

Global Crisis, Acquisition Behaviour, and Firm Performance

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This study aims to determine and analyse the firm's acquisition behaviour during a global crisis, and aims to understand the impact of the acquisition behaviour on the firm's short-term performance during the period before the crisis and during the crisis. This study looked at 99 acquisitions taken by publicly listed companies in Indonesia for the year 2007-2010. The first and second analysis models were tested using logistic regression with dependent variables that dichotomous, namely the acquisition of similar sectors and domestic acquisitions. The results of the study significantly indicate that companies that make acquisitions in times of crisis tend to make acquisitions in similar sectors compared to cross-sector acquisitions (diversification). However, there is no significant relationship in acquisitions in times of crisis with the decision to make acquisitions on the domestic vs. cross-border market. Companies that carry out crosssector acquisitions in the pre-crisis period do not affect firm performance, but cross-sector acquisitions will improve firm performance if done in a crisis period.

Key words: *Global crisis, acquisition behaviour, tobin's q, return on equity.*

Introduction

The 2008 Global Crisis began with the United States, which was experiencing a financial crisis and had an impact on various countries, especially Southeast Asia, such as Singapore, Thailand, Malaysia and Indonesia, on different scales. The high confidence of the Indonesian government that the crisis in America would not have an impact on the Indonesian economy was not established. The impact of the American crisis was strongly felt by Indonesia. This was evident from several indicators including the unstable GDP growth rate, the sharp decline in the stock price index on the IDX, and the exchange rate of the Rupiah against the USD which depreciated in early 2009, which amounted to Rp11,900 per 1 USD, and to the banking sector experiencing liquidity problems. Even the Government found it difficult to



find loans on the financial market (Nezky, 2013). The depreciation of the rupiah lead to the import capital goods and other factors of production to increase. Busineses were faced with two choices to overcome this problem. Firstly, companies could reduce the number of imported factors of production so they might reduce the amount of production. Secondly, the number of imported factors of production were fixed but with increasing cost so that the prices of products sold rose so that the firm could maintain profit margins. However, the crisis also caused people's purchasing power to decline, which was caused by high inflation rates, relatively fixed salaries or wages, and high unemployment due to increased layoffs. This condition caused the absorption of products sold to decrease, so that it can result in decreased corporate profits (Susilo and Handoko, 2002).

Therefore, in times of crisis, existing corporate strategies can be considered ineffective (Meyer et al, 1990) so companies are required to be able to manage their strategies in response to dramatic changes in the environment. Zona (2012) states that when an economic crisis occurs, companies are faced with two strategy choices, namely avoiding risk and implementing conservative strategies, or taking risks to expand their competitive advantage. Supporters of the risk avoidance perspective suggest that companies tend to reduce risk during the economic crisis and are hesitant to change their business strategies. High uncertainty and large potential losses can drive companies away from risky projects (Zona, 2012). Supporters of the perspective of risk-taking emphasise the opposite, that companies can respond to economic downturns by making changes to strategies and exploiting their market opportunities, even though the risks taken are greater. One of them is through acquisition. When a firm makes an acquisition, the firm will change its existing business strategy because the acquisition will change the nature of the firm's operations (Cerrato et al, 2016).

The number of mergers and acquisitions in Indonesia began to increase since 2008 and reached its highest peak in 2010. The reason companies tend to choose mergers and acquisitions rather than internal growth as a strategy is because mergers and acquisitions are considered a fast way to realise firm goals where companies do not need to start a new business from scratch (King & Rusadi, 2017).

Based on the theory of corporate behaviour, in times of economic crisis, companies that take risky actions tend to focus their search locally and avoid excessive risk behaviours that can disrupt the survival of the firm or can cause excessive uncertainty (Cerrato et al, 2016). This indicates that companies that make acquisitions during crisis times tend to do so domestically rather than cross-country acquisitions. Companies also tend to make acquisitions with the same type of industry or not diversify. In stable economic conditions, companies that diversify tend to produce negative effects on firm performance. Meanwhile, cross-border acquisitions have a positive influence on firm performance (Cerrato et al, 2016). Behaviour



of acquisitions made by these companies has a different effect on firm performance during a crisis. Based on these considerations, this study intends to discuss the impact of the economic crisis on the behaviour of corporate acquisitions in Indonesia and how these behaviours relate to short-term corporate performance in the pre-crisis and crisis periods.

This study uses data from companies listed on the IDX in the 2007-2010 period by excluding acquisitions made by banks and joint ventures. The acquisition used in this research is where the acquirer has full control of the acquired business. Joint ventures and acquisitions of branch companies are excluded. The research data is divided into three groups namely the entire sample (2007-2010), before the crisis (2007-2008), and during the crisis (2009-2010). The results showed that companies that make acquisitions in times of crisis, tend to make acquisitions in similar sectors compared to cross-sector acquisitions (diversification of acquisitions). In addition, companies that made cross-sector acquisitions (diversification) in the pre-crisis period were not related to firm performance. Companies that make cross-border acquisitions in the pre-crisis period are not related to the firm's performance in the pre-crisis period. Conversely, cross-sector acquisitions (diversification) in times of crisis increase the firm's market performance. Companies that make cross-border acquisitions in times of crisis also worsen the firm's accounting performance, but increase market performance.

The structure of this paper is as follows: Part 2 is a literature review and hypotheses development; Part 3 is sample description and research variable; Part 4 is the results and discussion; Part 5 is conclusions, limitations, and suggestions of this research.

Literature Review

Colombo, et al. (2007) and Shimizu, et al. (2004) view that cross-country acquisitions are associated with greater uncertainty and complexity compared to domestic acquisitions (Cerrato et al. 2016). Acquisitions that cross geographical boundaries increase the risk of a firm's business so it is expected that with increased risk, cross-border acquisitions can offer a greater potential return. Based on this argument it can be concluded that cross-country acquisitions during stable economic times are positively associated with firm performance. There is a difference in influence between cross-country acquisitions when the economy is stable compared to during a crisis, on firm performance. In times of economic crisis, a challenging economic environment is likely to increase potential losses. Managers must face challenges in their domestic environment, such as competing with falling demand, price pressures, and management costs. This is already a big challenge for managers.

For companies operating across countries, these challenges will be more difficult given the heterogeneity of markets, customers, competitors, culture and institutions (Cerrato et al. 2016). Acquisition of countries across crises will involve even greater risks because of the



increased potential for mistakes in management and decision-making. Thus, in times of crisis, cross-country acquisitions tend to have greater opportunities for generating losses. Based on these arguments it can be concluded that cross-country acquisitions in times of crisis are negatively associated with firm performance.

The firm may prefer acquisitions that are in the "environment" of the firm's current activities, both in terms of the business sector and geographical coverage. This shows that during a crisis, if the firm will make an acquisition, the firm is more likely to acquire similar businesses with the same geographical coverage, rather than diversifying into new industries and markets. That is because of the challenging economic conditions during a crisis, even this local acquisition still increases risk for the firm. Based on this explanation, the following hypotheses can be drawn:

H₁: Companies that make acquisitions during crisis tend to make acquisitions in similar industries rather than diversifying acquisitions (cross-sector acquisitions).

H₂: Companies that make acquisitions during crisis tend to do acquisitions in the domestic market rather than cross-country acquisitions.

In stable economic times, companies with a greater degree of diversification tend to have relatively lower firm performance compared to companies that implement focus strategies. This happens because the more diversified a firm is, the cash flow volatility and return will be reduced and the firm will not be optimal in managing business segments.

In times of crisis, reduced volatility in cash flows and returns due to diversification can reduce a firm's potential losses. In addition, companies that diversify acquisitions during a crisis will target their choice in industries that can reduce performance pressures resulting from the economic crisis. Companies that diversify acquisitions during crises also tend to conduct more accurate investigations when selecting target companies. Based on this explanation, the following hypotheses can be drawn.

H₃: Diversification of acquisitions (cross-sectoral acquisitions) has a negative relationship with firm performance in the pre-crisis period.

H₄: Diversification of acquisitions (cross-sectoral acquisitions) has a positive relationship with firm performance in times of crisis.

In stable economic times, cross-country acquisitions increase the risk of a firm's business so that it can offer a greater potential return. This indicates that cross-country acquisitions are positively related to firm performance when the economy is stable.



During an economic crisis, challenging conditions will increase potential losses. Companies operating across countries experience difficulties in dealing with the heterogeneity of markets, customers, competitors, culture and institutions. Acquisition of countries across crises will involve even greater risks because of the increased potential for mistakes in managerial and decision-making. Thus, in times of a crisis, cross-country acquisitions tend to have greater opportunities for generating losses. Based on this explanation, the following hypotheses can be drawn:

H₅: Acquisitions across countries have a positive relationship with firm performance in the pre-crisis period.

H₆: Acquisitions across countries have a negative relationship with firm performance in times of crisis.

Research Design Sample and Data Source

This study uses data from companies listed on the IDX in the 2007-2010 period by excluding acquisitions made by banks and joint ventures. The acquisition used in this research is where the acquirer has full control of the acquired business. This criterion is needed in order to have a homogeneous operating sample. Joint ventures and acquisitions of branch companies are excluded. The research data is divided into three groups namely the entire sample (2007-2010), before the crisis (2007-2008), and during the crisis (2009-2010).

Data Definition

The dependent variable in this study is firm performance. Performance shows the achievement of work in accordance with the rules and standards that apply to the work of each organisation (Nasution & Rafiki, 2018) and firm goals (Widiyanti et al., 2019). Several studies show the measurement of firm performance by using several measurements such as ROE, Tobin's Q, ROA (Harymawan, Nasih, Madyan, & Sudaryati, 2019; Larasati, Harymawan, & Zulaikah, 2019; Utama & Mirhard, 2016). This profitability is usually seen from the firm's income statement account, because in the firm's income statement it can show the performance of a firm (Arifuddin, Hanafi, & Usman, 2017) This study uses two measurements, namely, Tobin's Q and ROE. ROE shows the firm's ability to generate profits after tax using the firm's own capital. ROE is calculated using earnings after tax divided by equity (Sadalia, Daulay, Marlina, & Muda, 2019; Triawan & Shofawati, Nantyah & Laila, 2017; Amar & Hamid, 2016). Tobin's Q Ratio as market performance, describes a condition of investment opportunities owned by the firm (Lang et al, 1989) or the firm's growth potential (Tobin 1969).



$$Tobin's \ Q \ Ratio = \frac{Market \ Value \ of \ Equity + Debt}{Total \ Asset} \ . \tag{1}$$

The first independent variable in this study was a type of acquisition, diversification of acquisition across countries. Similar acquisitions show companies that make acquisitions in the same sector or industry. This study uses the Jakarta Stock Industrial Classification (JASICA) which is a sectoral classification system used to categorise companies in Indonesia. The JASICA code is written with common numbers 1-9. These numbers are used to identify sectors (one digit) and sub-sectors (two digits). This variable is measured using a dummy with a score of 1 if the firm that acquired is acquired in the same sector and a score of 0 if the firm that is acquired was acquired in a different sector. Domestic acquisitions show that companies do acquisitions in the domestic market rather than cross-country acquisitions. This variable is measured using a dummy, 1 if the firm that acquired and was acquired is in the same country and 0 if the firm that acquired was acquired is in a different country. Acquisition Diversification (Acquisition of Cross-Sector) shows companies that make acquisitions in different sectors or industries. This variable is measured using a dummy with a score of 1 if the companies that acquire and are acquired are in different sectors and a score of 0 for companies that acquire and are acquired in the same sector. Cross-Country Acquisitions show companies that conduct cross-country acquisitions rather than acquisitions in the domestic market. This variable is measured using a dummy with a score of 1 if the firm acquiring and being acquired is in a different country. And 0 for if the firm that acquired and was acquired is in the same country.

The second independent variable is crisis. The crisis is measured using a dummy, with a score of 1 if the firm made an acquisition during a crisis, namely in January 2009 - December 2010, 0 = if the firm made an acquisition in the time before the crisis, namely in January 2007 - December 2008. This study divides four years (2007-2010) into two equal periods (24 months). 2007-2008 is the period before the crisis and 2009-2010 is the crisis period. The division of the two periods considers that the global crisis began to have a significant impact on the Indonesian economy at the end of 2008 or early 2009. Research conducted by Cerrato, et al. (2016) states that the adoption of an acquisition strategy requires consideration and not a short period of time. Therefore, the acquisition which was realised at the end of 2008 had been planned well in advance, even before the global crisis substantially affected the economy.

Acquirer Financial Resources are used to determine the availability of financial resources that come from internal companies. The greater the financial resources they have, the more likely companies are to be tempted by risky projects. Potential Slack Acquirer is used to find out potential access in obtaining funding externally. In times of crisis, external resources become more difficult to obtain.



Financial resources or available slack =
$$\frac{Cash Flow}{Sales}$$
(3)

Potential slack =
$$1 - \frac{Debt}{Equity}$$
....(4)

Principal is measured using a dummy with a score of 1 if the acquirer is in the main sector according to JASICA and a score of 0 if the acquirer is in another sector. Services are measured using a dummy with a score of 1 if the acquirer is in the service sector according to JASICA and a score of 0 if the acquirer is in another sector.

Research Method

Data processing in this study using SPSS. This study uses two different regression models, namely, logistic regression analysis to test hypotheses 1 and 2, and multiple linear regression analysis to test hypotheses 3-6.

$$ROEit = \beta 0 + \beta 1 (CBORDER)it + \beta 2 (DIVERS)it + \beta (FR)it + \beta (PS)it + \beta (MAIN)it + \beta (SERVICE)it + \varepsilon$$

Tobin's Qit =
$$\beta 0 + \beta 1(CBORDER)it + \beta 2(DIVERS)it + \beta (FR)it + \beta (PS)it + \beta (MAIN)it + \beta (SERVICE)it + \varepsilon$$

Result and Discussion

Descriptive Statistics

The following are descriptive statistics for the research model used to answer hypotheses 3-6.

Table 1: Descriptive Statistics Model 1

	Full	Full Sample					
	N	Min	Max	Mean	Std Dev		
Roe	91	-23.06%	48.40%	13.20%	12.48%		
Cborder	91	0	1	16%	37.30%		
Divers	91	0	1	47%	50.20%		
Fr	91	-1027%	83.19%	7.41%	111.26%		
Ps	91	-423.38%	445.22%	-54.90%	121.90%		
Main	91	0	1	26%	44.30%		
Service	91	0	1	51%	50.30%		
	Pre-	Pre-Crisis					
Roe	38	-23.06%	48.40%	170.11%	15.06%		



Cborder	38	0	1	18%	39.30%		
Divers	38	0	1	32%	47.10%		
Fr	38	-1027%	49.10%	-10.56%	169.91%		
Ps	38	-423.38%	445.22%	-52.54%	146.70%		
Main	38	0	1	26%	44.60%		
Service	38	0	1	53%	50.60%		
	Crisi	Crisis					
Roe	51	-9.40%	27.97%	10.35%	9.58%		
Cborder	51	0	1	16%	36.70%		
Divers	51	0	1	59%	49.70%		
Fr	51	-102.19%	83.19%	20.63%	22.10%		
Ps	51	-386.86%	81.61%	-48.46%	91.07%		
Main	51	0	1	27%	45.10%		
Service	51	0	1	51%	50.50%		

 Table 2: Descriptive Statistics Model 2

Full Sample					
N	Min	Max	Mean	Std Dev	
93	36.07%	311.40%	147.06%	67.80%	
93	0	1	16%	37.00%	
93	0	1	48%	50.20%	
93	-10%	83.19%	6.26%	109.98%	
93	-3203.6%	820.37%	-90.34%	374.06%	
93	0	1	26%	44.00%	
93	0	1	52%	50.20%	
		·		<u> </u>	
40	36.07%	311.40%	123.64%	65.05%	
40	0	1	15%	36.20%	
40	0	1	35%	48.30%	
40	-1027%	49.10%	-11.92%	165.40%	
40	-958.35%	445.22%	-90.34%	209.72%	
40	0	1	28%	45.20%	
40	0	1	53%	50.60%	
53	68.41%	260.14%	164.74%	64.95%	
53	0	1	17%	37.90%	
53	0	1	58%	49.70%	
53	-94.99%	83.19%	19.97%	20.84%	
53	-3203.6%	820.37%	-90.35%	463.22%	
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Main	53	0	1	25%	43.40%
Service	53	0	1	51%	50.50%

Main Analysis

The first hypothesis in this study is that companies that make acquisitions during a crisis tend to make acquisitions in similar industries rather than diversifying acquisitions (cross-sectoral acquisitions). Table 3 shows that the CRIS variable has a positive relationship with the TYPE with a significance value of 0.014. The significance level is 0.014 < 0.05 (α), then H1 is accepted and H0 is rejected, which shows that the CRIS variable is significantly positively related to the TYPE variable. In times of crisis, unstable economic conditions cause managers to face the complexity of new business while simultaneously managing firm operations that are facing economic challenges, so that acquisitions in similar sectors have a high risk for the firm so that decision holders avoid excessive risk taking (Cerrato et al., 2016).

Table 3: Regression Results of Similar Sector Acquisition

	Similar Sector Acquisition				
	В	Exp(B)	Sig		
Constant	0.564	1.758	0.464		
CRIS	1.071	2.918	0.014*		
FR	-2.172	0.114	0.140		
PS	0.014	1.014	0.930		
MAIN	-0.291	0.747	0.640		
SERVICE	-0.610	0.543	0.282		
		·			
Cox & Snell R Squar	·e		0.089		
Nagelkerke R Square 0.119					
Chi-square (Omnibus Tests) 9.178					
Sig Chi-Square (Om	nibus Tests)		0.102		

The second hypothesis in this study is that companies that make acquisitions during crises tend to do acquisitions in the domestic market rather than cross-country acquisitions. Table 4 shows that the CRIS variable has a positive relationship with DOMESTIC with a significance value of 0.279. These results indicate that the CRIS variable is not significantly related to the DOMESTIC variable. This result is contrary to research conducted by Cerrato, et al., (2016) which states that companies that make acquisitions in times of crisis tend to do acquisitions in the domestic market compared to cross-country acquisitions.



Table 4: Regression Results Domestic Acquisition

	Domestic Acquisition				
	В	Exp(B)	Sig		
Constant	-11.895	0.000	0.999		
CRIS	4.335	76.296	0.279		
FR	0.117	1.124	0.848		
PS	1.830	6.233	0.042*		
MAIN	20.167	573562987.310	0.998		
SERVICE	13.644	842347.245	0.999		
			·		
Cox & Snell R Square	:		0.244		
Nagelkerke R Square 0.685					
Chi-square (Omnibus Tests) 24.295					
Sig Chi-Square (Omni	bus Tests)		0.000		

Table 5 shows that in the period before the crisis, the coefficient of determination (R square) was 0.196 which showed that 19.6% of the ROE variable could be explained by the independent and control variables studied, while the rest was explained by other variables not examined in this study. In the pre-crisis period, cross-country acquisitions were positively related to ROE. The direction of the positive relationship shows that cross-country acquisitions improve firm performance based on accounting and the market. However, this relationship is insignificant, so companies that make acquisitions across countries in the precrisis period are not related to firm performance. These results indicate that companies in Indonesia that carry out cross-country acquisitions do not aim to improve firm performance. Table 5 also shows that in the crisis period, the coefficient of determination (R square) of 0.600 indicates that 60% of the ROE variable can be explained by the independent and control variables studied, while the rest is explained by other variables not examined in this study. In times of crisis, companies that carry out cross-sector acquisitions (diversification) have positive insignificant relationship with ROE. The results of this study contradict the research conducted by Cerrato et al. (2016) but support the research conducted by Chakrabarti et al., (2007). Cerrato et al. (2016) show that in times of crisis, diversification worsens firm performance while Chakrabarti et al. (2007) find that diversification is positively related to the performance of companies in six Asian countries when hit by a crisis.



Table 5: Regression Results with The Dependent Variable ROE

Model 1 (Roe)			Model 2 (Roe)	Model 2 (Roe)		
All Sampel (2007 - 2010)		Pre-Crisis (2007 - 2008)		When Crisis (2009 - 2010)		
Variable	В	Sig	В	Sig	В	Sig
Constant	0.190	0.000	0.198	0.005	0.232	0.000
Cborder	0.012	0.726	0.038	0.551	-0.046	0.074**
Divers	-0.030	0.256	-0.040	0.465	0.008	0.692
Fr	0.013	0.299	-0.004	0.832	-0.130	0.020*
Ps	0.007	0.587	-0.033	0.162	0.092	0.000*
Main	-0.014	0.729	-0.003	0.975	-0.035	0.224
Service	-0.078	0.024*	-0.075	0.265	-0.087	0.001*
R Square		0.109	R Square	0.196	R Square	0.600
Adj R Square		0.045	Adj R Square	0.040	Adj R Square	0.546
F		1.715	F	1.258	F	11.008
Sig F		0.127	Sig F	0.305	Sig F	0.000

Significance level. *p<0.05, **p<0.10

Table 6 shows in the period before the crisis, the coefficient of determination (R square) of 0.209 which indicates that 20.9% of the TOBIN variable can be explained by the independent and control variables studied. On the other hand, the direction of the positive cross-sector acquisition relationship to Tobin's Q indicates that diversification is responded positively by investors thereby increasing the firm's market performance. Investors assume that by making acquisitions across sectors, companies will avoid bankruptcy risks.

Table 6 shows that in times of crisis, companies that carry out cross-sector acquisitions (diversification) have a significant positive relationship with Tobin's Q. The direction of the positive relationship shows that diversification (cross-sector acquisitions) increases firm performance based on accounting and markets. Cerrato et al. (2016) showed that in times of crisis, diversification worsened firm performance while Chakrabarti et al. (2007) found that diversification had a positive effect on the performance of companies in six Asian countries when hit by the crisis. The firm diversified (acquisitions across sectors) in times of crisis aimed at obtaining returns from other sources so as to cover or reduce the losses of its ongoing business. Companies that carry out cross-sector acquisitions during crises tend to conduct more accurate investigations when selecting target companies. The firm will target industries that can generate returns and reduce performance pressures due to the economic crisis.



Table 6: Regression Results with Tobin's Q Dependent Variable

Model 1 (Tobin)			Model 2 (Tobin)		Model 3 (Tobin)	
All Sampel (2007 - 2010)		Pre-Crisis (2007 - 2008)		When Crisis (2009 - 2010)		
Variable	В	Sig	В	Sig	В	Sig
Constant	0.735	0.000	1.067	0.000	0.620	0.000
Cborder	0.368	0.028*	0.032	0.911	0.541	0.004*
Divers	0.431	0.001*	0.269	0.247	0.447	0.001*
Fr	0.075	0.180	0.054	0.458	0.040	0.900
Ps	-0.015	0.369	0.019	0.743	-0.026	0.067**
Main	0.820	0.000*	0.503	0.124	0.972	0.000*
Service	0.460	0.003*	-0.085	0.756	0.792	0.000*
R Square	R Square 0.337		R Square	0.209	R Square	0.585
Adj R Square 0.291		0.291	Adj R Square	0.065	Adj R Square	0.531
F		7.284	F	1.452	F	10.798
Sig F		0.000	Sig F	0.225	Sig F	0.000

Significance level. *p<0.05, **p<0.10

Conclusion

Based on the hypothesis testing that has been done and the discussion that has been presented, this study found that the crisis was positively related significantly to the acquisition decisions in similar sectors. These results indicate that companies that make acquisitions in times of crisis, tend to make acquisitions in similar sectors compared to cross-sector acquisitions (diversification of acquisitions). In the pre-crisis period, cross-sector acquisitions were negatively related but not significantly with ROE, but positively not significantly related to Tobin's Q. The results showed that companies that made cross-sector acquisitions (diversification) in the pre-crisis period were not related to firm performance. Cross-border acquisition is not positively related significantly to ROE and Tobin's Q, so companies that carry out cross-country acquisition in the pre-crisis period are not related to the firm's performance in the pre-crisis period.

In times of crisis, cross-sector acquisitions are positively related insignificantly to ROE, but have a significant positive relationship with Tobin's Q so that companies that make cross-sector acquisitions (diversification) in times of crisis improve the firm's market performance. In times of crisis, cross-country acquisitions have a significant negative relationship with ROE, but have a significantly positive relationship with Tobin's Q. These results indicate that companies that make cross-country acquisitions during a crisis worsen the firm's accounting performance, but improve market performance.



This research provides insight for companies wishing to carry out cross-country acquisitions in times of crisis who must be able to manage finances well and consider factors that reduce the firm's accounting performance. Future studies can examine crises, acquisition behaviour and firm performance during other crisis periods that have occurred in Indonesia, such as the 1998 Asian financial crisis and the 2013-rupiah currency crisis. In addition, subsequent studies can also compare acquisition behaviour on short-term performance and long-term performance. We suggest further research to explore other types of firm investment during the crisis in Indonesia, such as innovation, the establishment of subsidiaries, joint ventures and others.

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