

THE DIVERGENCE OF OWNERSHIP STRUCTURE AND AUDIT FEE: THE CASE OF SET 100 THAILAND

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Abstract - This study aims to examine the relationship between the divergence of ownership structure and audit fee after controlling for firm characteristics, as well as the types of auditor. The divergence of ownership structure is measured by the percent of divergence between the control and cash flow rights of the largest ultimate owners. By using pyramidal and cross-shareholding structures, on average, the largest ultimate owners of the sample firms are seen to have excess control rights at 16.91 %, with a maximum and minimum of 93.09% and 0.00%. The cross-sectional regression analysis also shows a significantly negative relationship between the divergence of ownership structure and audit fee. Additionally, there is a negative relation between firm profitability and audit fee. However, firm size, firm leverage, and BIG4 are positively associated with audit fee.

Index terms - Divergence of Ownership Structure, Audit Fee, Cash Flow Right, Voting Right, SET 100 Thailand

I. INTRODUCTION

As a financial expertise, an auditor should provide an audit process to comfort and reassure the financial statement users. The usefulness of the auditors depends on the audit quality. Normally, most shareholders are willing to pay a higher audit fee in order to gain higher audit quality. A prior study indicated that the audit fee is correlated with audit quality [1]. Furthermore, the ownership structure of large Thai firms is complicated because of their pyramidal and cross-shareholding structures [2]. These pyramidal and cross-shareholding structures allow controlling shareholders to have a higher level of voting right than the level of their equity ownership [3]. It is interesting to investigate the relationship between the divergence of ownership structure and audit fee. The objective of this paper is to investigate the relationship between the divergence of ownership structure and the audit fee of firms in SET 100 Thailand. A positive relationship is expected between the audit fee and the divergence of ownership structure. Controlling shareholders often use their control power to exploit wealth from non-controlling shareholders [4]. Auditors require more audit time, resources, and effort to inspect clients' financial statements, and as a consequence, they have to charge such clients a higher audit fee [5].

On the other hand, we expect a negative relationship between audit fee and the divergence of ownership structure. Controlling shareholders do not incentive to expropriate [6]. They prefer a reputation for not expropriating non-controlling shareholders. This can signal a strong tool for monitoring managers, leading to lower audit fee.

The sample consists of 81 non-financial firms from the SET 100 index in year 2014. On average, the sample firms have divergence of voting and cash flow

rights at 16.91%, with the maximum and minimum of 93.09% and 0.00%. The regression result also shows that there is a significant negative relationship between the excess control right and audit fee after controlling for several firm characteristics and auditor types. This implies that the excess control voting right of the largest ultimate owners can be a monitoring tool that can decrease audit risk and audit fee. Otherwise, it can be said that the largest ultimate owners prefer low audit fee to high audit quality.

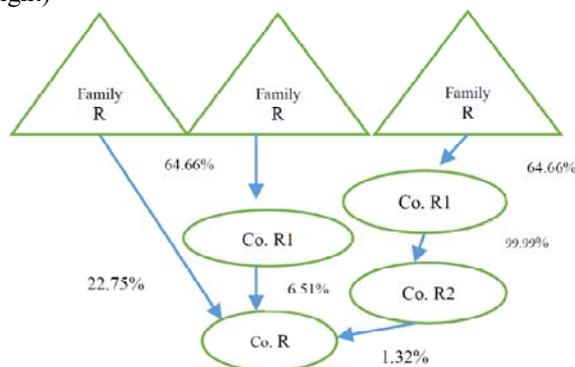
Regulators should consider the influence of the divergence of ownership structure on future regulation settings in order to enhance the quality of audits. Investors and auditors should acknowledge that excess control over cash flow rights is related to audit fee. The results of this study will assist accounting practitioners and academics in understanding more about the determinants of audit fee.

II. LITERATURE REVIEW AND HYPOTHESIS DEVELOPMENT

This study concerns the second type of agency problems. It is the conflict of interest between the controlling and non-controlling shareholders. Agency problem type II happens when the controlling shareholders increase their wealth in consuming additional perquisites to the detriment of non-controlling shareholders. For example, they decide to retain the earnings of the firm for future profitable risky projects instead of distributing the profits as dividends to all shareholders.

The ownership structure of large Thai firms is complicated through pyramidal and cross-shareholding structures. Pyramidal (figure 1) and cross-shareholding (figure 2) structures create the divergence of voting and cash flow rights. With these

structures, controlling shareholders are able to commit low equity investment (low cash flow right) while keeping tight control of the firms (high voting right)



In Figure 1, cash flow right which Family R has over Co. R is 27.81%. It is calculated as $(22.75\%) + (6.51\% * 64.66\%) + (1.32\% * 99.99\% * 64.66\%)$. Voting right is 30.58%, which is calculated as $(22.75\%) + (6.51\%) + (1.32\%)$. Divergence of voting and cash flow rights is 9.06%. This is calculated as $1 - (27.81\% / 30.58\%) = 9.06\%$.

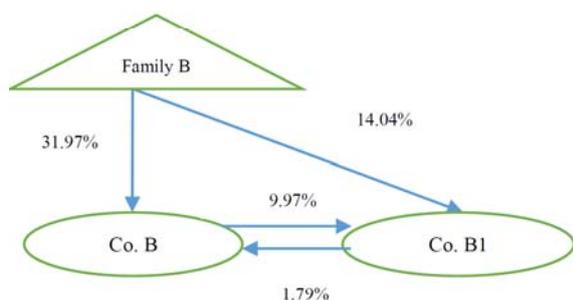


Figure 2: Cross-shareholding Structure

In figure 2, cash flow right which Family B has over Co. B is 32.22%. It is calculated as $(31.97\%) + (1.79\% * 14.04\%)$. Voting right is 33.76%, which is calculated as $(31.97\%) + (1.79\%)$. Divergence of voting and cash flow rights is 4.56%. It is calculated as $1 - (32.22\% / 33.76\%)$.

Pyramidal and cross-shareholding structures have significant impact on the auditor's risk assessment and quality, and in turn, the audit fee. The audit fee is the consequence of the auditor's risk assessment and clients' demand for audit quality [7]. It is also a representative of audit quality.

In a situation of higher risk or divergence of ownership structure, the auditors use more audit effort, time and resources to ensure high audit quality.

As a result, they charge greater audit fee. A prior study [5] has provided evidence that auditors charge higher audit fee due to increased audit risk from agency problem type II. Controlling shareholders tend to take advantage of non-controlling shareholders. In contrast, other prior study [8] has

indicated that auditors charge lower audit fee for firms with a divergence of voting and cash flow rights. A limit in the rules in protecting the rights of shareholders in Korea was pointed out, and some Korea businesses preferred low audit fee to audit quality. Auditors in Korea might reduce their work and propose low audit fee with a low quality audit. However, prior study [6] has argued that controlling shareholders prefer a reputation for not expropriating non-controlling shareholders. This can be an effective mechanism to monitor managers. For control variables, prior studies [5, 8, 9, 10] have documented the significant relationship between audit fee and client characteristics, including firm size, profitability, and leverage and complexity, as well as auditor types. According to the audit risk and demand-based perspective, auditors usually price audit fee depending on the audit effort, time, and resources. Large firms have a greater number of transactions. Profitable firms tend to disclose more information to show their performance. High leverage firms have to reveal more information to meet the requirements of creditors. Consequently, auditors require more time and effort to audit the accounts of these firms. Furthermore, in auditing complex firms, auditors tend to encounter more professional liability claims. The audit fee of complex firms are higher than that of simple firms. Thai research has indicated that firms with BIG4 auditors pay higher audit fee [11].

Our study aims to investigate the effect of the divergence of ownership structure on audit fee in the case of firms in SET 100 Thailand. We set the hypothesis as follows:

H1: The divergence of ownership structure is related to the audit fee of SET 100 firms.

It is predicted that, there may be a positive relationship between audit fee and the divergence of ownership structure. According agency problem type II, auditors require more time and effort to audit the client's financial statements. Auditors charge higher audit fee.

Alternatively, we anticipate a negative relationship between audit fee and the divergence of ownership structure. With higher control of the firms, the largest ultimate shareholders can be an effective mechanism to monitor managers. This leads to lower audit risk and audit fee. Otherwise, in an environment of low investor protection, the largest ultimate owners might require low audit fee rather than high audit quality.

III. RESEARCH METHODOLOGY

The sample of this study is initially composed of all listed firms on the SET 100 index of the Stock Exchange of Thailand during the period of 2014. Then we exclude 13 financial firms since these firms

have special activities and more regulations. Then 2 firms with incomplete data and 4 firms with fiscal year end other than December 31 are excluded.

The final sample consisted of 81 listed firms at the end of 2014. The financial data utilized in this study are obtained from the DATASTREAM database. The non-financial data regarding audit fee, ownership structure, and auditor information are collected from annual reports and form 56-1, which are available in the websites of the Stock Exchange Commission of Thailand and the Stock Exchange of Thailand.

We follow prior research [4, 12] in order to identify the largest ultimate owners and measure the divergence of voting and cash flow rights. The largest ultimate owners are defined as the shareholders that have the largest control voting rights of the company and that are not controlled by anyone else. Voting and cash flow rights have the same method of defining the chain of control.

The divergence of ownership structure is measured according to the percent of divergence between the control and cash flow rights of the largest ultimate owners. Cash flow right is the sum of a multiplier of the direct and indirect shareholdings in each control chain of the largest ultimate owners. However, voting right is the sum of the minimum percentage of the direct and indirect shareholdings in each control chain.

In order to find out whether the divergence of ownership structure is related to audit fee, we have to control for other determinants of audit fee, including firm size, profitability, leverage, complexity, and BIG4. The following regression model is used to test the hypothesis:

Model:

$$LAF_i = \beta_0 + \beta_1 DIV_i + \beta_2 MVE_i + \beta_3 ROA_i + \beta_4 LEV_i + \beta_5 INVREC_i + \beta_6 BIG4_i + \varepsilon_i \quad (1)$$

Where:

- LAF = Audit fee, measured by natural log of audit fee
- DIV = Divergence of voting and cash flow rights of the largest ultimate owners
 It is a proxy of the divergence of ownership structure.
 $\%DIV = (1 - (CFR/VR) * 100)$
 CFR is the percentage of cash flow right of the largest ultimate owners.
 VR is the percentage of the voting right of the largest ultimate owners.
- MVE = Firm size, measured by year-end market value of common equity
- ROA = Firm profitability, measured by return on assets
- LEV = Firm leverage, measured by long-term liabilities divided by total assets

- INV REC = Firm complexity, measured by sum of inventories & account receivables divided by total assets
- BIG4 = Auditor types, 1 if the auditor is one of international BIG4 and 0 otherwise
- ε = Error

IV. RESULTS AND ANALYSIS

In this section, first we describe the descriptive statistics for an overview of the characteristics of SET 100 firms in Table 1. Second, in Table 2, we report the Pearson correlation coefficients in order to confirm that there is no serious multicollinearity problem. Finally, we present the results of regression analysis in Table 3.

Table 1. Descriptive Statistics (n=81)

Variables	Mean	Std. Dev.	Max	Min
AF (mil. baht)	10.68	19.24	112.66	.89
CFR (%)	39.71	19.27	77.28	4.75
VR (%)	49.41	20.18	109.80	15.02
DIV (%)	16.91	26.85	93.09	0.00
MVE (bil. baht)	87.59	147.75	816.90	6.77
ROA (%)	9.65	9.13	38.12	-20.01
LEV (time)	0.52	0.16	0.89	0.09
INVREC (time)	0.25	0.22	0.90	0.00
BIG4	0.83	0.38	1.00	0.00

Table 1 reports the raw audit fee, ranging from a minimum of 0.89 million baht to a maximum of 112.66 million baht with a mean value of 10.68 million baht. The means for cash flow and voting rights are 39.71% and 49.41%, respectively. Firms on the SET 100 display on average higher voting right than cash flow right. Divergence of ownership structure is 16.91%, while some firms appear to have 93.09%, and others do not have any divergence.

There is also a wide diversity of other firm characteristics. The market value of equity, a proxy of firm size, has a minimum of 6.77 billion baht and a maximum of 816.90 billion baht, with a mean of 87.59 billion baht. The ROA, a proxy of firm performance, has a minimum of -20.01% and a maximum of 38.12%, with a mean of 9.65%. The average leverage ratio (LEV) is 0.52, measured by the long-term liabilities divided by total assets. Account receivables and inventories also comprise, on average, 25% of total assets. Finally, 83% of the sample firms are clients of the BIG4.

Table 2 demonstrates the paired correlation matrix of all variables used in the research model. The result

shows that the natural log of the audit fee has a significantly positive relation with firm size and leverage. These correlations imply that firms of a large size and with a high leverage ratio pay higher audit fee. The Pearson correlations are also used to detect a multicollinearity problem, a potential high pair-wise correlation of all explanatory variables.

Table 2. Pearson Correlation Matrix

	LAF	DIV	MVE	ROA	LEV	INV REC	BIG 4
LAF	1						
DIV	-.036	1					
MVE	.553**	.133	1				
ROA	-.161	-.050	.152	1			
LEV	.352**	.115	.100	-.398	1		
INVREC	.020	-.188*	-.213*	-.030	.097	1	
BIG4	.104	.189*	-.144*	-.133	.136	.053	1

Note: * significant at the 5% level, ** significant at the 1% level-

In this study, we do not find the problem of multicollinearity. All of the correlation coefficients between explanatory variables are less than the criteria value. The criteria value of multicollinearity is 0.8 [13]. Further, the VIF for all explanatory variables are quite low as indicated in Table 3. The criterion for VIF is 10 [14].

In sum, a regression analysis could be used to investigate the effect of the divergence of ownership structure on audit fee, since this study does not violate the basic assumptions of multiple regression, which are linear relationship, normality, no or little multicollinearity, no autocorrelation, and homoscedasticity.

Table 3. Multiple Regression Analysis

The model used in the regression:

$$LAF_i = \beta_0 + \beta_1 DIV_i + \beta_2 MVE_i + \beta_3 ROA_i + \beta_4 LEV_i + \beta_5 INVREC_i + \beta_6 BIG4_i + \varepsilon_i \quad (1)$$

Variable	Expect	Coeff.	t-stats	VIF
constant		.412	1.006	
DIV	+/-	-.006	-1.847*	1.109
MVE	+	<.000	6.835***	1.162
ROA	+	-.018	-1.683*	1.268
LEV	+	1.355	2.208**	1.287
INV REC	+	.449	1.088	1.119
BIG4	+	.450	1.915**	1.095
Adj-R ²	42.7%	Dubin-watson	1.931	
F-stats	10.954***	n= 81		

Note: * significant at the 10% level, ** significant at the 5% level, *** significant at the 1% level

Variable definition: LAF = a natural log of audit fee. DIV = a percent of the divergence between voting and cash flow rights of the largest ultimate owners. %DIV = (1- (CFR/VR)*100). MVE = a year-end market value of common equity. ROA = a return on assets. LEV = long-term liabilities divided by total assets. INVREC = sum of inventories & accounts receivable divided by total assets. BIG4 is types of auditor: 1 if the auditor is one of the international BIG4 and 0 otherwise.

Table 3 summarizes the regression results to see whether the divergence affects on the audit fee after controlling for other firm characteristics and auditor types. The adjusted R² in the model is 42.7%. This indicates that this model is capable of explaining 42.7 percent of the variation in the audit fee. In addition, the reduced model shows that the adjusted R² in the model without DIV is 40.9% (results not tabulated). The divergence of the ownership structure (DIV) slightly increases with the explanatory power by 1.8%.

According to table 3, the coefficient on DIV is -.006, which is negative and significantly related to the LAF at the 10% level. It can be explained that firms with higher divergence of ownership are charged lower audit fee. This is possibly because the largest ultimate owners can be an effective mechanism to monitor managers, leading to lower audit risk and audit fee. The negative relation is also consistent with a prior study in Korea [8]. A negative relationship exists because firms with greater divergence of ownership prefer low audit fee to high audit quality.

In sum, with excess control over cash flow rights, the largest ultimate owners can decrease audit fee for two reasons. First, the largest ultimate owners can be a mechanism to control managers and reduce audit risk. Second, the largest ultimate owners might prefer low audit fee rather than a high-quality audit process. As a consequence, firms with a higher divergence of ownership structure have lower audit fee.

As reported in Table 3, most of the control variables are significantly related to the audit fee. The MVE is significantly positive related to the LAF at the 1% level. The audit fee of large firms is greater than that of the small firms. The LEV and BIG4 are significantly positive related to the LAF at the 5% level. High-leverage firms are charged more audit fee since they have more finance and audit risks. Auditors must put more effort and resources into their audit process. The result also shows that the BIG4 firms charge their clients higher audit fee, consistent with prior Thai research [11].

In addition, the coefficients for the control variables are in the expected directions, except for the ROA variable. The coefficient of ROA is -.018, which is

negatively significant at the 10% level. We expected a positive relationship between profitability and audit fee. However, we find a negative relationship. It could be explained that firms with lower profitability have a higher default of financial and audit risks. Thus auditor might charge low-profitable firms high audit fee.

CONCLUSION

Audit quality is one of the factors that can build investors' confidence in the Thai capital market. Audit fee is a representative of audit quality. The determinants of audit fee are an interesting topic for Thai researches. Furthermore, prior research [2] indicated that the divergence of ownership structure often has appeared with any pyramidal and cross-shareholding structures in Thailand. With these structures, controlling shareholders can gain excess control over cash flow rights. Agency problem Type II might occur and impact the cost of the audit. As a consequence, our question is whether the divergence of ownership structure impacts the audit fee.

This study aims to test the relationship between the divergence of ownership structure and audit fee after controlling for firm characteristics and auditor types. The divergence of ownership structure is measured according to the difference between the voting and cash flow rights of the largest ultimate owners in each firm. Firm characteristics consists of firm size, profitability, financial risk, and complexity. Auditor types are BIG4 or not.

With 81 sample firms on the SET 100, we find that the divergence of ownership has a significantly negative relationship with audit fee. We provided two explanations for the negative relationship. First, controlling shareholders prefer a reputation for not expropriating from non-controlling shareholders. They also place more effort in monitoring management. With an incremental effective control and a decrease of audit risk, auditors can decrease their time and resources required in the audit process. Thus they can charge lower audit fee for firms with a higher divergence of ownership structure.

The other explanation is that controlling shareholders prefer low audit fee rather than a high-quality audit. This is due to low investor protection in Thailand. With low legal risk, auditors, do not have an incentive to provide a high-quality audit. To satisfy the largest ultimate owners, auditors might charge low audit fee for high-divergent firms. In addition to the divergence of ownership structure, firm profitability is seen to have a negative relationship with audit fee. Auditors charge higher audit fee for firms with lower profitability. This is because these firms have higher financial and audit risks. Auditors need more effort and resources in the audit process.

However, firm size and firm leverage have a positive impact on audit fee. It is explained that auditors charge higher audit fee for firms of large sizes and with high financial risk, as they require greater effort and resources during the audit process.

This paper makes several contributions. First, this study indicates to investors and auditors that the divergence of ownership structure has a negative impact on audit fee. SET 100 firms, with excess control of the largest ultimate owners, might have an effective monitor tool and lower audit fee. Second, the results of this study also support evidence for regulators that the 100 largest firms on the Stock Exchange of Thailand have more voting than cash flow rights, with an average of 16.91%. However, the study does not find the entrenchment effect in the SET 100 firms.

Third, this study also suggests that regulators pay more attention to the behaviors of controlling shareholders and auditors. As can be seen in prior research [8], in the Thai environment with weak investor protection and the absence of lawsuits, controlling shareholders, who gain excess control over cash flow rights, prefer low audit fee to the quality of the auditor's work. Finally, the standard setter should be more concerned about the impact of the ownership structure on future standard setting in order to enhance the quality of the audit.

Future researches can extend to investigate the relationship of divergence of ownership structure and audit fee in other firms in the SET and MAI markets. The SET is a market for firms with more than THB 300 million, but the MAI is a market for small and medium-sized enterprises. Their ownership structure and the impact of divergence of ownership structure on their audit fee might be different from those of this study.

In addition, audit quality plays a significant role in the stock market; however, there is still limited evidence in this area. Thus it is suggested that future researchers investigate other determinants of audit fee as a proxy for audit quality. Furthermore, the divergence of ownership structure is normally found in Thailand; thus, future studies might investigate the relationship between the divergence of ownership structure and corporate value.

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