

## **Related Party Transactions and Firm Value in the Business Groups in the Indonesia Stock Exchange**

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### **Abstract**

Related party transactions are the most common corporate actions occurring in the business groups in the Indonesia Stock Exchange that can influence firm value. The market capitalization proportion of the business groups is more than 50 percent of all the market capitalization of the issuers listed in the Indonesia Stock Exchange. This study aimed to analyze the determinants of related party transactions affecting the values of the companies in the business groups in the Indonesia Stock Exchange. The determinants were the types of related party transactions, company's size, debt to equity ratio, and period of crisis. This study used panel data with quarterly time period from 2006 to 2013. Samples were determined by purposive sampling that focused on the typology of the companies, namely the companies in the three business groups representing the three layers of market capitalization. In total were 704 observations. The result showed that related party transactions of sales and incomes as well as purchases and expenses significantly have positive effect on firm value. Debt to equity ratio insignificantly has positive effect on firm value. The related party transactions of loans, receivables, asset tunneling, company's size and period of crisis significantly have negative effect on firm value.

**JEL classification numbers:** G11, G32

**Keywords:** related party transactions, firm value, business groups, Indonesia, propping and tunneling

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## **1 Introduction**

Business groups holds significant proportion in the economic activities of many nations throughout the world [1]. Business groups can take the form of multinational corporations which are companies owned or controlling the production of goods and services of more than one country [2]. Reference [3] stated that the size of multinational corporations on the global economy is extraordinary. Currently, there are more than 82,000 multinational corporations around the world with an average of ten affiliate companies abroad. The value-added of the activities of multinational corporations throughout the world is more than 25 percent of world GDP and 42 of the top 100 of the world economic activities are conducted by multinational corporations instead of nations [4].

Indonesia cannot be separated from the role of business groups in the economy. Based on reference [5], it was stated that business groups play an important role in determining the value of capitalization in the Indonesia Stock Exchange. The business groups include the business groups which form large market capitalization consisting of Astra, Salim, Lippo and Sinarmas with a total of 17.93 percent of the whole market capitalization. The business group of State-Owned Enterprises (BUMNs) comprises 21 issuers with a total of 26.35 percent of the entire market capitalization. Other business groups form a small market capitalization, namely MNC, Saratoga, Ciputra, Bakrie and Rajawali with a total of 4.63% of the entire market capitalization. If the business groups mentioned above are added with several other business groups, it will form a proportion of over 50 percent of the total market capitalization in the Indonesia Stock Exchange.

A business group can be described as a company organization where a number of companies are connected via the pyramid ownership structure and cross ownership [6]. The existence of business groups in emerging market is highly important due to market failures caused by asymmetrical information and agency problem [7]. The characteristics of market failures are, for instances, inadequate disclosure and weak corporate governance and control. Companies in a business group are trying to overcome market failures by conducting transactions among the companies in that business group [8, 9]. Transactions between companies in a business group are called related party transactions [7, 10].

Based on the press releases of the Financial Services Authority of Indonesia [OJK] derived from [11], it was stated that related party transactions are important activities and regulated by the Decree of the Chairman of the Capital Market Supervisory Agency (Bapepam) and Financial Institution Number: 412/BL/2009 on Related Party Transactions and Conflicts of Interest on Certain Transactions. The data from OJK news releases sourced from [12, 13, 14] showed that related party transaction activities have a dominant proportion compared to other corporate actions and has been increasing from year to year. In 2012, 165 related party transactions of a total of 271 corporate actions (60.89%) were recorded [12]. In 2013, 245 related party transactions of a total of 386 corporate actions (63.47%) were recorded [13]. In 2014, 194 related party transactions of a total of 273 corporate actions (71.06%) were recorded [14].

The ultimate shareholders in the pyramid ownership structure are largely controlled by family and have a strong role in controlling related party transactions [6, 15]. Reference [6] stated that eight of the nine countries in Asia are owned by 15 family groups controlling more than 20% of company assets listed in the exchange. Reference [15] declared that in 13 countries in Western Europe, there are more than 45% of companies found in 15 nations that are controlled by family. References [16, 17] stated that the

pyramid ownership structure scheme allows related party transactions to be used as the expropriation device to maximize the welfare of the majority shareholders at the expense of minority shareholders.

Thus, related party transactions can be positive as the efficient market internalization device, but can also be negative as the device that allows the expropriation of the majority shareholders against the minority shareholders [18, 19]. Related party transactions can ultimately affect firm value as found in the studies conducted based on references [20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33]. Related party transactions in business groups show different patterns in crisis and non-crisis situations [34]. During strong economic period, the pattern shows weaker tunneling pattern. On the contrary, during weak economic period, the pattern shows weaker propping pattern.

Based on previous studies and the phenomena, the problem formulation was obtained, i.e. related party transactions affect firm value. This study aimed to analyze the determinants of related party transactions affecting the firm value of the companies in the business group listed in the Indonesia Stock Exchange. The determinants covered the types of related party transactions occurring commonly in the Indonesian business groups, the control variable of related party transactions as well as the period of crisis affecting the firm value.

This study is expected to provide benefits to the academicians, companies, public or investors and government. For the academicians, this study is beneficial to add the literature specifically in related party transactions and business groups. For the companies, this study is useful for planning and decision-making regarding related party transactions to be applied in the business groups. For the public or investors and government, the study can be used to review the policies related to related party transactions occurring in the business groups in the Indonesia Stock Exchange.

## **2 Literature Review and Hypotheses**

### **2.1 Related Party Transaction**

Related party transactions according to reference [35] was defined as: "a transfer of resources, services, or obligations between related parties, regardless of whether a price is charged". Furthermore, OJK based on reference [11] defined related party transactions as the transactions made by a company or a controlled company with an affiliate of the company or an affiliate of a member of the board of directors, board members, or company's major shareholder. Reference [33] stated the same thing with the OJK definition, namely related party transactions occur in a company with other related entities such as controlling shareholders, directors, managers and companies under the same control.

Reference [19] classified the types of related party transactions that generally occur in the expropriation of minority shareholders. Related party transactions are divided into three categories. First, transactions that generally result in the expropriation consisting of asset acquisitions, asset sales, equity sales, trading relationships and cash payments to connected parties. Second, the type of transactions that are profitable to the company consist of cash receipts and subsidiary relationships. Third, the type of transactions which may be controlled by strategic rationales comprises takeover offers and joint ventures, joint venture stake acquisitions and sales.

Based on reference [36] related party transactions, especially tunneling, are classified into three major parts, namely cash flow tunneling, asset tunneling and equity tunneling. Cash flow tunneling removes part of the cash flow for the ongoing year, but does not affect the existing productive assets in the long term and does not directly affect firm value to investors. For examples, the transfer pricing of the output sale below the market price or the input purchase above market price. Asset tunneling consists of asset tunneling "out" and asset tunneling "in". Asset tunneling "out" involves the transfer of tangible or intangible assets of a company of which the value is less than the market value. For instance, the sale of assets to an affiliate party is lower than the market value and loan to the affiliate company. Asset tunneling "in" involves the acquisition of major assets of which the price is above the market price derived from an affiliate company or equity in the company. Equity tunneling increases the firm value of controlling shareholders at the expense of minority shareholders, but does not change the productive assets or cash flow. Examples are dilutive offering, freeze-outs of minority shareholders, loans to parties in the company, equity-based incentive compensation that exceeds the market level and insider trading.

Related party transactions may play a role in creating a transaction cost saving and improve the operating efficiency of the company [37]. Furthermore, reference [37] stated that in some specific cases related party transactions are unavoidable because of the commercial sense for the company and if related party transactions are prohibited, it will be against the principle of maximizing shareholder value. Related party transactions can also increase the effectiveness of the use of assets for strategic purposes [7, 38, 39]. Moreover, related party transactions enable the companies in the business groups to share risks through income cash flow transfer and money reallocation from one affiliate to another when needed [40]. Reference [18] stated that the weaker the mechanism of corporate governance is, the higher the value of money in related party transactions is. The statement of reference [18] has strengthened the support for the existence of agency problem in related party transactions. Reference [41] discussed corporate governance influencing firm value by taking evidence from Korea. In previous studies, there were limited discussions on the causal relationship between governance which influenced the attitude of company and market value. The evidence has supported that the reduction of insider self-dealing (disadvantageous related party transactions) improves the welfare transfer to outside shareholders and improves company's performance and firm value thoroughly.

Related party transactions pose a dual effect that could benefit or damage firm value, so to determine this, symmetrical information disclosure to the stakeholders is needed [42]. The problem that arises is that asymmetrical information regarding related party transactions is often disclosed to stakeholders. Corporate governance is needed to monitor financial information disclosure to avoid asymmetrical information that can reduce firm value.

## **2.2 Firm Value**

Reference [44] stated that stock analysts in conducting fundamental analysis use multiple models to value a firm. The models are, among others, dividend discount model (DDM), price-earnings (P/E ratios), and free cash flow models. Reference [44] stated that in measuring firm value the concept of replacement cost known as Tobin's q can be used. Furthermore, the firm value in a computerized simulated business game can be determined through five measurements, namely: book value, market value, capitalized value, deductive judgment in the form of Tobin's q, and adjusted net worth [45]. Reference [46] asserted that Tobin's q has become one of the favorites as the indicator of company's performance.

Tobin's  $q$  is the "value of capital relative to its replacement cost" [47]. If the "capital" refers to the amount of the actual value of a company called  $V$ , and the "liabilities" of the company is called  $L$ , and the "replacement cost" refers to the total assets of a company called  $A$ , then  $q = (V + L)/A$ . If the value of the firm's capital ( $V + L$ ) is equal to the replacement cost ( $A$ ), then Tobin's  $q$  is 1. If the company is managed by someone who has capability then Tobin's  $q$  should be above 1; on the other hand, if that person does not have capability then its worth is below 1. Tobin's  $q$  can be seen as the capability measurement for a company manager relative to his/her co-workers. The interpretation of Tobin's  $q$  allows the independent capability measurement of a manager converted to scale  $q$  and use the results of the conversion to obtain firm value.

Economists connect investment fluctuation with the fluctuation in the capital market. The term of shares refers to the ownership of a company and the stock market is a market where the shares are traded [48]. Stock prices tend to be higher if a company has a profitable investment possibility because there is an opportunity to make profit. This means that higher income is expected in the future for its shareholders. So, stock prices reflect the incentive for investment. Reference [47] proposed that a company forms its investment decisions based on the ratio of Tobin's  $q$ . The numerator of Tobin's  $q$  is the value of economic capital determined by the capital market. The denominator is the price of the capital if purchased today. Tobin reasoned that net investment depends on whether  $q$  is greater or less than 1. If it is greater than 1, the stock prices of the market value may overcome the replacement cost. In this case, a manager can increase the market value of his/her company by buying more capital. Conversely, if  $q$  is less than 1, the stock prices of the market value will be less than the replacement cost. In this case, a manager cannot replace the obsolete capital.

Many studies use Tobin's  $q$  as a device to measure firm value because Tobin's  $q$  is an indicator of the effectiveness of the company from the perspective of investment to various top management games [46]. Furthermore, Tobin's  $q$  plays an important role in many financial interactions and explains the differences in corporate phenomena [49]. The phenomena are, among others: the differences in cross-sectional in investment and diversification decisions, the relationship between managerial equity ownership and firm value, the relationship between managerial performance and profit offering, investment opportunities and response to offering and financing, dividend and compensation policies.

### **2.3 Propping and Tunneling**

Based on research references [19, 50, 51, 52, 53], propping and tunneling are the mechanisms of related party transactions that can affect firm value. Propping and tunneling concepts derived from the model according to references [54, 55, 56]. Propping is expressed as negative tunneling. The model was developed in countries with inadequate legal protection for investors. In countries with weak legal protection, entrepreneurs can "tunnel" resources out of the companies that are not protected by external investors [54].

Reference [57] declared tunneling as the transfer of resources from lower level to higher level in the pyramid chain. Conversely, propping relates to transfers in the opposite direction, i.e. from higher to lower in the pyramid chain aiming to bail out the recipient company to avoid bankruptcy. Tunneling and propping are the primary behavior patterns performed by the controlling shareholders in dealing with related party transactions [58]. Furthermore, reference [58] stated that the two different patterns of related party transactions can be found in the same company at different times.

Tunneling leads to lower firm value and occurs in countries with weak legal protection for investors [54]. Tunneling is conducted by the majority shareholders at the expense of the minority shareholders [59]. Propping is found in crisis situations such as the Asian financial crisis in 1997 and 1998 [60]. Propping pattern contrasting with tunneling shows the adverse effect, namely propping actually increases firm value.

Reference [36] analogized some tunneling activities with a description of an apple plantation. Cash flow tunneling can be seen as the thefts of some apple crops this year. Asset tunneling out involves the thefts of some apple trees resulting in reduced potential apple trees. Asset tunneling in involves additional acquisition in the apple trees that is too expensive. Equity tunneling involves the thefts of ownership claim of the apple plantation. This analogy states that the activities of different types of tunneling have different time horizon impact. The activities of cash flow tunneling have short term impact on firm value. The activities of asset tunneling and equity tunneling have long term impact on firm value. References [60] stated that tunneling and propping activities cannot be monitored, prevented or convicted in countries with weak legal protection for investors. If legal protection is weak, then the creditor cannot take collateral, but it is resulted in the inability of the company to obtain another loan in the future. In this context, the direct result of debt is to increase potentially for propping and make investors participate in the financing of the company. Reference [60] also stated that the propensity for tunneling and the propensity for propping, namely transfer in and out, are symmetrical. The propensity for propping correlates with the amount of more debt with not very significant side effect on the stock prices when there is an adverse macroeconomic shock.

The most important question is when and in what context do the shareholders choose to conduct propping or tunneling? Reference [58] discovered that companies initially conduct propping and perform tunneling later on. Propping is carried out by the controlling shareholders due to institutional factor which is in order to maintain the "shells" and the achievement of refinancing qualification. After successful propping, companies will suffer from tunneling. References [61] stated the same thing in that propping is done by companies to avoid being delisted or losing of the ability to refinance. Reference [62] expressed the opinion of earnings manipulation that encourages shareholders to conduct tunneling. Furthermore, reference [63] stated that the market would react differently if healthy and unhealthy companies conduct related party transactions. In a healthy company, related party transactions are often considered to be the cause of the expropriation of the minority shareholders. On the other hand, in unhealthy company which is in a financial distress condition, the market will assume that related party transactions are propping aiming to heal the company.

## **2.4 Research Hypotheses**

Sales to related party have different views from several studies linking to related party transactions. References [64] and [65] stated that sales to affiliate party of abnormal nature can be used as propping. It means that prop up earnings is done by using abnormal related sales when the listed company is exposed to the risk of being delisted from the stock exchange or losing the ability to receive refinancing [58]. Conversely, reference [36] stated that sales and purchases are included in the cash flow tunneling. For examples, the transfer of sales pricing to related party below the market price or the purchase from related party above the market price. Cash flow tunneling is done repeatedly over the years but the proportion may vary from time to time. These studies represent sales and incomes as well

as purchases and expenses from related parties which affect firm value. The hypotheses formed are:

H1: Sales and incomes to related parties will affect firm value.

H2: Purchases and expenses to related parties will affect firm value.

Reference [66] investigated the related party transactions between the companies in Hong Kong and their controlling shareholders. The results showed that the controlling shareholders of the listed companies in the Hong Kong stock exchanges performed tunneling through inter-corporate loans. Furthermore, reference [36] stated that loans to affiliate companies are part of asset tunneling out. Asset tunneling out affects the profitability of the existing company assets and affects firm value. Hypothesis formed from this theory is:

H3: Loans to related parties will affect firm value.

Reference [19] stated that a profitable transaction for minority shareholders occurs when cash receipts and subsidiary relationships exist. Cash receipts occur when a transaction involves a cash or a loan provided to the company. Subsidiary relationship occurs when acquisition or equity stakes or asset and trade relation happen. Reference [60] stated that propping up exists over transactions profitable for minority shareholders. These transactions will increase firm value. Thus, the hypothesis established is:

H4: Receivables to related parties will affect firm value.

Reference [67] revealed the existence of transfer of wealth between the companies listed in the stock exchanges and the controlling shareholders through asset transactions. Furthermore, reference [36] stated that asset tunneling "in" involves the acquisition of company' major assets procured from affiliate company at a price higher than the market price. Asset tunneling activities will influence the capacity of company to raise cash in the future that will ultimately affect firm value. Hypothesis formed next is:

H5: Asset Tunneling to related parties will affect firm value.

Reference [19] stated that a large company has better exposure and can prevent the financial pressure better. Reference [58] stated that company's size is an important variable affecting the normal activity of related party transactions. Reference [33] incorporated company's size as a control variable in analyzing the effect of related party transactions on firm value as measured by Tobin's q. Thus, the hypothesis established is:

H6: Company's size will affect firm value.

Reference [60] explained that the companies operating in countries with weak legal system will depend on huge debt burden. Weak legal system will make debt very interesting because creditors cannot effectively control the collateral. The debt ratio is large enough to cause financial distress that will affect firm value [6]. Thus, the hypothesis established is reflected through the debt to equity ratio that will affect firm value.

H7: Debt to equity ratio will affect firm value.

A study of the business groups in Japan was conducted based on reference [34] to discover the tunneling and propping in different economic situations. Reference [34] found that in strong economic situation tunneling occurs weakly between the affiliate companies in the business groups. Conversely, in crisis situation propping occurs weakly between the affiliate companies in the business groups. Thus, the hypothesis established is:

H8: Period of crisis will affect firm value.

### **3 Methods**

The data used in this research were secondary data obtained from PT. The Indonesia Stock Exchange (BEI), [www.idx.co.id](http://www.idx.co.id) website, PT. Indonesian Capital Market Electronic Library (ICaMEL), Economic and Business Data Center (PDEB) of University of Indonesia and other sources that could be trusted. The study period was quarterly from 2006 to 2013. In total were 704 observations composed of 22 companies including three business groups for 8 years with quarterly period.

Based on the website of The Indonesia Stock Exchange, [www.idx.co.id](http://www.idx.co.id), information stating that the population up to December 31, 2014 were 507 companies was obtained. Those companies can be divided into two main sectors, namely: raw material industry and processing or manufacturing industry. Raw material industry consist of sub-sectors: (1) agriculture and (2) mining. Processing or manufacturing industry consists of sub-sectors: (1) basic and chemical industry, (2) textile and garment, (3) food and drinks, (4) property and real estate, (5) infrastructure, utilities and transportation, (6) finance, and (7) trade, services and investment.

Non-probability sample sampling technique was used by purposive sampling, i.e. the samples were taken based on the company's typology of the group related to the market capitalization of the business groups in the Indonesia Stock Exchange at the present. The use of market capitalization is a reflection of investors in determining investment return based on company's size measured by market capitalization [44].

Business groups were classified into three layers of market capitalization; the first layer was above Rp 250 trillion, the second layer was between Rp 100 trillion to Rp 250 trillion, and the third layer was under Rp 100 trillion. The business groups in the first layer consisted of Astra and a group of state-owned enterprises. The business groups in the second layer consisted of Salim, Lippo and Sinarmas. The business groups in the third layer consisted of MNC, Saratoga, Ciputra, Bakrie and Rajawali.

In the first layer of market capitalization, Astra business group with 7 companies was chosen. Astra was selected because it was the only private business group in the first layer. In the second layer of market capitalization, Lippo business group with 9 companies was chosen. Lippo was selected because it occupied the highest market capitalization growth in comparison with Salim and Sinarmas business groups. As for the third layer of market capitalization, Bakrie business group with 6 companies was chosen. Bakrie was selected because this business group showed a very contradictive performance in that it had dominated market capitalization in the past, but now its stock prices plunged down in the Indonesia Stock Exchange.

Research variables were measured based on the theories and hypotheses of the study as previously described in the literature review and the research hypotheses. Variable operationalization in detailed is seen in the following Table 1:

Table 1: Variable Operationalization

Variable	Indicator/ Proxy	Measurement/ Formula	Scale
TQ	Tobin's q	$\frac{\text{Equity market value} + \text{liabilities}}{\text{Asset}}$	Ratio
RP_INC	Related Party Transactions of Sales and Incomes	$\frac{\text{Sales and incomes to related party}}{\text{Total sales and incomes}}$	Ratio
RP_EXP	Related Party Transactions of Purchases and Expenses	$\frac{\text{Purchases and expenses to related party}}{\text{Total purchases and expenses}}$	Ratio
RP_LN	Related Party Transactions of Loans	$\frac{\text{Loans to related party}}{\text{Total liabilities}}$	Ratio
RP_REC	Related Party Transactions of Receivables	$\frac{\text{Total receivables to related party}}{\text{Total receivables}}$	Ratio
AST_TNL	Asset Tunneling	$\frac{\text{Total asset tunneling}}{\text{Total asset Ln (asset)}}$	Ratio
SIZE	Company's Size		Ratio
DER	Debt to Equity Ratio	$\frac{\text{Total Liabilities}}{\text{Shareholders' Equity}}$	Ratio
Dummy_CRS	Crisis existed or not	Dummy : Crisis existed (1), if not existed (0)	-

Based on the hypotheses and variable operationalization above, a model was constructed as the analysis draft to answer the following research hypothesis:

$$TQ_{it} = \beta_{it} + \beta_1 RP\_INC_{it} + \beta_2 RP\_EXP_{it} + \beta_3 RP\_LN_{it} + \beta_4 RP\_REC_{it} + \beta_5 AST\_TNL_{it} + \beta_6 SIZE_{it} + \beta_7 DER_{it} + \beta_8 Dummy\_CRS_{it} + \varepsilon_{it}$$

The data used in this study were panel data. According to reference [68], economic studies using panel data have advantages compared to the cross-sectional or time-series data. The advantages of panel data are: (1) panel data generally give researchers a large number of data points, (2) the increase of the degree of freedom (3) reducing collinearity between explanatory variables thus improving the efficiency of the econometric estimation, (4) longitudinal data enables researchers to analyze a number of important economic questions that cannot be done using cross-sectional or time series data.

Panel data model consisted of Pooled Least Square (PLS) model, Fixed Effect Model (FEM), and Random Effect Model (REM). Selection of the best model was conducted through statistical tests in the forms of Chow test, Breusch-Pagan LM test and Hausman test. Chow test was used to select whether PLS model or FEM was better. Breusch-Pagan LM test was used to choose between PLS model and REM. Hausman test was used to

decide between FEM and REM [69].

Model testing also considered the selection guidelines based on references [70] and [71], namely: (1) if T (unit time series) is greater than N (unit cross section), Fixed Effect Model (FEM) is chosen, (2) if N is greater than T, Random effect Model (REM) is selected, (3) if individual error correlates with independent variable, then the parameter obtained using random effect will be biased while that using fixed effect will not be biased, (4) If N is greater than T and the assumption underlying random effect can be met, then random effect is more efficient than fixed effect.

Panel data condition in this study was that T was greater than N, i.e. 32 units of time series with N as many as 22 companies consisting of Astra Group with 7 companies, Lippo Group with 9 companies and Bakrie Group with 6 companies. Based on the model testing and selection consideration, the selected model was the Fixed Effect Model (FEM). All data were processed with Microsoft Excel and Eviews version 8.

## 4 Results and Discussion

### 4.1 Descriptive Statistics

Based on Table 2, the descriptive statistics of research variables consisting of the independent variable of firm value (TQ) and dependent variables comprising related party transactions of sales and incomes (RP\_INC), related party transactions of purchases and expenses (RP\_EXP), related party transactions of loans (RP\_LN), related party transactions of receivables (RP\_REC), related party transactions of asset tunneling (AST\_TNL), company's size (SIZE) and debt to equity ratio (DER) is as follows:

Table 2: Descriptive Statistics of Research Variables

Variable	Obs	Mean	Std Dev	Min	Max
TQ	704	1.490129	1.417322	0.109149	16.005459
RP_INC	704	0.122882	0.711781	-9.378884	5.671981
RP_EXP	704	0.105954	0.147848	0	0.935894
RP_LN	704	0.131981	0.204916	0	0.942217
RP_REC	704	0.208185	0.252355	0	1.000000
AST_TNL	704	0.275868	0.288425	0	0.992239
SIZE	704	22.078108	5.628416	13.736815	31.074650
DER	704	1.360297	15.368791	-387.837294	79.690201

Source: Secondary data, processed

Mean firm value in Tobin's q of 1.490129 states that averagely the firm value of the companies in the business groups is greater than 1 if calculated based on Tobin's q. The results of Tobin's q ratio above 1 indicate two things, i.e. the companies in the business groups averagely are managed by people who have capability and stock prices can overcome replacement cost, hence it can replace obsolete assets [47, 48]. Tobin's deviation standard is quite high at 1.417322 which indicates that data heterogeneity is pretty high.

The results show that there are outlier data, i.e. firm value with Tobin's q minimum value at 0.109149 and Tobin's q maximum value at 16.005459. The firm value of Tobin's q at 0.109149 is the firm value of PT Lippo E-Net Tbk (company code LPLI), part of Lippo business group in the period of 2008 Q4. As for the firm value of Tobin's q amounting to

16.005459, it is the firm value of PT Matahari Department Store Tbk (company code LPPF), also part of Lippo business groups in the period of 2013 Q1.

Further study shows that PT Lippo E-Net Tbk, of which its original scopes of business were services, information technology and company management, has transformed into an investment company that manages and develops business. The period of 2008 Q4 is the peak period of crisis that affects the entire activities of the companies in the business group. The main business of PT Lippo E-Net Tbk is investment that is highly vulnerable to the effects of crisis. Crisis pressure on the field of investment is the reason for PT Lippo E-Net Tbk to have the lowest firm value compared to other companies in the studied three business groups.

On the contrary, PT Matahari Department Store Tbk in the period of 2013 Q1 experiences extraordinary firm value increase causing the Tobin's q ratio reaching up to 16.005459. Further study shows that in 2013 there would be an acquisition of 26.1% shares of PT Matahari Department Store Tbk by Anderson Investment, a subsidiary company of Temasek, Singapore at US\$ 300 million [72]. This transaction has created investor expectation which has resulted in the tremendous increase of stock prices and firm value of PT Matahari Department Store Tbk.

Mean related party transactions of sales and incomes, related party transactions of purchases and expenses, related party transactions of loans, related party transactions of receivables, and related party transactions of asset tunneling show a range from 0.105954 to 0.275868. These results indicate that related party transactions with various types occur almost evenly throughout the companies in the business groups. The range of related party transactions occurring from 0.105954 to 0.275868 is very beneficial if the results of this study are used as the benchmark for the study of related party transactions in other business groups.

The values of related party transactions of sales and incomes with a range of minimum -9.378884 and maximum 5.671981 show other income in the companies that can create a pretty extreme ratio. Other income (expense) accounts can produce other expenses that can erode sales; on the other hand, other income (expense) accounts can result in other incomes that exceed the value of the sales of the company. Meanwhile, the ratio of other related party transactions for minimum to maximum range indicates normal range from 0 to 1.

Company's size in the form of natural asset logarithm shows a fairly high deviation standard at 5.628416. This result shows that the sizes of the companies in the business groups quite varied in terms of company assets. The quite high level of diversity for company's size also caused diverse variations of related party transactions in the companies in the business groups.

Debt to equity ratio (DER) with a mean of 1.360297 indicates that debts incurred in the companies in the business groups are averagely 1.360297 times the average of equity. Analysis shows that in general debt to equity ratio occurring in the companies in the business groups is not too high and is still within normal limit. However, debt to equity ratio shows that the highest deviation is at 15.368791. DER also has the widest range compared to other variables, namely from the minimum of -387.837294 to the maximum of 79.690201. This means that the debt to equity ratio variables show the highest level of diversity or the most heterogeneous compared to other variables.

## 4.2 Panel Data Analysis

Based on Table 3, the panel data estimation results on the independent variables of related party transactions of sales and incomes (RP\_INC), related party transactions of purchases and expenses (RP\_EXP), related party transactions of loans (RP\_LN), related party transactions of receivables (RP\_REC), related party transactions of asset tunneling (AST\_TNL), company's size (SIZE), debt to equity ratio (DER), period of crisis (Dummy\_CRS) on the dependent variable of firm value (TQ) is as follows:

Table 3: Panel Data Estimation Results

Variable	Coefficient	Prob.	Result
C	4.982423	0.0000	Constant
RP_INC	0.049077	0.0579	***)
RP_EXP	0.728016	0.0000	*)
RP_LN	-0.393711	0.0158	**)
RP_REC	-0.606386	0.0000	*)
AST_TNL	-0.726404	0.0015	*)
SIZE	-0.107722	0.0000	*)
DER	0.000679	0.3435	Insignificant
Dummy_CRS	-0.169960	0.0000	*)
R-squared	0.669566		
Prob (F-statistic)	0.000000		

Note: \*) Significant at 1% significance level  
 \*\*) Significant at 5% significance level  
 \*\*\*) Significant at 10% significance level

Related party transactions of sales and incomes have significantly positive effect on firm value. This finding supports the hypothesis put forward by references [64] and [65] which stated that sales to affiliate party are abnormal and are used as propping. This finding rejects the theory put forward by reference [36] i.e. sales and incomes to affiliate party is the cash flow tunneling that could reduce firm value. The finding of this study shows that there is no negative effect or tunneling due to an increase in firm value. Nevertheless, it should be questioned further whether the related party transactions of sales and incomes are of propping nature and benefit minority shareholders or they just aim to avoid the risk of being delisted from the stock exchange or losing the ability to receive refinancing [58]. The findings from other related party transaction accounts will explain the actual outcome.

Related party transactions of purchases and expenses have significantly positive effect on firm value. This finding is unique because so far the theories of related party transactions are still limited in connecting purchase and expense transactions with firm value. This finding also contradicts reference [36] which stated that trade transactions including purchases are categorized as cash tunneling which can reduce firm value. The finding of this study actually states the opposite, namely the purchases and expenses to related party have positive effect on firm value. Nevertheless, it should be questioned further whether the related party transactions of purchases and expenses is of propping nature and benefit minority shareholders or they just aim to avoid the risk of being delisted from the stock exchange or losing the ability to receive refinancing [58]. The findings of other related party transaction accounts will explain the actual outcome.

Related party transactions of loans have significantly negative effect on firm value. This finding confirms the study based on reference [66] and reference [36]. Reference [66] stated that inter-corporate loan is tunneling that can reduce firm value. Reference [36] stated that the loans between related parties are tunneling out that can lower firm value. This finding also confirms reference [60] which stated that developing countries with weak corporate governance will indicate a high level of debt ratio. In this case, the debt ratio shown is the debt ratio of related party transactions against overall debt.

Related party transactions of receivables have significantly negative effect on firm value. This finding contradicts the finding put forward by reference [19] which stated that the transactions of cash receipts and subsidiary relationships are beneficial to minority shareholders. Likewise, this finding differs from the finding proposed by reference [60] which suggested the existence of propping up over the transactions that benefit minority shareholders. In this study, related party transactions of receivables of cash receipts nature actually decrease firm value, which means it is more tunneling than propping.

Related party transactions of asset tunneling have significantly negative effect on firm value. This result confirms the study according to reference [67] and reference [36]. Asset tunneling allows the controlling shareholders to make a transfer of wealth. The process is carried out by obtaining or purchasing assets that are higher than the market prices through the companies in the business groups. Asset tunneling activities will affect firm value in the long term.

Company size has significantly negative effect on firm value. This finding shows a different result with reference [19] which stated that a larger company has better exposure and could prevent financial distress better. This study points out that greater company's size will lead to decreasing firm value. Frequent and more related party transaction activities in bigger company will result in a decrease in firm value. The finding of this study supports the study according to reference [33] which stated that company's size affects the firm value of Tobin's  $q$ . This finding also confirms reference [58] which stated that company's size is an important variable in the normal activity of a company.

Debt to equity ratio (DER) has positive but insignificant effect on firm value. The results of descriptive statistics state that debt to equity ratio amounted to 1.360297 in average can still be said to be within normal limit. This means that averagely companies maintain not to high debt to equity ratio, causing the estimation of DER on firm value to be insignificant. This finding does not implicitly support references [60] and [17] which stated that companies operating in countries with weak legal system would highly depend on huge debt burden. Further analysis is conducted if this result is associated with previous finding, i.e. related party transactions of loans have significantly negative effect on firm value. Both of these findings, if connected, describe the debt from creditor or third party to the business groups converted into loan to related parties in the companies in the business groups. In other words, the hypothesis of reference [60] would be more appropriate if the occurrence of debt was overseen in the layer between affiliate companies in the business groups.

Period of crisis has significantly negative effect on firm value. This finding suggests that in times of crisis the occurring related party transactions are of tunneling nature, resulting in lower firm value. These results confirm the research conducted by reference [34] that revealed that during crisis situation propping occurs weakly between the affiliate companies in the business groups. In other words, tunneling is the selected related party transactions for the controlling shareholders at the time of crisis.

The coefficient of determination (R-squared) of 0.669566 or 66.9566% means that all

independent variables can explain 66.9566% of the dependent variable of firm value (TQ). While the rest of 33.0434% are factors beyond the independent variables that can explain the dependent variable of firm value (TQ). Further study is expected to reveal the factors beyond related party transactions that affect firm value.

Overall, panel data estimation results stated that related party transaction activities with various types occur throughout the companies in the business groups. Two affiliate transaction activities, namely related party transactions of sales and incomes as well as purchases and expenses, result in an increase in firm value. The two related party transaction activities are propping up conducted by a company to another company in the business groups. Three related party transaction activities, namely related party transactions of loans, receivable transactions and asset tunneling, result in a decrease of firm value. The three related party transaction activities are called tunneling. These findings confirm reference [60] that also stated that the propensity for tunneling and the propensity for propping namely transfer in and out is symmetrical. These findings also confirm the statement by reference [58] which declared that both patterns of the different related party transactions can be found in the same company at different times.

Overall, panel data estimation results express that tunneling activities are done more than propping activities. Tunneling activities are carried out by three types of related party transactions, namely loans, receivables and asset tunneling. Meanwhile, propping activities are carried out by two types of related party transactions, namely sales and incomes as well as purchases and expenses. An interesting result has found out that propping activities are performed on profit and loss accounts, while tunneling activities are carried out on balance sheet accounts. These findings can be linked to the previous study that revealed that companies conducted propping with make-up or enhanced the financial statements to avoid the companies from being delisted [61]. Other motivation for companies to perform propping is in order for the controlling shareholders to maintain the "shells" and the achievement of refinancing qualifications [58].

Propping activities on sales and incomes as well as on purchases and expenses are activities conducted repeatedly over the years but the proportion varies from time to time. Propping activities are similar to cash flow tunneling on sales and purchases as proposed by reference [36]. Reference [36] revealed that related party transaction activities of sales and purchases do not affect the existing productive assets in the long term and do not directly affect firm value to investors. Thus, propping activities according to econometric analysis increase firm value, but directly will not affect firm value in the eyes of investors. The propensity of propping activities is only to meet the needs of performance in the stock exchange, the maintenance of "shells" as well as the achievement of refinancing qualifications [61, 58].

There are differences in tunneling activities in the studied three accounts, namely related party transactions of loans, receivables and asset tunneling. These three activities occur in balance sheet accounts. References [36] stated that these three activities affect the productive asset in long-term and directly influence firm value to investors. These activities reflect the behavior of the controlling shareholders in conducting the transfer of wealth to them [66, 67]. The tunneling activities also confirm the statements by references [60] and [54], i.e. companies operating in countries with weak legal system will perform many tunneling activities. Tunneling is conducted by the majority shareholders at the expense of minority shareholders [59].

Further analysis of the study findings is the sequence of propping and tunneling events and the effect on firm value. Reference [60] also stated that the propensity for tunneling

and the propensity for propping in the forms of transfer in and out are symmetrical. However, reference [58] repositioned the findings of reference [60], namely companies initially perform propping but then will do tunneling. So, this study findings can be translated that initially the occurring related party transaction activities are propping of sales and incomes as well as purchases and expenses, but then the controlling shareholders will undertake tunneling activities through related party transactions of loans, receivables and asset tunneling. The propping activities on the profit and loss accounts are only short term and do not essentially affect firm value for investors. Furthermore, tunneling activities carried out on balance sheet accounts will be in long term and affect firm value for investors.

The problem that arises according to reference [60] is the fact that tunneling and propping activities cannot be monitored, prevented or convicted in countries with weak legal protection for investors. Through this study, the problem is attempted to be answered, i.e. tunneling and propping activities could be monitored through the approach of theories and econometric analysis on related party transaction activities. The prevention of tunneling and propping that decrease firm value and harm minority shareholders can be done through good corporate governance [18, 41] and the disclosure of symmetrical information to the stakeholders [42]. Law enforcement is the duty of the nation, especially the Financial Services Authority of Indonesia (OJK), to be more active in reducing related party transaction activities in the companies listed that is detrimental to the public.

## **5 Managerial Implications**

Companies in the business groups listed in the Indonesia Stock Exchange have the habit to conduct propping on profit and loss accounts but tunneling on balance sheet accounts. This pattern in the long term will hinder firm value to grow properly. Companies in the business groups must change this pattern in order to avoid benefitting only the controlling shareholders. Planning and decision-making on the type of related party transactions to be applied should be based on good corporate governance and good financial information disclosure. The change of related party transactions into better pattern leads to better growth for the companies in the business groups in the future.

The government, in this case the Financial Services Authority of Indonesia, in the future has to be able to keep an eye on the patterns and types of related party transactions occurring in the Indonesia Stock Exchange. The propping of related party transactions on profit and loss accounts is only to enhance the financial statements ("window dressing") and in short term has positive impact on the performance of the stock exchange. In the long term, the performance of the stock exchange will be determined by the types and amount of tunneling performed by the companies in the business groups. Early detection through report disclosure using qualified public accounting firm should be periodically reviewed by OJK. Strict sanctions for the violation of related party transactions is a key to law enforcement for the protection of investors in the Indonesia Stock Exchange.

Investors should have a good knowledge on the patterns and types of related party transactions occurring in the companies in the business groups. Better knowledge would make investors more cautious in investing in companies associated with related party transactions so as to avoid investment losses in the future. Investors are also expected to perform their active role in assisting the Financial Services Authority of Indonesia if there are related party transactions that will lead to negative impacts on the public. The role can

be in the forms of written information delivered to OJK or official announcement in the media that can correct the company and OJK. Information disclosure and good communication between the companies, the Financial Services Authority of Indonesia and investors will make the stock market more trustworthy. In the long term, if the stock market goes well then all the stakeholders concerned will be benefitted.

## **6 Conclusions**

Related party transaction activities in the form of sales and incomes, purchases and expenses, loans, receivables and asset tunneling occur in the entire companies in the business groups in the Indonesia Stock Exchange. Related party transactions of sales and incomes as well as purchases and expenses have positive effect on firm value. Related party transactions of loans, receivables and asset tunneling have negative effect on firm value. Related party transactions of sales and incomes as well as purchases and expenses are of propping nature that can support the financial condition of an affiliate company in financial distress. However, these two types of related party transactions can actually exist just to enhance the financial statement in order to avoid the risk of being delisted, maintaining a "shell" and keeping the company from losing the ability to receive financing. Related party transactions of loans, receivables and asset tunneling are of tunneling nature which creates the expropriation of the majority shareholders at the expense of minority shareholders.

Related party transactions occurring through propping and tunneling can go through two stages. Propping is performed first on an affiliate company and tunneling will occur next on the companies incorporated in the business groups. Tunneling on related party transactions of loans, receivables and asset tunneling influences the productive asset and in the long term affects firm value. This condition confirms the weaknesses in a country's legal system in the protection of the rights of investors. Tunneling prevention can be done through good corporate governance and the disclosure of symmetrical financial information to the stakeholders. Law enforcement through the Financial Services Authority of Indonesia can also reduce the negative effects of related party transactions in the form of tunneling.

Other variables affecting firm value are company's size, debt to equity ratio as well as period of crisis. Bigger company size actually results in lower firm value. This means that greater company's size does not reflect better corporate governance mechanism. Debt to equity ratio (DER) has positive effect, but insignificant on firm value. Nevertheless loan incurred among affiliate parties decreases firm value. If both of these findings are connected, they will describe that debt from creditor or a third party is converted into loan to related parties in the companies in the business groups that ultimately will reduce firm value. In the period of crisis, related party transactions of tunneling nature occur that significantly decrease firm value.

## References

- [1] C.S. Kim, "Is Business Group Structure Inefficient? A Long-Term Perspective," *Asia-Pacific Journal of Financial Studies*, vol. 41, Jan 2012, pp. 258-285.
- [2] C.N. Pitelis and R. Sugden, "The (theory of the) Transnational Firm," in *The Nature of the Transnational Firm*, 2nd ed. C.N. Pitelis and R. Sugden, Ed. London and New York: Routledge, 2000, pp. 1-7.
- [3] L. Eden and L.M. Smith, "The Ethics of Transfer Pricing," *Proceedings Presentation at the AOS Workshop on Fraud in Accounting, Organizations and Society*, London, 2011, pp. 1-40.
- [4] United Nations Conference on Trade and Development (UNCTAD) "World Investment Report 2011," 2011.
- [5] Berita Satu, "5 Grup Emiten Kuasai "Market Cap" Bursa," Internet : <http://www.beritasatu.com>, 2015 [Apr. 7, 2015].
- [6] S. Claessens, J.P.H. Fan and L.H.P. Lang, "The Benefits and Costs of Group Affiliation: Evidence from East Asia," *Emerging Markets Review*, vol. 7, no. 1, 2006, pp. 1-26.
- [7] T. Khanna and K. Palepu, "Is Group Affiliation Profitable in Emerging Markets? An Analysis of Diversified Indian Business Groups," *Journal of Finance*, vol. 55, no. 2, 2000, pp. 867-891.
- [8] R. Coase, "The Nature of the Firm. *Economica* 4," 1937, pp. 386-405.
- [9] O. Williamson, "The Economic Institutions of Capitalism: Firms, Markets, Relational Contracting," New York: Free Press, 1985.
- [10] T. Khanna and K. Palepu, "The Future of Business Groups in Emerging Markets: Long-run Evidence from Chile," *Academy of Management Journal*, vol. 43, no. 3, 2000, pp. 268-285.
- [11] Otoritas Jasa Keuangan (OJK), "Keputusan Ketua Badan Pengawas Pasar Modal dan Lembaga Keuangan Nomor : KEP-412/BL/2009 tanggal 25 Nopember 2009 tentang Transaksi Afiliasi dan Benturan Kepentingan Transaksi Tertentu", 2009.
- [12] Otoritas Jasa Keuangan (OJK), "Siaran Pers Akhir Tahun 2012", 2012.
- [13] Otoritas Jasa Keuangan (OJK), "Laporan Tahunan OJK 2013", 2013.
- [14] Otoritas Jasa Keuangan (OJK), "Konperensi Pers Akhir Tahun 2014", 2014.
- [15] M. Faccio and L. Lang, "The Ultimate Ownership of Western European Corporations," *Journal of Financial Economics* 65, 2002, pp. 365-395.
- [16] R. La Porta R, F. Lopez-De-Silanes, A. Shleifer, "Corporate Ownership around the World," *Journal of Finance*, vol. 54(2), 1999, pp. 471-517.
- [17] S. Claessens, S. Djankov, H.P Lang, "The Separation of Ownership and Control in East Asian Corporations," *Journal of Financial Economics*, vol. 58 (1-2), 2000, pp. 81-111.
- [18] E.A. Gordon, E. Henry, D. Palia, "Related Party Transactions : Associations with Corporate Governance and Firm Value," *Advances in Financial Economics*, vol. 9, 2004, pp. 1-27.
- [19] L.C. Cheung, P.R. Rau, A. Stouraitis, "Tunneling, Propping, and Expropriation : Evidence from Connected Party Transactions in Hong Kong," *The Journal of Financial Economics*, vol. 82(2006), 2006, pp. 343-386.
- [20] A.C.H. Lei and F.M. Song, "Connected Transaction and Firm Value : Evidence from China-Affiliated Companies," *Pacific-Basin Finance Journal*, vol. 19, 2011, pp. 470-490.

- [21] R.S.K. Tan, P.L. Chng, "CEO Share Ownership and Firm Value. *Asia Pacific Journal of Management*," vol. 18, 2001, pp. 355-371.
- [22] K.C. Chan and J. Li, "Audit Committee and Firm Value: Evidence on Outside Top Executives as Expert-Independent Directors," *Journal of Corporate Governance*, vol. 16, 2008.
- [23] J.M. Griffith, "CEO Ownership and Firm Value," *Managerial and Decision Economics*, vol. 20, 1999, pp. 1-8.
- [24] O. Faleye, "Classified Boards, Firm Value, and Managerial Entrenchment," *Journal of Financial Economics*, vol. 83, 2007, pp. 501-529.
- [25] P.P. Gupta, D.B. Kennedy, S.C. Weaver, "Corporate Governance Scores, Tobin's Q and Equity Prices: Evidence from Canadian Capital Markets," *Corporate Ownership and Control*, vol. 6 (3), 2009.
- [26] P. Klein, D. Shapiro, J. Young, "Corporate Governance, Family Ownership and Firm Value : Canadian," Blackwell Publishing L, 13 (6), 2005.
- [27] Y. Kim, "The Proportion and Social Capital of Outside Directors and Their Impacts on Firm Value: Evidence from Korea," Blackwell Publishing, vol. 15 (6), 2007.
- [28] L.Y. Setia-Atmaja, "Governance Mechanisms and Firm Value: The Impact of Ownership Concentration and Dividends," *Corporate Governance : An International Review*, vol. 17(6), 2009, pp. 694-709.
- [29] W.P. Chen, H. Chung, T.L. Shu, S. Wu, "External Financing Needs, Corporate Governance, and Firm," *Corporate Governance : An International Review*, vol. 18(3), 2010, pp. 234-249.
- [30] V. Jog, P.C. Zhu, S. Dutta. "Impact of Restricted Voting Share Structure on Firm Value and Performance," *Corporate Governance : An International Review*, vol. 18 (5), pp. 415-437, 2010.
- [31] A. Renders and A. Gaeremynck, "Corporate Governance, Principal-Principal Agency Conflicts, and Firm Value in European Listed Companies," *Corporate Governance : An International Review*, vol. 20 (2), 2012, pp. 125-143.
- [32] R. Barontini and L. Caprio, "The Effect of Family Control on Firm Value and Performance : Evidence from Continental Europe," *European Financial Management*, vol. 12(5), 2006, pp. 689-723.
- [33] M. Nekhili and M. Cherif, "Related Parties Transactions and Firm's Market Value : the French Case," *Review of Accounting and Finance*, vol. 10 (3), 2011, pp. 291-315.
- [34] S. Dow, J. McGuire, "Propping and Tunneling: Empirical Evidence from Japanese Keiretsu," *Journal of Banking and Finance*, vol. 33, 2009, pp. 1817-1828.
- [35] International Accounting Standards Boards (IASB), "International Financial Reporting Standards Part A," 2010, pp A589.
- [36] V. Atanasov, B. Bernard, C.S. Ciccotelo, "Unbundling Measuring Tunneling," Finance Working Paper, European Corporate Governance Institute, 2008.
- [37] P. Srinivasan, "An Analysis of Related-Party Transaction in India," Working Paper No : 402, Indian Institute of Management Bangalore 3, 2013.
- [38] T. Khanna and J.W. Rivkin, "Estimating the Performance Effects of Business Groups in Emerging Markets," *Strategic Management Journal*, vol. 22(1), 2001, pp. 45-74,.
- [39] I.P Mahmood, W. Mitchell, "Two Faces: Effects of Business Groups on Innovation in Emerging Economies," *Management Science*, 2004, pp. 1348-1365.
- [40] J. Lincoln, M. Gerlach, C. Ahmadijan, "Keiretsu Networks and Corporate Performance in Japan," *American Sociological Review*, vol. 61, 1996, pp. 67-88,.

- [41] B.S. Black, W. Kim, H. Jang, K.S. Park, "How Corporate Governance Affects Firm Value: Evidence on Channels from Korea," Social Science Research Network, 2010.
- [42] M.F. Chaghadari, Z.A. Shukor, "Corporate Governance and Disclosure of Related Party Transactions," Proceeding 2nd International Conference on Business and Economic Research (2nd ICBER 2011), 2011.
- [44] Z. Bodie, A. Kane, A.J. Marcus, "Investments," 10th ed, New York : Mc Graw Hill Education, 2014, pp. 622-653.
- [45] P. Thavikulwat, "Determining The Value of a Firm," Developments in Business Simulation and Experiential Learning, vol. 31, 2004.
- [46] J. Wolfe, "The Tobin q as a Company Performance Indicator," Development in Business Simulation and Experiential Learning, vol. 30, 2003.
- [47] J. Tobin, "A General Equilibrium Approach to Monetary Theory," Journal of Money, Credit and Banking, vol. 1(1), 1969, pp. 15-29.
- [48] N.G. Mankiw, "Macroeconomics," 8th ed, New York : Worth Publishers, 2012, pp. 505-506
- [49] K.H. Chung, S.W. Pruitt, "A Simple Approximaton of Tobin's q," Financial Management, vol. 23(3), pp. 70-74, 1994.
- [50] L. Gao, G. Kling, "Corporate Governance and Tunneling: Empirical Evidence from China," Pacific-Basin Finance Journal, vol. 16(5), 2008, pp. 591-605.
- [51] M. Jian, T.J. Wong, "Earnings Management and Tunneling through Related Party Transactions: Evidence from Chinese Corporate Groups," Working Paper from The Chinese University of Hong Kong, 2004.
- [52] G. Jiang G, C.M.C Lee, H. Yue, "Tunneling Through Inter-corporate Loans: The Chine Experience," Paper from Guanghua School of Management, Peking University, 2009.
- [53] K. Wang and X. Xiao, "Controlling Shareholders' Tunneling and Executive Compensation: Evidence from China," Journal of Accounting and Public Policy, vol. 30 (1) , 2011, pp. 89-100.
- [54] R. La Porta, , F. L Silanes, A. Shleifer, R. W. Vishny, "Investor Protection and Corporate Valuation," Journal of Finance, vol. 57, 2002, pp. 1147- 1170.
- [55] J. Simon, P. Boone, A. Breach, E. Friedman, "Corporate Governance in the Asian Financial Crisis," Journal of Financial Economics, vol. 58, 2000, pp. 141-186.
- [56] A. Shleifer and D. Wolfenzon, "Investor Protection and Equity Markets," Journal of Financial Economics, vol. 66, 2002, pp. 3-27.
- [57] Y.E. Riyanto, L.A. Toolsema, "Tunneling and Propping: A Justification for Pyramidal Ownership," Journal of Banking and Finance, vol. 32, 2008, pp. 2178-2187.
- [58] Q. Ying and L. Wang, "Propping by controlling shareholders, wealth transfer and firm performance: Evidence from Chinese listed companies," China Journal of Accounting Research, vol. 6, 2013, pp. 133-147.
- [59] G. Edward, S. Johnson, A. Shleifer, "Coase versus The Coasians," Quarterly Journal of Economics, vol. CXVI, 3, August 2001, pp. 853-900,.
- [60] E. Friedman, S. Johnson, T. Mitton, "Propping and Tunneling," National Bureau of Economic Research, Paper No. 9949, September 2003.
- [61] G. Jiang and H. Wang, "Should Earnings Thresholds be Used as Delisting Criteria?" Journal of Accounting and Public Policy, vol. 27, 2008, pp. 409-419.

- [62] Q. Liu and Z. Lu, "Corporate Governance and Earning Management in the Chinese Listed Companies : a Tunneling Perspective," *Journal of Corporate Finance*, vol. 13, pp. 881-906.
- [63] W.Q. Peng, K.C. Wei, Z. Yang, "Tunneling or Propping : Evidence from Connected Transactions in China," *Journal of Corporate Finance*, vol. 17(2), 2011, pp. 306-325.
- [64] M. Jian, T.J. Wong, "Propping through Related Party Transactions," *Review of Accounting Studies*, vol. 15, 2010, pp. 70-105.
- [65] Y.H. Yeh, P.G. Shu, Y.H. Su, "Related-party Transactions and Corporate Governance : the Evidence from the Taiwan Stock Market," *Pacific-Basin Finance Journal*, vol. 20, 2012, pp. 755-776.
- [66] G. Jiang, C. Lee, H. Yue, "Tunneling through Inter-corporate Loans: the China Experience," *Journal of Financial Economics*, vol. 98 (1) , 2010, pp. 1-20.
- [67] Q. Zhou, L. Xia, M. Li. "Tunneling Motivation of Large Shareholder and the Bias of Asset Valuation of Listed Companies," *Statistical Research*, vol. 10, 2003, pp. 39-44.
- [68] C. Hsiao, "Analysis of Panel Data," 2nd, Cambridge : Cambridge University Press, 2003.
- [69] M. Firdaus, "Aplikasi Ekonometrika untuk Data Panel dan Time Series," Bogor : IPB Press, 2011.
- [70] N.D. Nachrowi, H. Usman, "Pendekatan Populer dan Praktis Ekonometrika. Untuk Analisis Ekonomi dan Keuangan," Jakarta : Lembaga Penerbit Fakultas Ekonomi Universitas Indonesia, 2006.
- [71] G.G Judge, W.E Griffiths, R.A Hill, H. Lutkepohl, T.C. Lee, "The Theory and Practice of Econometrics," 2nd, New York : John Wiley & Sons, Inc, 1985.
- [72] Kontan, "Setiap Waktu Temasek Bisa Caplok MPPA," Internet : <http://www.kontan.co.id>., 2013 [Aug. 3, 2013].