

# Do Cross Border Acquisitions Relieve Financial Constraints of Target Firms in Asean?

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## ABSTRACT

This paper examines whether cross border acquisitions lessen financial constraints of target firms in ASEAN based on a sample of 538 acquisitions over the period of 1988-2016. Using cash holding of target firms, the cash flow sensitivity of cash, the cash flow of sensitivity of investment and the quantity of the target firm's investments to measure financial constraints, we find that cross border acquisitions in ASEAN are associated with a reduction of target firm's financial constraints.

*Keywords: cross-border acquisitions, financial constraints, ASEAN*

## 1. INTRODUCTION

According to World investment report 2018 (UNCTAD, 2018), foreign direct investment (FDI) inflows to ASEAN gained for the third time in 2018, reaching an all-time high of US\$ 155 billion. By observing the dynamic development of the industry and increasing investment and business environment in the region, this trend is expected to continue. Cross border merger and acquisition sales in ASEAN saw a 6 percent increase to US\$ 18 billion in 2018. The cross-border investment inflows are said attracting private investments from companies in the host country and have an impact on investment and productivity (Harrison et al, 2003; Harrison et al 2004; Miozzo et al, 2016). This is essential for companies in developing countries in which financial constraints are common, limiting their ability to carry out increasing project value and invest in research and development (Almeida, Campello, &Weisbach, 2004).

Companies require funding sources to carry out these investment opportunities, yet financial constraints are on their way. An acquisition offers a solution for the target company to reduce financial constraints, as it provides access to capital and increases investment value. The

acquisition also makes the target company a part of a larger entity, thus enabling it to increase financing with better access to the capital market and cross-division capital reallocations (Stein, 2003). Departing from this point, managers often justify that the acquirer company can expand the operations of the target company by increase more production cost capacity and take advantage of the increase in market share.

Even with the extensive literature acquisitions, how the acquisitions reduce financial constraints is unknown, one of the reasons is related to the financial policies of the target company and how it has changed after the acquisition.

To see how financial constraints are reduced after the acquisition can be seen by measuring the financial constraints before the acquisition and how the changes after the acquisition There are several measures of financial constraints, one of which can be measured by observing manager policies regarding the company's financial position. is to observe the manager's policy regarding the company's financial position. In a world with imperfect capital markets and difficult access to capital markets, managers will

hold more cash and will consider investing more. Besides, some previous researchers showed that the company's additional cash flow has a more significant impact on Investment and cash holdings when the company is facing financial issues (Almeida, Campello, & Weisbach, 2004; Fazzari, Hubbard, & Petersen, 1998).

In several studies, acquisitions are proven to have the potential to increase investment value target firms and relieve target firms' financial constraints in developed countries (Almeida et al, 2011; Erel et al 2015; Khatami et al 2015), which is very little research in developing countries (Cull et al, 2015). Some studies that evaluate financial constraints in developing countries had only focused on domestic companies without looking at the effects of cross-border acquisitions on the financial constraints of target companies.

In this study, researchers will see to what extent the cross-border acquisitions have relieve financial constrained target firms in ASEAN by examining how the target company has decreased cash holdings, increased investment-cash flow sensitivity, and decreased cash-cash flow sensitivity after the acquisition. According to the previous explanation, this paper contributes to extensive literature acquisitions, in particular regarding on financial constraints after acquisition in the following way. First, this research contributes to the extensive literature on the theory of the capital market and corporate investment imperfections in a developing country.

This Research also contributes to the literature on how firms transfer their resources to one another and improved their capital market internally. By acquisition, firms can do combining divisions to investment efficiency, and improved direct capital access.

The study specifically explains financial constraints in emerging countries, particularly ASEAN and how transfer of resources from another country can relieve ASEAN firms' financial countries. Secondly, this research contributes to identifying the motives of mergers. The research also documents increased acquisition-related value and about how the company transfer resources through the internal capital market.

This research is organized as follows. Section 2 describes similar previous studies. Section 3

describes the construction of our sample and explains the research methodology that includes description of variables. Section 4 presents the results and discusses the empirical results and we conclude them in section 5.

## **2. METHODS**

To identify the extend in which financial constraints of target firm are relieved after cross-border acquisitions, it is very important to have target firm's financial data that can be used to measure financial constraints before and after acquisitions, which mostly depends on financial access to the company.

In measuring financial data of target companies and acquirers before and the change after the acquisition are required. Researchers begin by taking samples of acquisitions in ASEAN from the Thomson Reuters Eikon database throughout 1988-2016. To be able to see changes in financial constraints, the financial information needed should at least cover two years prior and after the agreement. The researchers also compared the impact of domestic and crossborder acquisitions on the target firms' financial constraints. The researcher ends with a sample of 538 acquisition in ASEAN. The firms' financial data were derived from Datastream Eikon, while the macroeconomic data was collected from the World Bank database.

Table 1 presents the accounting variables summary from the target firm, two years before and after the acquisition. Total assets in the target company saw an increase after the acquisition, with an average value of 738,851.886 from 610,415.667. The target company also has fewer cash reserves as part of its assets after being acquired, having only 0.03 percent compared to 0.9 percent before acquisition.

A number of researchers indicate that financial constraints is when financial friction causes companies to deviate from their first best Investment. Keynes (1936) argues that companies hold cash as a precautionary measure against potential financial constraints, due to financial market friction. The optimal company cash holdings are determined by equating the profits obtained from increasing investment with the cost of holding cash due to avoiding potential financial constraints. As a result, the company's cash holdings are positively related to the

company's concern about future financial constraint.

**Table 1.** Summary statistics for the accounting variable

	Target							
	Before				After			
	obs.	Mean	SD	Median	obs.	Mean	SD	Median
Total Assets	538	610415.667	1431043.031	164819.000	538	738851.886	1776618.378	203163.250
Number of Employees	538	2936.255	8549.819	858.500	538	3334.906	7729.919	1081.000
Cash/Total Assets	538	0.090	0.301	0.045	538	0.003	0.004	0.002
Gross Investment/Total Assets	538	0.047	0.143	0.012	538	0.046	0.242	0.242
Cash Flow/Total Assets	538	0.071	0.127	0.070	538	0.087	0.082	0.074
ROA	538	0.071	0.365	0.055	538	0.078	0.741	0.051
Sales Growth	538	0.240	1.231	0.105	538	0.225	1.311	0.089
Leverage	538	0.565	1.294	0.452	538	0.643	1.418	0.443

Source : Primary data 2020

**Table 2.** Measurement and sources of variable

Variable	Description
Panel A: Country-Level Variables	
Private Credit/GDP	Private credit by deposit money banks and other financial institutions to GDP (Source: World Bank)
Market Cap/GDP	Value of listed shares to GDP (Source: World Bank)
GDP Growth	Annual percentage nominal growth rate of GDP in local currencies (Source: World Bank)
Panel B: Deal-Level Variables (Source: Datastream Eikon)	
Total Asset	Book value of assets=Fixed assets (FIAS)+Current assets (CUAS).
Ln(Total Asset)	Natural logarithm of total assets converted into U.S. dollars.
Number of Employees	The number of employees (EMPL).
Cash/Total Assets	Cash and cash equivalents (CASH)/Total assets.
Gross Investment/Total Assets	[Fixed assets – lagged fixed assets + Depreciation (DEPRE)]/Total assets.
Cashflow/Total Assets	Cash flows (CF)/Total assets.
$\Delta$ (Cash/Total Assets)	Cash flows/Total assets – lagged (Cash flows/Total assets).
ROA	EBITDA(EBTA)/Total assets.
Sales Growth	(Sales (TURN) – Lagged Sales)/Lagged Sales.
Leverage	[Long-term debt (LTDB)+Current liabilities (CULI)]/Total assets.
AFTER	Dummy variable that equals one (zero) for the years after (before) an acquisition

Source : Primary data 2020

Financial constraints are defined as the limitations of the company in obtaining additional capital for business investment, either internal or external investments (Fazzari, Hubbard, and Petersen, 1988). The asymmetric information on external financing causes higher costs than internal financing (Fazzari et al., 1988). Asymmetric information itself increases the risk premium demanded by creditors, thus increasing external financing costs. Companies that do not make investments are less likely to develop and obtain more income in the future. Fazzari et al. (1988) mention that a higher sensitivity between Investment and cash flow of a company indicates

that the company is more prepared to face financial constraints.

Almeida et al (2004) introduced an alternative measure of financial constraint by using estimates of firms' propensity to saving cash from additional cash flows. An unrestricted company invests at their first investment best level, so that cash flow has no real effect on the company's Investment. However, companies that face financial constraints, the managers will save additional cash flow as cash to finance their Investment in the future, so that cash holdings to finance additional investments in the future will increase with company cash flow. The view of company management about whether the

company faces financial constraints in the future is reflected by a small portion of the cash held by the company from additional cash flows. Meanwhile, the impact of financial constraints on company investment can be measured by the sensitivity of cash flows to investment and how management's view of the possibility of the company facing financial constraints in the future can reflect by cash-cash flow sensitivity.

Several researchers have used measures of financial constraints which consists of financial variables to easily construct a more broadly usable indices of financial constraints. An example, Lamont et al (2001) used "KZ Index" as a measure of financial constraints. Whited and Wu (2006) introduced a financial constraint index using the Euler equation approach from a structural model of investment known as "WW index". KZ index and WW index are estimated using data on U.S. firms. However, Hadlock et al, (2010) find that both indices are constructed predominantly by a simple index of firms size and age, so firms become less constrained after being acquired. Other measures of constraints are by Hoshi et al (1991) constructed by membership in Keiretsu and bond rating, are not relevant for ASEAN firms.

From some of these studies, the researchers utilize various methods to measure financial constraints, including cash level (normalized by company assets), sensitivity cash flow of investment, and cash-cash flow sensitivity, where each measure can be used globally. The

measurement of the variables used in this study is shown in Table 2. By using three different methods, the researchers aim to estimate whether the acquisition seems to lessen financial constraints in the target company.

### 3. RESULTS AND DISCUSSION

#### 3.1 The Cash Holdings of Target Firms

Keynes (1936) identified one of the motives for holding cash is precautionary motives. Companies can hold more cash to avoid there is a risk in the future or for finance its activities and investments. Custodio et al., (2005) find strong evidence that companies with financial constraints increase cash during a recession, which is consistent with the precautionary motive for holding cash.

Based on equation 1, we try to see how changes in the company's financial policies may change due to financial constraints. Potentially relevant control variables are utilized to evaluate whether the firm policies change after the acquisition. The first policy to consider is how much the manager held cash. By keeping other factors constant while reducing cash held, the firm is seen to have lower caution in holding cash. To test this hypothesis, researchers use an equation that predicts the amount of cash, normalized by the company's total assets.

$$Cash/Assets = \alpha + \beta AFTER + c Controls + e \quad (1)$$

**Table 3**

This Table presents estimates of equations in which the dependent variable are cash holdings normalized by total assets in columns (1) and (5). Changes in cash holdings in columns (2) and (6), and gross investment normalized by total assets in columns (3), (4), (7), (8). *AFTER* is dummy variable that equals one (zero) for the years after (before) an acquisition. The standard errors are presented in parentheses. Standard errors are robust to heteroscedasticity. (\*), (\*\*), and (\*\*\*) represents significance at the 10%, 5%, 1%. We used Stata 12 for the analysis.

Dependent Variable	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	Panel A : Cross Border Acquisitions				Panel B : Domestic Acquisitions			
	Cash/Asset	Δ(Cash/Asset)	Inv/Asset	Inv/Asset	Cash/Asset	Δ(Cash/Asset)	Inv/Asset	Inv/Asset
<i>AFTER</i>	-3.1456*** (0.131)	-0.0304 (0.569)	1.1266** (0.493)	2.0042*** (0.153)	-3.2078*** (0.094)	-0.0185 (0.421)	1.8534*** (0.190)	1.9255*** (0.099)
Cash Flow/Total Assets	0.0974* (0.052)	-0.0035 (0.085)	-0.0036 (0.066)	0.0039 (0.064)	0.1533*** (0.042)	-0.2104*** (0.076)	0.0306 (0.047)	0.0276 (0.045)
<i>AFTER</i> X Cash Flow		-0.0487 (0.061)	0.0965** (0.048)			-0.0051 (0.044)	0.0082 (0.019)	
Ln(Total Assets)	-0.1462*** (0.042)	-0.2565*** (0.090)	-0.2138*** (0.062)	-0.1627*** (0.052)	0.0206 (0.036)	-0.0987 (0.062)	0.0351 (0.040)	0.0390 (0.037)
Private Credit/GDP	-0.0642 (0.208)	-0.5785 (0.399)	-0.4117* (0.249)	-0.3651 (0.250)	0.1199 (0.164)	-0.3392 (0.258)	-0.1943 (0.174)	-0.1961 (0.174)
Market Cap/GDP	0.4252*** (0.141)	-0.1611 (0.266)	0.1183 (0.166)	0.0969 (0.167)	-0.0616 (0.066)	-0.1870* (0.103)	-0.0607 (0.073)	-0.0621 (0.073)
GDP Growth	-0.1245 (0.113)	0.0844 (0.184)	0.0973 (0.196)	0.0840 (0.196)	-0.0893 (0.056)	0.1868* (0.097)	-0.0573 (0.062)	-0.0576 (0.063)
Constant	-1.3412** (0.598)	1.4920 (1.176)	0.7321 (0.880)	0.1070 (0.805)	-3.5385*** (0.460)	-0.7958 (0.811)	-2.4595*** (0.533)	-2.5144*** (0.488)
Observations	348	348	348	348	728	728	728	728
R2	0.6622	0.0671	0.3551	0.3448	0.6198	0.0293	0.3513	0.3512

The control variable is the variable that is controlled so that the influence of the independent variable on the dependent variable is not

influenced by factors outside that is not researched. The function of the control variable is to prevent there is a biased calculation result.

Researchers use several control variables that vary across firm-level specifications. Besides, the researchers added three control variables, namely private credit, market capitalization, and GDP growth, to control variations in external financing availability. Where AFTER is a dummy variable with a value of 0 before acquisition and 1 after the acquisition.

The estimation results in Column 1, Panel A (cross border acquisition) of Table 3. Show that coefficient of the dummy variable AFTER shows that the company-year after the acquisition is - 3,1456, implying a decrease of 3.1456% in cash to assets ratio after the acquisition. Consistent with the literature that after foreign investors acquired them the target companies reduced their cash holdings. This is also proven in Column 1, Panel B (domestic acquisition) of Table 3., in which after being acquired by domestic firm the target firms reduced their cash holdings. The cash to assets ratio decrease 3.2078% after the acquisition. Erel, Jang, and Weisbach (2015) find that drop in the target company's cash holdings after acquisition indicated that acquisition relieve target firms's financial constraints. However, target can reduced their cash holding by hold their cash in their parent firm, they centralize their treasury functions, so we need another evidence by using cash flow sensitivity of investment, and cash-cash flow sensitivity to see change of financial constraints target firms after being acquired.

### 3.2 Cash-Cash Flow Sensitivity of Target Firms

Dichuet al (2012) formulated cash holding in his research as the ratio of retention of cash or cash value contained in the position of financial statement to total assets. Cash holding or an amount of cash withheld company in essence is a certain nominal amount owned and reported by the company in the form of cash and cash equivalents as tangible assets of the company. Cash holding is the result of activity of fund traffic or cash flow of the company used for pay off loans, maintain the ability of the entity / company to operate, pay dividends, and make new investments without relying on external funding sources (IAI, 2012). So, it can be concluded that cash holding is a certain amount of cash allows companies to be able to finance investments and other obligations to prevent high costs from increasing corporate financing.

Almeida et al (2004) show an alternative approach to measuring financial constraints through firms' policy of saving cash from additional cash flow. Financial constraints are generally defined as conditions company financial limitations to finance its investment projects, which cannot be fulfilled by external financial sources except by the company's own internal finance. In the Almeida et al models, firms experiencing financial constraints saved a small fraction of the additional cash flow as cash to financing their future investments. For unconstrained firms, they already invest at their first best level, so they do not have a reason to saving a small fraction of the additional cash flows as cash. Therefore, cash holding sensitivity to cash flow is formulated as  $\Delta$  Cash holding over total assets, that is calculated of cash or cash equivalents in year t less cash or cash equivalents in year t-1. To test this hypothesis, researchers use equation (2) with  $\Delta$  Cash holding/ total assets as the dependent variable.

$$\Delta(\text{Cash}/\text{Assets}) = \alpha + \beta \text{AFTER} + c \text{Controls} + e \quad (2)$$

The estimates in column (2) and (6) of Table 3. show that the coefficient on the dummy variable AFTER does not significantly affect the dependent variable. This is not in line with Erel, Jang, and Weisbach (2015), who identify that cash flow sensitivity of cash target firms in Europe declined following the acquisition. However, the estimates are in line with the research of Chen, Hua, and Boateng (2017), that firm-year after acquisition does not significantly affect cash holding sensitivity to cash flow. This can happen because companies continue to adjust their savings behavior after being acquired even though their investment is at their best level.

### 3.3 The Sensitivity Cash Flow of Investment

Fazzari et al (1988) measure financial constraints by estimate sensitivity cash flow of investment. The notion is that a company with no such constraints must make all investments that increase value. However, if the company faces such constraints, the project to be run are rationed. Therefore, we must observe the relationship between the company's Investment and company's cash flow under the financial constraints condition. The following equation is

used to estimate the sensitivity of investment cash flow.

$$\text{Gross Investment/Total Assets} = \alpha + \beta \text{ AFTER} + c \text{ Controls} + e \quad (3)$$

The estimates of the equation in column (3) cross border acquisition of Table 3. In panel A, the coefficient on variable AFTER is 1.1266 and statistically significant, showing that the target firms investment increased 1.1266% after acquisition. The coefficient of cash flow that interacts with the dummy after the acquisition is also positive, which show that the investment sensitivity to cash flow is higher after the acquisition. Interpretation of these results is in line with Carpenter et al (2002), Moyen (2004), Xu et al, (2013) in which the financial constraints decrease at the time of acquisition and show that if cash flow increases, investment opportunities will increase to. For domestic acquisitions, estimates from equation (3) in column (3) panel A of Table 3. shows that the coefficient of cash flow is 1.8534, this shows that after the acquisition, target firm experienced easing financial constraints by increasing target firm investment.

The interpretation of this result is in accordance with Fazzari et al (1988), acquisition relieve financial constraints of target firms and this interpretation according to the literature that there is a positive correlation between cash flow and investment opportunities. So, this result we interpret as additional evidence that acquisitions reduce financial constraints of target firms.

### *3.4 Effects of Acquisition on the Target Firms' Quantity of Investments*

Companies with financial constraints effectively got higher capital costs than in a frictionless market. Therefore, if the acquisition relieves target firms' financial constraints, after acquisition will cause the target firm to increase their investment by using lower capital costs. The theory is target firms may finance investment easier than what can be done independently, as formalized in model Almeida et al (2004), that often used by managers to justify acquisitions. To see change of target firm's quantity of investments after acquisition, equation (3) is used.

The estimates in Column (4) and (6), Panel A of Table 3. variable coefficients indicate if the company-year after an acquisition is statistically

significant and positive. The size of the coefficient is economically significant between 1.9255 and 2.0042, implying that Investment in the target firms increased 1.9255% after the acquisition by domestic companies, and increased by 2.0042% after the acquisition by foreign investors. The increased investment target after the acquisition in line with easing financial constraints, this can happen because the target company gets lower capital costs to financing their investment projects by combining divisions can increase operating synergy.

## **4. CONCLUSION**

The research seeks to identify the impact of cross-border acquisitions on financial constraints. While many studies try to see the impact of cross-border acquisitions in developed countries, we know only a little about such impacts on developing countries. Using data before and after the acquisition of target companies in ASEAN throughout 1988-2016, researchers found that ASEAN companies had suffered financial constraints before the acquisition. The cash to assets ratio decrease 3.2078% after the acquisition. Erel, Jang, and Weisbach (2015) find that drop in the target company's cash holdings after acquisition indicated that acquisition relieve target firms's financial constraints. Investment in the target firms increased 1.9255% after the acquisition by domestic companies, and increased by 2.0042% after the acquisition by foreign investors. The increased investment target after the acquisition in line with easing financial constraints, this can happen because the target company gets lower capital costs to financing their investment projects by combining divisions can increase operating synergy. Financial constraints are relieved after the acquisition, as seen from the decreased cash holdings, higher cash flow sensitivity, and increased target investment after the acquisition.

The research results found that cross-border acquisitions reduce target firms' financial constraints, indicating that the acquisition improves target company finances in line with better access to capital markets in domestic or international. The financial synergy resulting from easing financial constraints can invoke some acquisitions, or even encourage managers to make acquisitions of impairment. From an economic

policy perspective, the results of this research raise the critical issue that cross-border acquisitions can bring resources and capital that may be needed by developing countries such as ASEAN which is face financial constraints, this is seen by cross border acquisitions can reduce financial constraints and increasing ASEAN target firms' investment. The results show that senior managers in ASEAN must support the use of cross border acquisition as a corporate strategy, as it might become an essential feature for companies to gain innovation and improve the company's competitive advantage in ASEAN.

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