section weight) or General Least Square (GLS). The purpose of weighting is to reduce heterogeneity between unit cross section (Gujarati, 2004).

Table 2 shows that the investment policy (IP) significantly and positively to the profitability (ROA) in manufacturing companies in the aggregate, manufacturing of agro-industry and non-agroindustry. These results are consistent with studies of Al-Mwalla (2012) who found that a conservative investment policy has a positive effect on profitability. Companies that adopt a conservative investment policy for having high business volatility (Sathyamoorthi & Wally-Dima, 2008). These results indicate that the provision of a large amount of current assets in the total assets of the company is able to support the creation of sales, resulting in increased profitability. These results indicate that the provision of a large amount of current assets in the total assets of the company is able to support the creation of sales resulting in increased profitability. In sales activities, companies need assets are sufficient to carry out the transaction, whether the transaction is cash or credit. Based on the sample data show that most of the company's overall manufacturing implement conservative policy in investment activity in which the proportion of current assets is greater than its fixed assets.

The financing policy (FPDUM) has no significant and negative correlation to profitability (ROA) on the manufacturing company in aggregate. While the manufacturing company of agroindustry classification, FPDUM has significant and negative effect. The results of this study were in accordance with the research of Vahid *et al.* (2012) which suggests that companies implementing aggressive financing policies correlate negatively to profitability and otherwise positively correlates to companies implementing conservative financing policies. These results are in line with sample data indicating that most manufacturing companies implement conservative financing policies.

The results of this study can also be said that companies that adopt a conservative approach to working capital financing policy has a margin of safety in managing their liquidity, so that the achievement of better profitability. The company's aim to use the life of the financing is relatively longer than the life investment in assets intended to avoid the risk of failure in fulfilling the company's short-term liabilities were then related to the company's operational



activity relationships with suppliers. The reputation of company in the supplier's eyes is very important things to be maintained because it affects the operational activities of the daily company, which can also affect the profitability of the company. The different results appears that at FPDUM significant and positive impact on non-agroindustry manufacturing company. It was concluded that more aggressive in financing its current assets, it will be accompanied by an increase in profitability (ROA) companies.

### **Firm Size to Profitability**

Firm size (SIZE) shows a significant and negative effect on profitability (ROA) on all the characteristics of a manufacturing company. SIZE variable is used to see if the size of the company measured by the amount of existing assets, has an influence for the company in profit. Based on some theories states when the larger the company, the activities of these companies will be greater so as to make profits earned by the company is also greater. But from the research found different results where the variable size and profitability have a negative relationship. This indicates the older companies will lead the company to become stiff, lose competitiveness, knowledge, abilities and skills as using and carrying a decrease in the profitability of the organization (Leonard and Barton, 1992 in Hariyanto and Juniarti 2014). Similar results were expressed by Loderer and Waelchi (2009) that the older companies have lower margins, higher costs, slower growth, the older assets and reduce investing their R & D activities.

### **Leverage to Profitability**

The debt ratio can be interpreted as the company gained their working capital by taking a policy of using debt provided by lenders that will impact on the profitability of the company (Riyanto, 2000). Leverage (LEV) is known to a significant and negative effect on ROA in manufacturing companies aggregate and non-agroindustry manufacturing. This result is consistent with the theory Wachowicz and Horne (2008) that found a certain level of increase in debt can lead to decreased profitability due to the costs associated with a greater than benefits. Different results on the sample of agroindustry manufacturing company where leverage has a significant and positive influence on profitability (ROA). This indicates the source of funds derived from the interest paid debt can reduce taxable income that is deemed more profitable company because there are tax savings.

### **The company's growth to Profitability**

Sales growth variables are used to see how big a company can improve the quality of products and good marketing for goods to be sold so as to increase the company's sales will

automatically increase the profitability of the company. The company's growth (GROWTH) indicate that this variable is not significant and positive impact on ROA on all the characteristics of a manufacturing company. The results are consistent with research Sunarto and Bob (2009) which shows the growth of the companies represented by the ratio of sales increase compared to the previous year's sales of no effect and no significant effect on the profitability of the company. The positive correlation indicates that the faster growth of the company, the company's ability to generate profits higher. It's just based on a sample study showed that non-agroindustry manufacturing company has a fairly slow growth that is still below 20% in each year, thus causing a positive correlation becomes not significant.

### **Working Capital Turnover to Profitability**

Working capital turnover (WCTO) shows that have a significant effect and positive impact on ROA in manufacturing companies aggregately and agroindustry, whereas non-agroindustry manufacturing no significant effect. The results of this study showed that changes in working capital turnover resulted in a change in the profitability. The faster working capital turnover, the more successful sales and greater profits that can be achieved so that the company can improve profitability. These findings are consistent with research that has been done by Rajesh and Reddy (2011) states that the turnover of working capital has a significant positive effect on profitability in the company in Pakistan.

### **SUMMARY AND CONCLUDING REMARKS**

Profitability of manufacturing companies listed at Indonesia Stock Exchange in 2011-2015 aggregately significant affected by working capital investment policy and control variables such as firm size, leverage and working capital turnover. Based on the characteristics, both agroindustry manufacturing and non-agroindustry equally significant affected by working capital investment policy, working capital financing policy, firm size and leverage. The recommendation for companies that currently still adopt aggressive investment policy need to take good care of the accuracy of the product turnover generated with the financing maturity time.

### **LIMITATIONS AND FUTURE RESEARCH**

The suggestions for further research to complete the limitations of this study are : (1) using a sample of listed companies from various industries, such as banking, retail and property; (2) use or add a macro variables such as GDP and inflation; (3) The next researchers need to separate the size of the company in order to obtain a tendency in each category. Basically, the size of the company is divided into three categories, there are large, medium and small firms.

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