

Institutional Ownership and Firm Value in Thailand

Yordying Thanatawee*

ABSTRACT

Despite the crucial roles of institutional investors in corporate governance mechanisms, there is little empirical evidence regarding the impact of institutional ownership on firm value in Thailand. This paper examines the relationship between institutional shareholdings and firm value in a sample of 1,451 observations from 323 non-financial firms listed on the Stock Exchange of Thailand (SET) over the period 2007 to 2011. After controlling for firm characteristics and endogeneity problems, the evidence indicates that equity ownership by domestic institutional investors has a positive impact on firm value while higher foreign institutional ownership is associated with lower corporate value. The findings suggest that domestic institutional investors provide effective monitoring roles, thereby increasing corporate governance and firm value, whereas foreign institutional investors are inactive in monitoring the managers and may even expropriate corporate resources at the expense of minority shareholders.

Keywords: Corporate Governance, Domestic Institutional Ownership, Foreign Institutional Ownership, Monitoring Roles, Ownership Structure

JEL Classification: G32, G34

1. Introduction

Since Berle and Means' (1932) study, the agency problems caused by the separation of ownership and control, and the effects of different types of shareholders on firm value, have received considerable attention in finance literature. According to Jensen and Meckling (1976), the agency problems normally stem from the divergence of interests of

* Yordying Thanatawee is an Assistant Professor of Finance at Graduate School of Commerce, Burapha University, Chonburi, 20131, Thailand. Email: yordying@yahoo.com

managers who run the firms and those of outside investors who supply the capital. Rather than maximise shareholders' wealth, a manager might expropriate corporate resources for his own benefits such as spending company's cash for a lavish office, setting excessive salaries, and undertaking negative Net Present Value projects in order to build empires. These counterproductive activities are definitely detrimental to shareholders' wealth. One method to reduce agency problems is for large shareholders to exert their powers to control and monitor managers. Hence, large shareholders can play crucial roles in providing effective corporate governance mechanisms, thereby increasing corporate value.

Whether or not large shareholders actively monitor managers' behaviours depends not only on their equity stakes but also on the country's quality of legal rules and enforcement. Jensen and Meckling (1976) and Shleifer and Vishny (1986) posit that controlling shareholders have strong incentives to monitor managers when they have substantial investments in the firm. According to La Porta, Lopez-de-Silanes, Shleifer, and Vishny (2000), in emerging countries where ownership structure of firms is highly concentrated and legal protection of minority shareholders is weak, the controlling shareholders will actively monitor managers to protect private benefits of control. However, the controlling shareholders may also expropriate company resources at the expense of minority shareholders when the controlling shareholders are involved in or connected to the management of the company. Therefore, the net effects of major shareholders in creating or destroying firm value are largely dependent on the contexts of investigation.

This paper aims to investigate the influence of major institutional shareholders on firm value in Thailand. The Thai capital market is an interesting setting in which to examine the impact of institutional ownership on firm value, as its landscape is dramatically different from that in the United States (U.S.) and most other developed markets. As documented by La Porta et al. (2000), ownership structure of Thai firms is highly concentrated and the legal rules protecting public investors in Thailand are weak. In addition, most Thai listed firms are controlled by family members, individuals, and related persons (Claessens, Djankow, & Lang, 2000; Wiwattanakantang, 2001; Aivazian, Booth, & Cleary, 2003). These characteristics create a poor corporate governance environment in which major shareholders can easily expropriate corporate resources for their own private benefits.

Thailand implemented major corporate governance reforms as a result of the Asian financial crisis in 1997.¹ Many corporate governance regulations that resemble those in the U.S. and the United Kingdom (U.K.) have been adopted, but the public enforcement of securities regulations appears to be a major hindrance to the effectiveness of the reform due to the intervention of business-owner politicians and politically connected shareholders (Ekkayokkaya & Pengniti, 2012). As a result, the legal environment is still weak and the expropriation risk facing minority shareholders remains high in Thailand. Thus, it is important to investigate whether an institutional investor provides effective monitoring roles and therefore, can be a pivotal mechanism that helps enhance corporate governance and corporate value of Thai listed companies.

The contributions of this paper to the existing literature are as follows: Firstly, this study helps shed some light on the inconclusive evidence regarding the relationship between institutional ownership and firm value. Many studies, for example, McConnell and Servaes (1990), Han and Suk (1998) and Guercio and Hawkins (1999) found a positive relationship between institutional equity ownership and firm value. However, several studies like Agrawal and Knoeber (1996), Faccio and Lasfer (2000), and Mollah, Farooque, and Karim (2012) found an insignificant effect of institutional holdings on firm value. Secondly, there is little research examining the impact of institutional shareholdings on corporate value in Thailand despite the important roles of institutional investors in corporate governance mechanisms. Previous studies such as Wiwattanakantang (2001) and Connelly, Limpaphayom, and Nagarajan (2012) focused on the impact of managerial behaviours or family ownership on firm value. Therefore, examining whether institutional investors are effective in providing monitoring benefits, offers additional insights into how they help improve corporate governance mechanisms and corporate value in an emerging country characterised by weak legal institutions, like Thailand.

Thirdly, this study examines the relationship between institutional ownership and firm value over the period 2007 to 2011 in a sample of 1,451 firm-year observations, thus employing a much larger and more recent sample than previous studies. Wiwattanakantang (2001)

¹ Some of the reforms include revisions of the Thai Accounting Standards to conform to the International Accounting Standards, the requirement that all companies listed on the Stock Exchange of Thailand (SET) have an audit committee comprising at least three independent members, and the establishment of the National Corporate Governance Committee. For more details, see Ekkayokkaya and Pengniti (2012).

examined the effects of controlling shareholders on firm value, using a sample of 270 non-financial firms that were listed on the Stock Exchange in Thailand (SET) in 1996, the period before the Asian financial crisis in 1997. As noted by Connelly et al. (2012), the number of family-controlled firms listed on the Thai stock market has decreased substantially since many family firms faced financial problems and became insolvent after 1997. Therefore, using more recent data for empirical analysis can offer better insights into the impacts of ownership structure on corporate value in the new institutional setting of Thai capital markets. Indeed, Connelly et al. (2012) analysed the relationship between family ownership and firm value, using a cross-section data of 216 firms listed on the SET in 2005.

The results of this study show that there is a positive relationship between institutional ownership and firm value. When the institutions are classified into domestic and foreign ones, however, it is found that firm value increases with higher ownership by domestic institutions, but deteriorates with higher ownership by foreign institutions. These findings have important implications regarding the link between institutional ownership and corporate governance in Thai firms. On the one hand, domestic institutional investors appear to be effective in providing monitoring activities, thus mitigating the agency costs of free cash flow that tend to rise when there are large amount of excess cash under the control of managers (For example, rather than disgorging excess cash to shareholders by paying dividends, managers may undertake negative Net Present Value projects to build their empires). On the other hand, foreign institutional investors may be inactive and even conspire with managers to consume corporate resources at the expense of minority shareholders.

The findings of this study offer better insights for policymakers and managers about how to improve corporate governance and increase corporate value via the participation of institutional investors. In addition, the findings provide useful information for investors to make better investment decisions. Moreover, the results of this study regarding the impact of institutional ownership on firm value, may be useful to make comparisons with those found in other countries.

The remainder of this paper is organised as follows. Section 2 provides the literature review on the roles of institutional ownership in corporate governance and develops the hypotheses of this study. Section 3 describes the data, the methodology, and the definitions of variables. Section 4 presents the empirical results and discusses the findings of this study. Section 5 concludes the paper.

2. Literature Review and Hypotheses Development

It is well recognised that institutional investors are the major players in corporate governance mechanisms. However, the effects of institutional shareholdings on firm performance can be either positive or negative. Pound (1988) proposes that institutional investors that own larger equity stakes have greater incentives to monitor managers' behaviours. Further, they can do so at costs lower than that incurred by individual investors. Hence, the monitoring hypothesis predicts a positive relationship between institutional ownership and firm performance. On the other hand, institutional investors may be inactive, or conspire with managers to expropriate corporate resources at the expense of minority shareholders. Thus, the expropriation hypothesis predicts a negative relationship between institutional ownership and firm value. In addition, Maug (1998) notes that the incentives to monitor managers by institutional investors depend on the size of their shareholdings. With a large proportion of shareholdings, an institutional investor has strong incentives to monitor. However, if the institutional investor holds only a few shares in the firm, it has a low incentive to monitor as the institutional investor can easily liquidate its portfolio when the firm performance is poor. Furthermore, Elyasiani and Jia (2010) showed that both proportion and stability of ownership are important determinants of the monitoring incentives and monitoring effectiveness of institutional investors. Similarly, Hsu and Wang (2014) found that increasing stability of institutional ownership is related to better performance of firms listed on the Taiwanese Stock Exchange. Their results suggest that long-term institutional investors provide monitoring benefits.

The existing empirical evidence regarding the relationship between institutional ownership and firm value remains inconclusive. McConnell and Servaes (1990) found a significant positive relationship between institutional ownership and Tobin's Q. Han and Suk (1998) found that stock returns, and their measure of corporate performance, are associated with institutional ownership positively. Cornett, Marcus, Saunders, and Tehranian (2007) found a positive relationship between both the percentage ownership and the number of institutional investors with operating cash flow returns for a subset of institutional investors with no business relationship with the firm. A positive relationship between institutional ownership and various measures of firm performance is also documented by Nesbitt (1994), Smith (1996), Guercio and Hawkins (1999), and Demiralp, D'Mello, Schlingemann, and Subramaniam (2011), suggesting that institutional investors provide monitoring benefits,

while Agrawal and Knoeber (1996), Craswell, Taylor, and Saywell (1997), Duggal and Millar (1999), Faccio and Lasfer (2000), and Mollah et al. (2012) found no evidence showing that institutional ownership is a significant determinant of corporate performance.

Analysing the effect of dominant institutional investors (banking institutions and investment funds) on firm value of firms listed on the Spanish Stock Exchange, Ruiz-Mallorqui and Santana-Martin (2011) found that the ownership of investment funds is positively related to firm value but the ownership of banking institutions is negatively related to firm value. In a recent study, Arouri, Hossain, and Muttakin (2014) found a significant positive association between institutional ownership and bank performance in Gulf Co-Operation Council (GCC) countries. In contrast, Ben Slama Zouari and Boulila Taktak (2014) found a negative relationship between institutional ownership and the performance of Islamic banks from 15 countries.

This paper aims to provide additional evidence on the relationship between institutional ownership and firm value. Since the agency problems in Thailand tend to be high, institutional investors are likely to actively perform monitoring roles to protect their benefits. Under the active monitoring hypothesis, higher institutional ownership is associated with stronger monitoring activities, thus increasing corporate value. Consistent with these arguments, the following hypotheses are proposed:

- H_{1a}: There is a positive relationship between institutional ownership and firm value.
- H_{1b}: The presence of an institution as a controlling shareholder is beneficial to firm value.

In this paper, the effects of two types of institutional shareholders, domestic and foreign institutions, on firm value, are also examined. Kim, Eppler-Kim, Kim, and Byun (2010) argue that foreign investors may have less incentive in monitoring firm value than domestic investors, because foreign investors tend to have higher monitoring costs compared to domestic investors. This argument suggests that domestic institutions are more effective in mitigating agency problems than foreign institutions. Accordingly, the following hypotheses are proposed:

- H_{2a}: There is a positive relationship between domestic institutional ownership and firm value.
- H_{2b}: The presence of a domestic institution as a controlling shareholder is beneficial to firm value.
- H_{3a}: There is no relationship between foreign institutional ownership and firm value.
- H_{3b}: The presence of a foreign institution as a controlling shareholder has no effect on firm value.

3. Data and Methodology

3.1. Sample

The institutional ownership data were obtained from SETSMART, the database of the Stock Exchange of Thailand (SET), and the financial data were drawn from www.securities.com, the database of Euromoney Investor PLC. The original sample included all non-financial firms reported by SETSMART from 2007 to 2011 (451 firms and 1,883 firm-year observations).² After eliminating the firms listed on the Market for Alternative Investment (MAI),³ the sample was narrowed down to 1,699 firm-year observations. After removing firms with missing ownership and financial data and filtering outliers, the final sample consisted of 1,451 firm-year observations for 323 firms from seven industries as classified by the SET. The industries are agriculture and food, consumer products, industrials, property and construction, resources, services, and technology.

3.2. Model Specification

While institutional ownership can increase firm value, better firm value may also attract institutional investors to increase their shareholdings. To address the endogenous relationship between institutional ownership and firm value, the following system of simultaneous equations is formulated:

² For the same reason provided by Connelly et al. (2012), five state-owned firms were excluded from the sample because they might pursue government's objectives rather than maximise shareholders' wealth.

³ The Market for Alternative Investment (MAI) is the second board for small and medium-size firms with paid-up capital lower than 40 million Baht. The firms listed on the MAI were removed because they were much smaller than the firms listed on the SET, which have a minimum paid-up capital of 100 million Baht. In addition, MAI listed firms were not classified by industries, which were used to control for the effects of industry differences on firm value in regression analysis.

$$Q = \alpha_0 + \alpha_1 \text{Institution Ownership} + \alpha_2 \text{ROA} + \alpha_3 \text{SIZE} + \alpha_4 \text{LEV} + \alpha_5 \text{RETA} + \alpha_6 \text{CPX} + \text{Industry dummies} + \text{Year dummies} + \varepsilon \quad (1)$$

$$\text{Institution Ownership} = \beta_0 + \beta_1 Q + \beta_2 \text{ROA} + \beta_3 \text{SIZE} + \beta_4 \text{LEV} + \beta_5 \text{RETA} + \beta_6 \text{CPX} + \delta \text{LIQ} + \text{Industry dummies} + \text{Year dummies} + \varepsilon \quad (2)$$

All variables in equations (1) and (2) are defined in section 3.3 below.

3.3. Variables

This study used Tobin's Q, the sum of market value of equity and the book value of debt divided by the book value of total assets, as a measure of firm value. Tobin's Q is a widely used measurement of firm value in the studies of ownership structure and corporate governance (see, for example, Demsetz & Villalonga, 2001; Chen, Guo, & Mande, 2003; Minguez-Vera & Martin-Ugedo, 2007, and Connelly et al., 2012).

The main independent variables are institutional ownership calculated from the major shareholders' ownership data reported on SETSMART;⁴ INST is the percentage of shares held by institutional investors including banks, financial institutions, insurance companies, funds, and unit trusts; DINST is the percentage of shares held by domestic institutional investors; FINST is the percentage of shares held by foreign institutional investors; and INSTCS is a dummy variable taking the value of 1 if an institutional investor is a controlling shareholder but 0 if otherwise. Following Wiwattanakantang (2001), a controlling shareholder of a company is defined as an investor who owns at least 25 per cent of the company's shareholdings.

The control variables consist of profitability (ROA) calculated as operating income over total assets; firm size (SIZE) calculated as the natural logarithm of total assets; financial leverage (LEV) calculated as total debts divided by total assets; firm life cycle (RETA) calculated as the ratio of retained earnings to total assets; and capital expenditures (CPX) calculated as investment in fixed assets over total assets.

Liquidity (LIQ), the current assets over the total assets, was used as the instrumental variable. Year dummies and industry dummies

⁴ An investor who holds at least 0.5 per cent of total shares outstanding of a firm is considered a major shareholder of the firm listed on the Stock Exchange of Thailand.

were included to control for the effects of macroeconomic variations and industry differences on firm value, respectively. Year 2007 was used as reference year. There were seven industry dummies, namely resources, services, property and construction, technology, industrials, agriculture and food, and consumer products. The resources industry was used as the reference industry because many firms in this industry are large firms with high market capitalisations and their shares were mostly held by institutional investors.

4. Results

4.1. Descriptive Statistics

Table 1 reports the descriptive statistics of the sample. It shows that the average Tobin's Q of this study is 1.20, which is much higher than the mean Tobin's Q of 0.82 reported by Connelly et al. (2012) for Thai firms in 2005. The mean institutional ownership is approximately 41.66 per cent, with 27.95 per cent and 13.71 per cent of shares held by domestic institutions and foreign institutions, respectively. In addition, Table 1 shows that 38.66 per cent of the sample firms have an institution as a controlling shareholder. Particularly, 30.19 per cent have a domestic institution as a controlling shareholder and 8.48 per cent have a foreign institution as a controlling shareholder. With regard to the control variables, the sample firms have, on average, 9.72 per cent return on assets (ROA), firm size (SIZE) of 15.18 (the natural logarithm of total assets), 39.79 per cent financial leverage (LEV), 26.19 per cent of retained earnings over total assets (RETA), and 4.78 per cent of capital expenditures over total assets (CPX).

Table 2 shows the correlation matrix of variables. It indicates a significant and positive correlation between Tobin's Q and institutional ownership. It also reveals that Tobin's Q is positively correlated to domestic institutional ownership variables but not correlated to foreign institutional ownership variables. Among the control variables, ROA, SIZE, RETA, and CPX have positive and significant correlations with Tobin's Q. Overall, the correlation coefficient between any pair of explanatory variables lies between -0.7 and 0.7, indicating no collinearity problem in regression analysis (Lind, Marchal, & Wathen, 2010).

Table 1: Descriptive Statistics of Variables

Variable	Mean	Median	Minimum	Maximum	Std. Dev.
Q	1.2013	1.0200	0.2500	7.5100	0.7239
INST	41.6591	40.9100	0.0000	97.7700	28.7583
DINST	27.9451	22.4100	0.0000	97.7700	24.6138
FINST	13.7106	5.4000	0.0000	90.2200	18.7024
INSTCS	0.3866	0.0000	0.0000	1.0000	0.4817
DINSTCS	0.3019	0.0000	0.0000	1.0000	0.4592
FINSTCS	0.0848	0.0000	0.0000	1.0000	0.2786
ROA	0.0972	0.0800	-0.2500	0.6800	0.0814
SIZE	15.1823	14.9300	11.5600	21.0600	1.4792
LEV	0.3979	0.4000	0.0000	0.9200	0.2008
RETA	0.2619	0.2200	0.0000	0.9300	0.1834
CPX	0.0478	0.0300	0.0000	0.4800	0.0505

Notes: The sample consists of 1,451 firm-year observations from 323 firms listed on the Stock Exchange of Thailand over the period 2007 to 2011. Tobin's Q is the sum of book value of total debts and the market value of equity over total assets. INST is the percentage of shares held by institutions. DINST is the percentage of shares held by domestic institutions. FINST is the percentage of shares held by foreign institutions. INSTCS is a dummy variable with a value of 1 if the firm has an institution as a controlling shareholder but 0 if otherwise. DINSTCS is a dummy variable with a value of 1 if the firm has a domestic institution as a controlling shareholder but 0 if otherwise. FINSTCS is a dummy variable with a value of 1 if the firm has a foreign institution as a controlling shareholder but 0 if otherwise. ROA is operating income over total assets. SIZE is the natural logarithm of total assets. LEV is total debts over total assets. RETA is retained earnings over total assets. CPX is capital expenditures over total assets.

4.2. Comparison of Tobin's Q and Firm Characteristics

In this section, Tobin's Q and firm characteristics are compared after the sample was divided into high and low groups by the mean values of institutional ownership (INST, DINST, and FINST). The results in Panel A of Table 3 indicate that Tobin's Q, firm size, retained earnings, and capital expenditures (except ROA and financial leverage) of firms with high institutional ownership are significantly higher than those of firms with low institutional ownership. The same results were obtained when the sample was classified by domestic institutional ownership. When the sample was partitioned by foreign institutional ownership, the results show that Tobin's Q, ROA, firm size, and retained earnings (except financial leverage and capital spending) of the high group are significantly higher than those of the low group.

The firms having an institution as a controlling shareholder were compared with firms having no institution as a controlling shareholder. The results in Panel B of Table 3 indicate that firms with an institution as a controlling shareholder are associated with significantly larger Tobin's Q, firm size, retained earnings, and capital investment. Similarly, firms with a domestic institution as a controlling shareholder have higher Tobin's Q, ROA, firm size, and capital expenditures than firms with no domestic institution as a controlling shareholder. Comparing firms with a foreign institution as a controlling shareholder and firms without foreign institution as a controlling shareholder, this study finds that the former group has larger firm size and retained earnings than the latter group, but insignificant differences in Tobin's Q, ROA, financial leverage, and capital expenditures.

Overall, the evidence in this section indicates that firms with larger institutional ownership show better firm value, and that the presence of an institutional investor, especially a domestic one, as a controlling shareholder is beneficial to firm value. The results also suggest that institutional investors tend to invest in larger firms with higher retained earnings.

Table 2: Correlation Matrix

Variable	Q	INST	DINST	FINST	INSTCS	DINSTCS	FINSTCS	ROA	SIZE	LEV	RETA	CPX
Q	1	0.103***	0.108***	0.017	0.066**	0.087***	-0.036	0.580***	0.122***	0.037	0.077***	0.185***
INST	0.103***	1	0.765***	0.531***	0.654***	0.556***	0.399***	0.047*	0.446***	0.000	0.204***	0.097***
DINST	0.108***	0.765***	1	-0.139***	0.520***	0.697***	-0.116***	0.040	0.314***	0.004	0.075***	0.092***
FINST	0.017	0.531***	-0.139***	1	0.321***	-0.063**	0.767***	0.020	0.272***	-0.006	0.215***	0.029
INSTCS	0.066**	0.654***	0.520***	0.321***	1	0.828***	0.504***	0.033	0.175***	0.028	0.092***	0.143***
DINSTCS	0.087***	0.556***	0.697***	-0.063**	0.828***	1	0.094***	0.055**	0.191***	0.019	0.032	0.131***
FINSTCS	-0.036	0.399***	-0.116***	0.767***	0.504***	0.094***	1	-0.022	0.088***	-0.019	0.135***	0.025
ROA	0.580***	0.047*	0.040	0.020	0.033	0.055**	-0.022	1	-0.012	-0.269***	0.387***	0.142***
SIZE	0.122***	0.446***	0.314***	0.272***	0.175***	0.191***	0.088***	-0.012	1	0.327***	0.040	0.103***
LEV	0.037	0.000	0.004	-0.006	0.028	0.019	-0.019	-0.269**	0.327**	1	-0.570**	0.063**
RETA	0.077***	0.204***	0.075***	0.215***	0.092***	0.032	0.135***	0.387***	0.040	-0.570***	1	0.066**
CPX	0.185***	0.097***	0.092***	0.029	0.143***	0.131***	0.025	0.142***	0.103***	0.063**	0.066**	1

Notes: Tobin's Q is the sum of book value of total debts and the market value of equity over total assets. INST is the percentage of shares held by institutions. DINST is the percentage of shares held by domestic institutions. FINST is the percentage of shares held by foreign institutions. INSTCS is a dummy variable with a value of 1 if the firm has an institution as a controlling shareholder but 0 if otherwise. DINSTCS is a dummy variable with a value of 1 if the firm has a domestic institution as a controlling shareholder but 0 if otherwise. FINSTCS is a dummy variable with a value of 1 if the firm has a foreign institution as a controlling shareholder but 0 if otherwise. ROA is operating income over total assets. SIZE is the natural logarithm of total assets. LEV is total debts over total assets. RETA is retained earnings over total assets. CPX is capital expenditures over total assets. ***, **, * denote statistically significance at the 1%, 5% and 10% levels respectively.

Table 3: Comparison of Tobin's Q and Firm Characteristics by Institutional Ownership

Panel A: High vs. Low groups

	High INST	Low INST	Diff.	High DINST	Low DINST	Diff.	High FINST	Low FINST	Diff.
Q	1.2418	1.1619	0.0799** (2.106)	1.2632	1.1513	0.1119*** (2.935)	1.2815	1.1605	0.1209*** (3.016)
ROA	0.0987	0.0958	0.0029 (0.678)	0.0994	0.0954	0.0004 (0.943)	0.1052	0.0931	0.0121*** (2.673)
SIZE	15.7335	14.6468	1.0868*** (15.038)	15.6149	14.8332	0.7817*** (10.368)	15.7638	14.8867	0.8771*** (11.118)
LEV	0.3950	0.4008	-0.0058 (-0.551)	0.3974	0.3984	-0.0010 (-0.096)	0.3977	0.3980	-0.0004 (-0.032)
CPX	0.0522	0.0435	0.0088*** (3.309)	0.0511	0.0451	0.0006** (2.275)	0.0470	0.0482	-0.0012 (-0.419)
RETA	0.3037	0.2212	0.0825*** (8.788)	0.2760	0.2505	0.0254*** (2.632)	0.3064	0.2393	0.0671*** (6.689)
N	715	736		648	803		489	962	

Panel B: Firms with an institution as a controlling shareholder vs. firms with no institution as a controlling shareholder

	INSTCS=1	INSTCS=0	Diff.	DINSTCS=1	DINSTCS=0	Diff.	FINSTCS=1	FINSTCS=0	Diff.
Q	1.2614	1.1633	0.0981** (2.567)	1.2967	1.1600	0.1367*** (3.399)	1.1358	1.2117	-0.0759 (-1.377)
ROA	0.1006	0.0951	0.0005 (1.600)	0.1040	0.0943	0.0097** (2.143)	0.0928	0.0979	-0.0052 (-1.000)
SIZE	15.5088	14.9765	0.5324*** (6.779)	15.6123	14.9963	0.6160*** (7.416)	15.6366	15.1610	0.3756*** (3.535)
LEV	0.4049	0.3935	0.0114 (1.053)	0.4039	0.3954	0.0169 (0.740)	0.3797	0.3988	-0.0111 (-0.894)
CPX	0.0569	0.0420	0.0149*** (5.519)	0.0579	0.0434	0.0144*** (5.041)	0.0577	0.0473	0.0037 (1.024)
RETA	0.2831	0.2485	0.0346*** (3.513)	0.2709	0.2580	0.0130 (1.237)	0.3509	0.2582	0.0716*** (5.171)
N	561	890		438	1,013		123	1,328	

Notes: In Panel A, the sample is divided by the mean values of institutional ownership. In Panel B, the sample is divided by the dummy variable indicating whether the firm has an institution as a controlling shareholder. Tobin's Q is the sum of book value of total debts and the market value of equity over total assets. INST is the percentage of shares held by institutions. DINST is the percentage of shares held by domestic institutions. FINST is the percentage of shares held by foreign institution. INSTCS is a dummy variable with a value of 1 if the firm has an institution as a controlling shareholder but 0 if otherwise. DINSTCS is a dummy variable with a value of 1 if the firm has a domestic institution as a controlling shareholder but 0 if otherwise. FINSTCS is a dummy variable with a value of 1 if the firm has a foreign institution as a controlling shareholder but 0 if otherwise. ROA is operating income over total assets. SIZE is the natural logarithm of total assets. LEV is total debts over total assets. CPX is capital expenditures over total assets. RETA is retained earnings over total assets. The values in parentheses are t-statistics. ***, **, * denote statistically significance at the 1%, 5% and 10% levels respectively.

4.3. Regression Analysis

To examine the relationship between institutional ownership and firm value, the OLS regression was performed. The results are reported in Table 4 below.

Table 4: OLS Regression Results of Institutional Ownership and Firm Value

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
Intercept	0.2243 (1.2966)	0.1468 (0.8745)	0.0696 (0.4162)	0.2261 (1.2522)	0.1705 (1.0146)	0.0343 (0.2088)
INST	0.0019*** (3.1682)					
DINST		0.0018*** (2.7262)				
FINST			0.0006 (0.8654)			
INSTCS				0.1091*** (3.1175)		
DINSTCS					0.1410*** (3.6024)	
FINSTCS						-0.0747 (-1.5226)
ROA	5.6998*** (12.9366)	5.6571*** (12.8131)	5.6883*** (12.9392)	5.7078*** (12.9475)	5.6843*** (12.8314)	5.6554*** (12.8245)
SIZE	0.0516** (1.8058)	0.0656** (2.4459)	0.0855*** (3.3133)	0.0574** (1.9953)	0.0653** (2.4948)	0.0915*** (3.6783)
LEV	0.3940*** (3.7991)	0.4013*** (3.8675)	0.3722*** (3.6497)	0.3832*** (3.7453)	0.4073*** (3.9611)	0.3763*** (3.6753)
CPX	1.3704*** (4.3203)	1.3616*** (4.3354)	1.4220*** (4.4014)	1.3618*** (4.2731)	1.3521*** (4.2719)	1.4348*** (4.4202)
RETA	-0.5410*** (-4.9802)	-0.4925*** (-4.4837)	-0.5119*** (-4.6928)	-0.5596*** (-5.1307)	-0.4923*** (-4.4837)	-0.4795*** (-4.3018)
Industry dummies	Yes	Yes	Yes	Yes	Yes	Yes
Year dummies	Yes	Yes	Yes	Yes	Yes	Yes
Adjusted R ²	0.4314	0.4307	0.4275	0.4316	0.4328	0.4277
N	1,451	1,451	1,451	1,451	1,451	1,451

Notes: This table presents the OLS regression results with Tobin's Q as the dependent variable. Tobin's Q is the sum of book value of total debts and the market value of equity over total assets. INST is the percentage of shares held by institutions. DINST is the percentage of shares held by domestic institutions. FINST is the percentage of shares held by foreign institutions. INSTCS is a dummy variable with a value of 1 if the firm has an institution as a controlling shareholder but 0 if otherwise. DINSTCS is a dummy variable with a value of 1 if the firm has a domestic institution as a controlling shareholder but 0 if otherwise. FINSTCS is a dummy variable with a value of 1 if the firm has a foreign institution as a controlling shareholder but 0 if otherwise. ROA is operating income over total assets. SIZE is the natural logarithm of total assets. LEV is total debts over total assets. CPX is capital expenditures over total assets. RETA is retained earnings over total assets. The values in parentheses are White robust standard errors t-statistics. ***, **, * denote statistically significance at the 1%, 5% and 10% levels respectively.

The results for Model 1 show that, after controlling for firm characteristics, the coefficient on INST is positive and significant, indicating that institutional ownership has a positive impact on firm value. Similarly, the results for Model 2 reveal that higher domestic institutional ownership is associated with better firm value as indicated by the positive and significant coefficient on DINST. However, the results for Model 3 indicate insignificant relationship between Tobin's Q and FINST. The positive and significant coefficients of INSTCS and DINSTCS in Models 4 and 5, respectively, indicate that firms with an institution, especially a domestic one, as a controlling shareholder have better firm value compared with those with no institution as a controlling shareholder. The coefficient of FINSTCS in Model 6 is, however, not statistically significant. Therefore, the OLS estimation results are consistent with all the hypotheses proposed in section 2.

4.4. Possible Endogeneity Problem

This section aims to address the possible endogenous relationship between institutional ownership and firm value. That is, while higher institutional shareholdings are associated with better performance, firms with higher performance may attract institutions to hold larger proportion of shares. To account for the endogeneity problem, a system of simultaneous equations (1) and (2), as specified in section 3.2, is estimated by the two-stage least squares (2SLS).

Performing 2SLS requires a valid instrument variable that is correlated with the suspect endogenous variable but uncorrelated with the error term, which is sometimes difficult to find out. In this paper, a proxy for firm's liquidity (LIQ), measured by the ratio of current assets to total assets, was employed as the instrument variable. Since the agency problems tend to be higher in firms with higher liquid assets, it is expected that firms with higher institutional ownership (higher monitoring by institutions) would hold lower liquid assets so that the expropriation problem is mitigated. Following the findings by Pinkowitz, Stulz, and Williamson (2006) showing a much weaker relationship between cash holdings and firm value in the countries with poorer investor protection, it is believed that, in the case of Thailand where investors are not well protected, liquidity does not have a direct impact on firm value.⁵

⁵ Consistent with the conjecture that LIQ is a valid instrument in this context, the results from the correlation analysis show that there is a negative correlation coefficient of -0.255 between LIQ and INST at 1% level of significance but insignificant correlation between LIQ and Tobin's Q. The results are available upon request.

Table 5: Two-Stage Least Squares (2SLS) Results of Institutional Ownership and Firm Value

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
Intercept	0.9881** (2.1224)	0.3972* (1.6684)	-0.6851* (-1.7552)	1.1457** (2.1721)	0.6887** (1.9721)	-0.1742 (-0.8787)
INST	0.0098** (2.2360)					
DINST		0.0063** (2.2809)				
FINST			-0.0179** (-1.9982)			
INSTCS				0.6633** (2.2378)		
DINSTCS					0.7232** (2.1989)	
FINSTCS						-1.5266** (-2.0930)
ROA	5.7832*** (12.3178)	5.6623*** (12.4957)	5.4406*** (11.8143)	5.8476*** (11.9740)	5.7011*** (12.0995)	5.1732*** (10.7046)
SIZE	-0.1118 (-1.1238)	0.0058 (0.1160)	0.2212*** (3.4007)	-0.1077 (-1.1143)	-0.0365 (-0.5351)	0.1213*** (4.1933)
LEV	0.4763*** (3.5990)	0.4668*** (3.7049)	0.4492*** (3.3854)	0.4267*** (3.6296)	0.5422*** (3.5432)	0.4072*** (3.4052)
CPX	1.1637*** (3.2963)	1.2207*** (3.6759)	1.3253*** (3.7216)	1.0720*** (2.8350)	1.0762*** (2.8459)	1.7444*** (4.3902)
RETA	-0.7321*** (-5.3191)	-0.4836*** (-4.2462)	-0.0286 (-0.0983)	-0.8820*** (-4.6904)	-0.4767*** (-3.9074)	-0.1563 (-0.6930)
Industry dummies	Yes	Yes	Yes	Yes	Yes	Yes
Year dummies	Yes	Yes	Yes	Yes	Yes	Yes
Adjusted R ²	0.3561	0.4099	0.2267	0.3187	0.3375	0.2491
N	1,451	1,451	1,451	1,451	1,451	1,451
Cragg-Donald F-statistic	30.62**	88.89**	18.56**	21.61**	23.80**	17.65**
Stock-Yogo critical value	16.38	16.38	16.38	16.38	16.38	16.38

Notes: This table presents two-stage least (2SLS) results with Tobin's Q as the dependent variable. Tobin's Q is the sum of book value of total debts and the market value of equity over total assets. INST is the percentage of shares held by institutions. DINST is the percentage of shares held by domestic institutions. FINST is the percentage of shares held by foreign institutions. INSTCS is a dummy variable with a value of 1 if the firm has an institution as a controlling shareholder but 0 if otherwise. DINSTCS is a dummy variable with a value of 1 if the firm has a domestic institution as a controlling shareholder but 0 if otherwise. FINSTCS is a dummy variable with a value of 1 if the firm has a foreign institution as a controlling shareholder but 0 if otherwise. ROA is operating income over total assets. SIZE is the natural logarithm of total assets. LEV is total debts over total assets. CPX is capital expenditures over total assets. RETA is retained earnings over total assets. The values in parentheses are White robust standard errors t-statistics. LIQ, the ratio of current assets to total assets, is used as the instrument variable. Cragg-Donald F-statistic and Stock-Yogo critical value (at 10% maximum rejection rate) are reported for the tests of weak instrument. ***, **, * denote statistical significance at the 1%, 5% and 10% levels respectively.

Since a weak instrument can behave poorly in 2SLS, the Stock and Yogo's (2005) test was conducted to ensure that LIQ was not a weak instrument. As shown in Table 5, the Cragg-Donald F-statistic is greater than the Stock-Yogo critical value (at 10 per cent maximum acceptable rejection rate) for every model, indicating that LIQ is not a weak instrument.

The 2SLS results in Table 5 show the positive and significant coefficients of INST, DINST, INSTCS and DINSTCS for Models 1, 2, 4 and 5, respectively. These findings reveal that institutional investors, especially domestic ones, have positive influence on firm value and that firms with an institution as a controlling shareholder have higher firm value relative to those with no institution as a controlling shareholder. The positive effects of domestic institutional ownership on firm value found in this study are broadly consistent with previous studies such as McConnell and Servaes (1990), Guercio and Hawkins (1999), and Demiralp et al. (2011), supporting the effective monitoring hypothesis.

However, the coefficients of FINST and FINSTCS are negative and significant when foreign institutional ownership and Tobin's Q are treated as endogenous. Therefore, the evidence indicates that higher foreign institutional ownership is associated with lower corporate value and that firms with a foreign institution as a controlling shareholder display poorer firm value than firms with no foreign institution as a controlling shareholder. These results suggest that the expropriation problem is more severe where the Thai firm has a foreign institution as a controlling shareholder. Maug (1998) and Elyasiani and Jia (2010) noted that as the incentives to monitor managers by institutional investors depend on the size of their shareholdings, a small fraction of shares held by foreign institutions is a likely reason why they have low incentives to provide monitoring roles. In line with this explanation, the institutional ownership data in Table 1 above indicate that 27.95 per cent of shares are owned by domestic institutions while only 13.71 per cent are held by foreign institutions and that 30.19 per cent of the sample firms have a domestic institution as a controlling shareholder while only 8.48 per cent have a foreign institution as a controlling shareholder.

Overall, the negative impacts of foreign institutional ownership on firm value found in this study are generally in line with those found by Ruiz-Mallorqui and Santana-Martin (2011) for banking institutions in Spain, and Ben Slama Zouari and Boulila Taktak (2014) for Islamic banks, supporting the expropriation hypothesis.

For the control variables, the ROA, LEV, CPX and SIZE have positive effects (as shown in Models 3 and 6) but RETA has a negative impact (as shown in Models 1, 2, 4, and 5) on Tobin's Q. The positive influences of profitability and capital expenditures on Tobin's Q are also documented by Connelly et al. (2012). However, the positive effects of debt and firm size on firm value are in contrast with previous studies such as Demsetz and Villalonga (2001) and Minguez-Vera and Martin-Ugedo (2007).

5. Conclusion

The main objective of this study is to analyse the effect of institutional ownership on the corporate value of firms listed on the Stock Exchange of Thailand over the period 2007 to 2011. The sample includes 1,451 observations from 323 non-financial firms. The OLS regression results show a positive relationship between Tobin's Q and equity ownership of institutional investors and a higher Tobin's Q for firms with an institution as a controlling shareholder, relative to firms with no institution as a controlling shareholder. Similar results are also obtained regarding the effect of domestic institutional ownership on Tobin's Q, but no significant effect of foreign institutional ownership on Tobin's Q is observed. When the institutional ownership and firm value are treated as endogenous, the 2SLS regression results still show the positive effects of institutional investors, particularly domestic ones, on firm value. However, the evidence indicates a negative impact of foreign institutional ownership on firm value.

The findings of this study shed light on the ways institutional investors influence firm value. Overall, the results support the notion that institutional investors provide effective monitoring roles, thereby increasing corporate value for Thai firms. The monitoring benefits, however, appear to be provided by domestic institutions rather than by foreign institutions. The findings have important implications from both managerial and academic points of view regarding the link between institutional ownership and corporate governance in Thailand. For policy makers and managers, they can adopt measures to enhance corporate governance by attracting domestic institutional investors to hold a larger proportion of shares. For investors, the information about the impact of institutional ownership on corporate governance and firm value can help them make better decisions on investments in the Thai stock market.

Nevertheless, this study is still subject to several limitations. One of them is that it does not take into account the effects of other types of ownership such as family ownership and managerial ownership on corporate value. Therefore, the results can be further improved by including family ownership and managerial ownership as control variables. Future research may also be carried out to examine whether firm value is enhanced by the active roles of institutional investors on the corporate Board. It will also be interesting to investigate the impact of stability of institutional ownership on firm value.

References

- Agrawal, A., & Knoeber, C.R. (1996). Firm performance and mechanisms to control agency problems between managers and shareholders. *Journal of Financial and Quantitative Analysis*, 31, 377-97.
- Aivazian, V., Booth, L., & Cleary, S. (2003). Dividend policy and the organization of capital markets. *Journal of Multinational Financial Management*, 13, 101-121.
- Arouri, H., Hossain, M., & Muttakin, M.B. (2014). Effects of board and ownership structure on corporate performance: Evidence from GCC countries. *Journal of Accounting in Emerging Economies*, 4, 117-130.
- Ben Slama Zouari, S., & Boulila Taktak, N. (2014). Ownership structure and financial performance in Islamic banks: Does bank ownership matter? *International Journal of Islamic and Middle Eastern Finance and Management*, 7, 146-160.
- Berle, A., & Means, G. (1932). *The Modern Corporation and Private Property*. New York: Macmillan.
- Chen, C.R., Guo, W., & Mande, V. (2003). Managerial ownership and firm valuation: Evidence from Japanese firms. *Pacific-Basin Finance Journal*, 11, 267-83.
- Claessens, S., Djankov, S., & Lang, L.H. (2000). The separation of ownership and control in East Asian corporations. *Journal of Financial Economics*, 58, 81-112.
- Connelly, J.T., Limpaphayom, P., & Nagarajan, N.J. (2012). Form versus substance: The effect of ownership structure and corporate governance on firm value in Thailand. *Journal of Banking & Finance*, 36, 1722-43.
- Cornett, M.M., Marcus, A.J., Saunders, A., & Tehranian, H. (2007). The impact of institutional ownership on corporate operating performance. *Journal of Banking & Finance*, 31, 1771-94.
- Craswell, A.T., Taylor, S.L., & Saywell, R.A. (1997). Ownership structure and corporate performance: Australian evidence. *Pacific-Basin Finance Journal*, 5, 301-23.
- Demiralp, I., D'Mello, R., Schlingemann, F. P., & Subramaniam, V. (2011). Are there monitoring benefits to institutional ownership? Evidence from seasoned equity offerings. *Journal of Corporate Finance*, 17, 1340-1359.

- Demsetz, H., & Villalonga, B. (2001). Ownership structure and corporate performance. *Journal of Corporate Finance*, 7, 209-33.
- Duggal, R., & Millar, J.A. (1999). Institutional ownership and firm performance: The case of bidder returns. *Journal of Corporate Finance*, 5, 103-117.
- Ekkayokkaya, M., & Pengniti, T. (2012). Governance reform and IPO underpricing. *Journal of Corporate Finance*, 18, 238-253.
- Elyasiani, E., & Jia, J. (2010). Distribution of institutional ownership and corporate firm performance. *Journal of Banking & Finance*, 34, 606-620.
- Faccio, M., & Lasfer, M.A. (2000). Do occupational pension funds monitor companies in which they hold large stakes? *Journal of Corporate Finance*, 6, 71-110.
- Guercio, D.D., & Hawkins, J. (1999). The motivation and impact of pension fund activism. *Journal of Financial Economics*, 52, 293-340.
- Han, K.C., & Suk, D.Y. (1998). The effect of ownership structure on firm performance: Additional evidence. *Review of Financial Economics*, 7, 143-155.
- Hsu, M.F., & Wang, K. (2014). The level and stability of institutional ownership and firm performance: Evidence from Taiwan. *Emerging Markets Finance and Trade*, 50, 159-173.
- Jensen, M.C., & Meckling, W.H. (1976). Theory of the firm: Managerial behavior, agency costs and ownership structure. *Journal of Financial Economics*, 3, 305-360.
- Kim, I.J., Eppler-Kim, J., Kim, W.S., & Byun, S.J. (2010). Foreign investors and corporate governance in Korea. *Pacific-Basin Finance Journal*, 18, 390-402.
- La Porta, R., Lopez-de-Silanes, F., Shleifer, A., & Vishny, R. (2000). Investor protection and corporate governance. *Journal of Financial Economics*, 58, 3-27.
- Lind, D.A., Marchal, W.G., & Wathen, S.A. (2010). *Statistical Techniques in Business and Economics* (14th ed.). Boston: McGraw-Hill.
- Maug, E. (1998). Large shareholders as monitors: Is there a trade-off between liquidity and control? *Journal of Finance*, 53, 65-98.
- McConnell, J.J., & Servaes, H. (1990). Additional evidence on equity ownership and corporate value. *Journal of Financial Economics*, 27, 595-612.
- Minguez-Vera, A., & Martin-Ugedo, J.F. (2007). Does ownership structure affect value? A panel data analysis for the Spanish market. *International Review of Financial Analysis*, 16, 81-98.
- Mollah, S., Farooque, O.A., & Karim, W. (2012). Ownership structure, corporate governance, and firm performance. *Studies in Economics and Finance*, 29, 301-319.
- Nesbitt, S.L. (1994). Long-term reward from shareholder activism: A study of the CalPERS effect. *Journal of Applied Corporate Finance*, 6, 75-80.
- Pinkowitz, L., Stulz, R., & Williamson, R. (2006). Does the contribution of corporate cash holdings and dividends to firm value depend on governance? A cross-country analysis. *Journal of Finance*, 61, 2725-2751.
- Pound, J. (1988). Proxy contests and the efficiency of shareholder oversight. *Journal of Financial Economics*, 20, 237-65.

- Ruiz-Mallorquí, M.V., & Santana-Martín, D.J. (2011). Dominant institutional owners and firm value. *Journal of Banking & Finance*, 35, 118-129.
- Shleifer, A., & Vishny, R.W. (1986). Large shareholders and corporate control. *The Journal of Political Economy*, 94, 461-488.
- Smith, M.P. (1996). Shareholder activism by institutional investors: Evidence from CalPERS. *Journal of Finance*, 51, 227-252.
- Stock, J.H., & Yogo, M. (2005). Testing for weak instruments in IV Regression. In Andrews, D.W.K. & Stock, J.H. (Eds.), *Identification and Inference for Econometric Models: Essays in Honor of Thomas Rothenberg* (pp. 80-108). Cambridge University Press.
- Wiwattanakantang, Y. (2001). Controlling shareholders and corporate value: Evidence from Thailand. *Pacific-Basin Finance Journal*, 9, 323-362.