

THE EFFECT OF CASH FLOW RIGHTS, CONTROL RIGHTS AND CASH FLOW RIGHT LEVERAGE ON COMPANY VALUES

BALDRIC SIREGAR¹, RISMA ADELINA SIMANJUNTAK² and JOKO SUSETYO³

¹ STIE YKPN Yogyakarta.

Abstract

The expropriation of minority shareholders by controlling shareholders is the principal agency conflict in concentrated ownership of public companies. This expropriation arises when there is a separation of cash flow rights and control rights. Separation of cash flow rights and control rights is carried out through a pyramid and cross-ownership structure. The concept of ultimate ownership is used to identify such separation. The implications of separating cash flow rights and control rights are tested on firm value. By using a sample of public companies listed on the JSE for the period 2016 to 2019, empirical evidence shows that cash flow rights and control rights do not go together but have different implications. The concentration of cash flow rights is an incentive to avoid expropriation. This can be seen from the positive influence of cash flow rights on firm value. Conversely, the concentration of control rights is an incentive to obtain private benefits through expropriation. This is supported by the negative effect of control rights on firm value. When control rights exceed cash flow rights, the controlling shareholder's incentive to expropriate also occurs with the existence of a negative influence between the leverage of cash flow rights on firm value.

Keywords: immediate ownership, ultimate ownership, cash flow rights, control rights, cash flow rights leverage, firm value, expropriation.

1. INTRODUCTION

This research examines the separation of cash flow rights and control rights over the possibility of expropriation by controlling shareholders against other shareholders using agency theory. This study has three main issues: the concentration of cash flow rights, the concentration of control rights, and the increase in control rights over cash flow rights. The separation of cash flow rights and control rights and the deviation of the two types of rights have implications for the possibility of expropriation within the company. Expropriation is carried out by controlling shareholders to obtain private benefits over control that cannot be exercised by minority shareholders.

The issue in this study is the concentration of cash flow rights, control rights, and cash flow right leverages and their implications for firm value. Cash flow rights are an incentive for controlling shareholders to avoid expropriation against minority shareholders. With the existence of financial incentives, Burkart et al. (1998) stated that expropriation is too expensive to be carried out by controlling shareholders. In line with that, La Porta et al. (1999) stated that the incentives and ability to control shareholders to expropriate are limited by financial incentives. An important source of such financial incentives is the cash flow rights of the controlling shareholders. It is this cash flow right that Jensen and Meckling (1976) emphasize with their statement that concentration of ownership has a positive impact on firm value (La Porta et al., 2002).



^{2, 3} Institut Sains & Teknologi AKPRIND Yogyakarta.





The effect of the concentration of cash flow rights on firm value is based on the PIE (positive incentive effect) argument. Based on PIE's argument, the controlling shareholder will not expropriate the minority shareholder because the party feels the most negative impact from the decrease in company value due to the expropriation. The ability to control shareholders to control management is not intended for personal gain, but rather to show that there is the harmony of interest between controlling shareholders and minority shareholders. Based on the PIE argument, the concentration of cash flow rights has a positive effect on firm value. Claessens et al. (2002), Mitton (2002), Yurtoglu (2003), Yeh et al. (2003), Carvalhal-da-Silva and Leal (2004), Yeh (2005), and Lefort and Walker (2005) find that cash flow rights have a positive impact on firm value, consistent with the PIE argument.

The NEE (negative entrenchment effect) argument is used to show the effect of control rights and cash flow right leverages on firm value. Based on this argument, controlling shareholders use their concentration of control rights for personal gain by expropriating minority shareholders. The greater the control rights, the greater the incentive and ability of controlling shareholders to expropriate. The essence of this argument is that controlling shareholders are more interested in obtaining private benefits over their control. Based on the NEE argument, the concentration of control rights has an impact on decreasing company value. Claessens et al. (2002), Mitton (2002), Lins (2003), Lemmon and Lins (2003), Yurtoglu (2003), Chan et al. (2003), Yeh et al. (2003), Carvalhal-da-Silva and Leal (2004), Harvey et al. (2004), Zhang (2005), Yeh (2005), and Lefort and Walker (2005) found that the concentration of control rights has a negative impact on firm value. This research examines both the PIE and NEE arguments related to the influence of cash flow rights, control rights, and leverage of cash flow rights on firm value.

2. THEORY REVIEW AND HYPOTHESIS DEVELOPMENT

2.1. Ownership Structure

LaPorta et al. (1999) were the first to show systematic evidence showing ownership patterns of public companies. They examined the ownership structure of 691 public companies in 27 countries from the continents of Asia, Europe, America and Australia which are considered to have fast economies. The same was followed by Claessens et al. (2000a) and Faccio and Lang (2002). Claessens et al. (2000a) evaluated the ownership structure of 2,980 public companies in 9 Asian countries, including 178 Indonesian public companies. Faccio and Lang (2002) examined the ownership structure of 5,232 public companies in 13 European countries. In examining the ownership structure, the three studies above are different from previous research. Previous research used the concept of immediate ownership, while the three studies used the concept of ultimate ownership. With the concept of ultimate ownership, the three studies have succeeded in showing the ownership of public companies in almost all countries in the world.

Corporate ownership can be classified into immediate ownership and ultimate ownership. Immediate ownership is direct ownership in a public company as indicated by the percentage of share ownership. The number of shares owned by a person on behalf of himself in a public







company represents immediate ownership. With the concept of immediate ownership, the classification of dispersed or concentrated ownership is solely determined based on the percentage of shares owned by the shareholders. The controlling shareholder is also determined based on the percentage of share ownership in the company. Because the information is available in financial statements, the immediate owner of a public company is easy to identify.

The concept of immediate ownership has several drawbacks. First, the concept of immediate ownership does not examine the possibility of a chain of ownership in public companies. Because it cannot be used to analyze the chain of ownership, researchers are unable to find out who the controlling shareholder is in a public company. Second, the concept of immediate ownership cannot be used to identify the ultimate owner. Third, the concept of immediate ownership cannot be used to examine whether there is a separation of ownership and control by shareholders.

Ultimate ownership is direct and indirect ownership in a public company. Direct ownership describes the percentage of shares owned by shareholders on their behalf of themselves. Indirect ownership is ownership of a public company through a chain of ownership. This concept of ownership requires the researcher to trace the ownership chain until the ultimate owner is known. Tracing the chain of ownership, identification of ultimate owners, separation of ownership and control, and mechanisms for increasing control can be studied using the concept of ultimate ownership. With the concept of ultimate ownership, public company ownership is classified into two, namely widely held ownership and ultimate ownership. Whether a company is included in the category of broad ownership or ultimate ownership depends on the cut-off control rights used by the researcher. At the 10% ownership cutoff it was found that as much as 76% (La Porta et al., 1999) and 93% (Claessens et al., 2000a) of the company is controlled by the controlling shareholder. Whereas at the 20% ownership cutoff it was found that as much as 64% (La Porta et al., 1999), 77% (Claessens et al., 2000a), and 63% (Faccio and Lang, 2002) of the company is controlled by controlling shareholders.

2.2. Controlling Shareholders

Controlling shareholders are individuals, families or institutions that have direct or indirect control over a public company at a certain cut-off level of control rights. The direct control of the controlling shareholder describes the percentage of shares owned by the controlling shareholder in a public company on his behalf. Indirect control describes the control that a controlling shareholder has over a public company through the chain of ownership. In principle, the lower the cutoff of control rights used, the more controlling shareholders in a public company. Conversely, the higher the cutoff of control rights used, the fewer controlling shareholders in a public company.

Based on the identity of the controlling shareholder, La Porta et al. (1999) and Claessens et al. (2000a) classify controlling shareholders into five, namely families, governments, financial institutions with large holdings, companies with large holdings, and other controlling shareholders.







A public company is categorized as a family-controlled company if the largest controlling shareholder of the company is an individual or family with a certain level of control rights. Individuals are categorized as families because the unit of analysis is the family, not the individual. LaPorta et al. (1999), Claessens et al. (2000a), and Faccio and Lang (2002) identified families based on the similarity of last names and the presence or absence of marital relations. Family members are categorized as a unit of controlling shareholders with the assumption that they provide voting rights as a coalition (Wiwattanakantang, 2000). Although competition can occur within a family, this possibility has not been considered in various studies.

A public company is categorized as a company controlled by the government if the largest controlling shareholder in the company is the government at a certain level of control rights. The government, without any classification of the central and regional government, is classified as a controlling shareholder because the government's objective of controlling a company is relatively different from that of other controlling shareholders. The main purpose of the government controlling a company is to improve the welfare of society. In addition, the government controls companies for political purposes (Shleifer and Vishny, 1994). This political interest is of course different from the public interest so the government deserves to be classified as a separate controlling shareholder.

The controlling shareholders of a public company may be financial institutions that are also public companies, such as banks and insurance companies. A public company is categorized as a company controlled by a public financial institution if the largest controlling shareholder in the company is a public financial institution that is widely owned by the public at a certain level of control rights. LaPorta et al. (1999) created a separate classification named "financial institutions with broad ownership" because companies in which financial institutions are controlling shareholders are not properly classified as companies with broad ownership. This is because these public companies are controlled by financial institutions which are also public companies, even though these financial institutions are widely owned by the public.

If the shareholders of a public company are financial institutions that are also public companies, then there are two possible classifications of controlling shareholders. First, after the ownership of the financial institution as a shareholder of the public company is traced, there may be an ultimate owner at a certain threshold. If this is the case, then the financial institution is not a controlling shareholder included in this classification. Second, after the ownership of the financial institution as a shareholder of the public company is traced, there may be no ultimate owner at certain cutoff rights of control. Such financial institutions are included as controlling shareholders in this classification, namely financial institutions with broad ownership.

The controlling shareholder of a public company may be another public company that is not a financial institution. A public company is categorized as a company controlled by another public company if the largest controlling shareholder in the company is a public company that is widely owned by the public at a certain level of control rights. Similar to the argument for the classification of financial institutions with broad holdings, La Porta et al. (1999) stated that it is necessary to create a separate shareholder classification under the name "company with







broad ownership." This is supported by the argument that companies, where other companies are controlling shareholders, are not properly classified as companies with broad ownership because these public companies are controlled by other public companies whose ownership is widely held by the public. Companies can be included in this classification only if the company's controlling shareholders are widely owned by the public.

It is possible that the controlling shareholder in a public company is not the family, the government, financial institutions with wide holdings, or other public companies with wide holdings. Other possible controlling shareholders in a public company are foreign investors, cooperatives, and employees. Every public company is included in this category if the controlling shareholder is not a family, the government, public financial institutions, and other public companies at a certain level of control rights.

2.3. Cash Flow Rights, Control Rights, and Cash Flow Right Leverage

The concept of immediate ownership assumes that cash flow rights and control rights are the same. With this concept of ownership, cash flow rights and control rights cannot be separated by examining the percentage of share ownership. Especially for shares with different voting rights, there may be a difference between ownership and control. However, because the concept used is direct ownership, there is no issue of separating cash flow rights and control rights in the concept of immediate ownership. With this concept of ownership, the researcher is unable to identify the possibility of increasing control rights beyond the cash flow rights held by controlling shareholders. Different from immediate ownership, the concept of ultimate ownership can be used to identify controlling shareholders, cash flow rights, control rights, and the deviation between cash flow rights and control rights. With this concept of ownership, the possibility of controlling shareholders exercising control rights beyond cash flow rights can be identified. In addition, the mechanisms used by controlling shareholders to increase control rights over cash flow rights can also be identified.

Cash flow rights are the financial claims of shareholders against the company (La Porta et al., 1999). Because the controlling shareholder is the focus of attention, the cash flow right is the controlling shareholder's claim to receive dividends. Cash flow rights consist of direct cash flow rights and indirect cash flow rights. Direct cash flow rights are the percentage of shares owned by a controlling shareholder on a public company behalf of himself. Indirect cash flow rights are the sum of the multiplied results of the percentage of shares in each chain of ownership (La Porta et al., 1999). Indirect cash flow rights show the controlling shareholder's claim on dividends indirectly through the control mechanism of the company.

Control rights are voting rights to participate in determining important company policies (La Porta et al., 1999). Similar to cash flow rights, control rights in this context are control rights of controlling shareholders. There are two types of control rights, namely direct control rights and indirect control rights. Direct control rights are the percentage of shares owned by controlling shareholders on behalf of themselves in a company. With the above understanding, direct control rights are the same as direct cash flow rights. That's why in the concept of immediate ownership there is no issue of separating cash flow rights from control rights.







Indirect control rights are the sum of the minimum control gains in each chain of ownership (La Porta et al., 1999). In other words, it can be said that the right of control is the sum of the weakest links in each chain of ownership

Cash flow right leverage is the deviation between cash flow rights and control rights. The greater the deviation between cash flow rights and control rights, the higher the increase in controlling shareholder control over their cash flow rights. Controlling rights over cash flow rights are increased by controlling shareholders through various mechanisms such as pyramid ownership, cross-ownership and shares with different voting rights. In addition, controlling shareholder control in a company can also be increased through involvement in management and the absence of other controlling shareholders in the company.

There are three mechanisms commonly used by controlling shareholders to increase control rights over cash flow rights, namely pyramid ownership, cross-ownership, and shares with different voting rights. Pyramid ownership is indirect ownership of a company through another company (Claessens et al., 2000a; Claessens et al., 2000b). In the context of ownership in public companies, this definition shows that pyramid ownership describes ownership in a public company through other companies, both public companies and non-public companies. Two things must be met for ownership to be categorized as pyramid ownership, namely (1) there is a controlling shareholder, or ultimate owner, at the specified cutoff of control rights, and (2) there is another company in that ownership between the controlling shareholder and controlled public company.

Cross-ownership is the controlling shareholder's ownership of two or more companies that are mutually owned by one another. The main requirement for ownership to be classified as cross-ownership is that it involves two or more companies and these companies are mutually owned. Shares with different voting rights are two or more categories of shares issued by a company, each of which has the same nominal value but with different voting rights (Yurtoglu, 2003).

2.4. Separation of Cash Flow Rights and Control Rights and Agency Conflicts

When the owner-manager is the sole shareholder, agency problems do not exist in the company (Jensen and Meckling, 1976). However, if ownership is dispersed so that separate ownership is in the hands of shareholders and control is in the hands of management, then agency problems arise between shareholders and management. In recent decades, the financial literature has been based on the assumption that shareholding in public companies is dispersed among the public. Even modern financial literature, such as Jensen and Meckling (1976), is based on this assumption.

When the share ownership of public companies is assumed to be dispersed, there is a separation between control and ownership. Based on this assumption, control is centered on management because no individual shareholder can significantly influence company policy. Under these conditions, the principal agency conflict is between management and shareholders.

However, if share ownership is concentrated, is the principal agency conflict still between management and shareholders, even though there are large shareholders who can effectively







influence company policy? When this happens, the main agency problem is no longer between management and shareholders, but between controlling shareholders and minority shareholders (La Porta et al., 1999; Claessens et al., 2000a; and Faccio and Lang, 2002). Agency problems between controlling shareholders and minority shareholders arise with the separation of cash flow rights from control rights (Bechuk et al. (1999). Mechanisms for separating cash flow rights and control rights that can give rise to agency problems are pyramid ownership, crossownership, and shares with different voting rights. Of the three main mechanisms, pyramid ownership is the most common mechanism that causes agency problems (La Porta et al. 1999).

As revealed by Gilson and Gordon (2003), agency problems do have two sides, namely classic agency problems between principals and agents and agency problems between controlling shareholders and minority shareholders. The agency problem between principal and agent arises because of the separation of ownership and control; while the agency problem between controlling shareholders and minority shareholders arises due to the existence of incentives and the ability to control shareholders to obtain private benefits over control. It is these private benefits that encourage controlling shareholders to maintain control within the company. Private benefits of control are greater when ownership is concentrated (Gilson and Gordon, 2003). With the existence of a controlling shareholder, the agency problem between management and shareholders is reduced, but another agency problem arises between the controlling shareholder and the minority shareholder.

It is empirically proven that concentration of ownership occurs in many countries as found by La Porta et al. (1999), Claessens et al. (2000a), and Facio and Lang (2002). Controlling shareholders have control over the company beyond their cash flow rights. With this concentration of ownership, an agency conflict arises between the controlling shareholder and the minority shareholder. Controlling shareholders can effectively influence management policies or even determine management. Thus it can be said that there is a problem with separating cash flow rights and control rights. Control rights are voting rights to make important decisions. Cash flow rights represent claims on dividends. High control rights and separation between cash flow rights and control rights (called cash flow right leverage) indicate high incentives and the ability to control shareholders to expropriate minority shareholders. However, if cash flow rights are also high, then these cash flow right leverage shows the size of the agency problem in the company. Cash flow right leverage illustrates the incentives and ability to control shareholders to obtain private benefits for the control they have.

2.5. Separation of Cash Flow Rights and Control Rights and Company Value

Due to the separation of cash flow rights and control rights in the concept of ownership structure, cash flow rights and control rights do not coexist and both have different implications for corporate policies and values (Claessens et al., 2000). Cash flow rights are a source of financial incentives that limit expropriation. This is in line with Jensen and Meckling (1976) who state the positive effect of ownership concentration on firm value. On the other hand, control rights are a source of incentives to obtain private benefits. This is in line with Shleifer







and Vishny (1997) in explaining the negative relationship between ownership concentration and firm value (La Porta et al., 2002).

Claessens et al. (2000b), La Porta et al. (2002), Claessens et al. (2002), Lemmons and Lins (2003), Yeh et al. (2003), and Yurtoglu (2003) put forward two different arguments about the effect of concentration of ownership on firm value, namely PIE (positive incentive effect) and NEE (negative entrenchment effect). PIE's argument states that the controlling shareholder will not expropriate minority shareholders because the party feels the most negative impact from the decrease in company value due to this expropriation. With the PIE argument, the ability to control shareholders to control management is not intended for personal gain, but rather to show minority shareholders that there is no expropriation within the company. The essence of this argument is that the consequences of expropriation are too expensive for the controlling shareholders.

NEE's argument states that controlling shareholders use their ability to control management for personal gain by expropriating minority shareholders. The ability of the controlling shareholder to expropriate is shown by the size of the control that the controlling shareholder has over the company. Minority shareholders (outside investors) who are wary of the ability to control shareholders to influence company policy for personal gain will value the company lower. Therefore, this argument states that ownership concentration has a negative impact on firm value. The essence of this argument is that controlling shareholders are more interested in obtaining private benefits over their control.

Claessens et al. (2000b) attempted to examine the expropriation of minority shareholders in public companies in nine Asian countries by examining the impact of the separation of cash flow rights and control rights on firm value. Claessens et al. (2000b) define expropriation as a process used by controlling shareholders to maximize their wealth or redistribute wealth from other parties through a power of control. Claessens et al. (2000b) put forward two arguments about the effect of ownership concentration on firm value, namely PIE and NEE.

Based on the PIE argument, controlling shareholders monitor management to increase the value of the company and avoid expropriation. If the controlling shareholder commits expropriation, then the party that feels the greatest decrease in the value of the company is the controlling shareholder himself. This argument is consistent with Jensen and Meckling (1976) who stated that ownership concentration has a positive impact on firm value. However, based on the NEE, controlling shareholders use their control power to influence company policy to obtain personal benefits. In this case, the controlling shareholder expropriates the minority shareholder. This expropriation will be greater if there is a greater difference between cash flow rights and control rights. This argument is consistent with Shleifer and Vishny (1997) who stated that ownership concentration has a negative impact on firm value.

There are several conclusions drawn from the research by Claessens et al. (2000b). First, the greater the cash flow rights, the higher the firm value. This finding is consistent with the positive incentive effect argument and in line with Jensen and Meckling (1976). Second, the greater the control rights and cash flow rights leverage, the lower the firm value. This finding







is consistent with NEE and in line with those of Shleifer and Vishny (1997). Third, the greatest expropriation occurs when the controlling shareholder is the family. Expropriation does not occur in companies if the controlling shareholder is the government.

LaPorta et al. (2002) argue that if the rights of outside shareholders and creditors are protected from possible expropriation by the majority shareholders, then they are more willing to hand over their funds to the company through equity or debt. Restrictions on expropriation can stimulate an increase in the price of a company's securities. The next impact is that companies can fund their projects and investments through external funding. An assessment of the differences between cash flow rights and control rights is important because these differences affect the incentives and ability to control shareholders to expropriate minority shareholders. LaPorta et al. (2002) also argued that investment opportunities can substitute for legal protection for investors. Research findings by La Porta et al. (2002) are consistent with predictions, namely firm value is higher for firms with better minority protection, higher investment opportunities, and higher cash flow rights.

Claessens et al. (2002) stated that the high concentration of ownership in countries other than the US causes a significant divergence between cash flow rights and control rights. This divergence can be an incentive for controlling shareholders to expropriate minority shareholders. With a sample of public companies from nine Asian countries, Claessens et al. (2002) found that the greater the cash flow rights of the controlling shareholders, the higher the firm value. This finding is consistent with the PIE argument. However, the greater the cash flow right leverage, the lower the firm value. This finding is consistent with the NEE argument.

Lemmon and Lins (2003) state that ownership structure is the main determinant that determines the extent of agency problems between controlling shareholders and outside investors. This agency problem can have implications for firm value because controlling shareholders have the incentive and ability to expropriate minority shareholders. According to Shleifer and Vishny (1997), various ways can be used by controlling shareholders for expropriation such as theft, dilution of outside investors through issuing shares to insiders, excessive salaries, selling assets to themselves or other companies that are controlled at unreasonable prices. , and unreasonable transfer pricing.

Research conducted by Lemmon and Lins (2003) tried to examine the relationship between ownership structure and firm value by using Asian company data during the crisis, namely from July 1997 to August 1998. The motivation of the researchers was that the financial crisis was an exogenous shock that significantly reduced investment opportunities. At a time when the ownership structure is constant, the shock due to the financial crisis makes it more difficult to deploy resources in profitable investments which in turn can increase expropriation. Another motivation is as found by La Porta et al. (1999) and Claessens et al. (2000a) that many companies in Asian countries use pyramid and cross-ownership ownership structures to increase control rights over cash flow rights held.

Lemmon and Lins (2003) found that during the crisis period, cash flow right management leverage is negatively related to firm value. This finding is consistent with the view that







ownership structure is an important determinant in determining whether or not controlling shareholders expropriate minority shareholders. This finding is consistent with the findings of Claessens et al. (2002) that the separation of cash flow rights and control rights is negatively related to firm value. This finding is also consistent with La Porta et al. (2002) and Claessens et al. (2002) that firm value is higher when the cash flow rights owned by controlling shareholders are high. However, control and management rights, including blockholders, are positively related to firm value. This is consistent with the argument that management still effectively controls firms during financial crises even though their cash flow rights are low. When moderated by cash flow rights, leverage, control and management rights, including blockholders, are negatively related to firm value. This shows that the manager is not effective in controlling the company if the control is carried out through cash flow right leverage.

Yeh et al. (2003) followed up on the expectations of La Porta et al. (1999) and Claessens et al. (2000a) so that the ownership structure in each country is examined to obtain in-depth empirical evidence that is more than what was done by the two studies. The concentration of ownership in the hands of ultimate shareholders and the involvement of ultimate shareholders in management is a common context in developing countries which is interesting to study in more depth. In their research Yeh et al. (2003) conducted an analysis of the mechanisms for increasing control rights and the relationship between cash flow rights and cash flow rights leverage and firm value.

Yeh et al. (2003) found two things. First, the pyramid ownership structure and cross-ownership are determinants of the increase in controlling shareholder control. Second, firm value is positively influenced by cash flow rights and negatively by cash flow rights leverage. Deviation of cash flow rights and control rights as well as collateralization of shares by controlling shareholders are two important variables in measuring the expropriation of minority shareholders. This conclusion is supported by empirical evidence that both measures are negatively related to firm value, consistent with NEE.

Yurtoglu (2003) tried to test how the influence of cash flow rights and cash flow rights leverage the value of Turkish public companies. Yurtoglu's (2003) motive for conducting this study stems from previous research findings which state that better protection of minority shareholders results in higher firm value (Claessens et al., 2002) and larger dividends (La Porta et al., 2000; Gugler and Yurtoglu, 2001). Turkey is considered an ideal setting to study the impact of concentration on ownership because this country has weak corporate governance and high concentration of ownership.

Based on the empirical evidence obtained, Yurtoglu (2003) revealed that 80% of Turkey's public companies are controlled by families. Because of this, Turkey is called an 'insider system' country because the family is the richest party in the country. In addition, researchers also found that cash flow rights are positively related to firm value, while control rights are negatively related to firm value. Cash flow right leverage is negatively related to firm value.

Yeh (2003) states that the recent literature on corporate ownership generally assumes that ownership is dispersed which may not correspond to the actual phenomenon. Three studies on







ownership structure, La Porta et al. (1999), Claessens et al. (2000a), and Faccio and Lang (2002), show that most of the ownership of public companies is in the hands of controlling shareholders. Compared to the study by Claessens et al. (2000a), Yeh (2003) tried to use a larger sample, namely 251 Taiwanese public companies, and the search for owners of owners was not limited to public companies. By using a more representative sample and better tracking of ownership, researchers hope to find stronger empirical evidence about the impact of ownership structure on firm value.

Yeh (2003) concluded several things based on his findings. First, there is concentrated ownership in the hands of controlling shareholders, both families and wealthy investors. Second, the deviation between cash flow rights and control rights is greater for companies with family-controlling shareholders than for other controlling shareholders. Increases in control rights are generally carried out through a pyramid structure and cross-ownership. Third, there are differences in cash flow rights, control rights, management involvement, and involvement in BOD, second controlling shareholder, company value, EBIT, and company age between companies that have cash flow rights leverage and those that do not have cash flow rights leverage. Family controlling shareholders generally have more members in the BOD than other controlling shareholders. If past performance is good (EBIT is good), controlling shareholders tend to invest more cash flow rights to earn profits. This causes the deviation between cash flow rights and control rights to be smaller. Firm value is lower for companies that have deviated cash flow rights and control rights than companies that do not have cash flow rights and control rights.

2.6. Hypotheses Development

The effect of cash flow rights on firm value is built on the PIE argument (positive incentive effect). PIE's argument about the effect of cash flow rights on firm value is based on the size of the financial impact felt by the controlling shareholder for acts of expropriation within the company. Because cash flow rights are the financial claims of the controlling shareholder in the company, the size of the impact of expropriation on the controlling shareholder depends on the size of the controlling shareholder's cash flow rights. If the negative impact of decreasing company value is large for the controlling shareholders, then the controlling shareholders will not be motivated to expropriate. Conversely, if the negative impact of decreasing company value is small for the controlling shareholder, then the controlling shareholder's motivation not to expropriate will decrease. Therefore, controlling shareholders who have high cash flow rights are more motivated not to expropriate than to expropriate. Conversely, controlling shareholders who have low cash flow rights are less motivated to avoid expropriation within the company.

Based on the PIE argument, controlling shareholders monitor management to increase the value of the company by avoiding expropriation. Because expropriation has a greater impact on controlling shareholders, it is too expensive for controlling shareholders to expropriate (Claessens et al. (2000b). The magnitude of the impact felt by controlling shareholders due to expropriation is shown by the magnitude of the cash flow rights of these controlling shareholders. Therefore, the cash flow rights of controlling shareholders are an incentive for







these controlling shareholders to avoid expropriation within the company, which is in line with Jensen and Meckling's (1976) statement that concentration of ownership has a positive impact on firm value.

If the rights of outside shareholders are protected from possible expropriation by the majority shareholders, then they are more willing to hand over their funds to the company through equity or debt. Restrictions on expropriation can stimulate an increase in the price of the company's securities which in turn has an impact on increasing the value of the company. If outside investors believe that there is no expropriation in the company, then they will value the company's shares higher. The right to cash flow of controlling shareholders is an incentive to maximize firm value through monitoring the actions of managers so that agency problems can be reduced. Based on the description, the hypothesis is formulated:

H1: Controlling shareholder cash flow rights have a positive effect on firm value.

The effect of control rights on firm value is built on the negative entrenchment effect (NEE) argument. Based on this argument, the concentration of control rights has a negative effect on firm value. The negative effect of concentration of control on firm value is by the statement that large shareholders can almost completely control the company to obtain private benefits over control of minority shareholders. This is in line with Shleifer and Vishny (1997) who state that large shareholders are more interested in using their control to obtain private benefits. When the private benefits of control are large, the controlling shareholders will try to allocate company resources to generate these private benefits. If large shareholders can effectively control the company, their policies tend to result in the expropriation of minority shareholders.

Claessens et al. (2000b) and Claessens et al. (2002) found that controlling shareholders of Asian public companies use their control rights for personal gain. Investors are wary of this, so investors undervalue companies with controlling shareholders who have large control rights. Claessens et al. (2000b) found that the greater the control rights, the lower the firm value. The same thing was found by La Porta et al. (2002) for public companies in 27 Asian, European and American countries. They found that the higher the ownership concentration, the lower the firm value. This argument is based on the view that controlling shareholders expropriate outside investors. If outside investors believe that the controlling shareholders are expropriating, then they will value the company's stock price lower. Yurtoglu (2003) also finds that the control rights of Turkish public companies are negatively related to firm value. The same thing was found by Carvalhal-da-Silva and Leal (2004) for Brazilian public companies.

Shleifer and Vishny (1997), La Porta et al. (1998), La Porta et al. (1999), Claessens et al. (2000a), and Denis and McConnell (2002) state that the weak legal protection for investors causes investors who feel less protected to try to protect themselves by becoming controlling shareholders. Shareholders' efforts to protect themselves can be seen from the increase in control beyond ownership rights in the company. Weak legal protection and corporate governance cause controlling shareholders to be more interested in obtaining private benefits for their control. Emerging markets are usually associated with weak shareholder protection. Because of the weak legal protection, it is easier for controlling shareholders to get private







benefits for their control (La Porta et al., 2000). If the potential use of private benefits for control arises, an agency problem will arise. By obtaining private benefits over the company's resources, the controlling shareholder has the opportunity to increase his wealth without worrying that his actions will affect him. Based on the description above, the hypothesis is formulated:

H2: The controlling shareholder control rights have a negative effect on firm value.

The effect of cash flow right leverage on firm value is based on the NEE argument which states that concentration of ownership has a negative effect on firm value. Cash flow right leverage illustrates the agency problem that occurs within a company between controlling shareholders and minority shareholders. Large cash flow right leverage indicates a high agency problem. Conversely, a low cash flow right leverage indicates a low agency problem. Excess control rights and cash flow rights are generally exercised through pyramid ownership and cross-ownership mechanisms. The greater the control rights exceed cash flow rights, the higher the power of the controlling shareholders to expropriate. Because cash flow right leverage shows the magnitude of incentives and the ability to control shareholders to expropriate, cash flow right leverage is negatively related to firm value.

When there is no separation between cash flow rights and control rights, conflicts of interest between controlling shareholders and minority shareholders do not occur. However, when the controlling shareholders increase their control through various mechanisms, a conflict of interest arises between the controlling shareholders and the minority shareholders. Various studies show that the higher the cash flow rights, the higher the value of the company. Conversely, the higher the control rights and the separation between cash flow rights and control rights, the lower the company value. Shleifer and Vishny (1997), La Porta et al. (1999), and Claessens et al. (2000b) showed that there is a conflict of interest between large and small shareholders. When large investors control companies, their policies tend to result in the expropriation of minority shareholders. Such companies will not be attractive to small shareholders and therefore they will undervalue the company.

The agency problem in developing countries is greater than in developed countries because the concentration of ownership generally occurs in developing countries. However Morck et al. (2004) stated that control through the pyramid reduces the market value of companies in Canada, a developed country. Consistent with the findings of La Porta et al. (1999), Claessens et al. (2000a), and Faccio and Lang (2002) that the concentration of ownership occurs in almost all countries in Asia, Europe and America, regardless of whether the country is developed or not. Therefore, agency conflicts between controlling shareholders and minority shareholders do not only occur in developing countries but also occur in developed countries. If there is no adequate legal protection, controlling shareholders can carry out activities that benefit themselves and harm minority shareholders. This agency conflict will be exacerbated if the controlling shareholders have more control rights than their cash flow rights (Zhang, 2005).

Controlling shareholders in Asian public companies carry out a mechanism for separating cash flow rights from control rights. This separation of cash flow rights and control rights causes a







decline in company value. This suggests that there is expropriation by controlling shareholders in Asia (Claessens et al., 2000a and Claessens et al., 2002). For public companies from 27 Asian, European, and American countries, La Porta et al. (2002) identified the presence or absence of incentives and the ability to control shareholders to expropriate by looking at cash flow right leverage. LaPorta et al. (2002) find that firm value is low for companies with controlling shareholders who have high control rights over cash flow rights.

The greater the cash flow right leverage, the more capable the controlling shareholder is to expropriate within the company. The controlling shareholder's incentive to expropriate is greater when the controlling shareholder is also part of the management. If the controlling shareholder is involved in management, the ability of the controlling shareholder to influence company policy will be greater. Involvement in management means that controlling shareholders are not only able to influence company policy but have become part of the management itself. Based on the description above, the hypothesis is formulated:

H3: Controlling shareholder cash flow right leverage has a negative effect on firm value

3. RESEARCH METHODS

3.1. Samples and Data

There are two types of data obtained, namely ownership data and company value data. The sample for this research is a public company listed on the Jakarta Stock Exchange (JSX) for a period of four years, namely from 2016 to 2019. Ownership data is obtained from financial reports, annual reports, company websites, and other sources that show ownership structure. Company value data is obtained from stock price statistics obtained from the Indonesia Stock Exchange and the company's financial statements.

Ownership of public companies will be classified into two, namely companies with dispersed ownership and companies with concentrated ownership. The classification of distributed or concentrated ownership is based on five cut-off control rights, namely 10%, 20%, 30%, 40% and 50%. The use of the lowest cutoff of control rights, namely 10%, is in line with the view of several researchers, for example Claessens et al. (2000b), La Porta et al. (2002), and Claessens et al. (2002), which states that 10% control rights are effective enough to control companies both in the middle position and at the end of the ownership chain. The use of cutoff control rights of 20%, 30%, 40%, and 50% accommodates several possibilities for the effectiveness of control rights by controlling shareholders in influencing company policies and values. Controlling shareholders are classified into families, governments, financial institutions with large holdings, companies with broad holdings, and other controlling shareholders.

3.2. Variables and Their Measurements

The dependent variable of this research is firm value. Firm value is the amount that investors are willing to pay for the company. In this study, the proxy for firm value is the ratio of market value to book value. The market value is the sum of the company's stock value and debt book value. Book value is the book value of assets listed in the balance sheet. The use of this





company value proxy refers to La Porta et al. (2002), Claessens et al. (2002), Lins (2003), and Faccio et al. (2003).

The independent variables of this study are cash flow rights, control rights, and cash flow right leverages. The right to cash flow is the shareholder's claim to obtain the distribution of company profits in the form of dividends (La Porta et al., 1999; Claessens, 2000a; La Porta et al., 2002, Siregar, 2019). Cash flow rights consist of direct cash flow rights and indirect cash flow rights. Direct cash flow rights are the percentage of shares owned by a shareholder in a public company on behalf of himself. Indirect cash flow rights are the sum of the multiplication of the shareholder ownership percentage in each chain of ownership. Indirect cash flow rights show the controlling shareholder's claim on dividends indirectly through the mechanism of ownership of the company. Shareholders' cash flow rights are the result of the sum of direct cash flow rights and indirect cash flow rights.

Control rights are voting rights to participate in determining important company policies (La Porta et al., 1999). In this case, control rights are measured by voting rights. Control rights include direct control rights and indirect control rights. Direct control rights are the percentage of shares owned by controlling shareholders on behalf of themselves in a company. With the above understanding, direct control rights are the same as direct cash flow rights. That's why in the concept of immediate ownership there is no issue of separating cash flow rights from control rights. Indirect control rights are the sum of the minimum control gains in each chain of ownership (La Porta et al., 1999). In other words, it can be said that control rights are the sum of the weakest relationships in each chain of ownership. Thus, shareholder control rights are the result of the sum of direct control rights and indirect control rights.

The leverage of cash flow rights is the deviation of cash flow rights from control rights held by shareholders using various ownership mechanisms. The greater difference between cash flow rights and control rights indicates a higher increase in shareholder control over their cash flow rights. Leverage of cash flow rights is obtained by controlling shareholders through various mechanisms such as pyramid ownership, cross-ownership, and shares with different voting rights. In this study, cash flow leverage describes the reduction of cash flow rights from control rights. This measurement refers to La Porta et al. (2002) and Claessens et al. (2002).

3.3. Empirical Model

There are three issues in this study, namely the concentration of cash flow rights, the concentration of control rights, and cash flow right leverage. These three issues are tested against firm value. Testing the hypothesis about the effect of cash flow rights (CFR), control rights (CR), and cash flow right leverage (CFRL) on firm value (FVL) is used by estimating the following equation:

$$FVL = a + b1CFR + b2COR + b3CFRL + e$$





4. RESULTS OF DATA ANALYSIS AND DISCUSSION

There were 718 observations that were processed. The number of observations is for the 10% cutoff of ownership. If the ownership cutoff is increased, the number of observations processed becomes less and less. At the cutoff of 50% ownership the number of research observations is 490.

Variables	N = 718							
	Minimum	Maximum	Mean	Standard Deviation				
FVL	68,52	425,44	123,89	79,18				
CFR	0,43	97,25	45,62	22,46				
CR	8,43	98,84	58,55	10,11				
CFRL	0,00	72,28	12,93	16,47				

Table 1: Description of Research Variables

The average value for the firm value variable (FVL) is 123.89. While the minimum value and maximum value for the firm value variable are respectively 68.52 and 425.44. This data indicates that the market price of the company's stock is higher than the book value of the company. Average cash flow rights (CFR) are lower than average control rights (CR). This shows that there is a separation between cash flow rights (CFR) and control rights (CR). The average leverage value of cash flow rights (CFRL) is 12.93.

Table 2: Hypothesis Testing Results
FVL = a + b1CFR + b2COR + b3CFRL + c

Cut-offs	b 1	b2	b3	F	\mathbb{R}^2	N	Hypothesis
10%	0,122*	-0,058*	-0,245*	37,143*	9,5%	718	Supported
20%	0,120*	-0,062*	-0,248*	36,454*	9,7%	688	Supported
30%	0,118*	-0,068*	-0,254*	35,611*	10,1%	650	Supported
40%	0,114*	-0,046*	-0,268*	34,132*	10,3%	576	Supported
50%	0,107*	-0,024*	-0,282*	33,097*	10,6%	490	Supported

^{*} Significant at 5% alpha

In hypothesis 1 it is predicted that the cash flow rights of controlling shareholders have a positive effect on firm value. The prediction in this hypothesis is supported if the b1 coefficient is positive and significant. The results of the equation estimation show that the coefficient b1 is positive and statistically significant at an alpha of 5%. This significance is consistent for each estimate in the five cutoff categories. The t value which is quite high and significant at 5% alpha shows strong support for this hypothesis. In addition, the model is also quite fit with quite large F and R2 values. With empirical evidence like this, it can be stated that the data support hypothesis 1 which states that the cash flow rights of controlling shareholders have a positive effect on firm value.

The positive effect of cash flow rights on firm value is in line with the PIE (positive incentive effect) argument. This argument states that the controlling shareholder will not expropriate the







minority shareholder because he or she is the party that feels the most negative impact from the decrease in company value due to the expropriation. The greater the concentration of cash flow rights, the greater the financial claims of the controlling shareholders against the company. This concentrated financial claim causes the controlling shareholder to be in the most advantaged and at the same time disadvantaged position with an increase or decrease in the value of the company. Therefore, the controlling shareholder will try to avoid expropriation which will position him/herself in the most disadvantaged condition when there is a concentration of cash flow rights. Apart from this research, the PIE argument is also supported by Claessens et al. (2002), Mitton (2002), Yurtoglu (2003), Yeh, Ko, and Su (Yeh et al.) (2003), Carvalhal-da-Silva and Leal (2004), Yeh (2005), and Lefort and Walker (2005).

If the concentration of cash flow rights is low, then the impact of increasing or decreasing company value for the controlling shareholders is also low. Under these conditions, the controlling shareholder is motivated to expropriate because the controlling shareholder receives the full benefits of the expropriation. Other shareholders are unable to obtain the same benefits. Conversely, if the concentration of cash flow rights is high, then the impact of increasing or decreasing company value for the controlling shareholders is also high. Under these conditions, controlling shareholders are motivated not to expropriate. Under these conditions, without expropriating the controlling shareholders, they will still benefit from the high cash flow rights they have. This condition is an implication of the positive influence of cash flow rights on firm value.

From the description above it can be said that due to financial incentive reasons, the concentration of cash flow rights is not used by controlling shareholders to increase agency conflicts. Conversely, the concentration of cash flow rights is used by controlling shareholders to align the interests of these controlling shareholders with minority shareholders. The controlling shareholder's efforts not to expropriate is a positive indication for minority shareholders that their interests in the company are protected. If the rights of minority shareholders feel protected from possible expropriation by the controlling shareholders, then they are more willing to hand over their funds to the company. This will stimulate an increase in the price of the company's securities which in turn will have a positive impact on increasing the value of the company. Outside investors who believe that there is no expropriation within the company will value the company's shares higher.

The prediction in hypothesis 2 is that the controlling shareholder's control rights have a negative effect on firm value. Hypothesis 2 can be supported if the b2 coefficient from the results of the estimated equation is negative and significant. As shown above, the coefficient b2 is significant across the five cutoff categories. The theory predicts that the NEE (negative entrenchment effect) argument applies if there is a concentration of control rights in the hands of controlling shareholders. Based on this argument, the concentration of control rights is not a financial incentive, but rather a voice to influence company policy. When the control rights are concentrated in the hands of the controlling shareholder, he is not the party most affected by the increase or decrease in the value of the company. Meanwhile, acts of expropriation that







can be carried out through concentration of control will be obtained by the full controlling shareholder.

The prediction in hypothesis 3 is the negative effect of leverage on cash flow rights of controlling shareholders on firm value. The prediction of hypothesis 3 can be supported if the results of the estimation of the equation produce a negative b3 coefficient. As shown in the table above, the estimation results show that the b3 coefficient is significant in the five tests. The data successfully support hypothesis 3 which states that the negative effect of leverage on cash flow rights of controlling shareholders on firm value.

The magnitude of the leverage of cash flow rights indicates the magnitude of the potential use of private benefits over control. By obtaining private benefits from the company's resources, controlling shareholders have the opportunity to increase their wealth without worrying that this action will affect them. The potential for obtaining private benefits is even greater if the controlling shareholder is also part of the management. This shows an increasing increase in agency problems. Markets that are aware of this increase in agency conflicts will value the company's shares lower. Investors who do not believe their interests are protected from expropriation will give a lower value to the company.

5. CONCLUSION

There are two conclusions obtained from the results of testing and discussion of hypotheses regarding the effect of separation of cash flow rights, control rights, and cash flow right leverages on firm value. First, the concentration of cash flow rights has a positive impact on investors' evaluation of the company. The large concentration of cash flow rights in the hands of controlling shareholders indicates high financial incentives to avoid expropriation. Investors who feel their interests are protected from acts of expropriation value the company's shares larger, which in turn increases the value of the company. The agency conflicts that occur between the controlling shareholders and minority shareholders are reduced by the concentration of cash flow rights in the hands of the controlling shareholders. This reduced agency conflict leads to a better valuation by investors of the company.

Private benefits obtained through acts of expropriation are not easy to measure. Even Dyck and Zingales (2002) state that it is the difficulty of measurement that causes these benefits to be called private benefits. If the benefit is not only obtained by the controlling shareholder, then the benefit is no longer a private benefit. The research will be more robust if private benefits are more measurable by the actual phenomenon. This study does not use a direct measurement of the benefits of private control. If data on expropriation activities are truly documented, then the measurement of private benefits obtained will be better. This better measure of private benefit will result in a more robust test. Possible expropriation activities to obtain private benefits include operating activities (such as salaries, benefits, compensation, insurance, annuity funds and bonuses), tunneling (contractual agreements such as transfer prices and sales of other assets), sales of controls, freezing out (selling shares to other parties who are also related to the controlling shareholder).

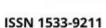




References

- Burkart, Mike; Gromb, Denis; and Panunzi, Fausto (1998). "Why Higher Takeover Premia Protect Minority Shareholders." Journal of Political Economy. No. 106:172-204.
- Carvalhal-da-Silva, Andre and Leal, Ricardo (2004). "Corporate Governance, Market Valuation, and Dividend Policy in Brazil." Woking Paper of COPPEAD Graduate Business School Federal University of Rio de Janeiro.
- Chan, Conan; Hu, Shing-Yang; and Wang, Yan-Zhi (2003). "When Will the Controlling Shareholders Expropriate Investors? Cash Flow Right and Investment Opportunity Perspectives." Academia Economic Papers. Vol. 31, no. 3: 301-331.
- Claessens, Stijin; Djankov, Simeon; Fan, Joseph; and Lang, Larry (2000b). "Expropriation of Minority Shareholders: Evidence from East Asia. Policy Research Working Paper 2088, The World Bank.
- Claessens, Stijin; Djankov, Simeon; Fan, Joseph P.H.; and Lang, Larry H.P. (2002). "Disentagging the Incentive and Entrenchment Effects of Large Shareholdings." Journal of Finance. Vol. 57, no. 6: 2741-1771.
- Claessens, Stijin; Djankov, Simeon; and Lang, Larry H.P. (2000a). "The Separation of Ownership and Control in East Asian Corporations." Journal of Financial Economics. Vol. 58:81-112.
- ❖ Dyck, Alexander and Zingales, Luigi (2002). "Private Benefits of Control: An International Comparison. NBER Working Paper No. 8711.
- Faccio, Mara and Lang, Larry H.P. (2002). "The Ultimate Ownership of Western European Corporations." Journal of Financial Economics. Vol. 65: 365-395.
- ❖ Faccio, Mara; Lang, Larry H.P.; and Young, Leslie (2003). "Debt and Expropriation." Working Paper of the Chinese University of Hong Kong.
- Gilson, Ronald J. and Gordon, Jeffrey N. (2003). "Controlling Controlling Shareholders." Columbia Law School Working Paper No. 228.
- ❖ Harvey, Campbell; Lins, Karl V.; and Roper, Andrew H. (2004). "The Effect of Capital Structure When Expected Agency Costs are Extreme." Journal of Financial Economics. Vol. 74:3-30.
- ❖ Jensen, Michael C. and Meckling, William H. (1976). "Theory of the Firm: Managerial Behavior, Agency Costs. And Ownership Structure." Journal of Financial Economics. Vol. 3: 305-360.
- ❖ LaPorta, Raphael; Lopez-de-Silanes, Florencio; Shleifer, Andrei (1999). "Corporate Ownership around the World." Journal of Finance. Vol. 54, no. 2: 471-517.
- ❖ LaPorta, Raphael; Lopez-de-Silanes, Florencio; Shleifer, Andrei; and Vishny, Robert (2000). "Agency Problems and Dividend Policies around the World." Journal of Finance. Vol. 55:1-33.
- ❖ LaPorta, Raphael; Lopez-de-Silanes, Florencio; Shleifer, Andrei; and Vishny, Robert (2002). "Investor Protection and Corporate Valuation." Journal of Finance. Vol. 57, no. 3:3-27.
- ❖ Lefort, Fernando and Walker, Eduardo (2005). "The Effect of Corporate Governance Practice on Company Market Valuation and Payout Policy in Chile." Working Paper of Potificia Universidad Catolica de Chile.
- ❖ Lemmon, Michael L. and Lins, Karl V. (2003). "Ownership Structure, Corporate Governance, and Firm Value: Evidence from the East Asian Financial Crisis." Journal of Finance. Vol. 58, No. 4: 1445-1468.
- ❖ Lins, Karl V. (2003). "Equity Ownership and Firm Value in Emerging Markets." Journal of Financial and Quantitative analysis. Vol. 38, No. 1: 159-184.
- ❖ Mitton, Todd (2002). "A Cross-Firm Analysis of the Impact of Corporate Governance on the East Asian Financial Crisis." Journal of Financial Economics. No. 64: 215-241.





DOI 10.17605/OSF.IO/GVC6P

- ♦ Morck, Randall; Wolfenzon, Daniel; and Yeung, Bernard (2004). "Corporate Governance, Economic Entrenchment, and Growth." NBER Working Paper No. 10692.
- Shleifer, Andrei and Vishny, Robert W. (1994). "Politicians and Firms." Quarterly Journal of Economics. No. 109:995-1025.
- Siregar, Baldric (2019). Direct and Indirect Effects of Investment on Community Welfare. Investment Management and Financial Innovations, Vol. 16, No. 3: 206-216
- ❖ Yeh, Yin-Hua (2003). "Corporate Ownership and Control: New Evidence from Taiwan." Corporate Ownership & Control. Vol. 1, No. 1:87-101.
- ❖ Yeh, Yin-Hua (2005). "Do Controlling Shareholders Enhance Corporate Value?" Corporate Governance. Vol. 13, No. 2: 313-325.
- ❖ Yeh, Yin-Hua; Ko, Chen-En; and Su, Yu-Hui (2003). "Ultimate Control and Expropriation of Minority Shareholders: New Evidence from Taiwan." Academia Economic Papers. Vol. 31, no. 3: 263-299.
- Yurtoglu, B. Burcin (2003). "Corporate Governance and Implications for Minority Shareholders in Turkey." Corporate Ownership & Control. Vol. 1, No. 1: 72-86.
- ❖ Wiwattanakantang, Yupana (2000). "The Equity Ownership Structure of Thai Firms." Working Paper of Hitotsubashi University.
- Zhang, Rongrong (2005). "The Effects of Firm and Country Level Governance Mechanisms on Dividend Policy, Cash Holding, and Firm Value: A Cross Country Study." Working Paper of the University of Tennessee.

