

# Cash Flow, Investment, and Internationalisation Strategy

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This study aims to examine the effect of cash flow on investment and the effect of internationalisation as a moderating variable. The sample used in this study consisted of 272 manufacturing companies listed on the Indonesia Stock Exchange in 2014-2018. The testing technique used in this study is the multiple linear regression analysis. Based on the results of this study, it can be concluded that cash flow has a significant positive effect on investment, and internationalisation weakens the positive influence of cash flow on investment.

**Keywords:** *Investment, Cash flow, Internationalisation.*

## Introduction

Investment decisions are financial decisions about assets that companies must buy (Sudana, 2015). This activity is related to the decision to allocate several funds to the assets at a specific time, for then investors will get a return in the future. For this reason, in investing, it is necessary to pay attention to the effectiveness and efficiency of its funding sources to achieve annual returns.

In practice, companies often experience financial constraints or difficulties in obtaining adequate external funding sources. Imperfect market conditions give rise to information asymmetry, which then results in higher external financing (Modigliani & Miller, 1958). This shows that to invest, the company is very dependent on its cash flow due to the high cost of external funding. Myers & Majluf (1984) showed that companies in financing investment would prefer to use internal funds before using debt and equity. The availability of internal company funding sources will depend on the cash flow from the company's operational activities.

The company's limitations in collecting funds cause the company to experience a decrease in investment (Lin et al., 2019). Companies will tend to reject projects with a positive NPV due to a lack of funds for companies to invest (Myers & Majluf, 1984). When a company

experiences financial constraints, it requires several alternative strategic plans, such as the internationalisation strategy. Internationalisation, according to Lin et al. (2019), is one of the growth strategies for companies that can improve company performance by maximising learning from the local market and expanding domestic market excellence to foreign markets. Through foreign sales as a form of company internationalisation activities to enter the international market, the higher the level of overseas sales shows that the market covered by the company is getting wider. Therefore, the company's sales volume and profits increase and internationalisation encourage companies to achieve maximum profits.

There have been many empirical studies examining the effects of cash flow on previous investments. Aggarwal and Zong (2006), Ascioğlu et al. (2008), Fazzari et al. (1988), Firth et al. (2012), George et al. (2011), Kaplan and Zingales (1997), and Lin et al. (2019) show that cash flow has a significant positive effect on investment. In contrast to these results, Prasetyantoko (2011) shows that cash flow has a significant negative impact on investment. Empirical studies in Indonesia that examine the effect of cash flow on investment by adding internationalisation as a moderating variable are still scarce. This makes the writer interested in conducting research on the effect of cash flow on investments moderated by internationalisation in manufacturing companies in Indonesia.

This study used a sample consisting of 272 manufacturing companies listed on the Indonesia Stock Exchange in 2014-2018. The hypothesis in this study was tested using multiple linear regression analysis. We found that cash flow has a significant positive effect on investment. Furthermore, we proved that internationalisation weakens the positive influence of cash flow on investment. The results of this study imply that internationalisation is a favourable strategy for firms to be able to reduce the dependence on free cash flow as investment funding.

The remainder of this paper is structured as follows. Section 2 develops the research hypotheses. Section 3 describes the research design. Section 4 specifies the empirical result. Section 5 summarises the paper and presents concluding remarks.

## **Literature Review and Hypothesis Development**

### ***Cash Flow and Investment***

Several studies on cash flow have been carried out in Indonesia (Fachrudin, 2018; Iskandar et al., 2012; Bukit & Iskandar, 2009). The existence of positive cash flow provides the ability for companies to be able to realise more profitable investment projects. In funding investment activities, companies will first use internal funding sources in accordance with the pecking order theory put forward by (Myers & Majluf, 1984). Every company wants to reduce costs in investment because it considers that internal funding sources are cheaper than external

sources. In imperfect markets, there will be asymmetrical information, which will cause the cost of using foreign funds to be more expensive than internal funding (Modigliani & Miller, 1958).

Asymmetry of information between external and internal parties causes companies to be vulnerable to financial constraints (limited funding), which is a condition of companies experiencing limitations or difficulties in obtaining external financing at low costs. Besides, Lin et al. (2019) also stated that the company's restrictions in raising funds caused the company to experience a decrease in investment. So, the company is more dependent on the company's internal funding sources or cash flow. Therefore, companies with high availability of domestic funds can realise more profitable investment projects. Internal cash flow funds originating from operating activities are an essential part that has a significant influence on investment activities. We argue that cash flow has a positive effect on investment. The higher the level of cash flow, the investment made by the company will be higher.

**H1:** Cash flow has a positive effect on investment.

### ***Internationalisation, Cash Flow and Investment***

Internationalisation, according to Lin et al. (2019), is one of the growth strategies for companies that can improve company performance by maximising learning from the local market and expanding domestic market excellence to foreign markets. Rakhman (2016) shows that the business environment will influence the intention of companies in foreign investment. When companies carry out internationalisation activities, investment dependence on internal funding sources or cash flow becomes lower. This is because the higher the level of internationalisation, the greater the market scope of the company, which affects the company's sales volume. The higher the company's sales volume, the number of goods produced and sold by the company will be higher. The condition will benefit the company's economies of scale, i.e., the company will get cost savings in the form of production costs per unit of product that will be lower (Lun & Quaddus, 2011). The lower cost of the product per unit caused by internationalisation, the additional revenue obtained by the company will be higher than the extra cost so that the company gets the maximum profit. This can increase the company's external funding sources to fund profitable investment activities when the company's internationalisation activities are higher.

**H2:** Internationalisation weakens the relationship between cash flow and investment

## Research Methodology

### *Sample*

The objects of this research were manufacturing companies listed on the Indonesia Stock Exchange (IDX) in 2014 - 2018. The final sample in this study was 272 observations consisting of 81 different companies. The data used in this study were obtained from the financial statements of manufacturing companies listed on the Indonesia Stock Exchange in the 2014-2018 period. The data was obtained through the IDX website at [www.idx.co.id](http://www.idx.co.id) and IDN Financials at [www.idnfinancials.com](http://www.idnfinancials.com).

### *Measurement of the Dependent Variable*

The dependent variable of this study is investment. Investment decisions define the decisions relating to an investment in fixed assets that are expected to drive firm growth and firm value in the future. In line with Firth et al. (2012), the formula to measure investment is as follows:

$$INVEST_{i,t} = \frac{Net\ Fixed\ Assets_{i,t} - Net\ Fixed\ Assets_{i,t-1} + Depreciation_{i,t}}{Net\ Fixed\ Assets_{i,t-1}}$$

$INVEST_{i,t}$  is company investment  $i$  in year  $t$ ;  $Net\ Fixed\ Assets_{i,t}$  is the firm's fixed assets in year  $t$ ;  $Net\ Fixed\ Assets_{i,t-1}$  is the company's fixed assets in year  $t-1$ ; dan  $Depreciation_{i,t}$  is the company Depreciation  $i$  in year  $t$ .

### *Measurement of the Interested Variable*

Cash flow is defined as a source of internal corporate funding that comes from its operational activities (Lamont, 1997). Based on the type of activity, cash flow can be divided into cash flows from operating activities, investment activities, and funding activities (PSAK, 2009). Cash flow is an indicator of company liquidity (Aggarwal & Zong, 2006). Positive cash flow will increase the availability of funds for investment activities such as buying assets and maintenance or development costs (Benardi, 2010). In line with Firth et al. (2012), cash flow is calculated as follows:

$$CF_{i,t} = \frac{Net\ Income_{i,t} + Depreciation_{i,t}}{Net\ Fixed\ Assets_{i,t-1}}$$

$CF_{i,t}$  is firm cash flow  $i$  in year  $t$ ;  $Net\ Income_{i,t}$  is the company's net income for the year  $t$ ;  $Depreciation_{i,t}$  adalah depreciation of company  $i$  in year  $t$ ; and  $Net\ Fixed\ Asset_{i,t-1}$  is fixed assets of company  $i$  in year  $t-1$ .

Singla & George (2013) states that there are two types of internationalisation strategies, exports and foreign direct investment (FDI). In this study, the level of firm internationalisation is calculated using the ratio of sales to total company sales which can be formulated as follows:

$$\text{INTER}_{i,t} = \frac{\text{Overseas Sales}_{i,t}}{\text{Total Sales}_{i,t}}$$

$\text{INTER}_{i,t}$  is internationalisation of firm  $i$  in year  $t$ ;  $\text{Overseas Sales}_{i,t}$  total foreign sales of firm  $i$  in year  $t$ ;  $\text{Total Sales}_{i,t}$  is total net sales firm  $i$  in year  $t$ .

## Methodology

This study uses multiple linear regression analysis to examine hypothesis 1 and hypothesis 2. The regression model (1) is used to prove hypothesis 1. The interested variable in the model (2) is CF. We predict a positive coefficient on the CF variable. The regression model (2) was used to prove the moderating effect INTER on the relationship between CF and INVEST. The interested variable in the model (2) is CF \* INTER. We predict a negative coefficient on CF \* INTER.

$$\text{INVEST}_{i,t} = \beta_0 + \beta_1 \text{CF}_{i,t-1} + \beta_2 \text{MB}_{i,t-1} + \beta_3 \text{SIZE}_{i,t-1} + \beta_4 \text{PROF}_{i,t-1} + \varepsilon_{i,t} \quad (1)$$

$$\text{INVEST}_{i,t} = \beta_0 + \beta_1 \text{CF}_{i,t-1} + \beta_2 \text{INTER}_{i,t-1} + \beta_3 \text{CF} * \text{INTER}_{i,t-1} + \beta_4 \text{MB}_{i,t-1} + \beta_5 \text{SIZE}_{i,t-1} + \beta_6 \text{PROF}_{i,t-1} + \varepsilon_{i,t} \quad (2)$$

$\beta_0$  is the constant;  $\text{INVEST}_{i,t}$  is investment of firm  $i$  on year  $t$ ;  $\text{CF}_{i,t-1}$  is cash flow firm  $i$  year  $t-1$ ;  $\text{INTER}_{i,t-1}$  is internationalisation of firm  $i$  year  $t-1$ ;  $\text{MB}_{i,t-1}$  is market to book ratio firm  $i$  year  $t-1$ ;  $\text{SIZE}_{i,t-1}$  is firm size of firm  $i$  year  $t-1$ ;  $\text{PROF}_{i,t-1}$  is Return on Assets firm  $i$  year  $t-1$ ;  $\beta_1 - \beta_5$  is regression coefficient;  $\varepsilon_{i,t}$  is Error of firm  $i$  year  $t$ . The control variables in this study are the market to book ratio (MTB), company size (SIZE), and profitability (PROF). Market to book ratio becomes a proxy of growth opportunities (Chen & Zhao, 2006). A high market to book ratio indicates a security value greater than the book value. This makes the market to book ratio expected to have a positive effect on investment. MTB is measured as the ratio of the market value of equity and the book value of equity. The size of the company is the size of the company based on the number of assets owned by the company (Arslan et al., 2006). Bigger companies have better management. This makes the company's external funding access higher so that the company can run more investment projects that have a positive NPV value. In this study, firm size is measured using the natural logarithm of total company assets (Larasati et al., 2019; Harymawan et al., 2019). Profitability is the company's ability to generate profits by using company-owned resources, such as assets, capital, or company sales (Sudana, 2015). The higher the profitability generated, the company has the potential to hold profits and collect cash in large amounts. In this study, profitability is

measured using ROA (return on assets), which is the ratio between earnings before tax and the company's total assets. ROA is one of the most crucial rentability or profitability ratios to predict firms or stock returns from a public company (Haryanto et al. 2019).

## Results and Discussion

### *Descriptive Statistics*

**Table 1:** Descriptive Statistics

	<b>N</b>	<b>Minimum</b>	<b>Maximum</b>	<b>Mean</b>	<b>Std.Deviation</b>
<b>INVEST</b>	272	-0.2072	0.5686	0.1464	0.1152
<b>CF</b>	272	-0.3764	1.9911	0.2388	0.2751
<b>INTER</b>	272	0.0008	0.9759	0.1730	0.2154
<b>MB</b>	272	-4.3197	10.0471	1.6243	1.6779
<b>SIZE</b>	272	25.3112	33.3202	28.4054	1.5331
<b>PROF</b>	272	-0.1260	0.7015	0.0826	0.0823

Table 1 shows the descriptive statistical results for the variables in this study. The values of INVEST vary from 0.2072 to 0.5686. This indicates that the highest level of investment made by the company is 56.86% in the year. CF has an average value of 0.2388, with a standard deviation of 0.2751. INTER has a minimum value of 0.0008, and a maximum value of INTER of 0.9759 indicates that the highest level of overseas sales is 98.05%. While the average INTER is 0.1730 and the standard deviation is 0.2154. MR has a minimum value of -4.3197, a maximum value of 10.0471, and an average of 1.6243 with a standard deviation of 1.6779. SIZE has a minimum value of 25.3112, a maximum value of 33.3202, and an average of 28.4054 with a standard deviation of 1.5331. PROF has a minimum value of -0.1260, a maximum value of 0.7015, and an average of 0.0826 with a standard deviation of 0.0823.

### *Main Analysis*

This study uses two types of regression models. The first regression model is used to test the effect of cash flow (CF) on investment (INVEST). The second regression model examines the effect of internationalisation moderation (INTR) on the effect of cash flow (CF) on investment (INVEST). Table 2 shows the results of multiple linear regression analysis.

**Table 2:** Double Least-Square Regression Analysis

<b>INVEST</b>		
	<b>MODEL 1</b>	<b>MODEL 2</b>
<b>Constant</b>	-0.166	-0.156
	(0.151)	(0.177)
<b>CF</b>	0.106***	0.135***
	(0.001)	(0.000)
<b>INTER</b>		0.036
		(0.353)
<b>CF_INTER</b>		-0.199**
		(0.041)
<b>MB</b>	0.012***	0.012***
	(0.007)	(0.006)
<b>SIZE</b>	0.009**	0.008**
	(0.034)	(0.048)
<b>PROF</b>	0.228**	0.250**
	(0.049)	(0.030)
<b>Observation</b>	272	272
<b>R-Squared</b>	0.291	0.303

\*\*\*: Significance level ( $\alpha$ ) 1%; \*\*: Significance level ( $\alpha$ ) 5%; \*: Significance level ( $\alpha$ ) 10%.

### ***Cash Flow and Investment***

The independent variable cash flow (CF) in the regression model 1 and the regression model 2 has positive coefficient with a significance value of 0.001 and 0.000, or smaller than the level of significance ( $\alpha$ ) 1%. Thus, hypothesis H0 is rejected, and H1 is accepted. It can be concluded that there is a significant positive effect of cash flow (CF) on investment (INVEST) in both regression models. This shows that the higher the level of cash flow, the higher the investment. The results of this study are consistent with the results of the study Lin et al., 2019. The implication is that companies tend to choose to use funding from internal sources compared to external funding sources because of the information asymmetry, hence, obtaining external funding sources requires relatively higher funds. Thus, the higher the cash flow, the higher the investment value will tend to be.

### ***The Moderating Effect of Internationalisation on the Relationship of Cash Flow and Investment***

The regression model 2 shows that the regression coefficient of the interaction between cash flow and internationalisation (CF \* INTER) is negative with a significance value of 0.041, or

smaller than the level of significance ( $\alpha$ ) of 5%, so the hypothesis H0 is rejected and H1 be accepted. The results of this study support the previous research of Lin et al. (2019). Thus, it can be concluded that internationalisation significantly weakens the positive influence of cash flow on investment. Meanwhile, the regression coefficient of the internationalisation variable (INTER) in the regression model 2 has a positive value with a p-value of 0.353, or greater than the level of significance ( $\alpha$ ) 10%, which means that internationalisation has no significant effect on investment. As the moderating variable significantly weakens the positive influence of cash flow on investment, while as an independent variable, internationalisation does not have a significant effect on investment, the internationalisation variable can be called a pure moderating variable.

Internationalisation in this study shows the firm's foreign sales. The higher level of foreign sales, the higher number of goods to be produced and sold by companies. A high level of production will benefit the firm's economics of scale by lowering the cost of production (Lun & Quaddus, 2011). The company gets additional revenue that is higher than the additional costs incurred so that the company gets the maximum profit. This can make it easier for companies to get external funding sources at low cost. Internationalisation activities will arise in diversified external funding sources. Companies experience lower financial constraints or low levels of investment dependence on cash flow by utilising external funding sources to realise more profitable investments for the company, which also shows that internationalisation weakens the positive influence of cash flow on investment.

MB, SIZE and PROF variables in the regression model 1 and regression model 2 have regression coefficients that are positive and statistically significant. This shows that the greater market to book ratio, firm size and firm profitability will increase investment in the firm.

## **Conclusion**

This study shows that cash flow has a significant positive effect on firm investment. This implies that the higher source of internal funding will result in the higher firm's investment. In imperfect markets, there will be asymmetrical information, which will cause a higher cost of using external funds (Modigliani & Miller, 1958). Therefore, companies will tend to use internal funding in the form of cash flow to fund their investment activities.

Additionally, this study also shows that the internationalisation of the firm weakened the relationship between cash flow and firm investment. The result implies that the internationalisation strategy will increase production and sales volumes. Therefore, the company will benefit the economics of scale (Lun & Quaddus, 2011). This advantage can be used by companies as additional income. Internationalisation is able to lead to diversification



of external funding sources of the company, which can then increase capital (Svetlicic & Rojec, 2003). With so many external funding sources available, it is more profitable for companies to choose which external funding sources are cheap for companies to realise investment activities that are cheap and profitable and reduce dependence on internal funding sources (cash flow).

This study implies that companies should maintain their cash flow by increasing the level of internationalisation so that external parties' trust increases and financial constraints do not occur so that sources of external funding will be later available in conducting investment activities for the company. Further research can explore the relationship between cash flow and other variables such as Tobins'Q to determine the effect based on the company's market performance and Return On Equity (ROE) to determine the effect based on the company's ability to generate profits with its own capital. In addition, further research can also develop moderating internationalisation variables such as family control to determine the effect based on the strength of the company controlled by the family in the company's investment activities.

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