3. DEVELOPMENT TUNNELING UKM SCOPUS

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Development of Tunneling Detection Model: A New Corporate Performance Improvement

(Pembangunan Pengesanan Model Terowong: Suatu Peningkatan Prestasi Korporat Baru)

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ABSTRACT

Tunneling through related party transactions is one of the most challenging aspects in corporate governance. In addition, the impact of tunneling activities may affect to corporate governance's performance in most of Asian countries. Yet, studies on the effectiveness of corporate governance in relation to tunneling are still limited and the results have been inconclusive. This study tries to develop a detection model to distinguish related party transactions that can be categorised as tunneling activities. Furthermore, this study also examines whether corporate governance mechanisms can explain the tunneling activities. The main findings of this study suggest that companies, in Indonesian listed companies, with concentrated ownerships have a greater tendency to conduct tunneling transactions compared to companies with dispersed ownerships, and the overall corporate governance mechanisms implemented by the companies could not be used as predictors for tunneling behaviour.

Keywords: Tunneling; corporate governance; related party transactions; asset tunneling; quality and performance improvement; Indonesian listed companies

ABSTRAK

Terowong melalui urus niaga dengan pihak berkaitan adalah salah satu aspek yang paling mencabar dalam tadbir urus korporat. Di samping itu, kesan aktiviti terowong boleh menjejaskan prestasi tadbir urus korporat di kebanyakan negara-negara Asia. Namun, kajian mengenai keberkesanan tadbir urus korporat berhubung dengan terowong adalah masih terhad dan keputusan belum meyakinkan. Kajian ini cuba untuk membangunkan model pengesanan untuk membezakan urus niaga pihak berkaitan yang boleh dikategorikan sebagai aktiviti terowong. Tambahan pula, kajian ini juga mengkaji sama ada mekanisme tadbir urus korporat tersebut dapat menjelaskan aktiviti terowong yang berlaku. Penemuan utama kajian ini menunjukkan bahawa syarikat-syarikat, iaitu syarikat Indonesia yang tersenarai, dengan pemilikan berpusat mempunyai kecenderungan yang lebih besar untuk menjalankan urus niaga terowong berbanding syarikat yang mempunyai pemilikan terpencar, dan mekanisme tadbir urus korporat yang menyeluruh dilaksanakan oleh syarikat-syarikat tidak boleh digunakan sebagai peramal bagi kelakuan terowong.

Kata kunci: Model terowong; tadbir urus korporat; urus niaga pihak berkaitan; terowong aset; kualiti dan peningkatan prestasi; syarikat tersenarai Indonesia

INTRODUCTION

There has been a growing interest in the issue of Related Party Transactions (RPTs) in recent years. RPT issues are considered critical in developing countries that have the characteristics of low levels of investor protection, law enforcement and group structure. Lack of disclosure of RPTs and low investor protection in these countries have made it difficult for users of financial statements to assess whether a certain transaction was made for economic, earning management, or tunneling purposes. Johnson, La Porta, Lopez-de-Silanes and Shleifer (2000) define tunneling as transferring of resources out of a company for the benefit of its controlling shareholders. Bae, Kang and Kim (2002) describe that tunneling practices could range from outright theft or fraud to dilutive share issues which discriminate against minority shareholders. There is plenty of empirical evidence of companies using RPTs for tunneling purposes.

So far, studies that focus on the effectiveness of corporate governance in relation to tunneling are still very limited and the results have been inconclusive. Gao and Kling (2008), Lo, Wong and Firth (2010), Yeh, Shu and Su (2012) and Haβ, Johan and MÜller (2016), for examples, found that overall corporate governance practices could prevent tunneling activities, whereas Cheung, Jing, Lu, Rau and Stouratis (2009a), Li (2010), Juliarto, Tower, Van der Zahn and Rusmin (2013), and Shan (2013) found that the overall corporate governance variables could not explain the corporate behaviour in relation to tunneling.

One of the obstacles in studying tunneling activities is finding an accurate method of measuring them. It is not surprising that most previous studies of tunneling focused on the evaluation of market reaction at the time of the announcements of RPTs (Facio & Stolin 2006; Peng, Wei & Yang 2011) or used the level of RPTs as a proxy for tunneling (Gao & Kling 2008; Juliarto et al. 2013).

Research in Indonesia to assess whether related party transcation used for efficient or opportunistic reasons also using stock market reactions (Utama & Utama 2009; Utama, Utama & Yuniasih 2010). This study to fill the gap, with the design tunneling detection criteria which not only based on the market's reaction but also the characteristics of the transaction and company. In addition, there have been some indications that some companies in Indonesia have performed tunneling activities (e.g. Juliarto et al. 2013), including those which were considered as fair trusted companies based on the corporate governance perception index (Sari 2013). These have led to a serious question about the effectiveness of corporate governance practice in Indonesia in preventing tunneling activities.

Taking the above discussion on board, this study tries to develop a detection model to distinguish RPTs that can be categorised as tunneling activities, and to examine whether corporate governance mechanisms can explain the tunneling activities in Indonesian listed companies. In this study, the tunneling detection model is developed based on market reactions at the time of announcements of RPTs and some characteristics of RPTs, such as indications that a transaction to related parties is made for tunneling purposes, similarities between the controlling shareholders of the two parties, and differences of cash flow rights between the controlling shareholders of the two parties. The findings are expected to provide insights into the role of corporate governance in deterring tunneling activities within the context of emerging markets.

CONCEPTUAL DISCUSSION AND RESEARCH PROPOSITION

RELATED PARTY TRANSACTIONS (RPTS) AND TUNNELING

There are three common reasons for companies to conduct RPTs. Firstly, RPTs are used by companies for the purpose of minimising transaction costs (Cook 1977; Fisman & Khanna 1998). This is a legitimate usage of RPTs based on economic motives. Secondly, RPTs are used by companies to manipulate earnings (Aharony, Wang & Yuan 2009; Jian & Wong 2003), and thirdly, RPTs are used for the purpose of tunneling (Berkman, Cole & Fu 2009; Cheung et al. 2009a). These second and third reasons are prompted by opportunistic motives.

In the case of RPTs that are used for the tunneling purpose, some studies have found various ways for resources to be tunnelled by companies. Aharony et al. (2009), Jian and Wong (2003), for example, found that companies used receivables to related parties as a tunnel to transfer resources out of the companies. Berkman et al. (2009) and Jia, Shi and Wang (2013) analysed companies that issued loan guarantees to their related parties, which in effect expropriated wealth from the minority shareholders. Cheung, Qi, Rau and Stouraitis (2009b) found empirical evidence that the sale and purchase of assets to related parties were used to perform asset tunneling.

Tunneling activities are often difficult to identify since the activities are made and hidden within the seemingly legitimate transactions. However, the process for substantiating tunneling activities requires utilisation of some relevant indicators, and, so far, there is a lack of an instrument that could be used for this purpose. While some studies have used the level of RPTs to measure tunneling (Gao & Kling 2008; Juliarto et al. 2013). Taking the above discussions on board, this study tries to develop a detection model that includes a number of key 'red flags' that can be used to indicate tunneling when examining a related party transaction made by a company.

CORPORATE GOVERNANCE AND TUNNELING

Principle good corporate governance mechanisms are useful in protecting the interests of minority shareholders by preventing opportunistic behaviours made by the controlling shareholders. Lins and Warnock (2004) described two common corporate governance mechanisms that companies can use: internal and external corporate governance mechanisms. Internal corporate governance mechanisms, which consist of control structure and corporate structure. External corporate governance mechanisms consist of the rule of law and market of corporate control. It has been suggested that corporate governance practices may differ across different institutional contexts and different countries (e.g. Filatotchev, Jackson & Nakajima 2013). The focus of this study is on the internal corporate governance mechanisms in Indonesian listed companies.

In relation to control structure, previous studies have found that the proportion of independent members in the board has a negative correlation with transfer pricing manipulations (e.g. Chen, Firth, Gao & Rui 2006; Gao & Kling, 2008; Lo et al. 2010; Shan 2013), a positive correlation to financial performance (e.g. Brickley, Coles & Terry 1994; Byrd & Hickman 1992) and a negative impact on financial fraud (Beasley 1996; Dechow, Sloan & Sweeney 1996). These findings imply that independent board members could counterbalance the influence of the controlling shareholders, and accordingly lead to better corporate governance practice. This perception has also been shared by some security exchanges. Indonesia Stock Exchange (IDX) for example, recommends any company listed on IDX to have at least 30% independent members on its board.

Furthermore, evidence has indicated that audit committees which had members with financial and industry backgrounds and expertise were more likely to

demand higher quality audits and reduce the chances for transfer pricing manipulations or asset appropriation (e.g. Abbott, Parker, Peters & Raghunandan 2003; Carcello, Hermanson, Neal & Relay 2002; Gao & Kling 2008; Lo et al. 2010). Lary and Taylor (2012) found that stronger audit committee independence and competence were significantly related to a lower number of incidents and a lower level of severity of financial restatements, which led to companies producing more reliable financial statements. In Indonesia, any listed company on IDX is required to have an audit committee of at least three members - one of whom must be an independent commissioner of the company and acts as the chairman of the audit committee.

In addition to the key ownership, management ownership has been seen as a factor that could align the potential divergence of interests between management and the shareholders (Jensen & Meckling 1976). However, some contrary arguments have suggested that the increased management ownership is not always able to improve the welfare of the shareholders as a whole. Managers in a company could increase the percentage of their holdings to a level that allowed them to dominate the board of directors, and thus isolate the interests of other parties in the internal and external control of the company (Fama & Jensen 1983; Gibson 2003; Santiago-Castro & Brown 2011).

In the context of emerging markets, Gunarsih (2002), in her study, found that large domestic institutional investors tended to represent their own interests, while Khanna and Palepu (2000) found that foreign institutional investors provided better monitoring functions when interacting with the emerging markets in the global economy compared to domestic institutional investors. Khanna and Palepu (2000) also found that corporate performance was positively related to foreign institutional owner ship and was negatively related to domestic institutional ownership.

In a company with a concentrated ownership structure, the controlling shareholder could control the company's resources and implement policies that benefit them at the expense of the non-controlling shareholders (La Porta, LopeZ-de-Silanes & Shleifer 2000). Gomes and Novaes (2001) suggested that a concentrated ownership structure could facilitate asset expropriation in a company as the major shareholders could not only dominate the board of directors and the shareholders' meetings, but also determine the company's daily operation including influencing contractual policies with related parties and appointing their own candidate as the CEO (Shi & Shitu 2004).

This study takes aboard the overall conclusion from the above discussion, and develops a tentative proposition namely;

P_1 There are significant differences between corporate governance structures of being-tunnelled and not-tunnelled companies

Cheung, Rau and Stouraitis (2006), Cheung et al. (2009b) and Jian and Wong (2003) found that there were many ways for companies to do tunneling. These include activities such as receivables to related party, asset transactions, trading transactions, cash payments and equity transactions to related parties. For example, a company can provide a huge amount of accounts receivable or a long credit period or loans to a related party. A receivable given to a related party can be treated as a put option, in which a related party can exercise such an option by not paying the receivable in a bad situation (Atanasov, Black & Ciccotelo 2008). Provision and elimination of related party loans will in effect decrease a company's net earnings.

Transfer pricing for related-party transactions should be set according to market prices as used in arm's length transactions (OECD 2001). However, in practice, management can use transfer pricing as a mechanism to transfer profits among related companies in order to reduce tax, increase management bonuses, and channel resources from one firm in a group of companies to another firm in the group or to the owner. Tunneling could also be made through unfair transfer pricing transactions, in which a company sold assets to related parties at a lower price than the normal independent party transaction price or purchased assets from related parties at a higher price than the independent transaction prices (Cheung et al. 2009b; Lo et al. 2010). Hosseinyan, Hashim and Isa (2016) found that sales or purchases of good through RPTs have a significantly negative relationship with firm value. Lo et al. (2010) found that tunneling through unfair transfer pricing decrease being-tunneled profit. Bertrand, Mehta and Mullainathan (2002) and Cheung et al. (2006), in their studies, found that being-tunnelled companies experienced decreased performance, while the tunneling companies experienced increased performance. Therefore, this study adds another proposition as follows:

P_2 There are significant differences in financial performances between being-tunnelled and not-tunnelled companies.

METHODOLOGY

SAMPLE AND DATA COLLECTION

This study aims to evaluate the differences between corporate governance structures of being-tunnelled and not-tunnelled companies that were listed in the Indonesia Stock Exchange (IDX). Therefore, the sample used in this study was collected using a two-step process to allow a representative sample for both being-tunnelled and not-tunnelled companies. The process will be discussed in the following two sub-sections.

The observation periods applied in this study were from 2009-2011. The reason for the period chosen was 2009 is a year after the world economic crisis in 2008. The following period in Indonesia, in 2011, changes in

financial sector reform. The government and the House of Representatives (DPR) agreed to set up Financial Services Authority (FSA or so called OJK) on 22 November 2012. The FSA is an independent institute with to take over the functions, duties and authority setting has been done by the Ministry of Finance through Capital Market Supervisory Agency and Financial Institution (Bapepam-LK). Therefore, the period prior to 2009 - 2011 for regulations on related party transactions in Indonesia are still using by Bapepam-LK. Under Regulation No.1X.E.1 2009, Bapepam-LK governing affiliated transactions and conflict of interests. However, after the year 2012 regulating agencies are no longer Bapepam instead of FSA.

The lists of the companies were collected from the IDX Fact Books 2009, 2010 and 2011 (Indonesia Stock Exchange 2009, 2010, 2011). There were nine industry classifications of listed companies on the IDX. In this study, Finance classified companies that were listed on the IDX during 2009 to 2011 were excluded since they were subject to specific financial sector regulations, and hence were not attuned to the other companies in the other eight classifications (i.e. Agriculture; Mining; Basic Industry and Chemicals; Miscellaneous Industry; Consumer Goods Industry; Property, Real Estate and Building Construction; Infrastructure, Utilities and Transportation; Trade, Services and Investment). There were 399, 407, 428 companies listed on the IDX during 2009, 2010, and 2011 respectively. After the exclusion of the Finance classified companies, the remaining listed companies, which were used in this study, were 332, 338, 357 during 2009, 2010, 2011 respectively.

DATA COLLECTION: TUNNELING DETECTION CRITERIA

The first data collection step was applied in this study to gather a sample of being-tunnelled companies. For this purpose, this study searched and reviewed announcements made by the listed companies on the IDX websites and/or on their companies' websites, including information regarding affiliate and conflict of interest transactions. For each transaction, its detailed information were evaluated, including the object of the transaction, the transaction value, the transaction date, the announcement date, the description of the relationships with the party's affiliation, and the report from the assessor's office about the fairness of the transaction. To identify the abnormal return around the announcements of RPTs, this study used use daily stock returns from Data Real-time Investment (RTI) from Universitas Gadjah Mada Database.

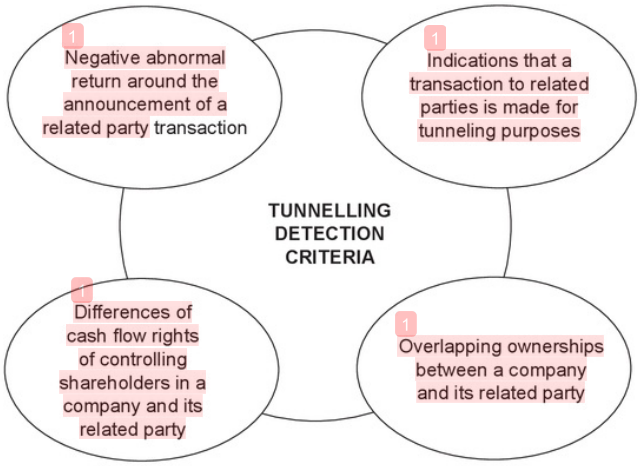

FIGURE 1. Tunneling detection criteria: Classification as tunneling by meet all four criteria

To determine whether a certain RPT can be classified as tunneling, some findings from previous studies were utilised as bases for developing the detection criteria. Figure 1 describes the criteria and their literature sources. A related party transaction could be classified as tunneling; if it met all of these four criteria (refer to Appendix A for criteria's description and literature sources).

DATA COLLECTION: NOT-TUNNELLED DETECTION CRITERIA

Accordingly, the second data collection step was applied in this study to gather a sample of not-tunnelled companies. In this second data collection step, in addition to the Finance classified companies, being-tunnelled companies that were found in the first data collection step were also excluded from the lists of the companies listed on the IDX during 2009, 2010 and 2011. Subsequently, the following

criteria were used to obtain the sample for not-tunnelled companies. A company could be classified as not-tunnelled if it met all of these three criteria as refer to Figure 2.

MODEL DEVELOPMENT WITH LOGISTIC ANALYSIS

In testing the propositions, this study employed Logistic Regression Analysis (Diekhoff 1992) and the data were analysed using Statistical Package for Social Science (SPSS) software. Logistic regression is used to analyse a dataset in which there are one or more independent variables that determine an outcome. The outcome is measured with a dichotomous variable which are only two possible outcomes. In logistic regression, the dependent variable is dichotomous for only contains data coded as 1 (TRUE, and etc.) or 0 (FALSE, and etc.).

Furthermore, dependent variable for this study are 1 is 'Assigned for a Being-Tunnelled Company' and 0 is 'Assigned for a Not-Tunnelled Company'. Moreover, the goal of logistic regression is to find the best fitting model to describe the relationship between the dependent variable or outcome variable and a set of independent or explanatory variables. The initial model to be tested in this study is constructed as follows:

$$\text{Tunnelling} = \beta_0 + \beta_1 \text{Single Shareholder} + \beta_2 \text{Multiple Shareholders} + \beta_3 \text{Independent Board} + \beta_4 \text{Audit Committee} + \beta_5 \text{Managerial Ownership} + \beta_6 \text{Foreign Institutional Ownership} + \beta_7 \text{Domestic Institutional Ownership} + \beta_8 \text{State Ownership} + \beta_9 \text{ROA} + \beta_{10} \text{PM} + \varepsilon i \quad (1)$$

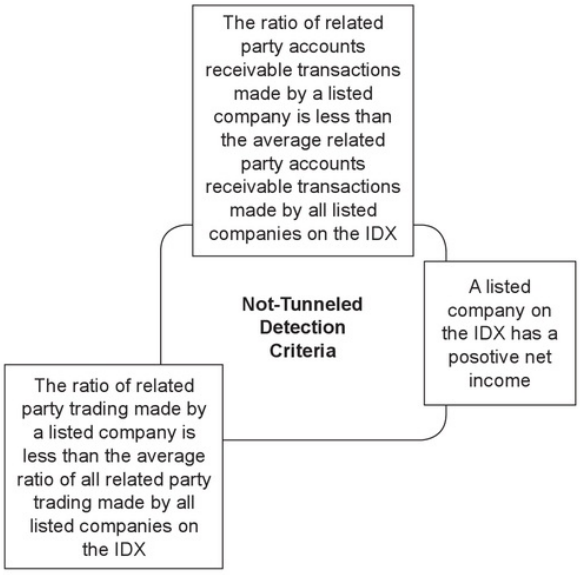

FIGURE 2. Not-tunnelled detection criteria: Classification as not-tunnelled by meet all three criteria

Explanatory variables for the tunneling model development as presented in Figure 3. In addition, detailed model is constructed and summarised in Appendix B. The results for this study are provided in the next section.

RESEARCH FINDINGS

BEING-TUNNELLED AND NOT-TUNNELLED COMPANIES

Analysis made for the period of 2009 to 2011on the IDX websites and on the listed companies' websites found announcements of affiliation and conflict of interest transactions made or related to 74 companies. Assessments based on the tunneling detection criteria showed 55 transactions which were indicated as asset tunneling transactions, 3 transactions which were indicated as equity tunneling transactions and 16 transactions which appeared to be propping transactions. Propping transactions are transactions that are seemingly beneficial for minority shareholders, although their real benefits are difficult to judge since the nature of the transactions are often concealed.

This study focuses on asset tunneling, and therefore, 55 being-tunnelled companies were included for further analysis. The detailed classifications of these 74 transactions are described on Table 1.

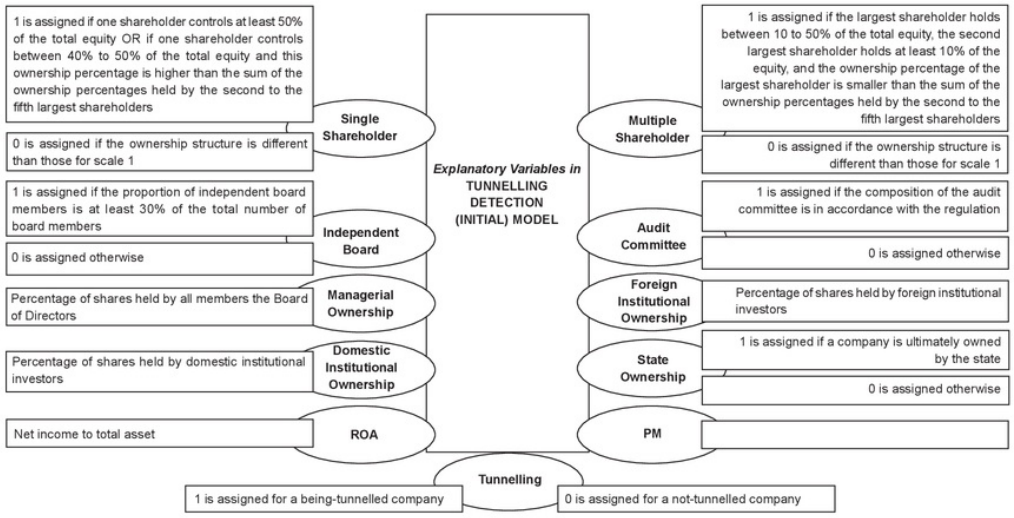

FIGURE 3. Explanatory variables in Tunneling Detection (Initial) Model

TABLE 1. Results of the tunneling detection

Transaction		Number of Announcements
Asset Tunneling :		
1	Elimination of receivables	9
2	Receivable transactions	10
3	Guarantee of receivables	8
4	Service payments	4
5	Leases	2
6	Purchase of assets	6
7	Sale of assets	16
Total		55
Equity Tunneling		3
Propping		16
Total		74

TABLE 2. Companies' IDX industry classifications

IDX Industry Classification	Number of Being-Tunnelled Companies	Number of Not-Tunnelled Companies
Agriculture	1	2
Mining	11	17
Basic Industry and Chemicals	12	19
Miscellaneous Industry	3	5
Consumer Goods Industry	14	22
Property, Real Estate and Building Construction	1	1
Infrastructure, Utilities and Transportation	3	5
Trade, Services and Investment	10	16
Total	55	87

A second analysis was conducted to obtain a sample for the not-tunnelled companies based on the not-tunnelled detection criteria, and the result of the analysis found 87 not-tunnelled companies. The detailed industry classifications of these 55 being-tunnelled and 87 not-tunnelled companies are described on Table 2.

THE MODEL DEVELOPMENT FOR TUNNELING DETECTION: CORRELATION ANALYSIS AND MODEL REVISION

To test the multi-collinearity aspect of the initial model, Pearson correlation analysis was conducted to examine the correlations among the independent variables. It was found that there were high correlations among the managerial ownership, foreign institutional ownership, domestic institutional ownership, and state ownership variables. Thus, this study constructed and used an Ownership Classification Index, which covers the four variables mentioned above. The value of this index was the sum of the dummy scores of the above four variables. For the managerial ownership variable, a dummy score of 1 was assigned when the level of managerial ownership of a company was lower than the median level of the population managerial ownership. For the foreign institutional ownership variable, a dummy score of 1 was assigned when the level of foreign institutional ownership of a company was higher than the median level of the population foreign institutional ownership. For the domestic institutional ownership variable, a dummy score of 1 was assigned when the level of domestic institutional

ownership of a company was lower than the median level of the population domestic institutional ownership. For the state ownership variable, a dummy score of 1 was assigned when the level of state ownership of a company was lower than the median level of the population state ownership.

The revised model is as follows.

Model 1:

$$\text{Tunnelling} = \beta_0 + \beta_1 \text{Single Shareholder} + \beta_2 \text{Multiple Shareholders} + \beta_3 \text{Independent Board} + \beta_4 \text{Audit Committee} + \beta_5 \text{Ownership Classification Index} + \beta_6 \text{ROA} + \beta_7 \text{PM} + \varepsilon i \quad (2)$$

The correlation matrix based on this revised model is presented on Table 3.

To allow more results gained from the analysis, this study also constructed a Corporate Governance Index to represent the overall quality of the corporate governance practices. This followed the study of Yeh et al. (2012). The value of this corporate governance index was the sum of the dummy scores of the independent board and the audit committee variables, and the ownership classification index. Accordingly, the following model was also used in this study.

Model 2:

$$\text{Tunnelling} = \beta_0 + \beta_1 \text{Single Shareholder} + \beta_2 \text{Multiple Shareholders} + \beta_3 \text{Corporate Governance Index} + \beta_4 \text{ROA} + \beta_5 \text{PM} + \varepsilon i \quad (3)$$

TABLE 3. Correlation matrix of the independent variables in the revised model

		1	2	3	4	5	6	7
1.	Ownership Classification Index	1						
2.	Return on Assets	-.072	1					
3.	Profit Margin	-.012	.529**	1				
4.	Independent Board	-.109	-.059	-.055	1			
5.	Audit Committee	-.042	.070	.206*	.111	1		
6.	Multiple Shareholders	-.188*	.071	-.069	.041	.011	1	
7.	Single Shareholder	-.186*	.019	-.168	.072	-.046	.594**	1

Notes: ** Correlation is significant at the 0.01 level (2-tailed)
* Correlation is significant at the 0.05 level (2-tailed)

THE RELATIONSHIPS BETWEEN CORPORATE GOVERNANCE MECHANISMS AND TUNNELING ACTIVITIES

To test Proposition 1 addressing the differences between corporate governance structures of being-tunnelled and not-tunnelled companies, this study employed logistic regression analysis on the two models. The results are presented in Table 4.

TABLE 4. Results of logistic regression analysis for tunneling detection model

	Model 1	Model 2
Single Shareholder	1.456**	1.505**
Multiple Shareholders	-.583	-.423
Independent Board	.172	
Audit Committee	.438	
Ownership Classification Index	-.101	
Corporate Governance Index		.115
Return on Assets	-.046	-.040
Profit Margin	-.249***	-.245***
R^2	.594	.590
Percentage of Correct Classification	93.2	89.0

Notes: ***significant at the 0.01 level
** significance at the 0.05 level
* significance at the 0.10 level

DISCUSSIONS

CORPORATE GOVERNANCE STRUCTURES OF BEING-TUNNELLED AND NOT-TUNNELLED COMPANIES: DESCRIPTIVE STATISTICS

Descriptive statistics for the companies based on the tunneling model used in this study are presented in Table 5 (kindly refer for detailed descriptive statistic at Appendix 1).

The main finding from the descriptive statistics indicated that being-tunnelled companies had significantly higher level of managerial ownerships than not-tunnelled companies. This might indicate that the owners who served in the board of directors in being-tunnelled companies dominated the decision making process, and focused the decisions on their own interests as owners (Santiago-Castro & Brown 2011).

The state ownership of being tunnelled companies was significantly higher than that of not-tunnelled companies. This finding is consistent with the findings of Bai, Liu, Lu, Song and Zhang (2004) and Shan (2013), in which companies controlled by states are likely to suffer more from tunneling activities. The domestic institutional ownership of being tunnelled companies was slightly higher than that of not-tunnelled companies, while the foreign institutional ownership of being tunnelled

TABLE 5. Quality detection for the companies based on the tunneling model

Variable	Quality Detection		Description
	Tunnelled	Not-Tunnelled	
Managerial Ownership	↑	↓	The owners who served in the board of directors in being-tunnelled companies dominated the decision making process, and focused the decisions on their own interests as owners.
State Ownership	↑	↓	Companies controlled by states are likely to suffer more from tunneling activities
Domestic Institutional Ownership	↑	↓	Companies controlled by domestic institutional are likely to suffer more from tunneling activities
Foreign Institutional Ownership	=	=	Companies controlled by foreign institutional are likely similar from tunneling activities
Ownership Concentrations (Single & Multiple Shareholders)	=	=	The values of the ownership concentrations compositions of being-tunnelled and not-tunnelled companies looked similar
Independent Board	=	=	The values of the independent board compositions of being-tunnelled and not-tunnelled companies looked similar
Audit Committee	=	=	The values of the audit committee compositions of being-tunnelled and not-tunnelled companies looked similar
Financial Performance (Return on Assets & profit Margin)	↓	↑	The financial performance of being-tunnelled companies was significantly lower compared to that of not-tunnelled companies

companies was similar to that of not-tunnelled companies. The values of the ownership concentrations (single and multiple shareholders), independent board and audit committee compositions of being-tunnelled and not-tunnelled companies looked similar. Finally, the financial performance (return on assets and profit margin) of being-tunnelled companies was significantly lower compared to that of not-tunnelled companies. This confirmed the proposition that tunneling activities are likely to destroy the overall shareholders' value.

THE RELATIONSHIPS BETWEEN CORPORATE GOVERNANCE MECHANISMS AND TUNNELING ACTIVITIES

The main finding that can be gained from the results is the significance of the single shareholder variable in both Models 1 and 2. The significance of the single shareholder variable clearly indicates that the IDX listed companies with concentrated ownerships have a tendency to conduct tunneling transactions, compared to those companies with dispersed ownerships. The multiple shareholders variable, however, is found to be an insignificant factor for predicting the tunneling behaviour of being-tunnelled and not-tunnelled companies.

The independent board and audit committee variables are found to be insignificant factors for predicting the tunneling behaviour of being-tunnelled and not-tunnelled companies. These findings are consistent with those reported by Juliarto et al. (2013) in their study on tunneling behaviour in South East Asian countries. It could be implied that the effectiveness of these two corporate governance elements in preventing tunneling activities within the IDX listed companies is questionable.

The ownership classification index, in this study, is found to be an insignificant factor for tunneling behaviour. It could indicate that overall there are no differences in managerial ownership, foreign institutional ownership, domestic institutional ownership, and state ownership structures between the being-tunnelled and the not-tunnelled companies that were listed on the IDX. It could also indicate that the differences on the corporate structures between the being-tunnelled and the not-tunnelled companies that were listed on the IDX could not be used as predictors for tunneling behaviour. This finding is consistent with that of Cheung et al.'s (2009a) study on publicly listed firms in Hong Kong which showed that the ownership structure variables could not explain the possibility for companies to conduct the value destroying RPTs. Similarly, the corporate governance index is found to be insignificant, and could imply that the overall corporate governance structures in the IDX listed companies have not been effective in preventing tunneling behaviour.

In relation to Proposition 1, overall corporate governance mechanisms of being-tunnelled and not-tunnelled companies listed on the IDX cannot be differentiated, or they cannot explain the tunneling behaviour made by these companies. Therefore,

Proposition 1 cannot be accepted inclusively. However, it can be partially accepted since the findings in this study show one corporate governance variable (i.e. single shareholder) which could be used to predict tunneling behaviour of being-tunnelled and not-tunnelled companies listed on the IDX.

THE RELATIONSHIPS BETWEEN FINANCIAL PERFORMANCES AND TUNNELING ACTIVITIES

The results on Table 4 show that, while the return on assets variable is not significant, the profit margin variable is significant in both Models 1 to 2. The correlation sign suggests a decrease in profit margin when there is an indication of tunneling activities. This strongly suggests that the profitability factor is able to distinguish between being-tunnelled and not-tunnelled companies. This is consistent with the studies by Bertrand et al. (2002) and Cheung et al. (2006), which found that companies experienced decreasing profitability when they performed tunneling transactions. Accordingly, Proposition 2 is accepted.

IMPLICATIONS TO ACADEMIC AND MANAGEMENTS

The agency problem is one of the central issues in the financial literature. In companies with concentrated ownership, shareholders can control the management or even be part of the management itself. In addition, the agency problem that stands out in a company like this is a conflict of interest between controlling shareholders and non-controlling shareholders. The controlling shareholders can expropriate the non-controlling shareholders in various ways. In addition, expropriation (expropriation) is the use of process control in order to maximize shareholder's own welfare on the other side of wealth distribution (Claessens, Djankov, Fan & Lang 2000).

Furthermore, Gilson and Gordon (2003) identified two possible ways to do the controlling shareholders to obtain private benefits over the control of the company's policy is through the company's operations policies and contractual policies with other parties. Forms of private benefits that can be obtained through the company's operating policies include high salaries and allowances, bonuses and huge compensation, and dividends. As concluded, to obtain private benefits through contractual policies among others by tunneling.

In addition, some implications to managements can be gained from this study. Especially for capital market regulators who could play a significant role in improving the practice of corporate governance and disclosures through more effective regulations, for potential investors who wish to improve their knowledge on corporate governance and RPTs, and for accountants and executives who have significant roles in enhancing the knowledge of companies in the areas of corporate governance and disclosures.

This study found empirical evidence that a related party transaction may be used as a tunnel for the transfer of resources out of the company's controlling interest at the expense of minority shareholders. Being-tunneled company will decrease financial performance. These results are consistent with the phenomenon of the expropriation of minority shareholders are carried through contractual policies with related parties.

CONCLUSIONS

The findings of this study support that notion and found that the IDX listed companies with concentrated ownerships have a tendency to conduct tunneling transactions, compared to those companies with dispersed ownerships. Klapper and Love (2004) claimed that companies operating in countries with a low level of investor protection policies were likely to have lower corporate governance rankings. Therefore, companies that operate in countries with weak legal systems should rely more on good corporate governance as a counterweight mechanism. The overall result of this study indicates that the IDX listed companies have weak corporate governance mechanisms which were ineffective in preventing tunneling activities.

In addition, the overall result has also been suggested that a high quality of disclosures made by companies might help in protecting minority shareholders, especially in emerging economies, since it could make it more difficult for controlling shareholders to conduct expropriation (Meyer, Estrin, Bhaumik & Peng 2009). In Indonesia, the level of compliance for mandatory disclosures made by listed companies on the IDX was still low (Khomsiyah 2005). Disclosures made for RPTs were even less, and most of the disclosures were prepared in a minimal way. Hence they often did not clearly indicate value destroying RPTs, such as tunneling that had been made by the companies.

As always there are limitations that should be considered. First, the companies used in this study are listed companies on the IDX, and hence the generalization of the findings should be treated cautiously. Second, there are other corporate governance factors that have not been included in this study, and hence future work, using other variable sets is strongly recommended to explore further relationships among the variables.

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APPENDIX

APPENDIX A. TUNNELING DETECTION CRITERIA

Criteria	Literature background
There is a negative abnormal return around the announcement of a related party transaction.	It has been found that market participants reacted negatively to announcements of RPTs which have indications of tunneling (Bae et al. 2002; Cheung et al. 2006; Cheung et al. 2009a; Facio and Stollin 2006; Peng et al. 2011). These studies have shown some evidence that minority shareholders experienced large value of losses after the announcements of such RPTs by publicly listed firms, which led to a suggestion of expropriation of minority shareholders.
There are indications that a transaction to related parties is made for tunneling purposes.	Berkman et al. (2009), Cheung et al. (2006), and Cheung et al. (2009b) found that asset transactions, cash payments, receivable transactions, loan guarantees, and trading transactions to related parties had high tendencies toward tunneling activities since they could be used by a company to tunnel resources out to its related parties through unfair pricing, and thus lowering the value of company at the expense of minority shareholders.
There are overlapping ownerships between a company and its related party.	Overlapping ownerships refer to similarities of controlling owners of a company and its related party. Overlapping ownerships could lead to opportunistic actions of transferring resources from a company to its related party (Goranova, 2007). Accordingly, overlapping ownerships between a company's controlling shareholders and its related party had high tendencies toward tunneling activities.
There are differences of cash flow rights of controlling shareholders in a company and its related party.	Earnings that flow from a company, in which the controlling shareholders have low cash-flow rights, to its related party, in which they hold high cash-flow rights, had high tendencies toward tunneling activities (Bertrand et al. 2002).

APPENDIX B. THE CONSTRUCT AND EXPLANATORY VARIABLES IN THE TUNNELING DETECTION (INITIAL) MODEL

Variable	Type	Scale/Measure	Description
Tunneling	Dummy	- 1 is assigned for a being-tunnelled company, i.e. a listed company on the IDX that has been identified to have an indication of performing tunneling activities; - 0 is assigned for a not-tunnelled company, i.e. a listed company that has a ratio of RPTs which is less than the average ratio of RPTs performed by all listed companies on the IDX.	As per section Data Collection for both Tunneling Detection Criteria and Not-Tunnelled Detection Criteria.
Single Shareholder	Dummy	- 1 is assigned if one shareholder controls at least 50% of the total equity OR if one shareholder controls between 40% to 50% of the total equity and this ownership percentage is higher than the sum of the ownership percentages held by the second to the fifth largest shareholders; - 0 is assigned if the ownership structure is different than those for scale 1.	To determine ownership concentrations, namely single shareholder or multiple shareholders, this study follows the approach of Gao and Kling (2008).
Variable Multiple	Dummy	- 1 is assigned if the largest shareholder holds between 10 to 50% of the total equity, the second largest shareholder holds at least 10% of the equity, and the ownership percentage of the largest shareholder is smaller than the sum of the ownership percentages held by the second to the fifth largest shareholders; - 0 is assigned if the ownership structure is different than those for scale 1.	

Variable	Type	Scale/Measure	Description
Independent Board	Dummy	- 1 is assigned if the proportion of independent board members is at least 30% of the total number of board members; - 0 is assigned otherwise.	IDX recommends that the proportion of independent board members is at least 30% of the total board members. Indonesia adopts a two-tier board system, where companies are required to have a supervisory board and an operational board. This study emphasises on the supervisory role of the board.
Audit Committee	Dummy	- 1 is assigned if the composition of the audit committee is in accordance with the regulation; - 0 is assigned otherwise.	Listed companies on the IDX are required to have an audit committee with at least three people, in which one of them should be an independent commissioner of the company and act as the chairman of the audit committee.
Managerial Ownership	Continuous	Percentage of shares held by all members the Board of Directors.	Managerial ownership shows the portion of a company's equity which is owned by its management board.
Foreign Institutional Ownership	Continuous	Percentage of shares held by foreign institutional investors.	Institutional ownership is defined to be the proportion of shares held by institutional investors (foreign and domestic), which include insurance companies, pension funds, banks, mutual funds, and investment banks (Aggarwal et al. 2011; Jennings, 2005).
Domestic Institutional Ownership	Continuous	Percentage of shares held by foreign institutional investors.	
State Ownership	Dummy	1 is assigned if a company is ultimately owned by the state; 0 is assigned otherwise.	State ownership shows the ownership of a company by the Indonesian government.
ROA	Continuous	Net income to total Asset	Return on Assets
PM	Continuous	Net income to sales	Profit Margin

APPENDIX C. DETAILED DESCRIPTIVE STATISTICS ON TUNNELING ACTIVITIES

	Being-tunnelled companies (N = 55)					Not-tunnelled companies (N = 87)				
Variable	*Mean*	*Max*	*Min*	*Median*	*SD*	*Mean*	*Max*	*Min*	*Median*	*SD*
Single Shareholder (dummy)	.744	1	0	1	.44	.507	1	0	1	.503
Multi Shareholders (dummy)	.8511	1	0	1	.415	.704	1	0	1	.415
Independent Board (proportion)	.0122	.40	.00	.004	.058	.0036	.01	.00	.0033	.002
Audit Committee (number)	2.10	5	1	3	1.6	2.26	5	0	3	1.48
Managerial Ownership (proportion)	.0547	.64	.00	.00	.16	.0212	.16	.00	.00	.04
Foreign Institutional Ownership (proportion)	.289	.99	.00	.13	.34	.258	1.00	.00	.128	.305
Domestic Institutional Ownership (proportion)	.361	.99	.00	.31	.37	.365	.81	.00	.39	.28
State Ownership (proportion)	.5109	.80	.00	.00	.20	.065	.702	.00	.00	.19
Return on Assets	.89	40.56	-.08	.07	5.6	7.19	31.98	.03	6.4	5.7
Profit Margin	.06	.29	-.56	.006	.14	17.49	62.98	.01	13.08	1.4

Sources: Indonesia Stock Exchange 2009; 2010; 2011

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