Determinants of the Probability of Good Corporate Governance: Evidence from Thailand
ปัจจัยที่เป็นตัวกำหนดความน่าจะเป็นที่จะมีการกำกับดูแลกิจการที่ดีของบริษัทจดทะเบียนไทย

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บทคัดย่อ

การกำกับดูแลกิจการในประเทศไทยมีบทบาทเพิ่มขึ้นภายหลังวิกฤติทางการเงินในปี พ.ศ. 2540 เพราะมีความสำคัญต่อการเจริญเติบโตเศรษฐกิจและการทำหน้าที่ของตลาดทุน งานวิจัยนี้มีวัตถุประสงค์เพื่อศึกษาผลกระทบของลักษณะเฉพาะของบริษัทที่มีต่อความน่าจะเป็นที่บริษัทจะมีการกำกับดูแลกิจการที่ดี โดยได้ทำการศึกษาบริษัทที่จดทะเบียนในตลาดหลักทรัพย์แห่งประเทศไทย และคะแนนกำกับดูแลกิจการของแต่ละบริษัทในรายงานการกำกับดูแลกิจการบริษัทจดทะเบียน

จากการวิจัยพบว่า ความเสี่ยงจากการลงทุนในหุ้นของนักลงทุน ขนาดของบริษัท และอัตราผลตอบแทนต่อสินทรัพย์มีผลต่อความน่าจะเป็นที่บริษัทจะมีการกำกับดูแลกิจการที่ดี กล่าวคือ บริษัทที่มีความเสี่ยงจากการลงทุนในหุ้นของนักลงทุนในระดับต่ำ บริษัทที่มีขนาดใหญ่ และบริษัทที่มีอัตราผลตอบแทนต่อสินทรัพย์ในระดับสูง จะมีการกำกับดูแลกิจการที่เข้มงวด อย่างไรก็ตาม อายุของบริษัทและมูลค่าของบริษัทไม่มีผลต่อความน่าจะเป็นที่บริษัทจะมีการกำกับดูแลกิจการที่ดี นอกจากนี้ กลุ่มอุตสาหกรรมมีผลต่อการกำกับดูแลกิจการเช่นกัน กล่าวคือ บริษัทที่อยู่ในอุตสาหกรรมประเภทเกษตรและอุตสาหกรรมอาหาร สินค้าอุปโภคบริโภค สินค้าอุตสาหกรรม ทรัพยากร และบริการ มีแนวโน้มที่จะมีการกำกับดูแลกิจการที่อ่อนแอ

คำสำคัญ: การกำกับดูแลกิจการที่ดี ความเสี่ยงจากการลงทุนในหุ้นของนักลงทุน

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Abstract

In Thailand, corporate governance has become increasingly important after the financial crisis in 1997 as it is essential to economic growth and functioning of capital market. This paper studies the effect of firm characteristics on the probability that firms will have stringent corporate governance by examining Thai listed firms and their corporate governance scorings in Corporate Governance Report of Thai Listed Companies (CGR).

This paper evidences that firm's total equity risk, firm size, and return on assets are significant to the probability to have good corporate governance. In other words, firms with lower equity risk, higher total assets, and higher return on assets are more likely to have better corporate governance practices. However, firm age and firm value are insignificant. Additionally, the industry that a firm is in also determines firm's corporate governance practice. That is, firms in the industries of agro and food, consumer products, industrials, resources, and services are more likely to have weak corporate governance.

Keywords: Good Corporate Governance, Total Equity Risk

Introduction

Organisation for Economic Co-operation and Development (OECD) defines corporate governance as "procedures and processes according to which an organisation is directed and controlled" and also states that corporate governance is essential to country's economic growth, efficiency, and market functioning and also improves confidence of investors. Furthermore, Claessens (2003) explains that corporate governance leads to economic growth and development because of more access to external financing, lower cost of capital and higher firm value, higher operating performance, lower risk of financial crises, and improved relationship with stakeholders. However, OECD (2004) notes that corporate governance also depends on legal and institutional system in each country.

Corporate governance has been received more attention in Thailand after the financial crisis in 1997. To restore Thai capital market and investor confidence, the Securities and Exchange Commission (SEC) implements corporate governance guidelines for listed companies. Thai government has also officially announced that the year 2002 is a year of good corporate governance and set up the National Corporate Governance Committee (NCGC) to establish policies and measures for better corporate governance in Thailand (SEC, 2010). Moreover, SEC (2010) remarks that three factors for success of corporate governance in Thai capital markets are regulatory discipline, market discipline, and self discipline.

Regarding market discipline, the Thai Institute of Directors Association (IOD) is established to promote professionalism of directors and corporate governance in Thai firms and it has issued Corporate Governance Report of Thai Listed Companies (CGR) since 2001. The purpose of the CGR is to measure corporate governance practices for all firms listed in the Stock Exchange of Thailand (SET) and the Market for Alternative Investment (MAI) by following OECD Principles of Corporate Governance. The main five principles are rights of shareholders, equitable treatment of shareholders, roles of stakeholders, disclosure and transparency, and board responsibilities. Firms shown in CGR are in the categories of "excellent" (score of 5), "very good" (score of 4), or "good" (score of 3) corporate governance scoring whereas firms that are not in CGR have poor corporate governance.

From 2001 to 2009, IOD has been issued 8 reports with the exception of years 2004 and 2007. The weight of each principle changes from year to year. The weights of all five principles in CGR 2010 are 20%, 15%, 15%, 25% and 25%, respectively. A number of scoring criteria in each principle are 24, 16, 10, 33, and 49, respectively. In addition, CGR 2010 does not include firms that register during the year 2009 and are under rehabilitation. Because CGR is published in 2010, the corresponding data used in this paper is in 2009.

Many previous studies examine the impact of corporate governance on firm value and stock

performance. However, this paper investigates the effect of firm characteristics on corporate governance. That is, the purpose of this study is to find the determinants of the probability that firms will have stringent corporate governance by examining 485 firms listed in both SET and MAI in 2009. The determinants are firm's total equity risk, size (total assets), return on assets, age, and firm value (Tobin's Q) and they are apart from criteria of IOD in CGR. Industry dummy variables are also included.

The finding is that firm's total equity risk, size, and return on assets are significantly related to the probability to have stringent corporate governance. That is, firms with lower equity risk, higher total assets, and higher return on assets are more likely to have better corporate governance practice; however, firm age and firm value are insignificant. Other finding is that industry factors are also significant. Firms in the industries of agro and food, consumer products, industrials, resources, and services are more likely to have less stringent corporate governance.

The paper is organized as follows. Section 2 discusses the literature on governance and firm performance. Section 3 describes the methodology, hypothesis and, the data. Section 4 gives empirical results and Section 5 concludes.

2. Literature Review

2.1 The Effect of Corporate Governance on Firm Performance

Many literatures study the impact of corporate governance on firm value and firm performance. First, Gompers et al. (2003) scrutinize corporate governance in terms of shareholder right in 1,500 firms in the United States from 1990 to 1999 and evidence that well-governed firms perform better with respect to firm value (measured as Tobin's Q), stock returns, profit, and sales growth. Second, Drobetz et al. (2003) construct corporate governance ratings of 253 listed firms in Germany. They find that during 1998-2002, corporate governance rating is positively related to firm value (measured as market-to-book ratio) and is negatively related to stock returns. The explanation is that firms with better corporate governance can reduce their monitoring costs; therefore, investors can lower expected returns.

Third, Klapper and Love (2004) study 374 firms in 14 emerging countries in 1999 and find that good corporate governance is positively related to firm market performance (measured by Tobin's Q) and operating performance (measured by return on assets). Fourth, Durnev and Kim

(2005) evidence the relationship between corporate governance ranking and valuation of firms in 27 countries and describe that corporate governance quality increases firm valuation (measured by Tobin's Q). The authors also apply simultaneous equations and affirm that good corporate governance has a positive effect on firm valuation; however, firm valuation has no effect on quality of corporate governance. Fifth, Black et al. (2006a) construct corporate governance index of firms in Korea Stock Exchange by surveying those firms in 2001 and apply two- and three-stage least squares estimators in simultaneous equations to account for endogeneity. They evidence that strong corporate governance leads to higher firm value (measured as Tobin's Q) and confirm that there is no reverse causality in the relationship between them. In other words, high value firms are not necessarily better governed. Furthermore, they claim that strong corporate governance does not increase profitability, which is the ratio of earnings before interest and tax (EBIT) to sales.

Additionally, Cheung et al. (2007) survey 168 largest firms in Hong Kong stock market during in 2002 to construct corporate governance index and conclude that governance index is positively related to market-to-book ratio (market performance) and return on equity (accounting performance). Bhagat and Bolton (2008) examine firms in the United States from 1990 to 2004 and apply simultaneous equation to take into account the effect of endogeneity. They assert that stringent corporate governance results in higher

return on assets in the present and succeeding periods; however, board independence has the opposite effect. Moreover, corporate governance has no positive impact on future stock performance. Furthermore, Morey et al. (2009) study firms in 21 emerging markets from 2001 to 2006 and point out that an increase in corporate governance rating results in an increase in firm value (measured by Tobin's Q and price-to-book ratio). That is, firms with corporate governance improvement have higher value. In addition to the aforementioned test of *change* variables, the authors also test for *level* variables and find the same results. Firms with higher corporate governance ratings have higher value. Finally, Renders et al. (2010) examine the relationship between stringent corporate governance and firm performance by studying 938 firms in FTSEurofirst 300 in 14 EU countries from 2000 to 2003 and taking the endogeneity problem into account. They find that firms with higher governance index have higher Tobin's Q, market value-to-sales ratio, market-to-book ratio, return on assets, and return on equity.

The following literatures study the impact of corporate governance on firm risk. First, Nguyen (2011) evidences the relationship between corporate governance and risk-taking behavior by studying Japanese listed companies during 1996-2003 and excluding financial institutions. The aspects of corporate governance are ownership structure (whether firms are controlled by family or bank) and ownership concentration (the cumulative ownership of the largest five stockholders). The

author finds that firms with family control and concentrated ownership have higher firm-specific risk. Next, John et al. (2008) study the relationship between corporate governance and risk-taking behavior by examining firms in 39 countries from 1992 to 2002. They assert that firms with higher investor protection (better corporate governance) take more risk, and have higher asset and sales growth and this result is also true for the United States data. They measure investor protection in terms of accounting disclosure, rule of law in each country, and shareholder rights and measure risk in terms of firm's earning volatility.

2.2 The Effect of Firm Characteristics on Corporate Governance

The previous section discusses the impact of corporate governance on firm performance; however, this section indicates how firm characteristics determine the level of corporate governance. First, Klapper and Love (2004) find that firms with high sales growth and high intangible assets have better corporate governance and corporate governance also depends on legal system of each country.

Second, Gillan et al. (2004) study both industry-level and firm-level determinants of corporate governance index since costs and benefits of governance mechanisms are different across industries and across firms. At the industry level,

investment opportunities (measured as industry average Tobin's Q) leads to higher governance index whereas product uniqueness (measured as ratio of selling expenses to sales and Herfindahl Index[1]) results in lower one. However, information environment (measured as average stock return volatility of firms in the industry) is insignificant. At the firm level, firm size (measured as natural log of assets) is significantly negative to governance index while firm stock return volatility is significantly positive to governance index. Nevertheless, investment opportunities of firm and firm age are insignificant.

Third, Durnev and Kim (2005) conclude that investment opportunities (measured by sales growth), need for external funds, and sales amount are positively related to quality of corporate governance.

Lastly, Black et al. (2006b) examine small firms in Korea Stock Exchange in 2001 and conclude that firm size (measured as natural log of assets) and firm risk (measured as standard deviation of stock returns) are significantly positive to corporate governance while other firm factors such as firm age, market share, and firm profit (measured as return on assets) are insignificant. They point out that bigger firms and riskier firms desire strong corporate governance because bigger firms are complicated and riskier firms are subject to intense monitoring.

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[1] Herfindahl index (HHI) is a measure of market concentration and is equal to the sum of the squared market shares of all firms in an industry. The industry with higher HHI has higher degree of concentration and is less competitive than the industry with lower HHI.

2.3 Related Researches in Thailand

The followings are literatures that study the effect of good corporate governance on firm performance in Thailand. First, Nittayagasetwat and Nittayagasetwat (2006) examine stock return behavior of 11 listed companies around the announcement date of companies' governance rating by Thai Rating and Information Services (TRIS) during 2004-2005 and those 11 companies are top quartile of corporate governance ratings. They find no evidence of abnormal return around the announcement date and imply that investors do not consider good corporate governance rating since those companies are large and reputable. Nittayagasetwat and Nittayagasetwat (2009) further find that during 2006-2009, firms with high corporate governance have higher firm value (Tobin's Q ratio), higher stock return, and higher return on equity.

Second, Kouwenberg (2006a) investigates the effect of firm characteristics on the adoption of corporate governance code initiated by the Stock Exchange of Thailand (SET) in 2002 by studying 320 listed firms. The author finds that size (market capitalization) is significantly positive to corporate governance code adoption; however, other variables (Tobin's Q, sales growth, percentage of closely-held ownership, and external financing need) are insignificant. That is, larger companies are more likely to adopt corporate governance code because of being analyzed by security analysts and investors. The author further concludes that higher corporate governance score increases firm value, which is measured by Tobin's Q, during 2003-2005. Furthermore, Kouwenberg (2006b) also evidences that during 2003-2005, companies that adopt corporate governance code perform better than those that lack good governance in terms of stock returns and return on equity.

Finally, Hodgson et al. (2011) examine the relationship between the IOD corporate governance index and firm performance for firms in SET and MAI from 2001 to 2006. They find that firms with "good" corporate governance category have higher firm value (market to book value, Tobin's Q, and stock returns) and higher firm performance (e.g. return on assets, return on equity, and ratio of cash flow from operation to sales). Moreover, those firms also have lower standard deviation of stock returns and lower dividend yield.

3. Research Methodology

3.1 Model Structure

The purpose of this study is to examine the determinants of the probability that firms will have strict corporate governance of Thai firms in SET and MAI in 2009. The determinants in the model are not scoring criteria in CGR. Furthermore, industry dummy variables are also included to control for unique characteristic of each industry.

The econometric method employed in this paper is logit model where the dependent variable is corporate governance dummy variable, which

is one if a firm has stringent corporate governance and zero otherwise. In order to obtain instrument variable or predicted value of firm's total equity risk that is one of independent variables in the first equation, the ordinary least squares (OLS) regression is employed. The two equations are as follows.

The logit regression:

$$CG_i = \beta_0 + \beta_1 \widehat{RISK}_i + \beta_2 ROA_i + \beta_3 SIZE_i + \beta_4 AGE_i + \beta_5 Q_i + \beta_6 IndustryDummy_j + \varepsilon_i \quad (1)$$

The OLS regression:

$$RISK_i = \alpha_0 + \alpha_1 DY_i + \alpha_2 DE_i + \alpha_3 SIZE_i + \alpha_4 AGE_i + \alpha_5 Q_i + \alpha_6 IndustryDummy_j + \varepsilon_i \quad (2)$$

where i = 1,2,..., 485 firms and j = 1,2,..., 8 industries.

Definition of variables:

CG_i is corporate governance dummy variable and is equal to 1 if firm is in "excellent" (score of 5)," very good" (score of 4), or "good" (score of 3) category in CGR in 2010 and zero otherwise. In other words, this dummy variable is one if firms have stringent corporate governance.

$\widehat{RISK}_i$ is instrumental variable estimator for $RISK_i$ in the equation (2).

$RISK_i$ is firm's total equity risk or stock volatility, measured as standard deviation of firm's monthly stock returns. This variable is constructed on a monthly basis at the end of all twelve months in 2009.

ROA_i is return on assets. This ratio is calculated as net income divided by firm's total assets.

$SIZE_i$ is natural logarithm of firm's total assets.

AGE_i is natural logarithm of years of firm's operation since its establishment until 2009.

Q_i is Tobin's Q or firm value. It is calculated by dividing the sum of book value of debt and market value of equity by total assets.

DY_i is dividend yield, which is ratio of annual cash dividend per common share to market price per common share.

DE_i is debt-to-equity ratio, which is the ratio of total liabilities to total equity stated in balance sheet. This ratio indicates firm's leverage, capital structure, and insolvency risk.

$IndustryDummy_j$ is dummy variable that shows firm's industry and accounts for characteristics that are specific to each industry. Since the data is from both SET and MAI and firms in MAI account for one sector, dummy of MAI is excluded. Therefore, there are 8 industry dummy variables for firms in SET.

D_AGRO_i is dummy variable for agro and food industry.

$D\_CONSUMER_i$ is dummy variable for consumer products, including home and office products, jewelry, and fashion sectors.

$D\_FINANCE_i$ is dummy variable for financials, including banking, finance and securities, and insurance sectors.

$D\_INDUSTRIAL_i$ is dummy variable for industrials, including petrochemicals and chemicals, machinery and equipment, packaging, paper, automotive, and steel sectors.

$D\_PROPERTY_i$ is dummy variable for property and construction.

$D\_RESOURCES_i$ is dummy variable for resources, including energy, utilities and mining sectors.

$D\_SERVICES_i$ is dummy variable for services industry, including commerce, media, health care, tourism, printing and publishing, and transportation and logistics sectors.

D_TECH_i is dummy variable for technology industry, including information and communication technology and electronic components sectors.

As shown in both equations, the two exogenous variables that are included in equation (1) but are excluded in equation (2) are dividend yield and debt-to-equity ratio.

3.2 Hypotheses

3.2.1 Hypotheses in "RISK" Equation

In regard to equation (1), two exogenous variables are hypothesized as follows. First, dividend yield (DY) is expected to be negative since firms that are able to pay dividend signal that they have extra liquidity and can generate cash in the future. Thus, dividend yield reduces banks' equity risk as perceived by investors. This hypothesis is consistent with Baskin (1989) and Hussainey et al. (2011), who conclude that dividend yield is negative to stock price volatility.

Second, since debt-to-equity ratio (DE) indicates insolvency risk, it is expected to be positively related to total equity risk as firms with high leverage are likely to be unable to pay obligations. This hypothesis is consistent with Christie (1982) and Duffee (1995), who prove that firms with higher financial leverage have larger stock volatility.

3.2.2 Hypotheses in "CG" Equation

In regard to equation (2), total equity risk ($\widehat{RISK_i}$) is expected to be positive as Black et al. (2006b) mention that firms with high risk are intensively monitored; therefore, those firms tend to have stringent corporate governance practices. Moreover, according to Gillan et al. (2004), investors in firms with high stock return volatility have difficulty in obtaining information to evaluate management performance.

Next, the expected sign of return on assets (*ROA*) is positive to *CG* as high-profit firms have more resources to implement better corporate governance and investors tend to pay more attention to those firms. Firm size (*SIZE*) is also expected to be positive to *CG* since bigger firms have more complicated structures and require stronger corporate governance (Black et al., 2006b). Those firms also get strong attention from investors and stock analysts and have incentive to implement stringent corporate governance (Kouwenberg, 2006a).

Moreover, firm's age (*AGE*) indicates experience in doing business; therefore, firms with more experience are more likely to have rigorous corporate governance. Thus, the coefficient of firm's age is expected to be positive. According to Black et al. (2006b), they mention that old firms could have time to enhance corporate governance; however, they find insignificant result.

Finally, Tobin's Q (*Q*) is expected to be positive as Gillan et al. (2004) hypothesize that firm's interesting investment opportunities (measured as Tobin's Q) encourage management to carefully consider the projects, leading to better corporate governance. In addition, Durnev and Kim (2005) evidence that investment opportunities (measured by sales growth) are positively related to quality of corporate governance.

3.3 Data

The criteria for firms surveyed in Corporate Governance Report of Thai Listed Companies in 2010 are that firms are listed in both SET and MAI and that firms that register for trading or are under rehabilitation in 2009 are excluded. Therefore, the data in this paper includes only firms that are listed for the whole year in 2009 and are not under rehabilitation. The data is cross-sectional since firm's data is only in 2009 and is obtained from Thomson Reuters Datastream and SET. However, corporate governance score is acquired from Corporate Governance Report of Thai Listed Companies in 2010. Table 1 indicates detail of each variable and data source and table 2 shows descriptive statistics.

Table 1: Data

Variable	Explanation	Source
RISK	Standard deviation of firm's monthly returns at the end of each month for 12 months in 2009.	Thomson Reuters Datastream
CG	CG is 1 if firm has stringent corporate governance. That is, firm is in "excellent", "very good", or "good" corporate governance scoring and zero otherwise.	Corporate Governance Report of Thai Listed Companies in 2010
DY	Dividend yield as of December 31, 2009.	Thomson Reuters Datastream
DE	Total liabilities (numerator) and total equity (denominator) in balance sheet as of December 31, 2009.	The Stock Exchange of Thailand (SET)
ROA	Net income (numerator) in income statement for the year 2009 and total assets (denominator) in balance sheet as of December 31, 2009.	The Stock Exchange of Thailand (SET)
SIZE	Total assets as of December 31, 2009.	Thomson Reuters Datastream
AGE	SET provides establishment date. Author calculates firm age. Age is the difference between year of establishment and 2009.	The Stock Exchange of Thailand (SET)
Q	Total liabilities (debt) and total assets on balance sheet as of December 31, 2009.	The Stock Exchange of Thailand (SET)
	Market capitalization as of December 31, 2009.	Thomson Reuters Datastream
Industry-Dummy	SET classifies firms into types of market (SET or MAI) and industry.	The Stock Exchange of Thailand (SET)

Table 2: Descriptive Statistics

Variable	Mean	Std. Dev.	Min	Max
RISK	0.1276	0.0867	0	0.7661
DY	3.7780	3.9714	0	33.8500
DE	2.8073	20.6819	-6.3509	410.3081
ROA	0.0296	0.1119	-0.6180	0.7705
SIZE (Natural logarithm of total assets)	6.5443	0.7270	4.7610	9.2484
Total assets (in million Baht)	31,050.21	155,239.93	57.68	1,771,931.62
AGE (Firm age in years)	28.45	16.21	1.00	133.00
Q	1.1287	0.6399	0.2455	7.0938

Source: Thomson Reuters Datastream and SET

Total observations are 485 firms, which are composed of 70 firms in "excellent" corporate governance scoring (score of 5), 179 firms in "very good" corporate governance scoring (score of 4), 138 firms in "good" corporate governance scoring (score of 3), and the rest is 98 firms. Table 3 indicates the number of firms in each industry.

Table 3: Number of Firms by Industry

Agro and food industry	40
Consumer products	39
Financials	57
Industrials	78
Property and construction	77
Resources	26
Services	84
Technology	35
Subtotal − Number of firms in SET	436
MAI	49
Total	485

Source: SET

4. Research Finding

The results of equations (1) and (2) are shown in Tables 4 and 5, respectively. According to Table 4, as expected, dividend yield (*DY*) is negatively related to firm's total equity risk (*RISK*) at 1% significance level. In other words, firms that pay more cash dividends relative to their market prices can lower total equity risk. Furthermore, debt-to-equity ratio (*DE*) is positively related

to firm's total equity risk (*RISK*) as expected at 5% significance level. That is, firms with high leverage are likely to prone to insolvency risk and firms' total equity risk. In addition, there are three significant industry dummy variables. The coefficients of consumer industry dummy (*D_CONSUMER*) and service industry dummy (*D_SERVICE*) are significantly negative. In other words, firms in those two industries tend to have lower total equity risk.

Table 4: OLS Regression in "RISK" Equation [Equation (1)]

Dependent Variable	Expected Sign	Coefficient	T-stat
DY	-	-0.0052 ***	-5.47
DE	+	0.0004 **	2.03
SIZE		0.0008 *	0.13
AGE		-0.0222 ***	-1.44
Q		0.0047 ***	0.77
D_AGRO		-0.0129	-0.76
D_CONSUMER		-0.0314	-1.81
D_FINANCE		-0.0153	-0.95
D_INDUSTRIAL		-0.0030	-0.24
D_PROPERTY		0.0178	1.22
D_RESOURCES		-0.0262	-1.57
D_SERVICES		-0.0392	-3.34
D_TECH		-0.0106	-0.60
Constant		0.1796	4.37
Number of observation		485	
F-statistic		5.57	
Prob > F-statistic		0.0000	
R-squared		0.1333	

Note: ***, **, * indicate statistical significance at the 1%, 5%, and 10% levels, respectively.

According to Table 5, the predicted value of risk ($\widehat{RISK_i}$) is significantly negative to corporate governance dummy (*CG*) at 5% significance level. This result has an unexpected sign and is inconsistent with Gillan et al. (2004) and Black et al. (2006b). This could be that in Thai firms with high total equity risk are more likely to have less stringent corporate governance as they may put more effort into reducing risk rather than improving corporate governance. As shown in Table 4, in order to reduce total equity risk, firms focus on their capital structure and dividend yield.

Furthermore, return on assets (*ROA*) and firm size (*SIZE*) have positive relationship with the probability that firms will have strong corporate governance at 1% significance level. In other words, firms with high profitability and large firms have more resources and more renowned and are more likely to implement better corporate governance. The result of firm size (*SIZE*) is consistent with Black et al. (2006b) and Kouwenberg (2006a).

However, firm age (*AGE*) is insignificant. That is, number of years of operation does not affect the probability to have rigorous corporate governance. Both old and young firms can have rigorous corporate governance. This result is consistent with Gillan et al. (2004) and Black et al. (2006b).

Moreover, Tobin's Q (*Q*) is also insignificant to corporate governance. This evidence is consistent with Gillan et al. (2004), Black et al. (2006a), and Kouwenberg (2006a). In contrast, as evidenced in previous studies, better corporate governance leads to higher Tobin's Q (Gompers et al., 2003; Klapper & Love, 2004; Durnev & Kim, 2005; Black et al., 2006; Morey et al., 2009; Renders et al., 2010; Kouwenberg, 2006a; Nittayagasetwat & Nittayagasetwat, 2009; Hodgson et al., 2011).
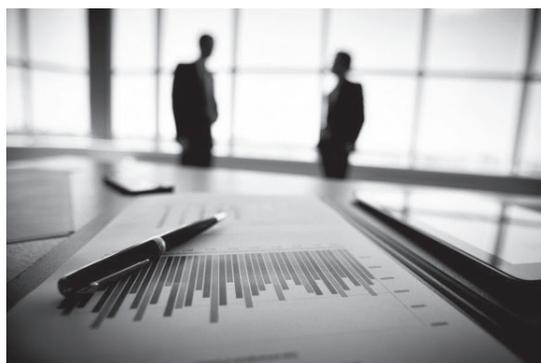
Table 5: Logit Model in "CG" Equation [Equation (2)]

Dependent Variable	Expected Sign	Coefficient	Z-Score
$\widehat{RISK}_i$	+	-18.8232 **	-2.39
ROA	+	9.4392 ***	5.58
SIZE	+	0.8368 ***	3.35
AGE	+	-0.3769 ***	-0.60
Q	+	0.3311 ***	1.44
D_AGRO		-2.1506 *	-3.48
D_CONSUMER		-1.7012 **	-2.71
D_FINANCE		-0.7537 *	-1.21
D_INDUSTRIAL		-0.7566	-1.65
D_PROPERTY		-0.2390	-0.42
D_RESOURCES		-1.3244	-1.94
D_SERVICES		-0.8473	-1.66
D_TECH		-0.5949	-0.84
Constant		-0.5090	-0.23
Number of observation		485	
Likelihood ratio chi-square		120.38	
Prob > Chi-sqaure		0.0000	
Pseudo R-squared		0.2466	

Note: ***, **, * indicate statistical significance at the 1%, 5%, and 10% levels

Regarding industry dummy variables, there is evidence that firms in the industries of agro and food, consumer products, industrials, resources, and services are more likely to have weak corporate governance. In other words, the industry that a firm is in also determines firm's corporate governance practice. Gillan et al. (2004) state that "industry effects on governance mechanisms, if present, could be due to systematic factors across industries that are related to the costs and benefits of the mechanisms, or industry could have an effect due to herding or peer comparisons and be unrelated to common cross-industry factors". They conclude that the industry with greater investment opportunities (higher Tobin's Q) has better corporate governance and industry with product uniqueness and lower degree of competition has weaker corporate governance. Therefore, negative industry dummy variables could indicate that some industries are in the mature stage with

no investment opportunities and that other industries are less competitive or obtain concessions from the Thai government.

For the robustness check, two-stage least squares (2SLS) regression is adopted and the findings are not affected. Although *ROA* and *D_INDUSTRIAL* are insignificant in equation (2), their signs are still positive and negative, repectively.

5. Conclusion

Corporate governance is important to economic growth and functioning of capital market. In Thailand, corporate governance has become increasingly important after the financial crisis in 1997. Since 2001, the Thai Institute of Directors (IOD) has issued Corporate Governance Report of Thai Listed Companies (CGR) to measure corporate governance in firms listed in both SET and MAI. This paper studies the determinants of the probability that firms will have stringent corporate governance by examining firm data in 2009 and firm corporate governance scoring reported in CGR 2010.

This paper evidences that firm's total equity risk is significantly negative to the probability to have stringent corporate governance whereas firm size (measured by total assets) and return on assets are significantly positive. In other words, firms with lower equity risk, larger size, and higher return on assets are more likely to have better corporate governance practice. The implication is that if listed firms are larger and more profitable and can lower stock volatility; those firms can put more resources to improve corporate governance practice. However, firm age and firm value are insignificant.

Additionally, the industry that a firm is in also determines firm's corporate governance practice. That is, firms in the industries of agro and food, consumer products, industrials, resources, and services are less likely to have stringent corporate governance. Thus, economic and market condition that is favorable to specific industries may help improve the quality of corporate governance since they have investment opportunities for future growth. Moreover, full enforcement of Trade Competitive Act B.E. 2542 may affect corporate governance practice in Thailand. Further research about the impact of industry-level and firm-level factors can clarify this issue.

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