Asset Tunneling: Does Corporate Governance Matter? Evidence from Indonesia

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Abstract

It has been suggested that tunneling activities through related party transactions is one of the most challenging aspects of corporate governance in Asian countries. However, studies that focus 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, and to examine whether corporate governance mechanisms can explain the tunneling activities in Indonesian listed companies. The main findings of this study suggest that 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, asset tunneling, related party transactions, Indonesia

I. Introduction

There has been a growing interest in the issue of related party transactions in recent years (e.g. Peng, Wei & Yang 2011; Cheung, Rau & Stouraitis 2006; Cheung et al. 2009a; Cheung et al. 2009b). Related party transaction issues are considered more critical in developing countries that have characteristics of low level of investor protection, law enforcement and group structure. It has been suggested that these characteristics trigger related party transactions made by companies to benefit their group members, which consequently damage their own corporate value (Khanna & Palepu 2000). Lack of disclosure of related party transactions and low investor protection have made it difficult for users of financial statements to assess whether a certain transaction was made for economic (Cook 1977; Fisman & Khanna 1998), earning management (Jian & Wong 2003; Aharony, Wang & Yuan 2009) or tunneling (Cheung et al. 2009a; Cheung et al. 2009b; Cheung, Rau & Stouraitis 2006; Juliarto et al. 2013) purposes. Johnson et al. (2000) define tunneling as transferring of resources out of a company for the benefit of its controlling shareholders. There have been plenty of empirical evidence of companies using related party transactions for tunneling purposes (e.g. Peng, Wei & Yang 2011; Bae et al. 2002; Facio & Stollin, 2006; Cheung, Rau & Stouraitis 2006; Cheung et al. 2009a; Cheung et al. 2009b; Juliarto et al. 2013; Yeh, Shu & Su 2012; Gao & Kling 2008).

A recent forum launched by the OECD has indicated that tunneling activities through related party transactions have been considered to be one of the most challenging aspects of corporate governance in Asian countries (OECD, 2009). Accordingly, it has been suggested that the Asian Economies should adopt comprehensive monitoring of these activities. La Porta, Lopez-de-Silanes and Shleifer (1999), Claessens, Djankov and Lang (2000) and Claessens et al. (2000) claimed that tunneling problems in Asia were caused by weak corporate governance and concentrated ownership structures. They argued that unrestrained tunneling was one of the main reasons for the Asian Financial Crisis during 1997 to 1999.

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. Yeh, Shu and Su (2012) and Gao and Kling (2008), for example, found that corporate governance practices could prevent tunneling activities, whereas Juliarto et al. (2013) and Cheung et al. (2009a) found that the ownership structure variables could not explain the corporate behaviour in relation to related party transactions.

One of the obstacles in studying tunneling activities is the way to measure them. Although it can be sensed that these activities are going on in business practices, it is difficult to prove 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 related party transactions (Peng, Wei & Yang 2011; Bae et al. 2002; Facio & Stollin 2006; Cheung, Rau & Stouraitis 2006; Cheung et al. 2009a) or used the level of related party transactions as a proxy for tunneling (Juliarto et al. 2013; Gao & Kling, 2008). The usage of the level of related party transactions to measure tunneling activities is problematic because companies can perform related party transactions not only for opportunistic reasons but also for legitimate economic reasons.

Indonesia is one of the emerging economies in Asia. There have been some indications that some companies in Indonesia have performed tunneling activities, including those which were considered as fair trusted companies based on the corporate governance perception index (Ratna, 2013). These have led to a serious question about the effectiveness of corporate governance practice in Indonesia in preventing tunneling activities.

The following is an example of tunneling made by one of the listed companies in Indonesia (Ratna, 2013)[1]. In this case, tunneling was performed through an elimination of related party receivables. Company A owned 50% shares of Company I. Both companies had the same controlling shareholders and similar people in their boards of commissioners and directors. In 2005, Company A provided related party receivables to Company I due to financial difficulties faced by Company I at that time, in the form of no-interest receivables without warranty and unspecified period for repayment. Company I's financial statements were not consolidated in the financial statements of Company A. In November 2010, Company A announced the elimination of these receivables. These written off receivables counted for 20% of Company A's fixed assets. As an effect of this tunneling, Company A obtained a negative abnormal return. This action had benefited the controlling shareholders but harmed the interests of the non-controlling shareholders.

Taking the above discussion on board, this study tries to develop a detection model to distinguish related party transactions 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

[1] All names of the companies in this example have been coded for ethical purposes.

market reactions at the time of announcements of related party transactions and some characteristics of related party transactions, 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 remainder of this paper is structured as follows. Section 2 reviews the conceptual discussion and research proposition. This is followed by Section 3, where research methodology and data employed in this study are described. Section 4 presents empirical results and discussions, and Section 5 presents the conclusion, implications, and limitations of the study.

II. Conceptual discussion and research proposition

2.1. Related party transactions and tunneling

There are three common reasons for companies to conduct related party transactions. Firstly, related party transactions are used by companies for the purpose of minimising transaction costs (Cook 1977; Fisman & Khanna 1998). This is a legitimate means of related party transaction based on economic motives. Secondly, related party transactions are used by companies to manipulate earnings (Jian & Wong 2003; Aharony, Wang & Yuan 2009), and thirdly, related party transactions are used for the purpose of tunneling (Cheung et al. 2009a; Cheung et al. 2009b; Cheung, Rau & Stouraitis 2006). These second and third reasons are prompted by opportunistic motives.

In the case of related party transactions that are used for the tunneling purpose, some studies have found various ways for resources to be tunneled by companies. Jian and Wong (2003), Jiang et al. (2005) and Aharony, Wang and Yuan (2009), for example, found that companies used receivables to related parties as a tunnel to transfer resources out of the companies. Cheung et al. (2009b) found an empirical evidence that the sale and purchase of assets to related parties were used to perform tunneling, by which asset tunneling was conducted through the turnover of assets to related parties at a lower price than the normal independent party transaction price, and the purchase of assets from related parties at a higher price than independent transaction prices.

Tunneling activities are often difficult to identify since the activities are made and hidden within the seemingly legitimate transactions. Markets usually react at the time of the announcements of related party transactions if and when they feel that there have been some irregular transactions made (Peng, Wei & Yang 2011; Bae et al. 2002; Facio and Stollin, 2006; Cheung, Rau & Stouraitis 2006; Cheung et al. 2009a). 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 related party transactions to measure tunneling (Juliarto, 2013; Gao and Kling, 2008), the usage of this indicator to measure tunneling activities is doubtful since it is not an ample proxy for tunneling, and therefore it could provide biased or variable results. 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.

2.2 Corporate Governance and tunneling.

Some empirical evidence has suggested that related party transactions can be used for expropriation through tunneling activities (Cheung, Rau & Stouraitis 2006; Cheung et al. 2009a; Aharony, Wang & Yuan 2009; Jiang & Wong 2003; Gao & Kling 2008; Juliarto et al. 2013). This has been connected to the issue of corporate ownership structures. For example, a concentrated ownership structure - a common phenomenon in many companies around the world - has been suggested as one of the leading indicators of an agency problem between controlling and minority shareholders (La Porta et al. 2000; Shleifer & Vishny 1997), in which the controlling shareholders might take advantage of their control to expropriate minority shareholders wealth through activities such as tunneling.

It has been widely accepted that 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: internal and external corporate governance mechanisms. Internal corporate governance mechanisms, which consist of control structure and corporate structure, observe the activities of a company and take corrective actions if and when the company goes off target. External corporate governance mechanisms consist of the rule of law and market of

corporate control, which are mainly controlled by parties outside a company. The focus of this study is on the internal corporate governance mechanisms.

In relation to control structure, previous studies have found that the proportion of independent members in the board has a positive correlation to financial performance (Brickley, Coles & Terry 1994; Byrd & Hickman 1992) and a negative impact on financial fraud (Dechow, Sloan & Sweeney 1996; Beasly 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.

Another important aspect of control structure is the presence of an audit committee in a company. Abbott and Parker (2000) and Jensen and Meckling (1976) suggested that an audit committee in a company could limit agency conflict problems. Evidence has suggested that an audit committee that had members with financial and industry background and expertise were more likely to demand higher quality audits (Carcello et al. 2002; Abbott et al. 2003). 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.

There are a few key ownership structures that have been discussed in the previous corporate governance studies: management (e.g. Gibson 2003; Santiago-Castro & Brown 2011), institutional (domestic and foreign) (e.g. Shleifer & Vishny 1997), concentrated (e.g. La Porta et al. 2000; Shi & Shitu 2004) and state ownerships (e.g. Bai et al. 2004).

Management ownership has been seen as a factor that could align the potential divergence of interests between management and the shareholders (Jensen and 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).

Shleifer and Vishny (1997) argued that large institutional investors tended to represent their own interests at the expense of the interests of the minority shareholders, and their actions were found to have negative impacts on the performance of the companies. However, there have been contradictory findings in some other studies. Bricley, Lease and Smith, Jr (1988) found that institutional investors did better in monitoring companies' activities comparatively to the other types of investors. Jarrell and Poulsen (1987), McConnell and Servaes (1990), and Brickley, Lease and Smith (1988) found some evidence that institutional investors would be more likely to oppose corporate actions that could destroy the overall shareholders' value.

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 comparatively to domestic institutional investors. Khanna and Palepu (2000) also found that corporate performance was positively related to foreign institutional ownership 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 et al. 2000). Shleifer and Vishny (1997) suggested that controlling shareholders were more interested in using their control to obtain private benefits. 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).

It has been suggested that companies that are controlled by states are likely to suffer more from tunneling (e.g. Bai et al. 2004). In Indonesia, for example, there have been some situations, in which profitable and attractive business units of a state owned enterprise (SOE) were partially sold to the public, while the fully owned SOE retained its position as a parent company (either directly or through a subsidiary). In situations in which the parent company experienced

difficulties, they could tunnel resources out from its business units to fund its operation. Directors of SOE were often political appointees or had some links to the state. In this circumstance, there were potential risks for lacks of board effectiveness and accountability to the other shareholders and for the use of the SOE as a 'cash cow' for authorities and/or political parties.

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

P1: There are significant differences between corporate governance structures of being-tunneled and not-tunneled 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 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 option by not paying the receivable in a bad situation (Atanasov 2008). Provision and elimination of related party loans will in effect decrease a company's net earnings. Tunneling could also be made through unfair pricing transactions, in which a company sold assets to related parties at a lower price than the normal independent party transaction price and purchased assets from related parties at a higher price than independent transaction prices (Cheung et al. 2009b).

Bertrand, Mehta, and Mullainathan (2002) and Cheung, Rau and Stouraitis (2006), in their studies, found that being-tunneled companies experienced decreased performance, while the tunneling companies experienced increased performance. Therefore, this study adds another proposition as follows.

P2: There are significant differences in financial performances between being-tunneled and not-tunneled companies.

III. Methodology

3.1 Sample and data collection

This study aims to evaluate the differences between corporate governance structures of being-tunneled and not-tunneled 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-tunneled and not-tunneled companies. The process will be discussed in the following two sub-sections.

The observation periods applied in this study were from 2008-2010. The lists of the companies were collected from the IDX Fact Books 2008, 2009 and 2010 (Indonesia Stock Exchange 2008; 2009; 2010). There were nine industry classifications of listed companies on the IDX. In this study, Finance classified companies that were listed on the IDX during 2008 to 2010 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 388, 399, 407 companies listed on the IDX during 2008, 2009, and 2010 respectively. After the exclusion of the Finance classified companies, the remaining listed companies, which were used in this study, were 320, 332, 338 during 2008, 2009, 2010 respectively.

3.2 Tunneling detection criteria

The first data collection step was applied in this study to gather a sample of being-tunneled 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[2]. 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.

[2] Capital Market Regulatory Body in Indonesia requires companies to announce affiliation and conflict of interest transactions, i.e. transactions that are part of the main activities of the company, to the public.

To identify the abnormal return around the announcements of related party transactions, this study used use daily stock returns from Data Realtime Investment (RTI) from Gadjah Mada University Database.

To determine whether a certain related party transaction can be classified as tunneling, some findings from previous studies were utilised as bases for developing the detection criteria. Table 1 below describes the criteria and their literature sources. A related party transaction could be classified as tunneling, if it met all of these four criteria.

Table 1
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 related party transactions which have indications of tunneling (Peng, Wei & Yang 2011; Bae et al. 2002; Facio & Stollin 2006; Cheung, Rau & Stouraitis 2006; Cheung et al. 2009a). These previous studies have shown some evidence that minority shareholders experienced large value of losses after the announcements of such related party transactions 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.	Cheung, Rau and Stouraitis (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, Mehta, and Mullainathan 2002).

3.3 Not-tunneled detection criteria

This study aims to evaluate whether there are significant differences between corporate governance structures and financial performances of being-tunneled and not-tunneled companies. Accordingly, the second data collection step was applied in this study to gather a sample of not-being tunneled companies.

In this second data collection step, in addition to the Finance classified companies, being-tunneled companies that were found in the first data collection step were also excluded from the lists of the companies listed on the IDX during 2008, 2009 and 2010. Subsequently, the following criteria were used to obtain the sample for not-tunneled companies. A company could be classified as not-tunneled if it met all of these three criteria.

1. The ratio of related party trading made by a listed company is less than the average ratio of all related party trading made by all listed companies on the IDX.
2. The ratio of related party accounts receivable transactions made by a listed company is less than the average related party accounts receivable transactions made by all listed companies on the IDX.
3. A listed company on the IDX has a positive net income.

3.4 Model and data analysis

The initial model to be tested in this study is as follows.

$$\text{Tunneling} = \beta_0 + \beta_1\text{Single Shareholder} + \beta_2\text{Multiple Shareholders} + \beta_3\text{Independent Board} + \beta_4 \text{Audit Committee} + \beta_5\text{Managerial Ownership} + \beta_6\text{Foreign Institutional Ownership} + \beta 7\text{Domestic Institutional Ownership} + \beta_8\text{State Ownership} + \beta_9\text{ROA} + \beta_{10}\text{PM} + \varepsilon i$$

Explanatory variables are constructed and summarised in Table 2.

Table 2
Variables in the Model

Variable	Type	Scale/Measure	Description
Tunneling	Dummy	1 is assigned for a being-tunneled company, which is a listed company on the IDX that has been identified to have an indication of performing tunneling activities; 0 is assigned for not-tunneled company, which is a listed company that has a ratio of related party transactions which is less than the average ratio of related party transactions performed by all listed companies on the IDX.	As per section 3.1 Tunneling detection criteria and section 3.2 Not-tunneled 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).
Multiple Shareholders	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.	
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 member. 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.

Table 2
Variables in the Model (continued)

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 (Jennings 2005; Aggarwal et al. 2011).
Domestic Institutional Ownership	Continuous	Percentage of shares held by domestic 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

In testing the propositions, this study employed logistic regression analysis and the data were analysed using Statistical Package for Social Science (SPSS) software. The results will be provided in the next section.

IV. Results and Discussions

4.1 Being-tunneled and not-tunneled companies

Analysis made for the period of 2008 to 2010 on 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[3] transactions. This study focuses on asset tunneling, and therefore, 55 being-tunneled companies were included for further analysis. The detailed classifications of these 74 transactions are described on Table 3.

Table 3
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

A second analysis was conducted to obtain sample for the not-tunneled companies based on the not-tunneled detection criteria, and the result of the analysis found 87 not-tunneled companies. The detailed industry classifications of these 55 being-tunneled and 87 not-tunneled companies are described on Table 4.

[3] 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.

Table 4
Companies' IDX Industry Classifications

IDX Industry Classification	Number of Being-Tunneled Companies	Number of Not-Tunneled 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

4.3 Corporate governance structures of being-tunneled and not-tunneled companies

4.3.1 Descriptive statistics

Descriptive statistics for the companies based on the tunneling model used in this study are presented in Table 5. The main finding from the descriptive statistics indicated that being-tunneled companies had significantly higher level of managerial ownerships than not-tunneled companies. This might indicate that the owners who served in the board of directors in being-tunneled 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 tunneled companies was significantly higher than that of not-tunneled companies. This finding is consistent with the findings of Bai et al. (2004), in which companies controlled by states are likely to suffer more from tunneling activities. The domestic institutional ownership of being tunneled companies was slightly higher than that of not-tunneled companies, while the foreign institutional ownership of being tunneled companies was similar to that of not-tunneled companies. The values of the ownership concentrations (single and multiple shareholders), independent board and audit committee compositions of being-tunneled and not-tunneled companies looked similar. Finally, the financial performance (return on assets and profit margin) of being-tunneled companies was significantly lower compared to that of not-tunneled companies. This confirmed the proposition that tunneling activities are likely to destroy the overall shareholders' value.

Table 5
Descriptive statistics

	Being-tunneled companies (N=55)					Not-tunneled 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

4.3.2 Correlation analysis and model revision

To test the multicollinearity 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. Multicollinearity could lead to a problem of logistic analysis, and therefore, for further analysis this study constructed and used a corporate structure index. This index covers the four variables of corporate structure mentioned above, and 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, and a dummy score of 0 was assigned otherwise. 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:

$$\text{Tunneling} = \beta_0 + \beta_1 \text{Single Shareholder} + \beta_2 \text{Multiple Shareholders} + \beta_3 \text{Independent Board} + \beta_4 \text{Audit Committee} + \beta_5 \text{Corporate Structure} + \beta_6 \text{ ROA} + \beta_7 \text{ PM} + \varepsilon i$$

The correlation matrix based on this revised model is presented on Table 6.

Table 6
Correlation matrix of the independent variables in the revised model

	1	2	3	4	5	6	7
1. Corporate Structure 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

** Correlation is significant at the 0.01 level (2-tailed); * Correlation is significant at the 0.05 level (2-tailed).

To allow more results gained from the analysis, this study also constructed two corporate governance indexes to represent the overall quality of the corporate governance practices. The first constructed index followed the study of Yeh, Shu and Su (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 corporate structure index. In the second corporate governance index, the dummy scores of the single shareholder and multiple shareholders variables were also included. Accordingly, the following two models were also used in this study.

Model 2:

$$\text{Tunneling} = \beta_0 + \beta_1 \text{Single Shareholder} + \beta_2 \text{Multiple Shareholders} + \beta_3 \text{Corporate Governance (1)} + \beta_4 \text{ ROA} + \beta_5 \text{ PM} + \varepsilon i$$

Model 3:

$$\text{Tunneling} = \beta_0 + \beta_1 \text{Corporate Governance (2)} + \beta_2 \text{ ROA} + \beta_3 \text{ PM} + \varepsilon i$$

4.4 The relationships between corporate governance mechanisms and tunneling activities

To test Proposition 1 addressing the differences between corporate governance structures of being-tunneled and not-tunneled companies, this study employed logistic regression analysis on the three models. The results are presented in Table 7.

Table 7
The results of the logistic regression analysis

	Model 1	Model 2	Model 3
Single Shareholder	1.456**	1.505**	
Multiple Shareholders	-.583	-.423	
Independent Board	.172		
Audit Committee	.438		
Corporate Structure Index	-.101		
Corporate Governance Index (1)		.115	
Corporate Governance Index (2)			-.021
Return on Assets	-.046	-.040	-0.30
Profit Margin	-.249***	-.245***	-.245***
R^2	.594	.590	.55
Percentage of Correct Classification	93.2	89.0	89.0

***significant at the 0.01 level; ** significance at the 0.05 level; *significance at the 0.10 level

The main finding that can be gained from the results is the significance of the single shareholder variable in both Models 1 and 2. This 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-tunneled and not-tunneled companies.

The independent board and audit committee variables are found to be insignificant factors for predicting the tunneling behaviour of being-tunneled and not-tunneled companies. These findings are consistent with those reported by Juliarto et al. (2013) in their study on tunneling behaviour in Asean 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 corporate structure variable, in this study, is found to be an insignificant factor to 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-tunneled and the not-tunneled companies that were listed on the IDX. It could also indicate that the differences on the corporate structures between the being-tunneled and the not-tunneled 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. (2009a), which showed that the ownership structure variables could not explain the possibility for companies to conduct the value destroying related party transactions. Similarly, the corporate governance indexes are 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-tunneled and not-tunneled 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-tunneled and not-tunneled companies listed on the IDX.

4.5 The relationships between financial performances and tunneling activities

The results on Table 7 show that, while the return on assets variable is not significant, the profit margin variable is significant in all Models 1 to 3. 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-tunneled and not-tunneled companies. This is consistent with the studies by Bertrand, Mehta, and Mullainathan (2002) and Cheung, Rau and Stouraitis (2006), which found that companies experienced decreasing profitability when they performed tunneling transactions. Accordingly, Proposition 2 is accepted.

V. Conclusions

Nenova (2003) stated that controlling shareholders in companies operating in countries with low level of investor protection policies had more chances to expropriate the minority shareholders' wealth. 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.

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

The following is an example of a disclosure regarding related party transactions made by one of the IDX listed companies in the notes to its financial statements (Ratna, 2013)[4].

In June 2009, Company B made a share purchase agreement to acquire Company CA and Company CB in the amount of US$ 0.8 million. This transaction was categorised as a transaction with an affiliated company for both Company B and Company C which were indirectly controlled by the same shareholders.

The detailed information regarding the above transaction, which was not disclosed, is as follows. Company B and Company C had the same controlling shareholder (i.e. the F family). They also had the same commissioners and directors, who were the family members of the controlling shareholder. In June 2009, Company B through Company BB (a subsidiary of Company B), signed a purchase agreement with Company C to take over 99.9% shares of Company CA and 99.9% shares of Company CB (both Company CA and Company CB, which at that time performed poorly, were subsidiaries of Company C). Company B also paid off the entire debts that Company CA and Company CB owed to Company C. The total agreed amount for the takeover transactions and the subrogation was US$ 886,013, in which US$ 75,122 of it

[4] All names of the companies in this example have been coded for ethical purposes.

was used to purchase the shares of Company CA and Company CB, and the remaining US$ 810,891 was used for repayment of Company CA's and Company CB's debts to Company C. This transaction had clearly created an outflow of resources from Company B to Company C. The F family had a total of 100% cash flow right in Company C and a total of 51% cash flow right in Company B.

It could be indicated from this above example that the transaction made by Company B was tunneling. However, the disclosures contained in the notes to the financial statements of Company B did not provide clear and detailed information about the relationships between the company and its related parties, the ultimate ownership structures of the companies involved in this transaction, and the detailed description of the transaction. In a situation where there was no effective regulation for quality of disclosures, the chances for companies to make abusive related party transactions, like the one in the above example, became higher.

There are some implications that 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 related party transactions, and for accountants and executives who have significant roles in enhancing the knowledge of companies in the areas of corporate governance and disclosures.

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 generalisability 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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