

# The Influence of Accounting Conservatism, Leverage, Growth Opportunities, Cash and Liquidity on Corporate Investment Among Manufacturing Companies Listed on Indonesia Stock Exchange

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## ABSTRACT

This study aimed to provide empirical evidence on the influence of Accounting Conservatism, Leverage, Growth Opportunities and Cash and Liquidity on Corporate Investment. The object of this research used was manufacturing companies listed on Indonesia Stock Exchange (IDX) in 2014-2016. Samples were obtained by using purposive sampling method consisting of 168 samples of manufacturing companies. Data analysis used Structural Equation Model (SEM) with Lisrel 8.8 software. The results of this study indicated that Accounting Conservatism, Leverage, Growth Opportunities, and Cash and Liquidity had no influence on Corporate Investment.

**Keywords:** *Corporate Investment, Accounting Conservatism, Leverage, Growth Opportunities, Cash and Liquidity*

## 1. INTRODUCTION

Investment decisions lead to resource commitments (including associated and ongoing commitments) from benefits that are not fully consumed in short-term and are expected to deliver benefits in medium and long-term. According to Pike and Neale (2009: 6), companies can invest in financial assets outside their business in form of short-term securities and deposits.

Gitman and Zutter (2012: 387) stated that investment decisions are important because they will influence the success of achieving company goals and are the core of all financial analysis. The purpose of investment decisions is to obtain high return at a certain level of risk (Hidayat, 2010: 458). Investment decision for investors can be used as a reference to the development of the company's positive prospects in the future. Based on the results of previous studies on corporate investment, various results had been obtained.

Many studies conducted by experts and proved that accounting conservatism has an influence on corporate investment viewed from the condition of capital owned by the company (Xu, et al., 2012), which is in line with the influence of accounting conservatism on corporate investment conducted by Balakrishnan, Watts, and Luo (2016) and Brockman, Ming, and Tao (2010). The results of the research by Aygun, IC, and Sayim (2014), Aivazian, et al. (2005), and Odit and Chittoo (2008) showed that leverage has an influence on corporate investment. Meanwhile, according to the results of the research by Omet, Yaseen, and Abukhadijeh (2015), leverage has no influence on corporate investment. Cash and liquidity have an

influence on corporate investment, as the research results from Balogun and Ajide (2016), because when a company has a large amount of cash, it will have the opportunity to make more investments to finance their fixed assets. Aygun, et al. (2014), Aivazian, et al. (2005), Omet, et al. (2015), and Balogun and Ajide (2016) showed that growth opportunities influence corporate investment. However, Franklin and Muthusamy's (2011) stated that growth opportunities do not affect corporate investment.

There are inconsistencies from the results of previous studies related to the factors that influence corporate investment. Therefore, this study was conducted to examine how accounting conservatism, leverage, growth opportunities, and cash and liquidity influence corporate investment, especially among manufacturing companies in Indonesia. Based on the explanation above, the problems can be formulated as follows:

1. Is there an influence of accounting conservatism on corporate investment?
2. Is there any influence of leverage on corporate investment?
3. Is there an influence of growth opportunities on corporate investment?
4. Is there any influence of cash and liquidity on corporate investment?

## 2. LITERATURE REVIEW

### 2.1. The Agency Theory

This theory began to be developed in the 1970s, especially in the research conducted by Jensen and Meckling (1976).

This theory assumes that each individual is solely motivated by personal interests, which causes a conflict of interest between the principal and the agent. According to Aivazian, et al. (2005: 278), agency problems arise when there are imperfect market conditions, and involve interactions between shareholders, debt holders, and management that cause underinvestment or overinvestment. Conflict arises, because the capital owners always try to use the funds as well as possible with the smallest possible risk, while the managers (agents) tend to take fund management decisions to maximize profits that often conflict and tend to prioritize their own interests. Such conditions affect management in investment decision making.

## **2.2. Trade-Off Theory**

This theory was first introduced by Modigliani and Miller (1963), which stated that a company has an optimal level of debt and seeks to adjust its actual debt-level toward the optimal point when the company is at overlevered or underlevered (too low level of debt).

## **2.3 Pecking-Order Theory**

Myers (1984: 581) stated that there is a ranking called financing pecking orders. This theory explains the order in which funds are used by companies in investing. In funding the main investment, the sources are derived from internal funds originating from retained earnings and depreciation, and then through the external funding in the form of debt, and finally using alternative stock issuance.

## **2.4 Tobin's Q Theory of Investment.**

This theory was proposed by James Tobin and William Brainard in 1968 in a general equilibrium approach to monetary theory in which an investment should be decided if it would increase the value of shares. If the investment value appraised by investors exceeds the investment costs incurred, the company's shares will provide benefits to the shareholders, which is in accordance with the company's goals. According to Balogun and Ajide (2016: 97), Q investment theory whereas 'q' represents the ratio of market value of a company's stock (share capital) to the cost of replacing the company's physical assets. If  $q > 1$ , it means that additional investment in the company will make sense, because the profits generated will exceed the cost of the company's assets. But if  $q < 1$ , then the company is better off-selling its assets than trying to add to its investment.

## **2.5 Corporate Investment**

According to Jangili and Kumar in Balogun and Ajide (2016: 95), "Corporate investment refers to the amount of capital spent to increase the total assets of a firm." The same

opinion was stated by Rahmawati, et al. (2015: 115), in which investment is the company's commitment to funds or a number of other resources at this time with the aim of obtaining future profits. In other words, corporate investment is the activity of spending funds at present with the hope of obtaining future profits by the company as its effort to maximize the process of its resources. Investments made can be in form of shares, securities, fixed assets, and so on.

## **2.6 Accounting Conservatism**

Xu, et al. (2012: 56) explained that conservatism is a principle of financial reporting which is the initial recognition of costs and debt and delaying recognition for income and profit. Research conducted by Brockman, et al. (2010) stated that accounting conservatism has negative and significant effect on corporate investment. The application of accounting conservatism concept in company makes management tighten in terms of supervision to make investment decisions. Management will be more selective in determining investments which only choose those with low level of risk and positive NPV. Meanwhile, the research conducted by Xu, et al. (2012) stated that accounting conservatism has positive and significant effect on corporate investment in condition that internal capital is not sufficient to be used in investment. However, when internal capital is sufficient for investment, the implication of accounting conservatism on corporate investment has negative effect.

H1: Accounting conservatism has positive effect on corporate investment.

## **2.7 Leverage**

Leverage is a financing instrument with debt. Debt issuance is done in order to acquire the cash and take into account the interest and principal debt. Sahid et al. (2016: 83) stated that companies with high growth rates can use leverage for investment, because they have sufficient cash flow to prevent the risk of using leverage. The research conducted by Aygun, et al. (2014) showed that leverage has positive and significant effect on corporate investment. This is in line with the research conducted by Bhunia (2012), whereas leverage has positive and significant effect on the investment done by small companies, while in medium and large companies, it has no significant effect. On contrast, according to the research conducted by Aivazian, et al. (2005), Omet, et al. (2015), Odit and Chittoo (2008), Balogun and Ajide (2016), Yuan and Motohashi (2014), and Sajid, et al. (2016), leverage has negative and significant effect on corporate investment. This is based on the existence of agency theory which states that with the level of leverage in the company, it will provide a disciplinary effect for the agent (management) in making payments of debt and interest. So, managers can not make investments and funds owned by the company channeled to pay the debts and interest to creditors.

H2: Leverage has positive effect on corporate investment.

H3: Growth opportunities have positive effect on corporate investment.

**2.8 Growth Opportunities**

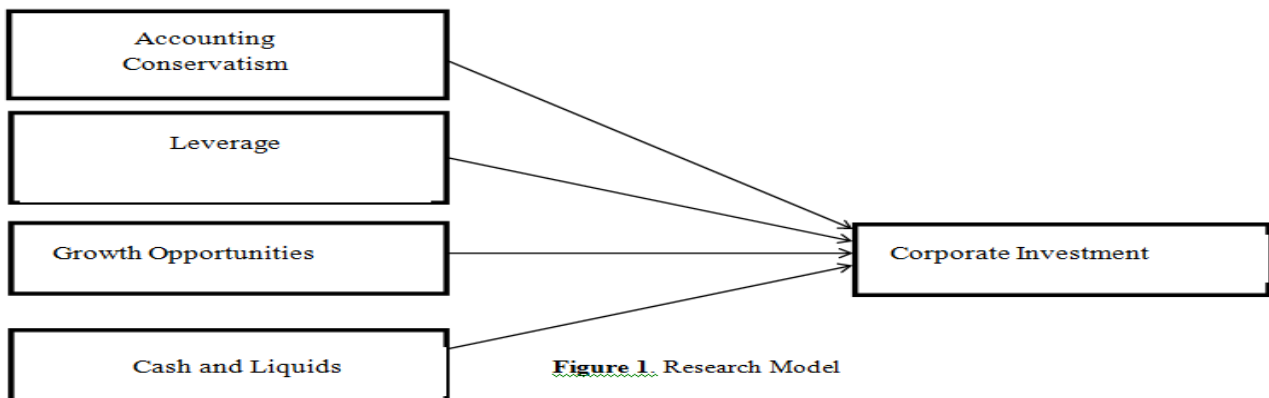
Harahap (2012: 71) explained that growth opportunities are the company’s opportunities to invest in things that are profitable. Haque (2014: 227) believed that companies that have good growth opportunities will invest more. Aygun, et al. (2014), Aivazian, et al. (2005), Omet, et al. (2015), Odit and Chittoo (2008), Yuan and Motohashi (2014) examined the effect of growth opportunities on corporate investment and the results showed that growth opportunities had positive and significant effect on corporate investment. This shows that growth opportunities can be used by companies to increase investment. However, the results from Balogun and Ajide (2016) and Sajid, et al. (2016) showed that growth opportunities have negative and significant effect on corporate investment. The company focuses more on internal funds for investment activities and does not pay attention to growth opportunities.

**2.9 Cash and Liquidity**

Frank and James (2008) defined the cash as a short-term investment that has a degree of liquidity that can be easily converted into cash with insignificant risk of changes in value. Balogun and Ajide (2016) conducted a research on the effect of cash and liquidity on investment by companies, of which the results have a positive influence. This influence is based on when a company with large cash will have the opportunity to make greater investment by using funds from the cash, so that the company's investment level can increase. The greater the amount of cash owned by the company, the more the company can use the cash as a source of funds to finance investments in fixed assets. Thus, it will increase corporate investment in fixed assets.

H4: Cash and Liquidity has positive effect on corporate investment.

Based on the hypothesis development above, the research model can be described as follow:



**3. RESEARCH METHODS**

**3.1. Population and Sample**

This study used secondary data obtained from Indonesia Stock Exchange (IDX). The sample used was the manufacturing companies listed on IDX. The sampling method used purposive sampling, which means that each company in the population can be sampled on the same occasion.

**3.2. Research Variable**

The variables used in this study were Accounting Conservatism, Leverage, Growth Opportunities, Cash and Liquidity as independent variables (exogenous variables) and Corporate Investment as dependent variable (endogenous variable). The objects in this study were 168 manufacturing companies listed on Indonesia Stock Exchange (IDX) in the period of 2014-2016.

**3.3 Operationalization of Variables**

The endogenous variable used is Corporate Investment, while the exogenous variables used are Accounting Conservatism, Leverage, Growth Opportunities and Cash and Liquidity. The formula used in calculating Corporate Investment is as follow:

**Table 1.** Operationalization of Variables

Variable	Scale	Source
Corporate Investment (Y)	$INV = \frac{Fixed\ Investment_{t-1}}{Total\ Assets_{t-1}}$	Yuan and Motohashi, 2014
Accounting Conservatism (X <sub>1</sub> )	$CONACC = \frac{(NIO + DEP - CFO)X(-1)}{Total\ Assets_{t-1}}$	Xu et al.2012 and Savitri, 2016
Leverage (X <sub>2</sub> )	$LEV = \frac{Total\ Liabilities_{t-1}}{Total\ Assets_{t-1}}$	Yuan and Motohashi, 2014
Growth Oppoertunities (Tobin's Q) (X <sub>3</sub> )	$LEV = \frac{(Number\ of\ Shares\ x\ Average\ Stock\ Price)}{+Total\ Liabilities_{t-1}}$	Yuan and Motohashi, 2014
Cash and Liquids (CLC) (X <sub>4</sub> )	$CLC = \frac{Cash\ and\ Cash\ Equivalent_{t-1}}{Net\ Fixed\ Assets_{t-1}}$	Balogun and Ajide, 2016

**Data Processing Techniques**

1. Descriptive Statistics
2. Data Normality

**Data Analysis Technique**

There are seven steps in data analysis that must be done when using the Structural Equation Model (SEM) (Hair et.al., 1995), namely: 1) Theoretical Model Development, 2) Development of Path Diagrams, 3) Conversion of Path Diagrams into Equations, 4) Selecting the Input Matrix and Model Estimation, 5) Emergence of Identification Problems, 6) Evaluating the Goodness of Fit Criteria, 7) Structural Equation Model Analysis

**4. ANALYSIS AND DISCUSSIONS**

**4.1 Descriptive statistics**

The data obtained from Accounting Conservatism, Leverage, Growth Opportunities, Cash and Liquidity, Corporate Investment are still random, raw, and not well-organized. This analysis is useful to describe the samples taken whether they are highly volatile or not, as well as whether there are outlier data, without the intention of making generally accepted conclusions or generalizations.

**Table 2.** Descriptive Statistics

Total Sample Size = 168

Univariate Summary Statistics for Continuous Variables

Variable	Mean	St. Dev.	T-Value	Skewness	Kurtosis	Minimum	Freq.	Maximum	Freq.
Y	0.084	0.074	14.813	0.000	-0.019	-0.125	1	0.293	1
X1	-0.074	0.102	-9.380	0.000	-0.019	-0.364	1	0.216	1
X2	0.428	0.172	32.254	0.000	-0.019	-0.059	1	0.914	1
X3	1.799	2.288	10.190	0.000	-0.019	-4.676	1	8.274	1
X4	1.091	1.711	8.265	0.000	-0.019	-3.751	1	5.934	1

Source: Lisrel output data

**4.2 Data Normality**

According to (Hair, 1998) The most fundamental assumption in multivariate analysis is about normality. In data normality, a single matrix variable is formed to produce a normal distribution. If Skewness and Kurtosis are significant (less than 0.05, at 5% level of significance), then it can be said that the data distribution is not normal. Conversely, if Skewness and Kurtosis are not significant (greater than 0.05), then the data distribution is considered normal.

**Table 3. Data Normality**

Variable	Test of Univariate Normality for Continuous Variables					
	Skewness		Kurtosis		Skewness and Kurtosis	
	Z-Score	P-Value	Z-Score	P-value	Chi-Square	P-Value
Y	0.000	1.000	0.105	0.916	0.011	0.995
X1	0.000	1.000	0.105	0.916	0.011	0.995
X2	0.000	1.000	0.105	0.916	0.011	0.995
X3	0.000	1.000	0.105	0.916	0.011	0.995
X4	0.000	1.000	0.105	0.916	0.011	0.995

From the above output, whereas the p-values in Skewness and Kurtosis are much greater than 0.05, it can be concluded that the data has very good level of normality.

**Theoretical Model Development**

The development of the model in this study was based on the literature review and framework of thinking as explained in the literature review section.

**Arrangement of Flow Charts (Path Diagrams)**

This step has been carried out and an explanation is found in research methods.

**Convert Flow Charts into Equations**

The model, that has been stated in the flowchart and structural equation, is contained in research methods.

**Choosing an Input Matrix and Estimation Technique**

The input was in form of covariance matrix, because in testing the causality relationship, the covariance matrix is taken as an input for SEM operations (Hair et al. ,1995 in Ferdinand, 2005). The results are as follows:

**Table 4. Covariance Matrix**

	Y	X1	X2	X3	X4
Y	0.005				
X1	-0.001	0.011			
X2	0.000	-0.001	0.030		
X3	0.034	-0.036	0.005	5.236	
X4	-0.006	0.018	-0.103	-0.256	2.929

The estimation technique used was the maximum likelihood estimation method, because the number of samples used was 168. This technique is carried out in stages, namely the estimation measurement model with confirmatory factor analysis and structural equation model techniques.

**Evaluate the Goodness-of-Fit Criteria**

**Overall-Fit Rating**

In the Structural Equation Model (SEM), a study does not only depend on one or several fit-indexes, but also has to consider all the fit-indexes. Based on the results of the Goodness-of-Fit Statistics, a fit-test (Testing-Fit) was conducted whereas the results of the fit-testing were as follows (Ghozali, 2005):

**Table 5. Testing Fit**

Goodness of Fit Statistics
Degrees of Freedom = 0
Minimum Fit Function Chi-Square = 0.0 (P = 1.000)
Normal Theory Weighted Least Squares Chi-Square = 0.00 (P = 1.000)
The Model is Saturated, the Fit is Perfect !

Source: Lisrel output data

**Evaluation of Measurement Model**

Validity test aims to determine the ability of an indicator in measuring exogenous variables, while the reliability test aims to determine the consistency of measurement of indicators from endogenous variables. The output of the Lisrel 8.8 program produces PHI-X and PSI Y as follows:

**Table 6.** PHI-X and PSI-Y

PHI	X1	X2	X3	X4
X1	0.011 (0.001) 0.028			
X2	-0.002 (0.001) -1.129	0.030 (0.003) 9.028		
X3	-0.012 (0.018) -0.676	0.007 (0.031) 0.243	5.236 (0.580) 9.028	
X4	0.016 (0.014) 1.137	-0.074 (0.024) -3.130	-0.240 (0.307) -0.781	2.929 (0.324) 9.028

PSI
Y
0.005 (0.001) 9.028

PHI-X is a matrix that connects exogenous variables (independent) with its indicators (variable manifest / variable observed), with the t-table value ( $\alpha = 5\%$ ) of 1.96. Based on such condition, the significant levels of all the above indicators are as follows:

1. X1 (Accounting Conservatism) with a correlation level of 0.0011, standard error of (0.001) and t-value of 9.028 ( $> 1.96$ ), means that the variable X1 was significant at  $\alpha = 5\%$ .
2. X2 (Leverage) with the correlation level of -0.002, standard error is (0.001) and t-value of -1.129 (lies between - 1.96 and 1.96), means that the variable X2 was not significant at  $\alpha = 5\%$ .
3. X3 (Growth Opportunities) with a correlation level of -0.012, standard error of (0.018) and t-value of -0.676 (lies between - 1.96 and 1.96), means that the variable X3 was not significant at  $\alpha = 5\%$ .
4. X4 (Cash and Liquidity) with a correlation level of 0.016, standard error of (0.014) and t-value of 1.137 (less than 1.96), means that the variable X4 was not significant at  $\alpha = 5\%$ .

5. PSI-Y is a matrix that connects the dependent variable with its indicators (variable manifest / variable observed), with the t-value of 1.96 ( $\alpha = 5\%$ ), the significance level of the above indicators are as follows:
6. Y (Corporate Investment) with a correlation level of 0.005, standard error of (0.001) and t-value of 9.028 (greater than 1.96), means that the variable Y was significant at  $\alpha = 5\%$ .

**Structural Equation Model (SEM) Analysis**

Testing the model in SEM was conducted in two kinds, which were the test of model suitability and the test of causality significance through the regression-coefficient test. The results of data processing for SEM analysis can be seen in GAMA output as follows:

**Table 7.** Structural Equation Model

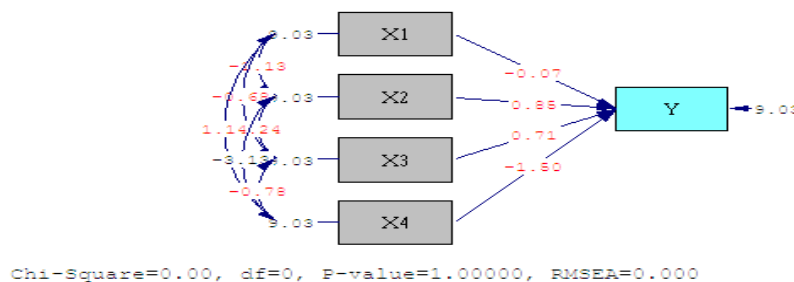
		GAMMA			
		X1	X2	X3	X4
Y		-0.004	0.029	0.002	-0.005
		(0.056)	(0.034)	(0.002)	(0.003)
		-0.067	0.846	0.713	-1.504

Source: Lisrel output data

GAMMA matrix shows the influence of exogenous variables on endogenous variables, and the results were as follows:

1. The correlation between X1 and Y was -0.004 with Standard Error (SE) of (0.056) and t-statistics of -0.067 (less than 1.96), proved that there was no significant correlation at 5% level.
2. The correlation between X2 and Y was 0.029 with Standard Error (SE) of (0.034) and t-statistics of 0.846 (less than 1.96), proved that there was no significant correlation at 5% level.
3. The correlation between X3 and Y was 0.002 with Standard Error (SE) of (0.002) and t-statistics of 0.713 (less than 1.96), proved that there was no significant correlation at 5% level.
4. The correlation between X4 and Y was -0.005 with Standard Error (SE) of (0.003) and t-statistics of -1.504 (less than 1.96), proved that there was no significant correlation at 5% level.

The output of the equation model above also generated a path diagram that displayed the structural model with t-value as follow:



**Figure 2.** Diagram Path

Testing the hypotheses was done by analyzing the value of t-table ( $\alpha = 5\%$ ) with the statistical constraints required. If the result is above 1.96, it means that it has a significant relationship. In this study, the following four hypotheses testing were done as follows:

### 1. Test of Hypothesis 1

H1: Accounting conservatism has positive influence on corporate investment.

The structural model result with t-statistics of -0.067 (less than t-table of 1.96) means that H1 was rejected or there was no significant influence of variable X1 (Accounting Conservatism) on Y (Corporate Investment) at 5% significance level. This means that the application of accounting conservatism concept in a company's financial reporting does not affect the management to invest in the company. The result of this study was in line with the study conducted by Xu, et al. (2012). The company will continue to invest without regard to the adequacy of internal capital in the company. The application of conservatism cannot limit a company's investment to a certain level. However, there are indications that conservatism can reduce the conflicts of interest between management and shareholders thereby reducing the agency costs, and when being linked to the agency theory, these results certainly do not support the theory. The research which stated that accounting conservatism affects corporate investment was done by the method of earning / stock return relation measures. The study was conducted by Pan (2017), whereas measurements were made by comparing earnings-per-share and quarter-end share prices and considering returns, leverage and market-to-book ratios.

### 2. Test of Hypothesis 2

H2: Leverage has positive influence on corporate investment.

The structural model result with t-statistics of 0.846 (less than t-table of 1.96) means that H2 was rejected or there was no significant influence of the variable X2 (Leverage) on Y (Corporate Investment) at 5% significance level. This means that the addition of debt made by the company was not used to make investments. This can be said that whether the company makes loans or not, it will continue to invest. This empirical test supports the results of the research conducted by Omet, et al. (2015), whereas the leverage ratio cannot prevent a company from investing if it has become its choice. In line with the results of the research from Bhunia (2012) and Franklin and Mathusamy (2011), leverage has no effect on corporate investment, especially in medium and large-scale companies. That's because the medium and large companies make investment decisions based on internal financial sources, which is in contrast to small companies that still depend on external funding to invest.

### 3. Test of Hypothesis 3

H3: Growth opportunities have positive influence on corporate investment.

The structural model result with t-statistics of 0.713 (less than t-table of 1.96) means that H3 was rejected or there was

no significant influence of the variable X3 (Growth Opportunities) on Y (Corporate Investment) at 5% significance level. This means that the chance of the company to grow did not affect it to increase or decrease the investments. Such results indicated that whether the company experienced growth or not, it would continue to invest. Based on the research conducted by Bhunia (2012), the growth opportunities variable has no influence on corporate investment especially in medium and large companies. But in small companies, the growth opportunities affect corporate investment. This study did not distinguish between companies with small, medium, or large-scale. The small-scale company considers future growth opportunities due to the expectation of an increase to medium and large-scale in terms of investment. Different research result was obtained by Yuan and Motohashi (2014), whereas growth opportunities have positive effect on corporate investment. The result obtained in this study was rejecting the third hypothesis, which can be interpreted that growth opportunities did not affect corporate investment. This could happen due to the fact that manufacturing companies as research subjects were medium and large-scale companies, and will continue to invest as their goal to generate maximum profit.

### 4. Test of Hypothesis 4

H4: Cash and liquidity has positive influence on corporate investment.

The structural model result with t-statistics of -1.504 (less than t-table of 1.96) means that H4 was rejected or there was no significant influence of the variable X4 (Cash and Liquidity) on Y (Corporate Investment) at 5% significance level. This means that not all investments made by companies were funded by using cash. Companies could use other funding to make investments such as from debt or stocks. However, this result did not mean that the company did not use its cash at all to fulfil the investment needs. The result of this study was not in accordance with the research result of Balogun and Ajide (2016).

Below is the summary of the results of each hypotheses testing.

**Table 8.** Result of Hipotheses Testing

Hypothesis	Result
Hypothesis 1	Rejected
Hypothesis 2	Rejected
Hypothesis 3	Rejected
Hypothesis 4	Rejected

Source: Lisrel output data

## 5. CONCLUSIONS

First, Accounting Conservatism does not have positive influence on Corporate Investment, Second, Leverage does not have positive influence on Corporate Investment, Third, Growth Opportunities do not have positive influence on

Corporate Investment, Fourth, Cash and Liquidity do not have positive influence on Corporate Investment.

### Research Implications

The results show that accounting conservatism, leverage, growth opportunities, cash and liquidity have no positive influence on corporate investment. Hence, investors when investing do not only rely on financial statements but also more importantly on the purpose of the company's funding needs. Is it used to increase company profits, to increase company operational activities, to increase productivity, or to minimize the risk of the lack of capital?

### Research Limitations

First, the variables' indicators were limited to Accounting Conservatism, Leverage, Growth Opportunities, Cash and Liquidity, which were taken from secondary data, Second, the observation period used for this research was limited to only three consecutive years, namely 2014, 2015 and 2016. Third, this study only focused on the observations on manufacturing companies listed on Indonesia Stock Exchange with predetermined criteria.

### Suggestions

First, future studies can increase the number of variables that can affect corporate investment such as Sales, Cash Flow, Firm Size, Liquidity, and so on, Second, the research period can also be carried out by taking a period with longer time-span to see the upward and downward trend from one period to another, Third, the companies used as observation should not be only in the manufacturing sector, but can also be in other sectors.

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