Stock Price Reactions to Announcements of Related Party Transactions*

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Abstract

The primary objective of this study is to investigate whether stock price reactions in response to investment announcements made by firms listed on the Indonesian Stock Exchange (JSX) depend on 1) the nature of relation between transacting parties (Related Party Transaction (RPT) or Non-Related Party Transaction (Non-RPT)); and 2) the type of firms (part of group affiliation or not). This study constitutes an event study, i.e., to examine cumulative abnormal returns (CAR) surrounding the date of investment announcements. The study finds that the stock price reaction (as measured by CAR) for RPT is lower than that for Non-RPT. Therefore, the market perceives that RPT is subject to wealth expropriation by controlling shareholders to minority shareholders, and that this perception is eventually reflected in the relatively lower market reaction. Further, the study finds (albeit weak) that the stock market reaction for firms in group affiliations is lower than for those in non-group affiliations. Under the condition of inadequate supervision and ineffective law enforcement, firms in group affiliations can easily conduct expropriation without being concerned about being detected by the regulator.

Keywords: Group Affiliation, Investment Decision, Minority Shareholders, Related Party Transaction, Wealth expropriation

JEL Classification: G14, G30, G32, G34

1. Background

The ownership structure of most listed firms on the Indonesian Stock Exchange (JSX) is concentrated, with public investor ownership, generally,

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ranging between 20 to 30 per cent, while the remainder is controlled by the dominant or controlling shareholder (Claessens et al., 1999; Kim, 2006). La Porta et al. (1998) state that concentrated ownership structure may raise an agency problem. When outside investors provide financing resources to a firm, they bear the risk that their expected return will not be realized because the firm's assets are expropriated by the controlling shareholder or manager (generally, the manager and controlling shareholder are considered as "insiders"). The expropriation can take a variety of forms, many of them are through Related Party Transactions (RPT), as follows: insiders sell the output (transfer pricing[1]), asset (asset stripping[2]), or issue additional securities (investor dilution[3]) in one firm controlled by them to another firm owned by them at below market value. Other examples of expropriation are: diverting the firm's opportunity; placing a family member in a managerial position; and making excessive payments to the executives. Generally, expropriation is linked to the agency problem described by Jensen and Meckling (1976), who, among others discuss the "perquisite"[4] and "shirking"[5] consumption, and many other agency problems caused by managers. The conclusion is that insiders employ the firm's earnings for their own benefit instead of benefiting the outside investors.

The expropriation of the controlling shareholder to minority shareholders is expected to be more pervasive in firms belonging to group affiliations that actively employ internal capital markets instead of external capital markets (Rajan et al., 2000; Walker, 2005). Group affiliations are known to have many varieties of diversified businesses. There are two explanations concerning the linkage between investment decision of group affiliations and firm value. On one hand, empirical studies show that there

[1] The price that is assumed to have been charged by one part of a firm for products and services it provides to another part of the same firm, in order to calculate each division's profit and loss separately (www.investorwords.com, 2006).
[2] The practice of acquiring a firm, then selling parts of it, in the hope that the cash realised from these sales will match the entire acquisition cost, meaning that the asset stripper is left with the remaining parts at nil cost (www.finance-glossary.com, 2006).
[3] A reduction in each current shareholder's fractional ownership resulting from the issuance of additional shares of common stock and/or the conversion of convertible securities (www.investorwords.com, 2006).
[4] Manager discretion to private benefit, included direct benefit like using firm's car or personal cost charged to the firm, and indirect benefit like luxurious office interior. The resulting costs are a loss to shareholders.
[5] For example, the majority of employees in the firm perform their job without putting the optimal effort. As a case in point, only 20 per cent of the employees accomplish 80 per cent of their job efficiently.

is a negative relation between the investment decision of group affiliations and firm value (e.g. Bae et al., 2002). They support the hypothesis that acquisitions conducted by Korean Business Groups (i.e. Chaebol) are used as a means of controlling shareholders to increase their wealth in a manner detrimental to minority shareholders. When chaebol-affiliated firms make an acquisition, their stock prices on average fall, but controlling shareholders still gain the benefit because the acquisition increases the value of another firm in their group. This empirical evidence shows that the agency problem raised by the self-dealing of the majority shareholder is more likely if a firm belongs to the same group.

On the other hand, empirical evidence by Shin and Park (1999) finds a positive relation between the level of investment and firm value for firms belonging to industrial groups in Korea and that this relation does not prevail for independent firms. Further, Hoshi et al. (1991) supports the view that keirestsu firms increase the value of the firm. Their study shows that keirestsu firms have a lower capital constraint compared to independent Japanese firms and, hence, RPT will increase the value of the firm.

In Indonesia, evidence so far appears to support the view that RPTs tend to cause damage to minority shareholders. Masruroh (2000) finds a relatively lower average abnormal return for firms conducting internal acquisitions than those conducting external transactions. Santoso (2003) also finds a negative average cumulative abnormal return for firms carrying out internal acquisitions. However, these studies only cover acquisitions while investment decisions are broader than acquisitions. Some issues that warrant further investigation include:

1. Are RPT, specifically related to investment decisions by public firms in Indonesia, being used by controlling shareholders to expropriate minority shareholders? Masruroh (2000) and Santoso (2003) cover only one aspect of investment decisions.

2. Does the type of firm (group affiliation or non-group affiliation) also play a role in the expropriation of minority shareholders through investment decision?

This study contributes to the extant literature as follows: It is the first study that provides evidence in Indonesia on the direct effect of RPT on firm value as measured by stock price reaction to investment decision announcement. Further, previous studies have not simultaneously investigated how RPT and the type of firm affect the extent of expropriation,

measured by stock price reaction to investment announcements. Stock price reaction reflects the market assessment on the probability of expropriation by the majority shareholder to minority shareholders.

Consequently, the objective of this study is to investigate whether stock price reactions to investment decisions in Indonesia are affected by: 1) the occurrence of RPT; and 2) the status of group affiliations. In addition, this study also aims to investigate how stock prices in general react to investment decision announcements in Indonesia.

The paper is organised as follows: Section 2 discusses the background of RPT in Indonesia, followed by the hypothesis development. Section 3 explains the research methodology, while section 4 provides the empirical results. The last section contains the conclusion, implications and the limitations of the study.

2. Background of RPT in Indonesia and Hypotheses Development

2.1 Background of RPT in Indonesia

RPTs are relatively common among public listed firms in Indonesia. Utama et al. (2008) document the relative size of RPT for the top 50 largest listed firms in terms of market capitalisation. They measure the extent of shareholders' exposure on RPT by calculating the sum of assets and liabilities arising from RPT divided by total stockholders' equity and they find that the average exposure is about 53 per cent for the years 2005 and 2006. The relatively high percentage of RPT implies that, in general, shareholders' exposure on RPT is quite high.

Badan Pengawas Pasar Modal dan Lembaga Keuangan (Bapepam or The Capital Market and Financial Institution Supervisory Agency) requires listed firms to disclose the nature and the amount of RPT in their financial statements.[6] If the amount of transaction is significant (i.e., more than one billion rupiah or approximately USD90,000), then the name of the transacted party and the nature of the relationship have to be disclosed. For certain RPT, Bapepam requires the approval from independent shareholders for the transaction to be obtained.[7] Independent shareholders are non-controlling shareholders and are not involved in the RPT. Since the rule excludes some types of RPT, in practice, only small numbers of

[6] Bapepam Rule VIII.G.7 Guideline on Presentation of Financial Statements.
[7] Bapepam Rule IX.E.1 Conflict of Interest Transactions.

RPT are subject to independent shareholders' approval.[8] Further, before the new Corporation Law that was enacted in 2007, there was no rule regulating the approval process of conflict of interest or RPT. The new Corporation Law requires that those (e.g. members of the board of directors, the supervisory board or controlling shareholders) who have a conflict of interest concerning transactions are prohibited from participating in deliberations with respect to, or voting on, the RPT. Thus, before 2007, unless a firm voluntarily set up its own rule regarding the monitoring or approval process of RPT, most RPTs were not subject to supervision and hence, were exposed to exploitation by insiders to expropriate the wealth of minority shareholders.[9]

Bapepam, indeed, requires that at least 30 per cent of the member of the Supervisory Board of a public firm should be independent, meaning that they should come from outside and should not have affiliations with the controlling shareholders, members of the Board of Directors or the Supervisory Board, and they should not have any business relationships with the firm. The presence of the so-called independent commissioner is expected to provide monitoring on the economic viability of RPT. Independent commissioners are elected by shareholders in a shareholders' meeting; however, given the concentrated ownership of most listed firms in Indonesia and given that the nomination process of the independent commissioners is left to the firms to decide, it is likely that the controlling shareholders are involved in both the nomination and selection process. As a result, the effectiveness of the independent commissioners to monitor RPT remains to be seen.

2.2 Hypotheses Development

Consistent with the agency theory, by pursuing his/her self-interest, the majority shareholder as an agent tends to expropriate the wealth of the minority shareholders as a principal. The majority shareholder acts as an agent since he/she has control over resources owned by the minority shareholders. Employing a sample of firms in East Asian countries (including Indonesia) during the Asian economic crisis, Claessens et al. (1999) find that values of the firms whose minority shareholders are more subject to expropriation decrease more than those of other firms. They

[8] Between 2004 – 2008, on average, less than ten transactions per year were required to obtain independent shareholders' approval.

[9] See Utama (2008) For more comprehensive explanation on the regulation and condition of RPT in Indonesia.

attribute the finding as evidence of wealth expropriation against minority shareholders.

Expropriation among others can be executed through RPT. The International Accounting Standard 24: Related Party Transaction defines RPT as: "*..a transfer of resources, services, or obligations between related parties, regardless of whether a price is charged*." (IAS 24, par. 9). The definition implies that expropriation can be more easily done through RPT since controlling shareholders have influence on both parties of the transaction. Thus, RPT constitutes a way to expropriate minority shareholders, with the consequence that stock price reaction to an investment decision announcement will be negative if the market perceives that the announcement is susceptible to expropriation.

Most studies (e.g. La Porta et al., 2002; Claessens et al., 2002) employ an indirect approach to provide evidence of expropriation. For example, using a South East Asia sample, Claessens et al. (2002) find a negative relation between firm value (measured by market to book ratio) and the likelihood of expropriation (measured by the divergence between control rights and cash-flow rights).

Several studies provide evidence of expropriation by investigating the valuation effects from specific firm actions that could result in expropriation. Most studies find evidence of expropriation (Bae et al., 2002; Cheung et al., 2006; Santoso, 2003; Masruroh, 2000), while one study finds no evidence of expropriation (Buysschaert et al., 2004). Using listed firms in Hong Kong, Cheung et al. (2006) document that firms announcing RPT generate significant negative abnormal returns, lower than those announcing similar arm's length transactions. This study extends previous literature by providing further direct evidence of expropriation in Indonesia using a more comprehensive sample than those employed by Santoso and Masruroh.

In line with the previous argument, the first hypothesis is explained as follows. Investment decisions are classified into two types, i.e., RPT and Non-RPT. This study expects that relative to Non-RPT, RPT will, on average, decrease the value of a firm due to the chance of expropriation by majority shareholders to minority shareholders. Non-RPT may increase or decrease the value of a firm depending on the firm's ability to evaluate the viability of the investments. As explained in the previous section, prior to the new Corporation Law enacted in 2007, most RPT are not subject to the approval by those independent of the transactions; only very few transactions require independent shareholders' approval. Although a firm had to disclose its RPT, the disclosures were made ex-post, i.e., after the transactions were conducted. In the absence of a monitoring process, it was likely that

controlling shareholders exploited RPT to expropriate the wealth of minority shareholders.

Therefore, announcements on investment decision constituting RPT will have lower stock price reactions (measured by cumulative abnormal return) than those of Non-RPTs. Thus, the first hypothesis is:

H1: Ceteris paribus, the cumulative abnormal stock return resulting from an investment decision announcement of a RPT is lower than that of a Non-RPT.

As explained earlier, investment decision making conducted by a firm affiliated to a group of firms can be classified into two types: first, an efficient investment decision having a positive impact on the value of the firm and, thus, a positive stock price reaction (Shin & Park, 1999; Hoshi et al., 1991; Ferris et al., 1995, 2003); and, second, inefficient investment decision making having a negative impact on the value of the firm and, thus, a negative stock price reaction (Bae et al., 2002). In the first case, the objective of the investment decision is to maximise the wealth of the shareholders without exception and hence, not to inappropriately transfer wealth to the controlling shareholder. Meanwhile, in the second case, the controlling shareholder conducts expropriation through RPT and consequently hurts the minority shareholders.

The stock price reaction is expected to be negative if investors perceive the RPT is a form of tunneling of resources by the majority shareholder. On the other hand, the reaction will be positive if: a) investors believe that the majority shareholder has better information in reallocating resources between firms in the same group, and/or b) external capital cannot be relied upon as the source of capital. Therefore, whether the price reaction tends to be positive or negative for firms belonging to a group affiliation depends on which factor dominates the other.

In the context of Indonesia, the weaknesses of supervision and lack of law enforcement could result in expropriation through tunneling, as it is relatively easy to perform without fear of being detected and/or punished by a regulator. La Porta et al. (1998) show that the legal environment in Indonesia is relatively low compared to other Asian countries. Indonesia scored especially low in its judicial efficiency, rule of law and corruption. Further, because in Indonesia most of the firms in group-affiliations operate in unrelated businesses, the expected positive benefits from group-affiliations decrease. Also, as a business entity requires specific resources related to that business, a transfer of resources from one entity to another unrelated entity may result in a negative impact on the entity receiving the

resources. Therefore, the study expects the negative effect of group affiliation to outweigh its positive effect:

H 2: Ceteris paribus, the cumulative abnormal stock return of investment decision announcement for firms belonging to a group affiliation is lower than that of the firms which do not belong to a group affiliation.

This study employs three control variables as they are expected to influence the price reaction to investment announcements.

Tobin's Q constitutes the ratio of market value of a firm's assets (i.e., sum of the market value of equity and liabilities) to the replacement cost of a firm's assets and reflects the stock market expectation of the firm's investment opportunity. A Tobin's Q of more than one implies that the firm makes a good investment decision, i.e. it is expected to invest in an investment project with positive net present value (NPV). On the other hand, if its value is lower than 1 (one), it implies that its return of investment does not cover the cost of capital of the investment (Drobetz, 2004). If the profitability of an investment announcement is reflected in Tobin's Q, then stock price reaction for firms with a Tobin's Q greater than 1 (one) is higher than that for firms with a ratio lower than one. However, Fama and French (1992) find that the ratio of price to book value (PBV), which is a proxy of Tobin's Q, has a negative relation with stock return. Their findings suggest that PBV may reflect the firm risk and, thus, have a negative impact on the stock return. Because PBV may reflect investment opportunity and risk, the influence of PBV on abnormal return depends on which influence (investment opportunity or risk) is more dominant.

Firm size is added as a control variable because according to Fama and French (1992), size has a negative relation with stock return. The existence of this negative relationship is subsequently interpreted as indicating that size also reflects a firm's risk. Finally, the risk free rate is used to control the effect of variation in market interest rate on the price reaction.

3. Research Methodology

3.1 Variable Measurement

The Indonesian regulator (through Bapepam-LK rule no. X.K.1 regarding information required to be announced to the public, and the Stock Exchange Rule No. Kep-306/BEJ-2004 regarding Requirement to Disclose Information)

obliges listed firms to disclose to the public all the activities that have a material impact on the value of the firms. This information, among others, includes an investment decision. Investment decisions disclosed to the public and relevant to the study are: 1) merger and acquisition decisions; 2) material transactions that include buying another firm's stock, fixed assets; and 3) change of business activities or reallocation of businesses. The announcements are classified as RPT or Non-RPT based on the evaluation of the substance of the transaction and based on Bapepam's rule no. IX.E.1 regarding Conflict of Transaction Reported to the Public.

Classification of whether a firm belongs to a group affiliation or not is based on the information published by *Pusat Data Bisnis Indonesia* circa 1995 and 1997. Based on investment decision announcements, the data is updated if a firm's status changes from an independent firm to an affiliated firm and vice versa.

Stock price reaction is measured by cumulative abnormal return (CAR). CAR is calculated from the sum of daily abnormal returns (AR) estimated by the market model over certain event window. Beta coefficient is estimated by regressing the stock market daily return to daily stock return with 210 days as the estimation period, i.e. from -220 days until -10 days before the investment announcement (day 0).

The proxy for Tobin's Q (PQ) is ratio of the market value equity plus book value of liabilities to the book value of assets. Because the data on market value of liabilities is difficult to collect, consistent with other studies (e.g. Kim, 2006; Klapper & Love, 2004; Durnev & Kim, 2005), market value of assets is calculated as the sum of market value of equity and the book value liabilities. Because it is difficult to measure replacement cost, in line with other studies (e.g. Kim, 2006; Klapper & Love, 2004; Durnev & Kim, 2005), its value is assumed to equal the book value of assets. Firm size is calculated by the log of the market capitalisation of equity at the end of the year of the investment decision announcement. The market interest rate is based on the interest rate of a short-term note (Sertifikat Bank Indonesia) issued by the central bank that prevails during the investment decision announcement.

3.2 Sample

The unit of analysis is announcements of investment decisions from 1 January 2000 until 31 December 2005. Data on investment decision announcements are collected from the Research and Development Division of the Indonesia Stock Exchange.

Only those observations which met the following criteria were included in the final sample. The first criterion is that the firm must be listed on the Indonesia Stock Exchange. The next is that the firm should conduct an investment announcement. Another criterion is the availability of the stock price and the market index data; and the last one is, the availability of the financial data.

3.3 Empirical Model

The steps of this study are as follows: First, to identify the investment decision announcement dates. In Indonesia, an investment decision must be announced in at least two national newspapers and at the Stock Exchange. The lag between the two announcements is approximately 1-3 days. The earlier announcement date is set as the investment announcement date (identified as day zero). Second, to determine the event window or the period during which the stock price reaction will be measured. This is because the possibility of the information having been leaked to the market before the public announcement cannot be discounted and, consequently, the stock price is affected even prior to the public announcement. In addition, there is a possibility that the stock price reaction occurs not only on the announcement day but also for several days after the announcement. Because there is uncertainty on when the information is known by the public and the duration of the reaction, the study employs several event windows. The event windows are first, from ten days before until ten days after the investment decision announcement (-10 days until +10 days); second, from -5 days until +5 days; and third, from -1 days until +5 days. The duration chosen are short to ensure that the abnormal return is attributed to the investment decision announcement, and not due to other announcements that may also affect the stock price. The third step is to calculate the stock price reaction during the event windows. Where one investment decision may involve several public announcements in different time periods, the study calculates the CAR for each of the announcements and adds the CARs to arrive at the combined CAR as a measure of the price reaction for the investment decision.[10]

[10] According to Nimalendran (1994), the traditional approach to multiple announcements is to measure the CAR over the entire period covering multiple announcements. One drawback of this approach is that aggregating abnormal returns for announcement and non-announcement period increases possible confounding effects and reduces the efficiency of the estimators. To overcome this drawback, this study excludes non-announcement period between the multiple announcements. See Ball and Torous (1988) for further discussion on event windows under multiple announcements.

The following are the independent and dependent variables employed in the study. The test employs either Ordinary Least Squares Regression or Weighted Least Squares (WLS) Regressions, depending on the result of the heteroscedasticity test.

CAR_{it} = b0 + b1 $GRPAFF_{it}$ + b2 RPT_{it} + b3 $DMYPQ_{it}$ + b4 $LOGMV_{it}$ + b5 SBI_{it} for firm i year t and where

GRPAFF = *dummy variable*, i.e. dummy 1 if a firm belongs to group affiliation, and 0 otherwise.

RPT = *dummy variable,* i.e. dummy 1 if the transaction is a related party transaction, and 0 otherwise

DMYPQ = *dummy variable,* i.e. dummy 1 if PQ at the end of the year is more than 1, and 0 otherwise

LOGMV = log of market capitalization of equity at the end of the year.

SBI = the risk free rate prevailing during an investment decision announcement.

According to the hypothesis proposed in the previous section, the coefficients of GRPAFF (b1) and RPT (b2) are expected to have negative values. DMYPQ, LOGMV, and SBI are control variables. DMYPQ is a proxy of future growth opportunity or proxy of the risk and can have either a negative or positive relation with price reaction. The coefficient of LOGMV is expected to be negative. Finally, the risk free rate is a macroeconomic factor and is expected to have a negative relation with stock abnormal return.

4. Empirical Results

4.1 The Result of Sample Selection

Investment decision announcements consist of 229 merger announcements and 105 material transaction announcements. However, classification of investment decision announcements into RPT or Non-RPT cannot be done easily since there is no standard format of reports related to investment decisions containing RPT. Although RPT must be disclosed, the information is not always explicitly stated in the letters submitted by the listed firms to the Indonesia Stock Exchange; instead the information is spread in the

various sections of public disclosure announcements such as in the ownership structure section and financial report. Therefore, the information must be carefully traced in these sections.

The calculation of the Cumulative Abnormal Return (CAR) results in 91 investment decision announcements because: 1) CARs arising from the same investment decision announcements are combined together and summed; and 2) there are several illiquid stocks such that their CAR cannot be reliably calculated. The sample selection process is given in Table 1.

Table 1: The Results of Sample Selection

		N
Total number of investment decision announcements during the sample period		
1. Merger		229
2. Material Transaction		105
	Total	**334**
Availability of stock return data		
1. Merger		181
2. Material Transaction		89
	Total	**270**
Investment announcements based on sequential and non-sequential category:		
1. Merger Announcement:		
1.1. Sequential	169	
1.2. Non-sequential	12	
	Total Merger Announcement	181
2. Material Transaction Announcement :		
2.1. Sequential	58	
2.2. Non-sequential	31	
	Total Material Transaction Announcement	89
	Total Announcement	**270**
Distinct investment announcements:		
1. Merger announcement :		
1.1. Sequential		28
1.2. Non-sequential		12
2. Material transaction announcement :		
2.1. Sequential		22
2.2. Non-sequential		31
Final Sample		**91**

Next the study compares the sample of the study with the population of listed firms in the Indonesia Stock Exchange based on the distribution of market capitalisation. The objective is to examine whether there is a significant size difference between the sample of the study and the

population, which may affect the external validity of the study. Table 2 shows the results of the comparison.

Table 2: The Distribution of the Sample and Population of Firms Listed on the Indonesia Stock Exchange Based on Market Capitalisation

Market Capitalisation (billion rupiah)	Population Average 2000-2004 (%)	Number of Sample	Sample (%)
> 20,000	1.41	4	4.40
10,000 – 19,999	1.11	2	2.20
5,000 – 10,000	2.11	7	7.69
1,500 – 4,999	5.52	13	14.29
< 1,500	89.82	65	71.43
Total	100.	91	100

Table 2 suggests that the size of the sampled firms generally is higher than the population. The result can be attributed to the fact that larger firms are more likely to make investment decisions that have to be disclosed to the public. Though the selected sample tends to be biased towards large firms, the representation of small firms (i.e., below 1.5. trillion rupiah) in the sample still constitutes the majority of the total observations. Therefore, in terms of size, the sample sufficiently reflects the population of firms listed on the Stock Exchange.

4.2 Descriptive Statistics

Table 3 provides the descriptive statistics of variables employed in the study.

Table 3: Descriptive Statistics of Main Variables Employed in the Study

	N	Minimum	Maximum	Mean	Std Deviation
CAR1010	91	-0.69	2.33	0.08	0.40
CAR55	91	-0.55	1.49	0.07	0.29
CAR15	91	-0.45	1.14	0.05	0.22
RPT	91	0	1	0.53	0.50
GRPAFF	91	0	1	0.64	0.48
LOGMV	91	0.45	4.69	2.74	0.86
DMYPQ	91	0	1	0.6	0.49
SBI	91	0.07	0.17	0.11	0.04

Based on Table 3, conclusions regarding the variables are as follows. In all event windows, the average CARs are positive, implying that investors tend to positively react to investment decision announcements. The number of RPT is about the same as that of Non-RPT. The relatively high proportion of RPT indicates that transactions containing potential conflict of interest are quite common in Indonesia. Similarly, the majority of the announcements are by firms belonging to group affiliation. The market capitalization of the observations ranges from as low as 2.8 billion rupiah to as high as 48,865 billion rupiah. Its average was 2.741 (in log) or 551 billion rupiah (or about US$60 million). This average was slightly higher than the average market capitalization of listed firms in Indonesia. The DMYPQ variable indicates that 60 per cent of the observations have market to book value of more than one while the average interest rate during the sample period was 11.2 per cent, which was high compared to the rates in other countries.

4.3 Test of Stock Price Reaction to Investment Decision

This section examines whether, on average, the stock price reacts positively or negatively to investment decision announcements. If the market expects that, on average, investments yield positive NPV and the announcement is unexpected, then the stock price tends to increase after the announcement.

Because the distribution of CAR is not normal, the variable is transformed into the logarithm of CAR. Since some of the CARs are negative, all return data is increased by one before the log transformation. The results using t-test for three log (CAR) variables in Table 4 show that the average CARs are marginally statistically significant for event window (-5, +5) and (-1, +5), while, it is not significant for event window (-10, +10). Therefore, the market tends to react positively to investment decision announcements. This result supports the assertion of Woolridge and Snow's (1992) study that the market generally reacts positively to investment decision announcements.

Table 4: The t-test for the Mean of Log CAR for Three Event Windows

Event Window	Mean	Std Deviation	Std Error Mean
-10, +10	0.011	0.13	0.014
-5, +5	0.015*	0.10	0.011
-1, +5	0.013*	0.08	0.009

Note: * Significant at the 0.10 level (1 tailed)

4.4 Analysis of Correlation among Variables

Table 5 provides the coefficients of Pearson Correlation. For event windows (-10, +10), consistent with expectation, RPT and firm size (LOGMV) negatively correlate with CAR at significance levels of 1 per cent and 5 per cent respectively. On the other hand, for event window (-1, +5), only firm size correlates negatively to stock return at the 5 per cent significance level. In line with hypothesis 2, the coefficient correlations of group affiliation status are consistently negative and marginally significant at 10 per cent.

Table 5: The Pearson Correlation Test among Variables

Variables	LogCAR (-10,10)	LogCAR (-5,5)	LogCAR (-1,5)	RPT	GRPAFF	LOGMV	DMYPQ	SBI
LogCAR(-10,10)	1.00	0.847***	0.742***	-0.25***	-0.113	-0.211**	-0.118	-0.107
		(0.00)	(0.00)	(0.008)	(0.14)	(0.02)	(0.13)	(0.16)
LogCAR(-5,5)		1.00	0.785***	-0.238**	-0.106	-0.241**	-0.11	-0.115
			(0.00)	(0.01)	(0.32)	(0.011)	(0.15)	(0.14)
LogCAR(-1,5)			1.00	-0.165*	-0.116	-0.177**	-0.171*	-0.121
				(0.059)	(0.27)	(0.047)	(0.053)	(0.13)
RPT				1.00	0.293***	0.144*	0.09	0.127
					(0.005)	(0.086)	(0.2)	(0.12)
GRPAFF					1.00	0.163	-0.03	-0.102
						(0.12)	(0.98)	(0.34)
LOGMV						1.00	0.349***	0.242**
							(0.00)	(0.01)
DMYPQ							1.00	0.211**
								(0.02)
SBI								1.00

Notes: *** Significant at the 0.01 level (1-tailed)
** Significant at the 0.05 level (1-tailed)
* Significant at the 0.10 level (1-tailed)
Figures in the parentheses are the p-value

Because Pearson correlation can be influenced by extreme values, the study also employs the Spearman correlation test.[11] The Spearman correlation provides the following results. Generally, the correlation results are in accordance with the hypotheses. For event window (-10, +10), RPT and group affiliation status negatively correlates with CAR at significance levels of 1 per cent and 5 per cent respectively. For event window (-5, +5), RPT also negatively correlates with CAR at the 5 per cent level of significance while for event window (-1, +5), RPT and group affiliation status correlate negatively with CAR at 10 per cent level of significance.

[11] Due to space constraint, the result is not provided but can be requested from the authors.

Based on the correlation tests, this study infers that the CAR of transactions involving related parties or from firms belonging to group affiliation tends to be lower than the CAR of transactions not involving related parties or from firms not belonging to group affiliation.

4.5 Regression Analysis

Regression analysis is conducted using two methods i.e.: 1) Enter method under which all independent variables are constrained to be simultaneously employed in the regression, and 2) Stepwise method is employed to examine which independent variables have a significant relation with CAR.

The total sample in this regression is 91 observations. Analysis of both regressions is done after ensuring that the assumption of OLS regression is fulfilled. If there is a heteroscedasticity problem, then the regression is run with the Weighted Least Squares method (WLS).

To detect if there is a multicollinearity problem, the variance inflation factors (VIF) of all independent variables for all regressions are observed. All VIFs are relatively small (less than 2), thus, the regressions do not exhibit a multicollinearity problem.[12]

White's heteroscedasticity test indicates that a heteroscedasticity problem exists for event windows (-10, +10) and (-1, +5). Therefore, WLS regressions are utilised for these event windows. The WLS method needs an analysis about the relationship between residual variance and the independent variables. If residual variances fluctuate proportionately with the independent variables then the weight employed in the WLS regression is $1/X_i$. Based on the White's heteroscedasticity test, residual variances fluctuate proportionally with size (logMV) variable for event window (-10, +10) and event window (-1, +5). Consequently, the weight used at WLS is 1/log(MV) for regressions with the Enter as well as Stepwise methods.

Table 6 shows the regression results with the Enter method with the first row showing the coefficients while the second row shows the p-value.

The results of the regression with the Enter method are as follows. For event window (-10, +10), the CAR for RPT is significantly lower than that for Non-RPT, and Size log(MV) is negatively related with CAR. The coefficient of RPT is -0.0741. If the coefficient is restated without log and minus one, the resultant coefficient is 0.1569, implying that after controlling other independent variables, the average CAR for RPT is 15.7 per cent lower than that for Non-RPT. The average market capitalization of the

[12] Due to space constraint, the results for all assumption tests are not provided but can be requested from the authors.

sample in this study is 500 billion rupiah. Therefore, on average, RPT deteriorates shareholders' wealth by over 80 billion rupiah (approximately US$9 million) per transaction.

Table 6: Results of Regressions with the Enter Method and WLS

Dependent Var. / Independent Var.	LOGCAR(-10,10)	LOGCAR(-5,5)	LOGCAR(-1,5)
Constant	0.4408 (0.0000)	0.1192 (0.0101)	0.2733 (0.0000)
RPT	-0.0741 (0.0490)**	-0.0409 (0.0378)**	-0.0440 (0.0585)*
GRPAFF	-0.0386 (0.2056)	-0.0047 (0.4223)	-0.0158 (0.2952)
LOGMV	-0.1338 (0.0000)***	-0.0234 (0.0471)**	-0.0759 (0.0000)**
DMYP-Q	-0.0332 (0.2235)	-0.0035 (0.4416)	-0.0515 (0.0312)**
SBI	-0.0631 (0.4605)	-0.1167 (0.3516)	-0.0463 (0.4539)
R^2	0.6392	0.1021	0.6361
Adj. R^2	0.6180	0.0492	0.6147
F	30.1146	1.9320	29.7184
Sig. F	0.0000***	0.0974*	0.000***

Notes: *** Significant at significant level 1%
** Significant at significant level 5%
* Significant at significant level 10%

For event window (-5, +5), the results are the same as for event window (-10, +10), i.e. the CAR for RPT is significantly lower than that for Non-RPT, and Size (Log(MV) is negatively related with CAR.

For event window (-1, +5), the significant results are RPT, log(MV), and Dummy P-Q. Log(MV) and Dummy P-Q are negatively correlated with CAR while the CAR for RPT is lower than that for Non-RPT.

Consistent with the hypothesis, the coefficient of Group Affiliation (GRPAFF) is negative, however, none of the coefficients is statistically lower than zero. Therefore, the first hypothesis is supported by the data while the second hypothesis is not.

The coefficient of Dummy PQ is negative in all three regressions and significant for event window (-1, +5). This result shows that higher Tobin's Q associates with lower CAR. As previously mentioned, PQ variable can be a measure of risk. Several researchers within and outside Indonesia (e.g. Utama & Dewiyani, 1999; Utama & Fitriani, 2001; Fama & French, 1992) find a negative relation between abnormal stock return and Price to Book Value, a similar measure of PQ. Therefore, the finding in this study is

consistent with previous studies and implies that the market model that is utilized to calculate CAR does not fully capture the risk of a stock.

The risk-free rate variable is not significant in all regressions. The possible explanation for this is that the level of interest rate is relatively stable during the research period and thus it has no significant influence on expected profitability of investments.

Table 7 shows the results of the stepwise regression and WLS. For all event windows, the CAR of RPT is significantly lower than the CAR of Non-RPT and Log(MV) is significantly and negatively related with CAR. However, status of group affiliation (GRPAFF) is not significant. Therefore, hypothesis 1 is supported by the data while hypothesis 2 is not supported.

Table 7: Results of Regressions with the Stepwise Method and WLS

Dependent Var / Independent Var	LOGCAR(-10,10)	LOGCAR(-5,5)	LOGCAR(-1,5)
Constant	–	–	–
RPT	-0.0886 (0.0168)**	-0.0431 (0.0228)**	-0.0535 (0.0221)**
GRPAFF	–	–	–
LOGMV	-0.1498 (0.0000)***	-0.0255 (0.0211)**	-0.0906 (0.0000)***
DMYP-Q	–	–	–
SBI	–	–	–
R^2	0.6343	0.1000	0.6190
Adj. R^2	0.6260	0.07795	0.6104
F	76.3090	4.8864	71.4958
Sig. F	0.0000***	0.0097***	0.0000***

Notes: *** Significant at significant level 1%
** Significant at significant level 5%
* Significant at significant level 10%

Table 8 provides a summary of regression results. The results indicate that the CAR for RPT is lower than that for Non-RPT in all event windows. In contrast, although in all regressions the coefficients of Status of Group Affiliation (GRPAFF) are all consistently negative, they are not statistically significant.

There are several plausible explanations for the insignificant results of the GRPAFF variable. First, the correlation analysis shows that there is a positive relation between RPT and GRPAFF, meaning that firms belonging to group affiliations are more likely to be involved in RPT. In the multiple

Table 8: Summary of the Sign and the Significance of the Coefficients of Independent

Variables	LogCAR(-10,10)		LogCAR(-5,5)		LogCAR(-1,5)	
	Enter	Stepwise	Enter	Stepwise	Enter	Stepwise
RPT	–**	–**	–**	–**	–*	–**
GRPAFF	–		–		–	
LOGMV	–***	–***	–**	–**	–**	–***
DMYP-Q	–		–		–**	
SBI	–		–		–	
Sig. F	***	***	*	***	***	***

Notes: ***Significant at significant level 1%
**Significant at significant level 5%
*Significant at significant level 10%

regressions, since these variables are analysed together, then the negative effect of the Status of Group Affiliation is absorbed by the RPT such that it loses its significance. Second, as explained above, Group Affiliation Status can be either positive or negative in its relation to CAR. If both influences are equally strong, then the variable may become not significant in its relation to CAR. However, all coefficients are negative; further, the correlation test also indicates a negative relation. Therefore, there is a tendency that the negative effect of affiliation status is slightly stronger than its positive effect.

5. Conclusion, Limitations, and Implications

Related party transactions are quite common for listed firms in Indonesia. More than 50 per cent of investment decision announcements can be categorised as RPT. The study finds that investors, in general, positively react to announcements of investment decisions. This finding is consistent with previous studies (Woolridge & Snow, 1992; Jones, 2000) and implies that investors, generally, expect that these investments will have a positive Net Present Value (NPV). Consistent with expectation, the study shows that on average, stock price reaction for RPT is lower than that for Non-RPT. This finding implies that investors perceive that, in general, RPT is prone to be used as a tool to expropriate the wealth of minority shareholders. This finding extends the findings of Masruroh (2000) who provides evidence that the market reacts negatively to the announcements of internal acquisitions. Thus, the negative reaction exists not only for internal

acquisition but also for RPT. The finding is also consistent with the findings of the previous studies (e.g. Bae et al., 2002; Cheung et al., 2006) that document the negative valuation effect of RPT.

The status of group affiliation tends to have no impact on the value of the firm, although there is some weak evidence of a negative impact on stock price, implying that its negative effect is slightly stronger than its positive effect. The explanation of this result is as follows. First, the relative inadequate monitoring by the regulator and the inefficient and ineffective judicial system enables firms to easily expropriate without being afraid of being detected or punished by the regulator or the court. Second, the nature of group affiliation in Indonesia, which conducts unrelated diversification, causes the reallocation of resources from one entity to another harming the entities instead of benefiting them.

The implications and recommendations of this study for capital market policy regulation are explained as follows. Since the study finds that RPT tend to harm shareholders, Bapepam and LK (The Indonesian Capital Market and Financial Institution Supervisory Agency) need to improve the transparency of RPT to the public, for example, by requiring listed firms to publicly disclose the firm's policy with regard to the monitoring and approval process of RPT so that the public will be able to assess the reasonableness of the policy, including whether the policy is in accordance with the Corporation Law No. 40/2007. Bapepam and LK could also enhance the supervision on RPT, among others, by expanding the coverage of RPT, which is subject to approval from minority shareholders. As explained above, in practice very few RPT obtain approval from minority shareholders, meaning that the majority of RPT are dictated by the controlling shareholders. Bapepam and LK should enforce the assessment and disclosure requirement on the fairness of transactions by independent parties and review the penalty imposed on parties conducting RPT that prejudiced the minority shareholders. Finally, because there is no standardised format for material announcements, this study finds that published information regarding RPT varies significantly across firms making it difficult to extract data. Therefore, the Indonesian Stock Exchange needs to develop a standardised format for corporate announcements, including information on RPT.

The limitations of this study are explained as follows. First, the number of observations is small relative to the number of listed firms in Indonesia and this may affect the generalisability of the study. In addition, it includes only investment decision announcements, thus limiting the coverage of the types of transactions.

The second limitation is that this study does not accommodate the effect of corporate governance practice and ownership structure on the extent of expropriation. Claessens et al. (2002) shows that pyramid and/or cross-holding structures causes the control right of the majority shareholder to exceed its cash-flow right. The divergence between control right and cash-flow right increases the incentive of the dominant shareholder to expropriate minority shareholders. Consequently, firms with large divergence between control right and cash-flow right is expected to receive more negative market reaction than those with small divergence. On the other hand, good governance practice will reduce the possibility of the controlling shareholder to expropriate minority shareholders. Therefore, price reactions towards RPT announcements for firms with good governance practice should be higher than those with poor governance practice.

The following are suggestions for future studies. First, to increase the number of observations, an alternative measure of investment decisions is to use capital expenditure data in financial statements. Kerstein and Kim (1995) find that the unexpected increase in capital expenditure, as a measure of investment decision, has a positive effect on annual stock return, suggesting that the increase provides a positive signal regarding the investment opportunities of the firm. For firms having significant RPT, this positive signal may not be the case. Since data on capital expenditure is available in financial statements, this approach can increase the number of observations. Further, future studies need to include all types of RPT to increase their external validity. Second, to broaden the scope of research, future studies could include ownership structure and corporate governance as independent variables that may influence the price reaction to the announcement of investment decision. The corporate governance variable may be measured by the proportion of independent commissioners or a broader measure of corporate governance practice, such as a Corporate Governance Index.

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