

Recruitment and profitability management (case study of primary sector companies listed on Indonesia Stock Exchange 2007 - 2016)

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Abstract. This study analyzes the effect of receivables management on the profitability of the main sector companies listed in the Indonesia Stock Exchange (IDX) in the period 2007 to 2016. Sampling research uses purposive sampling technique which the sample selected is based on certain criteria. There are 27 seals consisting of 11 agricultural sectors and 16 mining sectors that meet the criteria to be examined using Quantitative Descriptive approach. Receivables management is measured on the average collection period of receivables expressed by the average collection period. To clarify the effect of receivable management on profitability, so the data are added other independent variables such as current ratio, size, and financial debt ratio. The size of profitability is expressed by gross operating profit. Data processing is conducted by Eviews 9. To test the effect, the research used fixed effect model with feasible generalized least square approach (FGLS). From the test results, there is a significant influence between the average collection period variable, current ratio, size, and financial debt ratio on gross operating profit.

1. Introduction

In the Asian region, developing countries tend to rely on trade debt compared to sophisticated trading systems countries. This is evidenced by longer credit periods (Paul, Devi, & Tea, 2012). For example India has a 90-day credit period, followed by Malaysia with 30- to 90-day credit periods, as well as Singapore and Hong Kong which tend to have shorter credit periods of 30 days. Like China, Taiwan and Japan, some firms in Indonesia are more likely to provide trade accounts receivable to domestic trading partners than overseas trading partners with the lowest percentage of 38.3% of the surveyed countries (Atradius, 2013). From this survey, it is known that most of the respondents provide trade payables aiming to build long-term good relationships with customers. For Indonesian respondents, increased lending sales are made as short-term funding access for customers. Survey respondents from the manufacturing sector had the largest percentage about 63% giving credit sales to build long-term relationships with customers.

Generally, companies want to collect accounts receivable immediately to reduce the billing period and increase the receivable turnover ratios. Sometimes, the company gives an extended period of payment to the customer with consideration of certain considerations. Payment Practices Study Barometer Indonesia: International survey of B2B Payment Behavior conducted by Atradius (2013), found that bad debts in Indonesia show an uncertain pattern.



The ability to transform receivables into cash is particular concern to the company because the delay in the collection of accounts receivable by the customer can negatively impact to the operations of the company. In addition, the delay in the collection of accounts receivable not only reflects the inefficiency of collection receivables, but also the impact of increased collection costs and the risk of uncollectible accounts. Manufacturing companies tend to have high levels of inventories and receivables at risk of experiencing problems in profitability resulting from damage or obsolescence of inventories and bad debts. Therefore, both inventory and receivable management impact on cash conversion cycles that are important for corporate liquidity and profitability (Paul, Devi, and Tea, 2012).

Table 1. The differences between GOP and ACP of some prime companies

Name of Companies	GOP		ACP		->
	2007 2008	-> 2008 2009	-> 2007 2008	-> 2008 2009	
Bakrie Sumatera Plantations, PT	0.2195	-0.2928	-43.2041	22.2656	
Inti Agri Resources, PT	-0.0465	-0.2239	9.9765	83.5907	
Adaro Energy, PT	-0.0325	0.2572	-1.1548	-1.3879	
Elnusa, PT	-0.2146	0.0308	4.4781	-28.2321	
Ratu Prabu Energi, PT	0.5372	-0.0161	91.2212	-8.8214	
Timah (Persero), PT	-1.3256	-1.2232	3.4372	5.4221	
Citatah, PT	0.3304	-0.0554	48.0939	-17.4737	

Source: Author's processed

Table 1 shows that the increase of ACP of PT Bakrie Sumatera Plantations from 2008 to 2009 impacts to a decrease in GOP in the same year. However, the statement is tangent to the data shown by PT Citatah which has decreasing in ACP from 2008 to 2009 and in GOP in the same year. This incompatibility of data is interesting to be researched.

2. Literature review

Profitability measurement is performed to find out how efficiency companies use assets and manage operational activities (Ross, Westerfield, & Jordan, 2010). Generally, the measurement of profitability is counted by calculating the return on assets (ROA) which is dividing the net income directly with the total assets of the company. According to Paul, Devi, and Teh (2012), since the research data is obtained in the form of consolidated financial statements, so to minimize the risk of non-trading business entering the calculation, the operational profit or loss becomes the most appropriate proxy for calculating profitability. Referring to the research of Madishetti and Kibona (2013) and Enqvist, Graham, and Nikkinen (2014), the proxy for profitability used is gross operating profit divided by total assets minus financial assets.

The use of gross operating profit as a numerator in the calculation of profitability ratios is due to gross operating profit measuring the operational profit so that it can be directly related to the company's operational activities (Enqvist, Graham, and Nikkinen, 2014). Lazaridis and Tryfonidis (2004) added that the reasons for the use of gross operating profits are compared to earnings before interest tax depreciation amortization (EBITDA) or pre-tax profit or after tax to connect between operational success or failure to operational ratios and operational variables such as average collection period.

Accounts receivable are claims of the company against customers for money, goods, and services when the company sells products in cash (Kieso, Weygandt, and Warfield, 2011). From an accounting perspective, when credit is given, it will have accounts receivable. Accounts receivable due to lending

to other companies are called trade credits whereas the credits granted to corporate customers are called consumer credit (Ross, Westerfield, and Jordan, 2010).

According to Damodaran (2011), companies offer sales on credit to increase sales and profits. However, there are two costs associated with lending. First, the provision of credit to the customer may be at risk of default, so it loss from bad debts and collection fees. Second, the company ignores the granting of interest between the time of sale and the time of payment by the customer. These are the things that should be taken into account in making credit decisions.

The requirements of the credit explain how credit will be granted, including the length of the crediting period, the interest rate in the credit, and the default fee. The following chart of credit arrow below illustrates the time it takes for a company to convert its receivables into cash (Lamberg and Valming, 2009). In granting credit facilities to customers, the longer the credit period is given, the greater the risk faced by the company. To minimize this risk, the company should continue to shorten the credit period and provide adjustments to product prices as a compensation for those risks. One of the most common practices is to speed up the collection process of accounts receivable.

For most companies that make sales on credit, accounts receivable is an important part of the company's working capital. In the operational activities of the company, it is important to measure the quality of the receivables. Quality refers to the possibility of billing done without loss. This is measured from the proportion of receivables in term of payment set by the company. The longer outstanding receivables exceed the maturity, the higher risk of bad debts (Subramanyam and Wild, 2009).

According to Maness and Zietlow (2005), liquidity has three basic aspects namely time, amount, and cost. In the aspect of time, the attention is how long it takes to convert an asset into cash to pay short-term liabilities. In the aspect of the amount, the concern is the adequacy of liquidity to meet short-term obligations due, while the attention on the cost aspect is an asset is considered liquid if it can be converted into cash with minimal cost.

According to Shalit and Sankar (1977), firm size can be determined based on total sales, total assets, total employees, shareholder equity, and market value of the company at the end of the year. In Indonesia, the provisions on company size are regulated in RI Law no. 20 of 2008. In this law, there are four classifications of companies based on size namely micro, small, medium and large enterprises. Like its two sides of the coin, debt has a positive and a negative side to the profitability of the company. On the positive one, debt is considered to encourage companies to be more efficient in operational activities. In addition, short-term funding can reduce investment in working capital and provide reserves that can be used to drive sales growth. On the negative one, debt can expose the company to the risk of default and the risk of liquidation and can reduce the company's financial flexibility (Damodaran, 2011). The greater level of company's debt, the greater potential bankrupt of the company.

3. Conceptual framework

Based on the background and literature review above, the conceptual framework of this study are:

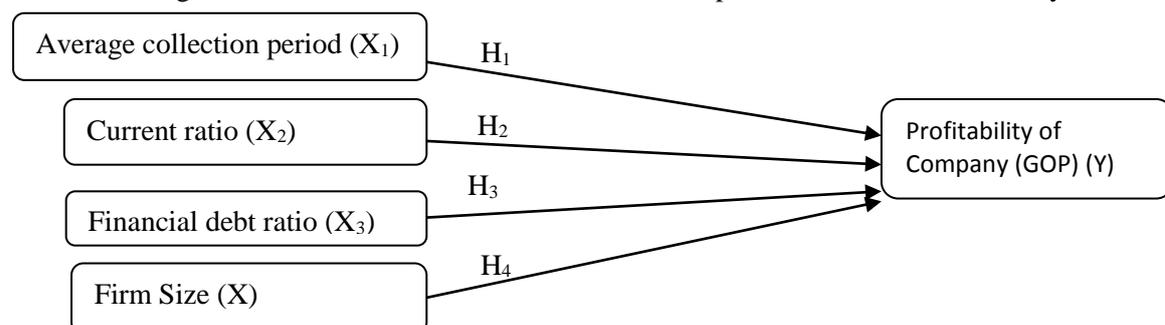


Figure 1. Framework

4. Hypothesis

Referring to previous research, the hypotheses of this research are:

1. Effect on Accountability of Receivables to Profitability
H0.1: There is no negative effect between the collectability of accounts receivable to profitability
H1.1: There is a negative influence between the collectability of accounts receivable to Profitability
2. The Influence of Liquidity to Profitability
H0.2: There is no influence between liquidity to profitability H1.2: There is influence between liquidity to profitability
3. The Effect of Debt Rate to Profitability.
H0.3: There is no influence between the level of debt to profitability H1.3: There is an influence between the level of debt to profitability
4. The effect of Company Size to Profitability.
H0.4: There is no positive effect between firm size to profitability H1.4: There is a positive influence between firm size to profitability

5. Research method

The design of this research is a causal design which is a design that tries to explain one variable to another variable. The operational definitions and the disguised variable are listed in Table 2 below.

Table 2. Operationalization and Measurement of Variables

Variable	Acronym	Concept	Model
Gross Operating Profit	GOP	A certain number earned from the sales divide less the selling cost by the asset amount less the	Ratio
Average Collection Period	ACP	A certain figure earned from the proceeds divides the cost of goods sold by the average amount of inventory	Ratio
Current Ratio	CR	A certain number obtained from dividing current assets to current liabilities	Ratio
Financial Debt Ratio	FDR	A specified number of short-term liabilities plus long-term liabilities divided by total asset	Ratio
Firm's Size	FS	A specific number obtained from the natural logarithm of dividing current asset to current liabilities	Ratio

The population in this study is the main sector companies listed on the Indonesia Stock Exchange from 2007 to 2016 as many as 33 companies. Sampling uses purposive sampling to get 27 companies

6. Data collection technique

The type of data used in this research is panel data collected by using documentation technique. The basic models developed are as follows:

Company Profitability = f (Accounts Receivable Management, Other Control Variables)

$$\text{Gross Operating Profit} = \alpha_0 + \beta_1 X + \beta_2 C + \varepsilon \quad (1)$$

In the equation above, the profitability of the company is influenced by X that is the delay of receivables collectability and other control variables C. The basic model above is modified with the panel data model as follows.

$$\text{GOPit} = \alpha + \beta_1 \text{ACPit} + \beta_2 \text{CRit} + \beta_3 \text{FDRit} + \beta_4 \text{FSit} + \varepsilon_{it} \quad (2)$$

Where:

ACP: average collection period, average 365 day billing period in a year

CR: current ratio, current asset ratio divided by current liabilities

FDR: the ratio of short-term and long-term loans to total assets

FS: the size of a company, viewed from the total natural logarithm sales.

In this research, two approaches of analysis are descriptive and inferential analysis.

a. Descriptive Analysis

It is conducted to determine the spread and tendency in centralized data (central tendency). This analysis is performed by looking at the mean value of the average data, the maximum and the minimum value. Meanwhile, to know the dispersion spread or size of a group of data, it can be seen from the standard deviation value.

b. Classic Assumption Test

To prove whether or not to influence the independent variable to the dependent variable, the regression analysis is used as a quantitative analysis tool. The regression model has some basic assumptions that must be filled to produce a good estimate known as Gauss-Markov Theorem. Based on Gauss-Markov Theorem, a good regression model must meet the classical assumption test known as Best Linear Unbiased Estimator (Gujarati and Porter, 2008). To see whether a model is BLUE, it will do some tests as follows:

1) Normality test

2) Autocorrelation Test

3) Hetero-scedasticity Test

4) Multi-collinearity Test

c. Panel Data Regression

d. Hypotheses Testing

1) F Test

2) t Test

e. Coefficient of Determination Test

7. Results and discussion

7.1. Descriptive analysis

This is the result of descriptive statistical processing of independent variables and dependent research.

Table 3. Descriptive statistics

	Gross operating profit	Average collection period	Current ratio	Financial debt ratio	Firms size
Mean	0.198266	60.90071	2.245090	0.284390	28.73868
Maximum	0.923625	512.1222	39.61718	0.860484	31.34871
Minimum	-0.397582	0.554200	0.098610	0.000000	23.10414
Median	0.164847	48.26698	1.588775	0.300000	29.04900
Std. Deviation	0.162887	54.33605	3.595492	0.207559	1.649775

7.2. Model conformity test

Cross-section value Chi-square: 128.706159 with p value: 0.0000 is less than 0.05, then H1 is accepted or it means that better model is FE. So next is the test of RE then compare RE or FE through hausman test. The chow test is FE, so Hausman test will be counted. To test hausman test, it first tests Random effect (RE). Cross-section random value is 21.736236 with p value of 0.0002 <0,05, so H1 is accepted or better model is FE. Based on Chow test and Hausman test obtained, the best model is fixed effect. Then the classical assumption test is done by using fixed effect.

7.3. Classical assumption test using FGLS model

P Value 0.059139 is greater than 0.05, so H0 is accepted or residual is normally distributed. If there is a standardized residual > 3 or < -3 or in other words absolute standardized residual is greater than 3, so the sample becomes an outlier and it is excluded from the analysis. Outliers are marked with absolute values of standardized residuals > 3. Based on the diagram above, there is no outlier.

7.4. Analysis of linear regression analysis

To overcome the problem of hetero-scedasticity and multi-collinearity, this research uses Feasible Generalized Least Square (FGLS) model by giving white-hetero-scedasticity-consistence covariance to anticipate hetero-scedastic data. Here are the final estimates used as statistical analysis.

From the result of regression model estimation above, regression equation is as follows.

$$GOP = 0.309911 - 0.000619ACP + 0.003216CR - 0.222344FDR - 2.58e-15FS \quad (3)$$

The regression model above can be interpreted as follows:

1. Regression coefficient of average collection period of 0.000619 states that if the average day of collection receivables increases one day with the assumption that other independent variables are zero, then the gross operating profit will decrease by - 0.000619. Regression coefficient of current ratio of 0003216 states if the current ratio increases one unit with the assumption of other independent variables are zero, so the gross operating profit will increase by 0.003216.
2. Regression coefficient of financial debt ratio of 0.222344 states if the financial debt ratio increases one unit with the assumption of other independent variables are zero, so the gross operating profit will decrease by 0.222344.
3. Regression coefficient of firm size regression of 2.58e-15 states if the firm size increases by one unit with the assumption that the other independent variable is zero, the gross operating profit will increase by 2.58e-15.

7.5. Hypothesis

a. t-test

The probability of average collection period of 0.0000 <0.05, so H0 is rejected meaning that there is a negative effect of significant average collection period on gross operating period. The probability of Current ratio of 0.0013 <0.05, so H0 is rejected. It means that there is a significant positive effect of current ratio on gross operating period. The probability of financial debt ratio of 0.0002 <0.05, so H0 is rejected. It means there is significant negative influence of financial debt ratio on gross operating

period. The probability of average collection period of 0.0089 < 0.05, then H₀ is rejected. It means there is a significant negative effect firm size against gross operating period.

b. F test

The value of F count equals to 18.42480 with p value or Probability 0.0000 < 0,05, so H₁ is accepted. It means all independent variable have significant effect to dependent variable simultaneously.

c. Coefficient of determination

Adjusted R square value is 0.660244. it can be interpreted as independent variable, it is able to explain the behavior of dependent variable equals to 66,02% while the rest equals to 33,98% explained by other independent variables that are not included in this model.

d. Result of hypotheses test analysis

From tests that have been conducted to support the research hypotheses, it can be obtained results as follows:

Table 4. Hypotheses testing results

Hypotheses	Variables	The prediction of variables	The results	Significant/not significant	Conclusion
H _{1.1}	ACP	Negative	Negative	Significant	Supported
H _{1.2}	CR	Negative/positive	Positive	Significant	Supported
H _{1.3}	FDR	Negative/positive	Negative	Significant	Supported
H _{1.4}	Firm Size	Positive	Positive	Significant	Supported

8. Conclusion

Based on the test results and analysis above, the following conclusions are obtained:

1. There is a negative influence of average collection period on gross operating profit. This is in line to research by Madishetti and Kibona (2013); Paul, Devi, and Tea (2012); Zainudin (2008); and Enqvist, Graham, and Nikkinen, (2014).
2. There is a significant positive influence of current ratio on gross operating profit. This is in line with research by Enqvist, Graham, and Nikkinen (2014) and Lamberg and Valming (2009).
3. There is significant negative influence of financial debt ratio variable on gross operating profit variable.
4. There is significant positive effect of firm size variable on gross operating profit variable. The result of this study is in line with Raheeman and Nasr (2007), and Mathuva (2010).

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