

## An Analysis of Corporate Governance, Earnings Quality and Stock Returns of Listed Companies on the Stock Exchange of Thailand

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### Abstract

This research examines the relationships between board structure and ownership structure, earnings quality, and stock returns on the SET. Earnings quality is proposed as a potential mediating variable between the board structure and ownership structure elements of corporate governance and the firm's stock returns. Earnings quality is proxied by earnings management (abnormal accruals) calculated using the modified Jones (1991) index, while stock returns are aggregate raw returns across the analysis period. Analysis is conducted using structural equation modelling (SEM), with a sample of non-financial firms from the SET (2014–2015) (n = 255). Effects on both earnings quality and stock returns were observed within the variables. Earnings quality did partially mediate some of these effects, though most mediation effects were small. The implication is that earnings quality could be a potential mediator for stock returns.

**Keywords:** corporate governance, earnings quality, discretionary accruals, stock returns

### 1. Introduction

The purpose of this research was to explore the relationship between two components of corporate governance (board structure and ownership structure), earnings quality, and stock returns on the Stock Exchange of Thailand. Corporate governance, under agency theory perspective, consists of a bundle of monitoring and alignment costs to ensure that the firm's managers are working in the interest of its shareholders (Shapiro, 2005). The role of the board of directors is to provide oversight for managerial decision making and to determine the structure of incentives and costs intended for alignment (CEO

compensation policies) (Fernando, 2011). Although in principle modern listed firms have separate ownership and control, this does break down in the case of large shareholders, such as family owners, institutional owners, or large block shareholders, who can exert managerial pressure to direct the firm toward their own interests and away from conflicting interests of others (Finkelstein, Hambrick, & Cannella, 2009; Huang, 2006). Thus, the structure of the board of directors and of the large shareholders of the firm have the potential to influence the firm's activity.

This research takes place in the context of the Stock Exchange of Thailand (SET), Thailand's only

public exchange for listed companies. The SET has a relatively stringent approach to corporate governance as set out in its *Principles of Good Corporate Governance* (Stock Exchange of Thailand, 2013). These principles, which are enforced on a comply-or-explain basis, are consistent with the OECD's corporate governance principles and with the ASEAN Corporate Governance Scorecard (Stock Exchange of Thailand, 2013; The World Bank, 2013). Core principles of corporate governance include rights of shareholders, equitable treatment of shareholders, role of stakeholders, disclosure and transparency, and responsibilities of the board (Stock Exchange of Thailand, 2013).

This research is particularly concerned with determining whether earnings quality, or the degree to which the firm's reported earnings reflect its actual financial position and activities (Dechow, Ge, & Schrand, 2010), could mediate the relationship of corporate governance structures and stock returns. There is evidence for effects of board structure and ownership structure on both earnings quality and stock returns, as discussed below, as well as evidence that earnings quality could influence stock return. However, there is a gap in the literature on the role of earnings quality in mediating the relationship. There are no extant research papers that have explored this relationship. This is the reason that the current research is being conducted.

## 2. Literature Review

### 2.1.1 Board structure and earnings quality

Earnings quality has been modelled in several different ways, including as accruals quality

(Ahmed, Hossain, & Adams, 2006; Aishah Hashim & Devi, 2008) or abnormal returns (Bradbury, Mak, & Tan, 2006). Six elements of board structure are routinely studied, including board size, board independence, CEO duality, gender diversity, meeting frequency, and CEO compensation.

Evidence for the significance of these factors is mixed, although they are all included in this study for model completeness. Some studies have found a negative effect of *board size* on earnings quality (Ahmed, et al., 2006; Aishah Hashim & Devi, 2008), while others have found a small positive effect (Bradbury, et al, 2006) or no significant effect (Khalil & Ozkan, 2016; Prencipe & Bar-Yosef, 2011). *Board independence* is more strongly supported, with studies routinely finding positive effects of board independence on earnings quality (Chen, Cheng, & Wang, 2015; García-Meca & Sánchez-Ballesta, 2009; Prencipe & Bar-Yosef, 2011; Sarkar, Sarkar, & Sen, 2008), although a few studies have not found a significant effect (Ahmed, et al., 2006; Aishah Hashim & Devi, 2008). In terms of *CEO duality*, it is most common for studies to find that there is no significant effect (Aishah Hashim & Devi, 2008; Khalil & Ozkan, 2016), which one meta-analysis found was due to results typically being within the margin of error (García-Meca & Sánchez-Ballesta, 2009). *Gender diversity* is again stronger, with some studies finding positive effects of more women on the board (Arun, Almahrog, & Aribi, 2015; Strydom, Yong, & Rankin, 2016) and others finding no significant effect (Hili & Affess, 2012; Sun, Liu, & Lan, 2011). Most studies on *board meeting frequency* have not found a significant effect (Aishah Hashim & Devi, 2008; Hermawan, 2016; Kantudu & Samaila, 2015), although there are

some conflicting effects (both positive and negative) (Masahyekhi & Bazaz, 2010; Qi & Tian, 2012). Finally, the evidence for CEO compensation strongly supports a negative relationship of risk-based compensation and earnings quality (Baker, Collins, & Reitenga, 2003; Bergstresser & Philippon, 2006; Cornett, Marcus, & Tehranian, 2008; Grant, Markarian, & Parbonetti, 2009; Harris & Bromiley, 2007). To test these factors, it is stated that:

*Hypothesis 1: Board structure (board size, board independence, CEO duality, gender diversity, meeting frequency, and CEO compensation) has an effect on earnings quality.*

### **2.1.2 Ownership structure and earnings quality**

Ownership structure is the division of ownership of a firm among different classes of owners (Bhagat & Jefferis, 2002). There are three classes of owners included in this study, including institutional owners, concentrated ownership, and family ownership. Like board structure, ownership structure could also influence earnings quality, although again the evidence is mixed.

*Institutional ownership* has mixed evidence, with several studies supporting a positive effect of institutional ownership on earnings quality (Aishah Hashim & Devi, 2008; Ajay & Madhumathi, 2015) and others indicating small negative effects (Cornett, Marcus, & Tehranian, 2008; García-Meca & Sánchez-Ballesta, 2009; Mazumder, 2016). Mazumder (2016) suggested that this could be due to differences in ownership interests between different classes of institutional owners. General *ownership concentration* has generally been shown to have a positive effect on earnings quality (Alves, 2012;

Beuselinck & Manigart, 2007; Khalil & Ozkan, 2016), although some studies using different measures of earnings quality have found a small positive effect (García-Meca & Sánchez-Ballesta, 2009; Yunos, Smith, & Ismail, 2010). This inconsistency in earnings quality measures is a persistent problem in the literature (Dechow, et al., 2010). Finally, most studies have shown that *family ownership* is positively associated with earnings quality (Adigüzel, 2013; Aishah Hashim & Devi, 2008; Cascino, Pugliese, Mussolino, & Sansone, 2010; Prencipe & Bar-Yosef, 2011). Thus, there is evidence that ownership structure has an effect on earnings quality, although there are conflicting directions for this relationship. For Hypothesis 2, it is stated that:

*Hypothesis 2: Ownership structure (institutional ownership, ownership concentration, family ownership) has an effect on earnings quality.*

### **2.1.3 Board structure and stock returns**

Next, the model turns to stock returns, or the change in price of the equity over a given time period (Ball, Engle, & Murray, 2016). As with the previous studies, the evidence on the effect of board structural characteristics and stock returns is mixed. *Board size* has been positively associated with stock returns (Behlkir, 2009; Guest, 2009; Jackling & Johl, 2009; Pham, Suchard, & Zein, 2011), although a few studies have shown limited or negative effects (Di Pietra, Grambovas, Raonic, & Riccaboni, 2008; Garg, 2007). *Board independence* has inconsistent outcomes, with some studies showing a positive effect on stock returns (Pham, et al., 2011); others showing negative effects (Koerniadi & Tourani-Rad, 2012); but most showing no effect (Behlkir, 2009; Garg, 2007; Jackling & Johl, 2009; O'Connell & Cramer, 2010).

Most studies also have not found a significant effect of *CEO duality*, which is commonly studied in conjunction with other board structure variables (Behlkar, 2009; Jackling & Johl, 2009; Lee, Lev, & Yeo, 2008). In contrast, *gender diversity* has been found to positively affect stock returns (Campbell & Mínguez–Vera,; Campbell & Vera, 2010; Kang, Ding, & Charoenwong, 2010), although these effects may not persist across balanced portfolios (Chapple & Humphrey, 2014). *Meeting frequency* typically has small, sometimes insignificant positive effects on stock returns (Brick & Chidambaran, 2010; Gallego–Álvarez, García–Sánchez, & Rodríguez–Dominguez, 2010; Jackling & Johl, 2009). A negative effect was observed in one time–series study, but the author noted that this was due to the firm’s prior poor performance, as firms increased their oversight following performance losses (Board meeting frequency and firm performance, 1999). Finally, *CEO compensation* is routinely negatively associated with stock returns when measured with at–risk compensation (stock options), which authors have attributed to managers depressing the price of the stock prior to option exercise, interacting with poor corporate governance (Brick, Palmon, & Wald, 2012; Chen & Ma, 2011; Core, Holthausen, & Larcker, 1999; Habib & Ljungqvist, 2005). Following this evidence, it is stated that:

*Hypothesis 3: Board structure (board size, board independence, CEO duality, gender diversity, meeting frequency, and CEO compensation) has an effect on stock returns.*

#### 2.1.4 Ownership structure and stock returns

There is also evidence for the effects of ownership structure on stock returns, although once

again this evidence is mixed. *Institutional ownership* has been found to decrease return volatility and risk (Bohl, Brzeszczynski, & Wilfling, 2009), although this effect depends on dividend payment policies (Rubin & Smith, 2009) and institutional ownership classes (as institutional owners have different investment priorities) (Azzam, 2010; Chuang, 2015). *Ownership concentration* has also been found to have a positive effect on stock returns (Bai, Liu, Lu, Song, & Zhang, 2004; Perrini, Rossi, & Rovetta, 2008). However, dual–class share ownership may disrupt this relationship (Bjuggren, Eklund, & Wiberg, 2007). Under ordinary market conditions *family ownership* has been positively associated with stock returns (Bouzgarrou & Navatte, 2013; Perrini, Rossi, & Rovetta, 2008; Sraer & Thesmar, 2007). However, under crisis conditions or professional management family ownership may depress operational and market performance (Braun & Sharma, 2007; Lins, Volpin, & Wagner, 2013). Thus, it can be stated that:

*Hypothesis 4: Ownership structure (institutional ownership, ownership concentration, family ownership) has an effect on stock returns.*

#### 2.1.5 Earnings quality and stock returns

The final relationship explored here is that of earnings quality and stock returns. There is evidence from several studies that earnings quality does have an effect on stock returns (Apergis, Artikis, Eleftheriou, & Sorros, 2012; Callen, Khan, & Lu, 2013; Kim & Qi, 2010; Rajgopal & Venkatachalam, 2011; Teoh, Welch, & Wong, 1998). In general, these studies showed a negative effect of earnings management or abnormal accruals (an inverse measure of earnings quality (Dechow, et al., 2010)) to stock returns, using either raw returns or composite measures such as Tobin’s *q*.

Furthermore, these effects are persistent; Teoh, et al. (1998) showed that higher levels of earnings management prior to a seasoned equity offering led to lowered cumulative abnormal returns over time. Thus, even though a surprisingly small number of studies have addressed the relationship of earnings quality and stock returns, there is evidence for this relationship. Thus, it is possible to state H5:

*Hypothesis 5: Earnings quality has an effect on stock returns.*

The novel aspect of this research is that it considers earnings quality as a potential mediating variable for the relationship of board structure and ownership structure to stock returns (H6 and H7 respectively). These relationships make logical sense due to the findings discussed above, which show that

board structure and ownership structure variables have effects on both earnings quality and stock returns, and that earnings quality and stock returns also have a relationship. However, it has not been tested in previous research studies. In the final stage of the study, the following hypotheses are tested:

*Hypothesis 6: Earnings quality has a mediating effect on board structure–stock returns relationships.*

*Hypothesis 7: Earnings quality has a mediating effect on ownership structure–stock returns relationships.*

### 2.1.6 Conceptual framework

The conceptual framework of the study is shown below (Figure 1). The following section explains how this framework was operationalized and tested.

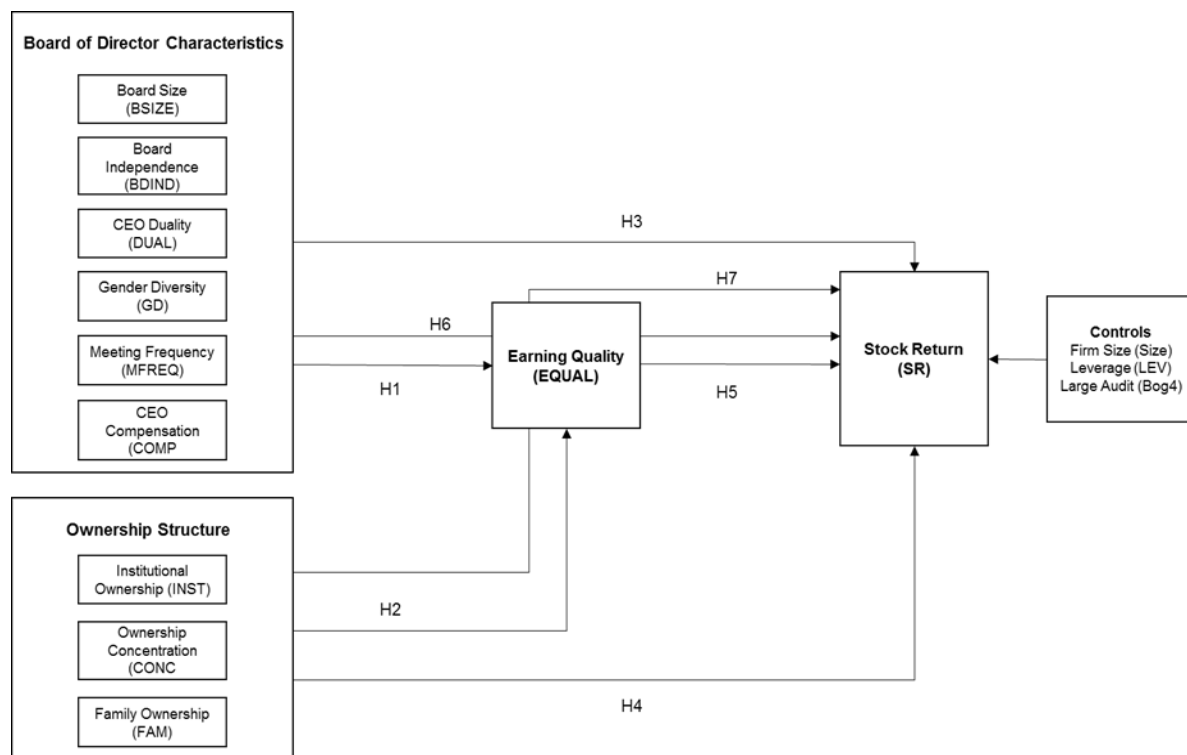


Figure 1 Conceptual framework of the paper

### 3. Data and Methods

#### 3.1 Data and measurement

The sample included non-financial firms listed on the SET (2014–2015). After removing financial firms and those not listed in both years, a total of 461 firms were available. Following guidelines for SEM sample size (Westland, 2010), a simple random sample of  $n = 255$  firms was selected. All data was collected from the firm’s Form 56–1 (mandatory annual financial statements and disclosure) using the SETSMART database. Table 1

summarizes the variables and measurement strategy. Variables included board structure (Board Size, Board Independence, CEO Duality, Gender Diversity, Meeting Frequency, and CEO Compensation), Ownership Structure (Institutional Ownership, Ownership Concentration, and Family Ownership), Earnings Quality (Abnormal Discretionary Accruals, following Dechow, et al.’s (1995) decomposed Jones (1991) model), and Stock Returns (Following Brown and Warner (1985)).

Variable	Abbreviation	Measurement or Calculation
Board Size	LogBSIZE	Log(Board Size)
Board Independence	PBDIND	Proportion of independent board members to board size
CEO Duality	DUAL	Dummy variable (0 = CEO duality is not present, 1 = Otherwise)
Gender Diversity	PGD	Proportion of female directors to board size
Meeting Frequency	MFREQ	Annual board meetings
CEO Compensation	LogCOMP	Log(Total CEO compensation)
Institutional Ownership	INST	Proportion of shares owned by institutions
OwnershipConcentration	CONC	Proportion of shares owned by the largest shareholder
Family Ownership	FAM	Proportion of shares owned by founder and family
Earnings Quality	ACCRUAL	Modified Jones (1991) model: $TA_{it} = NI_{it} - CFO_{it}$ (1) $TA_{it}/A_{it-1} = \alpha_{1i}(1/A_{it-1}) + \alpha_{2i}(\Delta REV_{it})/A_{it-1} + \alpha_{3i}PPE_{it}/A_{it-1} + \epsilon_{it}$ (2) $NDA_{it} = \alpha_{1i}(1/A_{it-1}) + \alpha_{2i}(\Delta REV_{it} - \Delta REC_{it})/A_{it-1} + \alpha_{3i}PPE_{it}/A_{it-1}$ (3) $DA_{it} = (TA_{it}/A_{it-1}) - NDA_{it}$ (4)
Stock Return	SR	$ln\left(\frac{P_1}{P_0}\right)$ , where $P_0$ = initial share price, $P_1$ = share price at the end of the period; Calculated daily following Brown and Warner (1985)
Firm Size	SIZE	Log(Total Assets)
Leverage	LogLEV	Log(Leverage)
Large Audit Firm	BIG4	Dummy variable (0 if firm does not use KPMG, PwC, E&Y or Deloitte, 1 otherwise)

Table 1 Summary of variable definitions and measurements

### 3.2 Analysis procedure

Structural equation modelling (SEM) was chosen as the procedure for this research. SEM is a whole-model evaluation process that helps to evaluate the interactions and effects of multiple causal variables and research stages (Byrne, 2016). Because this research was not concerned with model reduction, but was instead focused on mediation identification, the process began with confirmatory factor analysis (CFA) and continued to effects detection and analysis. SEM assumes normal distribution of variables. Variables were examined using visual inspection and skewness and kurtosis. The only variable that did not show an approximately normal distribution was PBDIND, which exceeded 2 for kurtosis (indicating a platykurtic distribution). Since SEM does not break if normal assumptions are violated, but instead may reflect lower effects in small

sample sizes (Byrne, 2016), and because there was no obvious adjustment to be made, the analysis proceeded.

## 4. Findings and Discussion

### 4.1 Descriptive statistics and model fit

Descriptive statistics are shown in Table 2, while the structural model is shown in Figure 2. The structural model's goodness of fit characteristics show a good fit by absolute fit measures ( $\chi^2 = 46.198$ ,  $df = 35$ ,  $p = .098$ ,  $CMIN/DF = 1.320$ ). The relative goodness of fit measures are also acceptable ( $GFI = .974$ ,  $CFI = .981$ ,  $AGFI = .921$ ,  $RMSEA = .035$ ). The Akaike information criterion (AIC) showed that the default model specified had the best fit of the three tested. Thus, this structural model could be used for further analysis without adjustment.

	Minimum	Maximum	Mean	S.D.
BFSIZE	5.00	21.00	10.37	2.412
LogBFSIZE	0.70	1.32	1.00	0.096
BDIND	3.00	11.00	4.16	1.252
PBDIND	0.27	0.85	0.40	0.088
DUAL	0.00	1.00	0.19	0.392
GD	0.00	8.00	1.81	1.562
PGD	0.00	0.63	0.17	0.150
MFREQ	4.00	25.00	8.10	4.103
COMP	1814000.00	435070000.00	41906732.05	50010011.074
LogCOMP	6.26	8.64	7.45	0.384
INST	0.00	99.12	34.00	28.836
CONC	0.00	74.59	18.06	16.698
FAM	0.00	84.94	21.80	22.487
TotalAsset	467430000.00	533291070000.00	19910582901.96	54352733395.945
LogSIZE	8.67	11.73	9.73	0.629
LEV	0.00	13.30	1.07	1.392
LogLEV	-6.10	2.59	-0.59	1.404
BIG4	0.00	1.00	0.67	0.469

SR	-1.32	0.60	-0.12	0.296
ACCRUAL	-26973.91	18412.65	634.04	3631.318

Table 2 Descriptive statistics

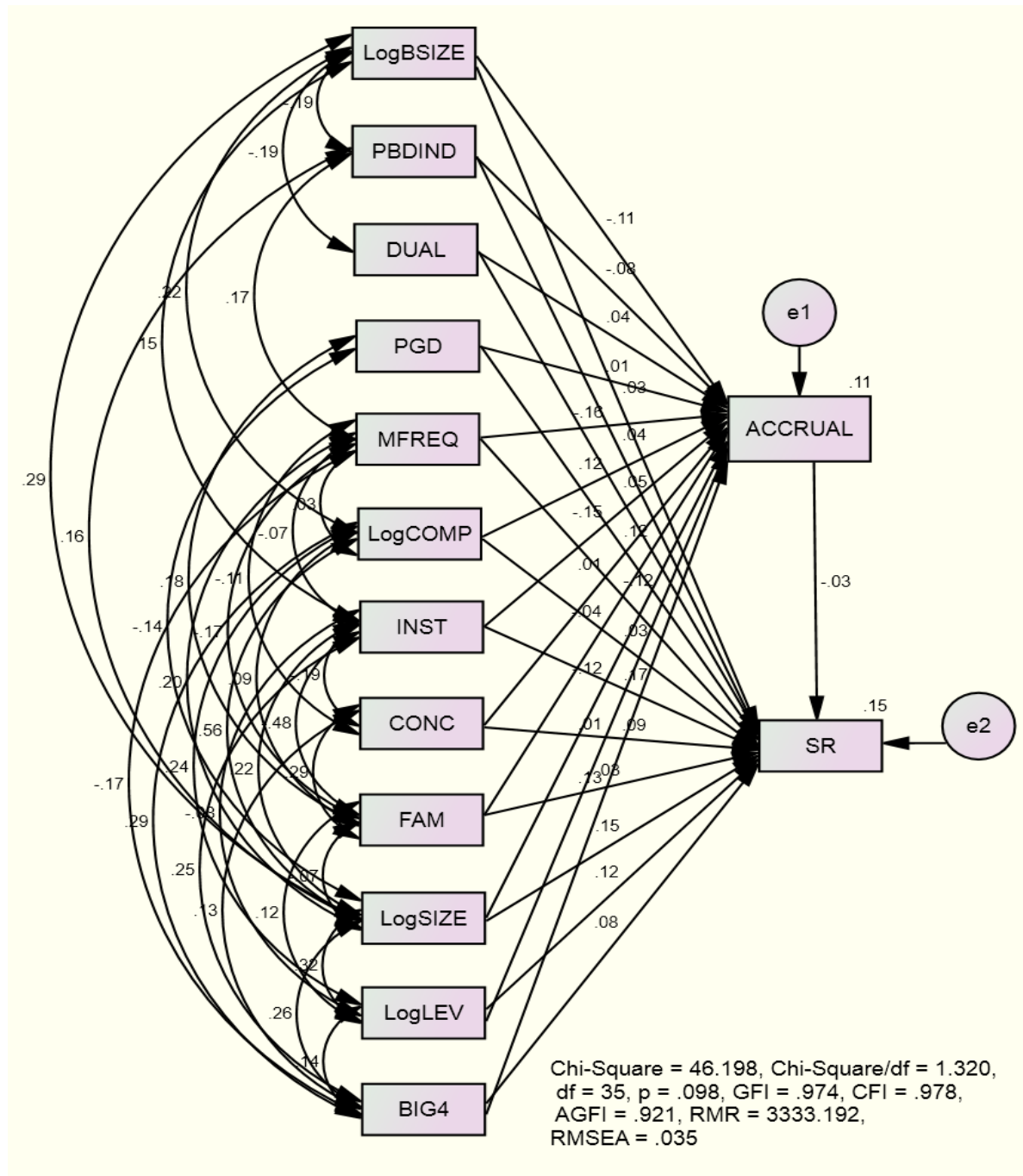


Figure 2 Structural model: Corporate governance – earnings quality – stock returns



#### 4.2 Regression coefficients (Hypotheses 1 through 5)

Hypotheses 1, 2, 3, 4 and 5 were tested using regression coefficients (Table 2). Significance was evaluated at  $p < .05$  for all measures.

**Hypothesis 1 and 2 (board structure and earnings quality and ownership structure and earnings quality).** Significant relationships were observed for  $ACCRUAL \leftarrow MFREQ$  ( $\beta = -.114$ ,  $p = .017$ ) and  $ACCRUAL \leftarrow INST$  ( $\beta = -.155$ ,  $p = .031$ ). *INST* had the strongest effect (-), followed by *MFREQ* (-). Since *ACCRUAL* is an inverse measure of earnings quality, these relationships to earnings quality are reversed. The other relationships in the model were not significant. *Hypothesis 1* was partly accepted, since meeting frequency had a negative effect on earnings quality, but board size, board independence, CEO duality, gender diversity, and CEO compensation had no significant effect. *Hypothesis 2* is also partly accepted, since institutional ownership had a significant effect but ownership concentration and family ownership did not.

**Hypothesis 3 and 4 (board structure and stock returns and ownership structure and stock returns).** Significant relationships were observed for  $SR \leftarrow PGD$  ( $\beta = .120$ ,  $p = .043$ ), and  $SR \leftarrow INST$  ( $\beta = .170$ ,  $p = .022$ ). Since the study used a direct measure of stock returns, the sign of these relationships is as indicated. The strongest effect was from *INST* (+), followed by *PGD* (+). The other variables in the model were not significant. Therefore, *Hypothesis 3* was partially accepted, as gender diversity had a positive effect on stock returns, but board size, board independence, CEO duality, meeting frequency, and CEO compensation did not have an effect. Similarly, *Hypothesis 4* was partially accepted, as institutional ownership had a positive effect on stock returns, but ownership concentration and family ownership did not.

**Hypothesis 5 (earnings quality and stock returns).** Finally,  $SR \leftarrow ACCRUAL$  ( $\beta = -.033$ ,  $p = .593$ ) did not have a significant relationship. Thus, *H5* was rejected.

	Unstandardized		Standardized	C.R.	P
	Estimate		Estimate		
	B	S.E.	Beta		
ACCRUAL $\leftarrow$ LogBSIZE	-4324.979	2538.653	-.114	-1.704	.088
ACCRUAL $\leftarrow$ PBDIND	-3098.111	2580.749	-.076	-1.200	.230
ACCRUAL $\leftarrow$ DUAL	342.875	559.627	.037	.613	.540
ACCRUAL $\leftarrow$ PGD	274.263	1494.014	.011	.184	.854
ACCRUAL $\leftarrow$ MFREQ	-138.055	57.630	-.156	-2.396	.017*
ACCRUAL $\leftarrow$ LogCOMP	1097.477	718.071	.115	1.528	.126
ACCRUAL $\leftarrow$ INST	-19.872	9.719	-.155	-2.045	.041*
ACCRUAL $\leftarrow$ CONC	1.983	13.714	.009	.145	.885

	Unstandardized		Standardized	C.R.	P
	Estimate		Estimate		
	B	S.E.	Beta		
ACCRUAL ← FAM	-5.859	11.840	-.036	-.495	.621
ACCRUAL ← LogSIZE	-754.375	515.174	-.125	-1.464	.143
ACCRUAL ← LogLEV	16.756	165.709	.007	.101	.919
ACCRUAL ← BIG4	996.092	524.015	.128	1.901	.057
SR ← LogBSIZE	.107	.204	.034	.523	.601
SR ← PBDIND	.150	.207	.045	.723	.470
SR ← DUAL	.038	.045	.050	.853	.393
SR ← PGD	.242	.120	.122	2.022	.043*
SR ← MFREQ	-.009	.005	-.118	-1.846	.065
SR ← LogCOMP	.022	.058	.029	.386	.699
SR ← INST	.002	.001	.170	2.286	.022*
SR ← CONC	.002	.001	.086	1.397	.162
SR ← FAM	.000	.001	.028	.394	.694
SR ← LogSIZE	.074	.041	.149	1.782	.075
SR ← LogLEV	.024	.013	.116	1.840	.066
SR ← BIG4	.050	.042	.079	1.193	.233
SR ← ACCRUAL	.000	.000	-.033	-.534	.593

Table 3 Regression outcomes

#### 4.3 Mediation Effects (Hypotheses 6 through 7)

The final point of analysis is the mediation effects of earnings quality on the relationships of board structure and stock returns and ownership structure and stock returns. The ratios of direct effects to total effects (DE/TE) and indirect effects to total effects (IE/TE) are used to evaluate the relative magnitude of the effects and determine whether earnings quality is a viable mediation variable (Preacher & Kelley, 2011). In no case was the effect of the predictor variable fully mediated. Several

relationships (SR←PGD and SR←CONC ) showed no indirect effects. Most of the others showed what could be considered as a minor mediation effect, with under 10% of the variance in SR mediated away. These relationships included SR←PBDIND, SR←DUAL, SR←MFREQ, SR←INST, SR←FAM, SR←LogLEV, and SR←LogB4. In two relationships, the mediating effect was still incomplete, but much stronger, with more than 10% of variance (but under 20%) mediated away. These relationships included SR←LogBSIZE SR←LogCOMP. The strongest was the SR←LogCOMP relationship, in which 16% of the

variance in SR was mediated away. Thus, Hypothesis 6 is partially accepted, with most relationships showing a minor partial mediation effect from ACCRUAL. Hypothesis 7 was also accepted, with most relationships showing a weak partial mediation effect.

Path	Direct Effects	Indirect Effects	Total Effects	DE/TE	IE/TE
ACCRUAL ← LogBSIZE	-.114	.	-.114	.	.
ACCRUAL ← PBDIND	-.077	.	-.077	.	.
ACCRUAL ← DUAL	.037	.	.037	.	.
ACCRUAL ← PGD	-.011	.	.011	.	.
ACCRUAL ← MFREQ	-.156	.	-.156	.	.
ACCRUAL ← LogCOMP	.115	.	.115	.	.
ACCRUAL ← INST	-.155	.	-.155	.	.
ACCRUAL ← CONC	.009	.	.009	.	.
ACCRUAL ← FAM	-.036	.	-.036	.	.
ACCRUAL ← LogBSIZE	-.125	.	-.125	.	.
ACCRUAL ← LogLEV	.007	.	.007	.	.
ACCRUAL ← BIG4	.128	.	.128	.	.
SR ← ACCRUAL	-.033	.000	-.033	1.00	.
SR ← LogBSIZE	.034	.004	.038	.89	.11
SR ← PBDIND	.045	.002	.047	.96	.04
SR ← DUAL	.050	-.001	.049	1.02	-.02
SR ← PGD	.122	.000	.122	1.00	.
SR ← MFREQ	-.118	.005	-.113	1.04	-.04
SR ← LogCOMP	.029	-.004	.025	1.16	-.16
SR ← INST	.170	.005	.175	.97	.03
SR ← CONC	.086	.000	.086	1.00	.
SR ← FAM	.028	.001	.029	.97	.03
SR ← LogSIZE	.149	.004	.153	.97	.03
SR ← LogLEV	.116	-.01	.115	1.01	-.01
SR ← BIG4	.079	-.004	.075	1.05	-.05

Table 4 Standardized effects

#### 4.4 Discussion

The inconsistency of the literature on the role of both board structure and ownership structure on

earnings quality and stock returns makes it difficult to say whether these results are as expected, since in almost all cases the literature has a wide range of

conflicting findings with no clear trend. This was true for most of the board structure variables, as well as some of the ownership structure variables (although ownership structure is studied less frequently). There are a few cases with a clear trend, such as the effect of gender diversity on stock returns (Campbell & Minguez-Vera.; Campbell & Vera, 2010; Kang, et al., 2010), which consistent with this study is typically positive. However, in other cases a clear trend was foiled. For example, this study did not find CEO compensation to be significant for either earnings quality or stock returns, even though the literature clearly indicates there is typically such a relationship (Baker, et al., 2003; Bergstresser & Philippon, 2006; Brick, et al., 2012; Chen & Ma, 2011; Core, et al., 1999; Cornett, et al., 2008; Grant, et al., 2009; Habib & Ljungqvist, 2005; Harris & Bromiley, 2007). This gap probably resulted from the choice of specification for CEO compensation, as this study used total compensation rather than risk-based or option-based compensation due to the limits of compensation reporting on Form 56-1. This points to one of the problems of the research on earnings quality, which is that multiple, often contradictory, definitions and operationalizations exist for both earnings quality and the related variables (Dechow, et al., 2010), which can make it difficult to replicate findings. This does raise the question of whether these relationships are truly robust or whether they are an artifact of measurement structures, which should be carefully considered in future.

The main novel finding of this research was the mediating effect of earnings quality. Although contrary to expectations set from previous literature (Apergis, et al., 2012; Callen, et al., 2013; Kim & Qi,

2010; Rajgopal & Venkatachalam, 2011; Teoh, et al., 1998), this relationship was negative, there are logical explanations for the direction of this relationship. For example, because earnings quality improves investor information, investor risk perceptions and return demand fall, thus reducing the price that firms must achieve for their stock (Callen, et al., 2013). Thus, this was not a major barrier. The mediations were partial, but three of them in particular showed that earnings quality mediated more than 50% of the variance in stock returns. This is an area that demands further study since it has not been explored before, but this research does indicate that at least for board structure, earnings quality could be an important moderating variable.

## 5. Conclusion

The goal of this study was to examine the potential mediating effect of earnings management on the relationships between corporate governance structures (board structure and ownership structure) and stock returns. This research was precipitated by the observation that while board structures and ownership structures are often observed to have direct effects on both earnings quality and stock returns, earnings quality has not been examined as a possible mediating factor. Since earnings quality represents the quality of information available to investors about the firm's financial disclosures, it does make sense that it would influence their investing decisions, as some other authors have shown. Thus, even though this has not been studied previously, there is a logical chain of causes that would allow for earnings quality to take a mediating role.

The findings showed that there were inconsistent direct effects on both earnings quality and stock returns, although some of the relationships were significant. This is consistent with previous studies in this area, which have been shown to be remarkably inconsistent in terms of findings. This inconsistency may be due to the complexity of institutional and investor environments that stock markets represent, which create potentially different pressures and responses to corporate governance. It may also be due to a high level of heterogeneity in measures of both earnings quality and stock returns. Although both of these outcomes have some more popular measures, such as the Jones (1991) model of discretionary accruals and Tobin's  $q$ , in fact studies reviewed for this research showed a wide array of measures that all were intended to measure the same underlying constructs. This is a potential weakness in the literature, and more research could be done to test and standardize such measures. The finding of weak to moderate mediation effects of earnings quality for almost every relationship tested offers another possible explanation for this inconsistency, since if there are undetected mediation effects this could create inconsistency. Thus, this research has

contributed both by identifying earnings quality as a mediating variable and suggesting it as a possible explanation for the high level of inconsistency in the literature.

This study did have some limitations. These included the limited time horizon and use of pooled cross-sectional data, which did not allow for detection of time series effects or a larger sample, and the use of a total compensation variable rather than risk-based compensation. However, the outcomes do point to some potential areas for further research as well. Studying the mediation effect of earnings quality in other markets and time periods would help to confirm whether it is a persistent relationship or whether it has emerged from Thailand's unique information and institutional environment. The use of other measures of stock performance and earnings quality could also help test and validate this relationship, and provide more robust information about their interconnections and dependencies. A time series study could help determine whether these effects are persistent over time or dependent on prior performance, which would also help explain how long earnings quality affects the firm's performance.

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