

Do Firms Decouple Corporate Governance Policy and Practice?

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Abstract

In this paper we use data on Thai listed firms to test whether firms with higher levels of good governance policy adoption are less likely to violate listing rules and laws put in place to protect shareholders. Our results suggest that Thai firms on average substantively, as opposed to symbolically, implement recommended governance policies, as violations occur less frequently among firms with higher levels of formal good governance policy adoption. However, we also find evidence of symbolic governance among a small group of “talk-only” firms that issue policy statements about good governance while lagging in the adoption of policies related to shareholders rights and the Board of Directors. A talk-only approach to governance is associated with a predicted increase in the probability of committing violations from 27% to 49%.

Key words: Corporate governance; violations; fraud; symbolic implementation; Thailand

JEL classification: G3, G38, K42

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1. Introduction

In the last decades most developed and many developing countries have issued an official corporate governance code or good governance guidelines.¹ Listed firms in these countries are generally required to disclose their voluntary compliance with the good governance principles. Outsiders—including minority shareholders and regulators—have to rely mostly on this disclosed information and annual reports to assess a firm's corporate governance quality and typically face a severe asymmetric information problem. This raises an interesting question: is adoption of formal good governance policies always associated with substantive good governance practices? In other words, is the adoption of formal good governance policies more than window-dressing to improve the firm's external image? A series of corporate meltdowns due to governance misconducts such as in the cases of Enron, WorldCom and Tyco provides notorious examples of firms that adopted formal good corporate governance policies while failing to live up to the intent of these policies.

Some might argue against symbolic implementation of governance policies on the ground that many empirical studies have found a positive relationship between corporate governance mechanisms and firm value.² The most straightforward explanation is that implementation of good governance principles by the firm helps to create more value for shareholders, leading to a higher value of the firm. However, managers may also adopt good governance policies only as a signal to shareholders that they will not expropriate the firm's assets, and it might be this signal to investors, not the substantive implementation of good governance practices, that leads to an increase in the market value of the firm. Investors might process all available information efficiently, but this does not resolve the fundamental asymmetric information problem regarding

¹ The European Corporate Governance Institute (ECGI) provides on its website comprehensive and up-to-date database on official corporate governance codes from 59 countries, including 29 developing countries. See: <http://www.ecgi.org/index.htm>.

² See, amongst others: Gompers, Ishii and Metrick (2003), Bauer, Guenster and Otten (2004), Drobetz, Schillhofer and Zimmermann (2004), Klapper and Love (2004), Durnev and Kim (2005), Black, Jang and Kim (2006), Bhagat and Bolton (2008).

the substantive implementation of good governance policies. Again, the unforeseen meltdowns of Enron, WorldCom, and their likes around the world (Parmalat, Ahold, for example) illustrate the extent of the problem.

The contribution of this paper is to address the important question whether firms adopt good governance policies substantively or only symbolically, by tracking subsequent violations of rules and regulations put in place to protect shareholders. Our empirical results suggest that Thai firms on average implement governance policies substantively: better governance scores in 2002 are associated with a significantly lower number of violations in the period 2003-2006, while controlling for the level of agency conflicts at the firm. A second contribution is that we also find strong evidence of symbolic governance among a small group of “talk-only” firms that excel in issuing declarations on governance and business ethics, while lagging in adoption of policies related to shareholder rights and board independence. We find that this talk-only approach to governance is associated with a 96% increase in the propensity to commit violations and an increase in the probability of committing violations from 27% to 49%.

Very little has been written on the relation between the adoption of formal good governance policies and subsequent governance practices. Closest to our paper is a study by Chen et al. (2006) that examines the effect of ownership structure and boardroom characteristics on corporate financial fraud in China. Using data on enforcement actions of the Chinese Securities Regulatory Commission, they find that a higher proportion of outside directors is associated with a lower probability of fraud. While Chen et al. (2006) investigate whether various governance mechanisms can help to explain fraud, our paper studies violations to see whether a large sample of Thai firms that voluntarily adopted formal governance policies really implemented them.³

Our empirical analysis uses data on listed firms in Thailand. The Stock Exchange of Thailand (SET) introduced a voluntary corporate governance code for listed companies in March

³ An indirectly related paper about governance in Asia is Aman and Nguyen (2008), finding no relation between the risk-adjusted excess stock market return of Japanese firms and a corporate governance index.

2002 consisting of 15 principles of good governance, similar to existing codes in developed markets (e.g. the U.K).⁴ The code addresses the protection of rights of minority shareholders and other stakeholders, the importance of independent directors and the disclosure of potential conflicts of interest, among other things. Listed firms must disclose their voluntary compliance with good governance principles yearly in their annual reports and registration statements on a “comply-or-explain” basis. In 2003, the Corporate Governance Center of the SET conducted a study that measured the adoption of the governance code based on firms’ disclosed information for the fiscal year 2002, resulting in a composite code adoption score for 333 listed companies.

To test our main hypothesis that the adoption of governance policies reduces the likelihood of subsequent misbehavior by firms, we develop an objective, outcome-based measure of misbehavior, by focusing on violations of listing rules and regulations put in place to protect shareholders. Thai listed firms are monitored and regulated by the stock exchange and the Thai Security and Exchange Committee (SEC). We use publicly available information on violations announced by both the SET and SEC, including failure to disclose information about related party connections, failure to disclose other material information, forced rectifications of financial statements, and violations of the regulations relating to market manipulation and tender offers. Further, we include data on warnings issued by the exchange when an auditor expresses an adverse opinion, a disclaimer of opinion, or a qualified opinion about a listed firm’s financial statements.

The paper is organized as follows. Section 2 provides the theoretical background for the study and develops hypotheses, based on the existing literature about agency theory and decoupling. Section 3 describes the methodology and data, including our measures of formal policy adoption and violations of rules and regulations. Section 4 discusses our empirical results, including several robustness checks. Section 5 concludes the paper.

⁴ Prior to the introduction of the 15 principles, in 1998 the Stock Exchange of Thailand (SET) required all listed companies to establish an audit committee. Further, in 1998 the SET also issued a code of best practices for board members of listed companies.

2. Theoretical Background and Hypothesis Development

2.1 Agency Conflicts and Adoption of Governance Policy

Berle and Means (1932) and Jensen and Meckling (1976) analyze the classical conflict between owners and managers in widely held corporations. The problem usually arises due to the separation of ownership and control as the owners (shareholders) delegate their decision making authority and leave control over the firm's assets and operations to the discretion of the managers. Examples of agency problems include managerial shirking, entrenchment, underinvestment and fraud. Good corporate governance policies provide firms with high agency conflicts a mechanism to mitigate these problems. We therefore expect that firms with high agency conflicts are more likely adopt formal good governance policies:

Hypothesis H1: There is a positive relation between the severity of agency conflicts and the adoption of formal good governance policies by firms.

In the absence of good governance policies we expect firms with high agency conflicts to violate rules and regulations that protect shareholders more often than firms with low agency conflicts. When firms with high agency conflicts implement good corporate governance policies, we expect violations to decrease in comparison with similar firms without these policies. Hence, controlling for the level of agency conflicts, we expect a negative relation between governance policy adoption and violations:

Hypothesis H2: Controlling for the level of agency conflicts at the firm, there is a negative relation between formal good governance policy adoption and subsequent violations of rules and regulations.

As our study is conducted in a market with high ownership concentration, agency conflicts may also arise between large and small shareholders. Jensen and Meckling (1976) point out that large shareholders have greater incentives to monitor managers and hence the presence of a large shareholder can mitigate agency problems. However, large shareholders might also use their controlling position in the firm to extract private benefits at the expense of small shareholders. Villalonga and Amit (2006) refer to the agency conflict between large and small shareholders as a Type II agency problem, whereas they refer to the classical agency conflict between owners and managers as a Type I agency problem. In the Thai market the majority of firms (80%) are controlled by founding families with large stakes and therefore Type II agency problems may occur. We expect Hypothesis H1 and H2 to hold regardless of the precise type of agency conflicts (Type I or II), but it implies that our list of proxies for the severity of agency conflicts needs to include a measure of ownership concentration.

2.2 Evidence on Effectiveness of Governance Mechanisms

Empirical evidence on the effect of widely used governance mechanisms – including outside directors, audit committees, and institutional shareholders – in monitoring management and preventing fraud is mixed. Some studies document a negative relationship between good governance mechanisms and fraud (Beasley, 1996, Chen et al., 2006), and earnings management (Dechow et al., 1996). Chen et al. (2006) examine the effect of board characteristics on corporate financial fraud in China and conclude that outside directors can help to deter fraud, while Beasley (1996) reports similar results for financial statement fraud among U.S. firms.

On the other hand, several other studies find that the presence of governance mechanisms does not seem to deter corporate misbehavior. For example, Uzun et al. (2004) find that board characteristics such as size of the board, frequency of meetings, and CEO/Chairman duality are not associated with fewer fraud occurrences. Agrawal and Chadha (2005) and Park and Shin

(2004) find that outside directors do not reduce earnings management; only when there is an independent director with financial expertise that they find that the probability of earnings management is lower.⁵ They also document that other key governance characteristics including audit committees, the provision of non-audit services by outside directors, and the average tenure of outside directors, are unrelated to the probability of accounting manipulations.

The apparently mixed results of existing work on the effectiveness of governance mechanisms calls for more research on this topic. Park and Shin (2004) suggests in a study of Canadian firms that the ineffectiveness of governance mechanisms may be due to the highly concentrated ownership and underdeveloped market for outside directors in Canada. We argue that, beside policy ineffectiveness, decoupling of formal policy from practice may be another plausible reason why several studies did not detect positive effects of governance mechanisms on violations. For example, a firm might nominate a director that is formally independent, but in practice connected to management or controlling shareholders. Audit committees can be undermined by withholding relevant information, and other tactics. We will now review literature that provides evidence of decoupling and symbolic actions by firms.

2.3 Decoupling and Symbolic Policy Adoption

Westphal and Zajac (1994) study the adoption and implementation of long-term incentive plans (LTIPs) by U.S. firms over the period 1972 through 1990. Long-term incentive plans typically involve stock options, stock appreciation rights, restricted stocks and performance plans for the CEO and other top managers. LTIPs can be considered as a governance mechanism, as in theory they mitigate the agency problem between managers and shareholders by tying part of management compensation to the firm's stock price. Surprisingly, Westphal and Zajac (1994)

⁵ Earnings management is not necessarily illegal; it does not violate Generally Accepted Accounting Principles (GAAP). However, managers engaging in earnings management are regarded as being opportunistic and untruthful to shareholders. The sources of earnings manipulations within GAAP include the choice of accounting methods, the application of accounting methods, and the timing of asset acquisitions and dispositions.

estimate that at least 21 percent (and up to 45 percent) of the 570 U.S. firms in their sample who adopted long-term incentive plans did not grant any options, stocks or other units to management in the following years. Hence, in these cases the adoption of LTIPs is mainly symbolic, as it is not followed by actual implementation: this is referred to as decoupling of policy from practice.

Westphal and Zajac (1994) draw upon the literature about impression management and institutional theory to explain why firms decouple the adoption and implementation of LTIPs, and under what circumstances. First, decoupling increases the legitimacy of powerful CEO's, while minimizing the risk of their compensation contracts. Second, decoupling can arise from the need to manage stakeholder's impressions in the face of poor firm performance. Third, decoupling can arise as a reaction to the increased legitimization and institutionalization of LTIPs by firms who do not actually want to alter their existing compensation structure.

Westphal and Zajac (2001) provide further evidence of decoupling, focusing on stock repurchase programs. Share buyback plans redistribute part of a firm's free cash flows to investors and can therefore reduce agency conflicts. As a measure of stock repurchase plan implementation, Westphal and Zajac (2001) divide the number of shares repurchased in a given year as part of an outstanding plan by the number of shares reserved under the plan for repurchase in that year. On average, the ratio equals 0.09, indicating that many repurchase plans are not, or only partially, implemented.

The work of Westphal and Zajac and others on decoupling provides an interesting alternative perspective on the adoption of good governance policies by Thai firms. Initiatives to improve corporate governance were mainly introduced by the Thai government and Thai regulatory bodies as a reaction to the Asian crisis, driven by recommendations from international organizations such as the IMF and the World Bank. As most of these good governance initiatives did not emanate from Thai firms themselves, a relevant question is to what extent Thai firms support these governance reforms and whether they implement the policies substantially or only adopt them symbolically. Relatively poor monitoring by non-family shareholders might facilitate

decoupling: there is no active market for corporate control and there are no powerful independent institutional shareholders in Thailand.⁶ Further, in a developing country like Thailand, weak rule of law and lack of human resources may elevate the cost of good governance implementation to be well above that incurred by firms in mature countries.

As discussed shortly below, our measures of formal corporate governance policy adoption is divided into three categories: (i) statements issued by firms about good governance, ethics and corporate mission; (ii) formal policies related to shareholder rights; (iii) board structure and independence. As the first category is purely based on written statements, the ease of engaging in purely symbolic actions seems greater. We single out firms that score relatively high in the first category, but rather low in the second or the third category and label them “talk-only” firms. We expect that firms in the talk-only group are less likely to substantively implement formal good governance policies than other firms and have higher violations:

Hypothesis H3: Talk-only firms violate rules and regulations more often than other firms, controlling for the level of agency conflicts.

3. Methodology and Data

3.1 Measurement of Formal Corporate Governance Policy Adoption

In 2003 the SET used information about corporate governance disclosed by firms for the accounting year 2002 to construct a measure of listed firms’ adoption of the various good governance policies recommended by the Thai Code. The measure is based on an assessment of: (i) written claims issued by the firm about its adherence to good governance principles (e.g. the firm writes in its annual report or on its website that it adheres to principles of good governance); (ii) formal policies related to the good governance principles that can be objectively verified (e.g.

⁶ Large foreign institutional shareholders might be the only exception, but their influence is limited by restrictive caps on foreign ownership. See Ananchotikul (2007) for a detailed study of the impact of foreign investment on the corporate governance of Thai listed firms.

the firm has procedures facilitating voting by proxy, and the Board has established a remuneration committee); (iii) disclosure of information related to good governance or relevant for stakeholders (e.g. the remuneration of each director is disclosed in the annual report).

The governance index constructed by SET is a weighted average of 15 sub scores, one for each of the 15 principles of good governance described in the Thai code. We have assessed each of these 15 measures and checked carefully whether they are solely based on written claims by the firm about the adoption of good governance policies, and/or factual information about the adoption of formal good governance policies by the firm, without containing additional information about the substantive implementation of these policies. The reason we want to exclude potential information about substantive implementation of good governance practices is that in our research design adoption of formal governance policies is used as a predictor of subsequent violations, our outcome-based measure of substantive implementation. Hence, we want to make sure that the adoption of formal policies measure does not accidentally contain some information about substantive implementation as well.

Below follows a list of nine good governance principles from the Thai Code that we deem relevant and that meet our criteria, divided in the following three main categories: A. Policy Statements, B. Shareholder Rights, and C. Board Structure and Independence.⁷ Below each principle we list the information used by the Thai exchange to assess the adoption of the principle by listed firms in 2002. For each of the three groups, we also indicate briefly how firms might be able to decouple policy and practice.

A. Policy Statements:

Principle 1, “Policy on Corporate Governance”:

- The company has a written corporate governance policy.

⁷ Appendix A lists the good governance principles that we choose not to use for our study, with motivation.

Principle 7: “Business Ethics”

- The Board of Directors provides a code of ethics or statement of business conduct for all directors and employees.

Principle 5: “Leadership and Vision”

- The company provides information on its corporate vision / mission.

Potential for symbolic adoption: clearly, firms can choose to adopt these policies only symbolically, without making any substantial changes in firm governance.

B. Formal Policies Related to Shareholder Rights:

Principle 4: Shareholders: Rights and Equitable Treatment

- Implementation of the “one-share-one-vote” principle.
- Procedures facilitating voting through proxy.

Principle 2: “Shareholders’ Meeting”

- Sending out the notice of a shareholder meeting well in advance.
- Providing sufficient information on each agenda item of the shareholder meeting, including names and sufficient background information when the appointment of a director or auditor is proposed.
- Encouraging shareholders to express their opinion and ask questions during shareholder meetings.

Potential for symbolic adoption: given the prevalence of large controlling shareholders in Thailand, the lack of a market for corporate control, limits on foreign ownership in most industries, and the absence of large domestic institutional investors who could press for changes, the majority of listed firms can adopt these policies without effectively giving more influence to shareholders.

C. Board Structure and Independence:

Principle 8: “Balance of Power in the Board”

- Proportion of independent directors on the Board.
- Number of independent directors on the Board.
- Firm provides its own definition of an independent director.

Principle 9: “Segregation of Positions”

- The titles and authority of the Board’s Chairman and head of the management team are clearly separated.
- The Chairman of the Board is independent.

Principle 12: “Committees”

- The firm has an audit committee, and a remuneration committee.
- The audit committee has at least three members and at least of one of the members has knowledge of, or experience in, accounting and/or finance.
- The majority of members of the remuneration committee are non-executive directors and the committee’s chairman is independent.

Principle 14: “Directors’ Reporting”

- The Board of Directors provides a statement of its responsibilities concerning the company's financial reports, presented alongside the auditor report and the audit committee report.
- The Director’s report is signed by all Board members.

Potential for symbolic adoption: given the high ownership concentration prevalent in the Thai market, controlling shareholders typically have great influence on the selection and appointment of independent board members. The Thai cultural context, high on power distance, collectivism and uncertainty avoidance, also reduces the likelihood that independent directors will confront or correct management when they suspect inappropriate actions. Overall, there appears to be some scope for decoupling.

We create a formal governance policy adoption score for each of the three categories above by equally weighting the sub-scores given to the various principles. The three cross-sectional policy adoption indices are denoted by *CG Policy*, *CG Shareholders* and *CG Board*. Finally, we create our overall measure of adoption of formal good governance policies by firms, *CG Total*, as an equally-weighted average of *CG Policy*, *CG Shareholders* and *CG Board*.

Firms that score high on policy statements concerning good governance, business ethics and corporate mission, but low on formal policies affecting shareholder rights, board structure and board independence are dubbed “talk-only” firms. To test Hypothesis H3, we create a talk-only dummy variable: it equals 1 if a firm has a *CG Policy* score among the top 33 percent, but either a *CG Shareholders* score or a *CG Board* score in the bottom 33 percent; the dummy is 0 otherwise. In total 43 firms out of 333 – 12 percent – are identified as talk-only.

3.2 Measurement of Violations of Rules and Regulations

We now describe our measure of violations of the principles of good governance by the firm and its controlling shareholders, to be used as an indirect, outcome-based, measure of substantive implementation of good governance practices.

Thai listed companies fall under the supervision of the exchange and the market regulator (SEC). The Stock Exchange of Thailand (SET) supervises the dissemination of information by listed companies; it can impose fines, and suspend trading, when listed firms fail to submit financial reports or any information which is likely to have a significant effect on the stock price. Further, SET monitors the trading of stocks for signs of insider trading and market manipulation. SET issues a variety of “trading sign” announcements to notify investors of information dissemination problems at listed companies, and/or other unusual situations that could potentially affect a security’s price.

The first sign, “NP (Notice Pending)”, is issued to indicate that the SET is waiting for additional information or clarification from the company, or when a listed firm has failed to

submit its financial statements within the deadline. The second sign, “H (Halt)” is issued when trading in the security is halted for one trading session, due to critical changes or events affecting the company during trading hours, requiring further clarification to the SET. The third sign, “SP (Trading Suspension)”, indicates that trade in a security has been suspended for more than one trading session, typically due to prolonged failure of a listed firm to comply with disclosure regulations. Once the company resolves the issue identified by SET, the trading sign is lifted, and in the case of a trading halt or suspension, trading is resumed as well.

We collect data on trading signs imposed by the SET for the period 1990-2006 from the SETSMART database (SET Market Analysis and Reporting Tool). The data includes the date the trading sign is imposed, the listed firm involved and the announcement of SET describing the reason for issuing a trading sign. We have analyzed all SET trading sign announcements, filtered out ones not related to good governance and then categorized them in the following groups:

1. Violation of rules regarding the disclosure of related party transactions and other material information:
 - The firm is forced by the SET to disclose information about a related party transaction, or other material information, to the public.
2. Violation of rules and procedures regarding financial statements:
 - The financial statement submitted by the firm contains errors, or does not comply with generally accepted accounting standards.
 - The financial statements were not submitted by the deadline, or not submitted following the relevant procedures.
3. Warnings issued when the firm’s auditor does not issue an unqualified opinion:
 - The firm’s auditor issues a qualified opinion, an adverse opinion, or a disclaimer of opinion about the firm’s financial statement.

4. Violation of the rules regarding tender offers:

- The firm fails to report that its shareholding of another public company passes a multiple of 5% of the outstanding shares.
- The firm does not make a tender offer when required.

Apart from the stock exchange, the supervision of listed companies is the responsibility of the Thai Securities and Exchange Committee (SEC). The SEC investigates possible offences of the securities law and if it deems that a serious violation has occurred, the SEC will file a criminal complaint with the Economic Crime Investigation Division of the Thai Police for prosecution. However, certain less grave offences can be fined directly by the SEC's Settlement Committee. We collect data from the SEC's website on fines imposed and criminal complaints filed during the period 1999-2006.⁸ The types of violations include expropriation, falsification of financial statements, insider trading and market manipulation. The website provides the name of the offender, the specific law and the section of the law that were violated, a short description of the accusation and, if available, the fine imposed or the outcome of the criminal justice process. We examine each case to verify whether the offenders identified by SEC were employees, Board members or controlling shareholders of a listed company in our sample at the time of the violation, and if this is the case, we link the violation to the listed company and record the year the offense took place.⁹

Table 1 provides an overview of all the SEC and SET information that we use to construct our measure of violations of the principles of good governance, as well as the number of violations involved. Please note that all violations covered in Table 1 are clearly at odds with good corporate governance practices, either involving fraud or failure to disseminate relevant

⁸ Data on SEC violations is available from 1999 onwards. See: http://www.sec.or.th/enforcement/Content_0000000392.jsp?categoryID=CAT0000278&lang=en

⁹ We also checked for potential overlap with the trading signs imposed by the exchange. In our sample, there are only two cases where a violation received both a SET trading sign and a SEC fine and/or criminal complaint; both cases involved companies failing to make a tender offer.

information to shareholders and the public at large. We classify the various violations into three groups based on their severity, see Table 1, as follows: (1) Severe violation of good governance principles; (2) Medium, i.e. a violation that is neither severe nor minor; (3) Minor violation.

For our research we are mainly interested in the total number of violations committed by the firm in the period 2003-2006—the period after the SET governance scores were collected. As a small number of firms were delisted before the end of 2006, we adjust the number of violations for the length of period that a stock was listed, creating the following measure: the average number of violations per year listed in the period 2003-2006. To take into account the difference in severity among the various violations, we also calculate a severity-weighted measure of the violations measure, with a weight of 1/6 for minor violations, 2/6 for medium violations and 3/6 for severe violations. The choice of the weights has very little impact on the overall measure, as the occurrence of medium and severe violations is positively correlated (+0.55), and minor violations do not occur more frequently than other two types. We will use these two variables as the dependent variables in our empirical analyses. As control variables in our regression models we will also use similar measures for the historical period 1990-2002.

Apart from the total number of violations, Table 1 also shows the average number of violations per year in the period 1990-2002 and 2003-2006. Comparing the two periods, we observe a remarkable shift from more serious fraud cases in the period 1990-2002 towards “cooking the books”, i.e. incorrect financial statements, in the period 2003-2006. The underlying reason is probably the relatively unchecked rapid development of the Thai stock market before the 1997 crisis, marred by lack of good governance and corruption, followed by a tightening of the regulatory environment, improved standards of accounting and auditing, and an increased focus on governance. Although the type of violations detected and/or committed might have changed, the frequency of violations is remarkably stable: the average number of violations per firm per year listed is 0.182 in 1990-2002 versus 0.181 in 2003-2006 (correlation: +0.32).

3.3 Regression Model

The primary variable of interest for our study is the average number of violations per year committed by listed firms during the period 2003-2006, denoted by F_i for $i = 1, 2, \dots, I$. We would like to test our main hypothesis that the adoption of corporate governance policies, measured by the index CG_i , is negatively related to violations, while controlling for the severity of agency conflicts (Hypothesis H2). The severity of agency conflicts at firm i is proxied by a set of k_1 variables collected in the vector \mathbf{X}^{AC}_i , including variables such as leverage, dividend payout, growth opportunities, asset tangibility, size and the presence of a controlling shareholder.

As 239 out of 333 firms in the sample were not found by the regulators to violate any rules, the distribution of the dependent variable has a relatively large probability mass at zero (see Figure 1), invalidating ordinary least squares regression models. To take into account the left-censoring in the data, we estimate a Tobit model:

$$(1) F_i^* = \beta_0 + \beta_1 CG_i + \beta_2 \mathbf{X}^{AC}_i + \beta_3 \mathbf{X}^{Other}_i + \varepsilon_i,$$
$$F_i = F_i^*, \quad \text{if } F_i^* > 0,$$
$$F_i = 0, \quad \text{if } F_i^* \leq 0,$$

where F_i^* is a latent variable that measures the firm's propensity to violate the rules, CG_i is a corporate governance policy adoption index, \mathbf{X}^{AC}_i is a $(1 \times k_1)$ -vector of proxy variables for the severity of agency conflicts at firm i , \mathbf{X}^{Other}_i is a $(1 \times k_2)$ -vector of other relevant control variables, β_2 and β_3 are column vectors of size k_1 and k_2 with regression coefficients, and ε_i is a normally distributed error term with constant variance.

The second relevant equation explains formal good governance policy adoption. We expect the index CG_i to be positively related to the severity of agency conflicts (Hypothesis H1):

$$(2) CG_i = \gamma_0 + \gamma_1 \mathbf{X}^{AC}_i + \gamma_2 \mathbf{X}^{Other}_i + \gamma_3 \mathbf{Z}_i + v_i,$$

where \mathbf{Z}_i is a $(1 \times k_3)$ -vector of k_3 instruments for CG_i , γ_1 , γ_2 and γ_3 are column vectors of size k_1 , k_2 and k_3 with regression coefficients, and v_i is a normally distributed error term with constant variance.

Endogeneity is a concern when estimating the Tobit equation (1) for violations. For example, suppose that relevant variables have been omitted that affect both violations F_i and CG_i .¹⁰ In that case CG_i would become correlated with the error term ε_i of equation (1) and the estimated coefficient $\hat{\beta}_1$ for CG_i would become biased. We try to mitigate this potential endogeneity problem by using two-stage Tobit estimation with instrumental variables (Heckman, 1979, and Maddala, 1983). In the first stage we estimate (2) by OLS, regressing CG_i on all relevant explanatory variables and a vector of instruments \mathbf{Z}_i that affect CG_i but not violations. In the second stage we estimate equation (1) for violations with a Tobit regression, but with CG_i replaced by the first stage predicted values. We use the Stock and Yogo (2004) test for weak instruments to select appropriate instruments for CG_i . We use a Wald test and the Durbin–Wu–Hausman test (see, e.g., Davidson and MacKinnon 1993, pp. 237-242) to test the exogeneity of CG_i in the violations equation. If we cannot reject that CG_i is exogenous in (1), then two-stage IV estimation is inefficient and it is better to estimate (1) directly with a regular Tobit regression.

3.3.1 Control variables related to the severity of agency conflicts

We will now define all control variables for the regression models, including a brief motivation and the expected sign of the corresponding coefficients. The severity of agency conflicts is proxied by the following set of variables (\mathbf{X}^{AC}_i): leverage, dividend payout, growth opportunities, asset tangibility, size and the presence of a controlling shareholder. Leverage is the ratio of total

¹⁰ The severity of agency conflicts at the firm could affect both violations and governance policy adoption. However, the severity of agency conflicts is not an omitted factor, as we explicitly include and control for several proxies for agency conflicts (\mathbf{X}^{AC}_i) in both equations.

debt to total assets for the year 2002.¹¹ Dividend payout is the ratio of dividends per share to earnings per share in 2002.¹² We use Tobin's Q (as of Dec-2002) as a proxy for growth opportunities.¹³ We measure asset tangibility with the ratio of property, plant and equipment to total assets for the year 2002. Size is the logarithm of total assets in 2002. Potential type II agency conflicts due to high ownership concentration are flagged by a dummy variable equal to 1 for firms with at least one controlling shareholder with a block of 25% or larger.¹⁴

Firms with higher leverage and higher payout are expected to have less severe agency conflicts, as there is less free cash flow left to be exploited by managers and controlling shareholders. Hence, lower violations are expected in (1) and a lower need to adopt CG policies in (2).¹⁵ Similarly, firms with high growth opportunities have more positive NPV-projects to invest in and a lower free cash flow problem: negative coefficients are expected in both equations. We expect higher asset tangibility to be negatively related to CG_i and violations, as it is easier to monitor and harder to steal fixed assets compared to soft assets (Klapper and Love, 2004). Larger firms may have greater agency conflicts because they are more difficult to

¹¹ We follow Wiwattanakantang (1999) and define total debt as the sum of bank overdrafts and short-term loans from financial institutions, the current portion of long-term liabilities, long-term liabilities (net of the current portion) and debt instruments, all as reported for 2002.

¹² Payout is winsorized at 200% (affecting only 3 firms), as for some firms earnings are close to zero, leading to extreme payout ratios. Consistent with this approach, for 5 firms with negative payout ratios we also insert the value 200%, as these firms pay out dividends regardless of having negative net income.

¹³ We follow Chung and Pruitt (1994) and Perfect and Wiles (1994) and define Tobin's Q as the sum of stock market capitalization (31-Dec-2002) and the book value of total debt, divided by the book value of total assets (debt and assets reported for 2002).

¹⁴ Ownership stakes of family members are aggregated, and we also take into account stakes of companies in the pyramid of control that are controlled by the same family or owner. We define a "controlling shareholder" as the largest shareholder (an individual or a group of family members) holding more than 25 percent of the firm's outstanding shares directly or indirectly. As noted in Ananchotikul (2007), under the Public Limited Companies Act, at or above 25 percent shareholdings, a shareholder has sufficient voting rights to do the following: 1) nullify any corporate decisions, 2) demand to inspect the business operation and the financial condition of the company, as well as the conduct of the board, 3) call an extraordinary general meeting at any time, and 4) submit a notion to the court demanding for the dissolution of a company if s/he believes that further company operations will bring only losses, and that the company has no chance of recovery. Since deviation from one-share-one-vote rule is not allowed in Thailand, voting rights are proportional to the number of shares owned by a shareholder.

¹⁵ John and Knyazeva (2006) find that US firms with weak corporate governance pay higher dividends on average and that this relation is stronger for firms with high free cash flow.

monitor: stricter governance mechanisms and higher violations are expected.¹⁶ Finally, type II agency conflicts are expected to be higher in firms with at least one controlling shareholder, as well as violations and CG_i . In sum: leverage, dividend payout, Tobin's Q and asset tangibility are negatively related to agency conflicts and for these variables we expect negative coefficients in equations (1) and (2). Firm size and the controlling shareholder dummy are positively related to agency conflicts and we therefore expect positive coefficients in equations (1) and (2).

We would like point out briefly that some of our proxies for the severity of agency conflicts could have different effects than described previously, as agency conflicts can have several dimensions. For example, we expect high type II agency conflicts between minority shareholders and controlling shareholders (usually a family or business group in Thailand), due to entrenchment effects. However, it might be the case that the positive effect of alignment of interest between managers and owners dominates, potentially leading to lower violations and lower need to increase CG_i . Similarly, agency conflicts between bondholders and shareholders may change the effect of leverage. For example, Dechow et al. (1996) point out that highly leveraged firms are more likely to misstate financial statements and manipulate earnings to avoid debt-covenant violations.

3.3.2 Other control variables

We include a dummy variable for talk-only firms in the violations equation to test Hypothesis H3. Further, we also include this dummy in the governance policy adoption equation, as talk-only firms may have relatively high overall good governance policy adoption scores due to their effort in making declarations and policy statements about good governance.

For the violations equation we select a number of control variables that are expected to be related to the propensity to commit violations or the likelihood of detection. As a robustness

¹⁶ Smaller firms may also have higher growth opportunities and therefore a need for better governance to attract external financing (Klapper and Love, 2004). However, growth opportunities are already explicitly controlled for in both equations.

check we will later on also estimate versions of equation (1) that take into account the partial observability of violations, by adding a separate probit equation for the detection of violations and fraud. We refer to Appendix B for the exact models and details. We expect that firms with lower profitability, measured by return on assets (ROA) in 2002, are more likely to commit violations. Loebbecke et al. (1989) find that poor financial performance often causes management to place undue emphasis on reported earnings.

We expect past violations, measured by the average number of violations per year listed in the period 1990-2002, to be positively related to future violations (2003-2006). As observed by Dana (2001), regulators and auditors closely monitor firms with repeated violations, so the probability of apprehension may increase with past violations. We also include a dummy equal to one if return on assets (ROA) in 2002 is in the top or bottom percentile. Regulators and auditors might scrutinize firms with either very low or high profitability more closely to check for irregularities. Finally, we include a dummy for consolidation of financial statements. Firms with consolidated financial statements tend to be more transparent (Durnev and Kim, 2005) and hence we expect that these firms are less likely to violate the accounting rules.

3.3.3 Instruments for governance policy adoption

The Thai corporate governance code was a new initiative in 2002 and we expect that the familiarity of board members with the code may have influenced adoption. Directors frequently serve on multiple boards: 69% and 19% of board members serve on one and two other boards, respectively. We expect a positive relation between the ratio of directors serving on other boards and code adoption because these directors are more likely to observe good governance practices at other firms and push for adoption at firms with lacking governance mechanisms. We do not expect the ratio to be related to violations, as apart from potentially giving the director more

experience, serving on several boards also consumes more time and spreads the director's attention over multiple firms.¹⁷

As a second potential instrument, we use a dummy for firms that received ISO14000 certification before or during 2003. We expect that firms with ISO14000 certification are more familiar with adopting standards for stakeholders and therefore more willing to adopt governance policies to reduce agency conflicts. We include firms that have received ISO14000 in the year 2003, as it may take a long time for firms to be approved for ISO14000 certification and most likely these firms have been working on ISO certification since 2002 or earlier.

3.4 Descriptive Statistics

Table 2 presents summary statistics of the formal good governance policy adoption index and the three sub indices. The composite index (*CG Total*) has a mean of 69.77 with standard deviation 14.20, and ranges from 28.59 to 96.05. As a preliminary analysis, we look at the correlation between the code adoption index and violations. *CG Total* in 2002 and the average frequency of violations in the period 2003-2006 have a correlation of -0.24 with a t-statistic of -4.52 (not shown in the table), which indicates a statistically significant negative relationship.

Further, in Table 3 we group the firms into five quantiles by *CG Total* and estimate the mean frequency of violations within each group. It is clear that the average frequency of violations is monotonically decreasing as the group average of *CG Total* increases. The ANOVA F-test and Welch F-test clearly reject equality of the mean violation frequency among the quintile groups (with p-values of 0.002 and 0.000, respectively). When we only focus on firm policy statements about governance, i.e. the *CG Policy* index, the results are similar and significant.

The inverse relationship reported suggests that firms with higher formal good governance policy adoption scores indeed behave better than firms with poorer scores, implying substantive

¹⁷ The data confirms this: the ratio of directors serving on other boards has a significant positive correlation of 0.26 (p-value < 0.001) with *CG*; and insignificant correlation with violations ($r = -0.10$, p-value = 0.10).

implementation of governance policies. However, we cannot readily make the above conclusion since here we have not controlled for other factors that might affect violation propensity and the violation detection probability. We will investigate the relationship in a fully specified model in Subsection 4.2. Table 4 shows summary statistics of the variables that will be used in the regression models. For our regression analysis the sample is limited to 275 non-financial firms only, as some variables such as leverage can be substantially different for financial firms. Out of 275 non-financial firms, 19 firms have missing data on past violations or no data on stock market value in 2002 (due to lack of trading), leaving a sample of 256 firms with complete data.¹⁸

4. Empirical Results

4.1 Governance Policy Adoption

To test hypothesis H1 we estimate equation (2), explaining the good governance policy adoption index *CG Total* with variables proxying for agency conflicts, other controls and instruments. We find that leverage has a negative relation with the adoption of governance policies (p-value = 0.0901), as expected given that firms with high leverage have a lower free cash flow problem and less severe agency conflicts. Similarly, we find that large firms have significantly higher good governance policy adoption scores than smaller firms (p-value = 0.002), corresponding to our expectation that large firms have more severe agency conflicts. Dividend payout, growth opportunities and asset tangibility have negative signs as expected, but the coefficients are not significantly different from zero. The sign of the control dummy is negative, but not significant.

Among the other control variables in the equation, the talk-only dummy is significantly positive (p-value < 0.01). This indicates that talk-only firms manage to achieve higher overall

¹⁸ Firms were selected based on data availability in 2002 and therefore there is no survivorship bias in the period 2003-2006 used for measuring violations. When a firm drops out of the sample in the period 2003-2006 we simply measure average violations over the months that are available for that firm.

governance policy scores than other comparable firms, as the high scores for policy declarations apparently more than compensate for below average scores for policies relating to shareholder rights and the board. The remaining control variables are insignificant.

The instrument directors on other boards has a significantly positive relation with governance policy adoption (p-value = 0.004, F-statistic = 8.51). Hence, as expected, governance policy adoption tends to increase when a firm's board has a higher proportion of directors serving on other boards. The F-statistic passes the weak instrument test of Stock and Yogo (2004) at a significance level of 5%, for a bias level between 10% and 20%. As explained in the robustness section, after eliminating redundant independent variables that are insignificant in both equation (1) and (2), the F-statistic for directors on other boards increases from 8.51 to 9.80, passing the Stock and Yogo (2004) weak instrument test at a lower bias level of 10%. We do not report estimation results in Table 5 for the second proposed instrument, the ISO14000 certification dummy, as the estimated coefficient was insignificant (p-value = 0.330, F-statistic = 0.95), and hence it did not pass the test. Column 1 of Table 5 displays the first stage regression model used to generate instrumented values for governance policy adoption (subsequently used in the second stage Tobit equation), only using the proportion of directors on other boards as an instrument for governance. The adjusted R^2 of the first stage regression is 0.166.

4.2 Governance Policy Adoption and Violations

We now test our main hypothesis (H2) and investigate whether there is a negative relation between formal good governance policy adoption and subsequent violations of rules and regulations, while controlling for the severity of agency conflicts at the firm. The second column of estimates in Table 5 displays the baseline Tobit estimation results. Consistent with the correlation results, after controlling for agency conflicts and other variables in a fully specified model, *CG Total* in 2002 has a significant negative relation with subsequent violations in the period 2003-2006 (p-value = 0.039). Thus, hypothesis H2 is supported. The result suggests that

Thai firms on average substantively implement good governance policies. For a widely-held firm of average size and profitability, a one standard deviation increase in *CG Total* is associated with a decrease in the propensity to commit violations of 0.14 per year (29% decrease relative to the mean) and a decrease in the probability of committing violations from 27% to 21%.

However, we also find clear evidence of decoupling of policy and practice among some firms. Consistent with hypothesis H3, talk-only firms have a significantly higher propensity to commit violations (p-value = 0.014). For a widely-held firm of average size and profitability, a talk-only approach to governance is associated with an increase in the propensity to commit violations of 0.46 per year (96% increase relative to the mean) and an increase in the probability of committing violations from 27% to 49%. Hence, investors can reduce their exposure to violations substantially by avoiding firms that have issued many policy declarations about good governance, while actually lagging in adoption of good governance policies related to shareholder rights and the board of directors.

Among the proxies for the severity of agency conflicts, dividend payout has a significant negative relation with violations (p-value = 0.067), while leverage has a significantly positive relation (p-value = 0.039). The sign of dividend payout is as predicted: firms with larger dividend payouts commit less violations as agency conflicts are reduced by high dividend payments. The sign of leverage is unexpected, however: Thai firms with higher leverage commit more violations, while we would expect lower violations due to reduced free cash flows. The severity of agency conflicts between bondholders and shareholders may explain this result. For example, Dechow et al. (1996) point out that highly leveraged firms are more likely to misstate financial statements and manipulate earnings to avoid debt-covenant violations.

Focusing on the remaining control variables, we find that less profitable firms are more likely to commit violations (ROA, p-value = 0.002), as expected. Firms with bad past records of violations also have a higher rate of violations in the subsequent period (p-value = 0.009). Consolidation of financial statements is negatively related to violations (p-value = 0.081).

So far we have taken corporate governance policy adoption as exogenous. A concern about these Tobit model estimation results is that there might be omitted factors that affect both governance policy adoption and violations simultaneously, potentially creating correlation between the random error term of the violations equation and the governance policy adoption index. We have therefore also estimated equation (2) with a two-stage Tobit estimation approach, where the governance policy adoption index is replaced by predicted values from the first stage regression (1). The second stage IV-Tobit estimation results for the violations equation are displayed in the third column of Table 5, while the first stage OLS regression results for *CG Total* are displayed in the first column as discussed before.

Comparing the IV-Tobit results (in column 3) to the regular Tobit results (in column 2), we observe that the variables *CG Total*, *Leverage* and *Consolidation* are no longer significant after two-stage IV Tobit estimation. The estimated coefficient of *CG Total* is more negative than before (-0.036 versus -0.010), in line with hypothesis H2, but the increase in the standard error of the coefficient is even larger (0.029 versus 0.005), leaving the variable insignificant (p-value = 0.217).

The Wald test statistic of exogeneity for the IV Tobit regression is equal to 0.81, with p-value of 0.399. Hence, we cannot reject the null that *CG Total* is exogenous to the violations equation. The Durbin–Wu–Hausman test gives a similar result (F-statistic = 0.89, p-value = 0.348) and cannot reject exogeneity of *CG Total*. Based on these two tests, we conclude that *CG Total* is not correlated with the error term of the violations equation. IV estimation is an inefficient method when *CG Total* is exogenous to the violations equation (inefficiency gives rise to larger standard errors than necessary) and the regular Tobit model in column 2 is the preferred model specification. We are therefore not very concerned about the insignificance of *CG Total* in the IV-Tobit model specification, taking into account that the coefficient is actually more negative than before and that the tests of exogeneity favor the regular Tobit model.

4.3 Robustness of the Results

We have repeated all estimations with the *CG Policy* index instead of the broader *CG Total* index, focusing only on declarations by the firm about ethics and good governance. Interestingly, the estimation results hardly change (results not reported to save space) and we reach similar conclusions: on average a higher level of declarations about good governance is significantly associated with lower subsequent violations, while controlling for the severity of agency conflicts. Still, talk-only firms do have a significantly higher propensity to commit violations, suggesting that decoupling does occur among this group of firms. As a further robustness check, we have also used the average *severity-weighted* number of violations as the dependent variable in the Tobit models, based on the classification of violations in three severity groups in Table 1. The results and conclusions are very similar to those for the non-weighted case and not reported to save space (available on request).

A standard Tobit model ignores the fact that not all violations committed by firms are detected by the regulators. Following Poirier (1980), Feinstein (1990) and others, we can add one equation to model the probability that violations are detected by regulators, resulting in a Tobit model with partial observability. We refer to Appendix B for the specification and technical details. We select past violations, the dummy for exceptionally high or low profitability and size as variables for the detection equation. Regulators might be more reluctant to report violations of larger –established– firms, while past violations and exceptional profitability might invite more scrutiny. The estimation results for Tobit models with partial observability are disappointing, as none of the variables in the fraud detection equation are statistically significant. We have also included a dummy variable in the detection equation for firms with family connections to cabinet members, as Thai firms with political connections may have more power and ability to lobby the

regulators not to announce violations.¹⁹ Again, the coefficient was not significant, providing no added value beyond a standard Tobit model.

As the assumption of a normally distributed error term is often violated for our estimated Tobit models, we have investigated count data models as an alternative. Even though the average number of violations per year is measured on a ratio scale, we can transform the variable back to count data with almost no loss of information. After multiplying the average number of violations per year by four, the length of the 2003-2006 period for firms with complete data, the resulting series has only three non-integer values. After rounding these three values to the nearest integer, we are left with a dependent variable that closely resemble count data (with excess zeros), as illustrated in Figure 1B. We have estimated a negative binomial count data model and a zero-inflated negative binomial model. The latter model is a count data model with a separate probit equation for zero observations, which allows us to take into account partial observability of violations (similar to a Tobit model with partial observability). Again, we find that the results are similar to the Tobit estimation results in Table 5, except that the coefficient of dividend payout is no longer significant. Adding a detection equation again does not add value, as the coefficients of all variables included in the equation are insignificant.

If explanatory variables are incorrectly included in a regression model, the standard errors of all variables may be larger than necessary. Four explanatory variables are insignificant in both equation (1) and in equation (2) in Table 5: Tobin's Q, asset tangibility, the control dummy and the dummy for firms with very high/low ROA. As a robustness check, we exclude these four variables and re-estimate the models. We find that the significance of the remaining variables increases markedly and all conclusions are reinforced. For example, the p-value of the estimated

¹⁹ We create a dummy for listed firms partially owned (5% or more) by cabinet members and their family. From February 9, 2001, until the coup of September 19, 2006, the telecom tycoon Thaksin Shinawatra was prime minister of Thailand. Many cabinet members in the governments led by telecom tycoon Thaksin Shinawatra belonged to families that owned large businesses. Bunkanwanicha and Wiwattanakantang (2007) show that the market value of firms connected to these cabinet members increased much stronger during this period than the value of similar non-connected firms.

coefficient of *CG Total* decreases from 3.9% to 0.3%. The smaller model specification may also alleviate concerns about the potential weakness of our instrument for *CG Total*, as the F-statistic for the ratio of directors on other boards increases from 8.51 to 9.80, passing the Stock and Yogo (2004) weak instrument test at a bias level of 10%.

Finally, some readers may be concerned that our instrument ratio of directors on other boards is related to future violations. We would prefer to use an alternative instrument for a robustness check, but very few good instruments for governance have been found in the literature so far.²⁰ Doidge, Karolyi and Stulz (2007) report multi-country evidence that firm-level corporate governance in emerging markets is difficult to explain, appearing to be largely random or exogenous. Single country studies by Black, Jang and Kim (2006) in Korea and Balasubramanian, Black and Khanna (2008) in India also find that much of the variation in firm-level governance is idiosyncratic. This is also reflected in the low adjusted R^2 of 0.166 that we report. The prevailing evidence that firm-level governance by firms in emerging markets is largely idiosyncratic confirms the results of our two exogeneity tests and in our opinion reduces potential concerns about the endogeneity of governance.

5. Conclusions

This paper investigates whether the adoption of formal good corporate governance policies by listed firms is mainly symbolic or indicative of substantive implementation of good governance practice. Our empirical results suggest that Thai firms on average implement governance policies substantively, as opposed to symbolically: a higher level of adoption of formal good governance policies is associated with a significantly lower number of subsequent violations in the period 2003-2006, while controlling for the level of agency conflicts at the firm.

²⁰ A study by Black, Jang and Kim (2006) on governance and firm value in Korea is an exception, using unique features of Korean legal rules to construct an instrument for a corporate governance policy index. Quoting Black et al. (2006, p.367): “Good instruments are not available in other comparable studies.”

However, there is a small group of “talk-only” firms that excel in issuing declarations on governance and business ethics, while lagging in adoption of policies related to shareholder rights and board independence. We find that such a talk-only approach to governance is associated with an increase in the propensity to commit violations of 0.46 per year (96% increase relative to the mean) and an increase in the probability of committing violations from 27% to 49%. Another finding is that Thai firms with high leverage might suffer from agency conflicts between bondholders and shareholders, as an increase in leverage is associated with higher violations.

Our paper can be extended in several directions. First, we lack time series information on governance code adoption for running a panel regression that might provide more reliable results. Second, if a database of comparable information on governance adoption and fraud and violations can be constructed for multiple countries – and this is still an open question, due to potential divergence in rules and regulations from one country to the other, as well as variety in the levels of enforcement – it would be relevant to extend this study to multiple countries.

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Table 1: Violations of SET / SEC Rules, 1990-2006

Violation	Number of Violations: 1990-2006	Violations per Year: 1990-2002	Violations per Year: 2003-2006	Source	Level of Severity*	Description of Violation
<i><u>Fraud</u></i>						
Expropriation	8	2.00	0.00	SEC	1	Expropriation of assets by managers of the firm.
Falsification	5	1.25	0.00	SEC	1	Management falsified financial statements or other documents.
Insider Trading	2	0.50	0.00	SEC	1	Managers or owners of the firm used inside information to trade the firm's shares for their own benefit.
Market Manipulation	7	1.75	0.25	SEC	1	Managers or owners of the firm manipulated the trading of company's stocks to mislead or lure others to buy or to sell.
<i><u>Financial Statements Not Correct</u></i>						
Accounting Violation	1	0.00	0.25	SET	1	Financial statements failed to comply with Generally Accepted Accounting Standards.
Financial Statement Amendment	10	0.00	2.50	SET	1	Company was required to amend their financial statements.
Adverse Opinion	50	0.00	12.50	SET	1	Auditors issued an adverse opinion on the firm's financial statement.
Disclaimer of Opinion	38	0.00	9.50	SET	2	Auditors issued a disclaimer of opinion on the firm's financial statement.
Qualified Opinion	2	0.00	0.50	SET	2	Auditors issued a qualified opinion on the firm's financial statement.
Financial Statement Rectification	1	0.08	0.00	SET	3	Company was asked by the SET to rectify mistakes in their financial statement.

* 1 = Severe violation, 2 = Medium violation, 3 = Minor violation.

Table 1: Violations of SET / SEC Rules, 1990-2006 (continued)

Violation	Number of Violations: 1990-2006	Violations per Year: 1990-2002	Violations per Year: 2003-2006	Source	Level of Severity*	Description of Violation
<i><u>Failure to Disclose Information</u></i>						
Connected Party Transaction	3	0.08	0.50	SET	1	Company failed to, and hence was forced to, disclose a connected party transaction by the SET.
Material Information	185	12.69	5.00	SET	1	Company failed to, and hence was forced to, disclose material information to the public by the SET.
Incomplete Information	24	1.38	1.50	SET	2	Company submitted incomplete and/or unclear information, and the SET summoned the company to submit complete information.
<i><u>Failure to Submit Financial Statements according to the Procedure</u></i>						
Information Deadline	129	6.85	10.00	SET	2	Company failed to submit financial statements or other documents by the deadline.
Information Procedure, #1	311	20.38	11.50	SET	3	Company failed to submit financial statements or other documents by the procedures as specified by the SET.
Information Procedure, #2	10	0.08	2.25	SET	3	Company submitted financial statements or other documents to SET but such information was not completely released to the public.
Information Procedure, #3	15	1.08	0.25	SET	3	Company submitted financial statements or documents during trading hours.
<i><u>Violation of Rules Related to Tender Offers</u></i>						
Tender offer	2	0.08	0.25	SET/SEC	1	Company failed to conduct a tender offer when required to so.
Reporting of share holdings	1	0.00	0.25	SEC	1	Company failed to report when the number of stocks held of another company reached a multiple of 5% of the total number.
Takeover Information	10	0.23	1.75	SET	2	Company failed to submit or submitted incomplete and/or unclear information about a tender offer to the SET or general investors.

* 1 = Severe violation, 2 = Medium violation, 3 = Minor violation.

Table 2: Corporate Governance Policy Adoption Indices, 2002

Index	Name	Obs	Mean	Std. Dev.	Min	Max
Governance policy statements subindex	<i>CG Policy</i>	333	58.54	29.35	0.00	100.00
Board structure and independence policy subindex	<i>CG Board</i>	333	77.64	11.57	36.11	100.00
Shareholder rights policy subindex	<i>CG Shareholders</i>	333	72.74	9.95	21.90	95.48
Overall good governance policy adoption index	<i>CG Total</i>	333	69.77	14.20	28.59	96.05

Table 3: Average Frequency of Violations, by Quintile of CG Total, 2003-2006

Quintile of CG index	Obs.	Mean CG index	Frequency of violations (per firm per year listed)	
			Mean	Std. Dev.
1st	66	46.75	0.33	0.59
2nd	67	65.37	0.20	0.39
3rd	67	71.55	0.19	0.51
4th	66	78.11	0.13	0.30
5th	67	86.86	0.04	0.15
All	333	69.77	0.18	0.43

Test for equality of means of the violation frequency grouped by CG index quintile

Method	df	Value	Probability
Anova F-test	(4, 328)	4.229774	0.0024
Welch F-test*	(4, 151.50)	6.3975	0.0001

*Test allows for unequal cell variances

Table 4: Definition and Descriptive Statistics of Explanatory Variables

Variable	Definition	Obs.	Mean	Std. Dev.	Min	Max
<i>LnAsset</i>	Natural logarithm of total assets	256	7.82	1.39	3.54	12.60
<i>ROA</i>	Return on assets, winsorized at the 1% and 99% percentile (left and right tail)	256	0.08	0.10	-0.29	0.29
<i>Leverage</i>	Total debt to assets ratio, winsorized at the 99% percentile (right tail only)	256	0.29	0.25	0.00	1.59
<i>Div. payout</i>	Dividend payout ratio: dividends divided by earnings, winsorized at 200%, and negative payout ratios replaced with 200%.	256	0.40	0.47	0.00	2.00
<i>Tobin Q</i>	Tobin's Q: sum of stock market capitalization (31-Dec-2002) and the book value of total debt, divided by the book value of total assets.	256	0.93	0.65	0.10	5.76
<i>Tangibility</i>	Ratio of plant, property and equipment to total assets	256	0.42	0.24	0.00	0.94
<i>Control</i>	Dummy: 1 for firms with at least one controlling shareholder with 25% or larger block (any type); 0 otherwise.	256	0.83	0.38	0	1
<i>Talk only</i>	Dummy: 1 for firms with <i>CG Policy</i> among the top 33%, but either <i>CG Shareholders</i> or <i>CG Board</i> among the bottom 33%.	256	0.13	0.34	0	1
<i>High/low profit</i>	Dummy: 1 for high- and low-profit firms, i.e. firms in either the top or bottom 10% percentile based on ROA; 0 otherwise.	256	0.22	0.42	0	1
<i>Consolidation</i>	Dummy: 1 for firms with consolidated accounts; 0 otherwise.	256	0.75	0.44	0	1
<i>Director</i>	Proportion of directors serving on other boards	256	0.29	0.23	0.00	0.89
<i>Violtot02</i>	Average number of violations per year listed, in the period 1990-2002.	256	0.19	0.24	0.00	2.40
<i>Violtot06</i>	Average number of violations per year listed, in the period 2003-2006.	256	0.18	0.41	0.00	2.50

Note: non-financial firms only, common sample (after listwise deletion of missing values).

Table 5: Estimation Results

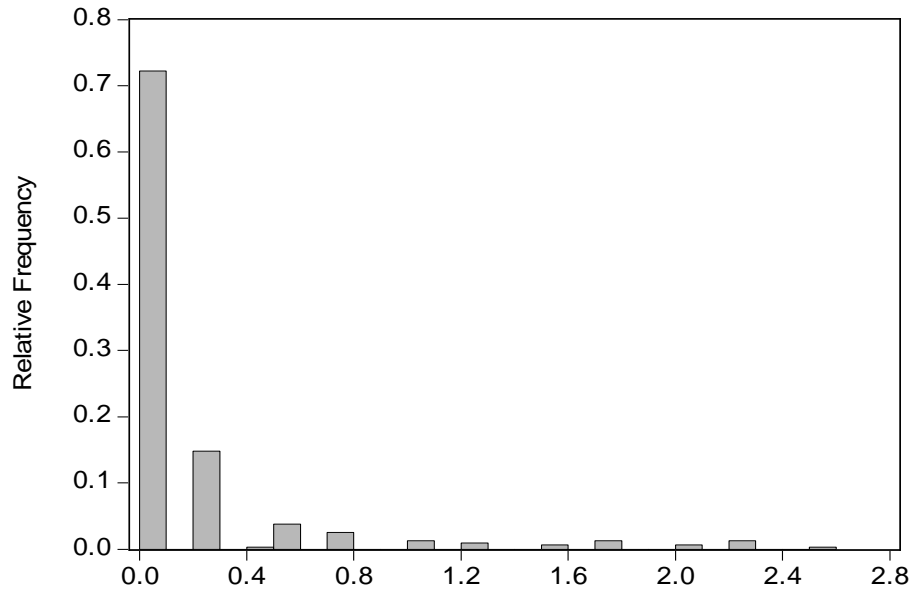
Dependent variable	Avg. Violations, 2003-2006		Avg. Violations, 2003-2006
	Method	1 st -stage OLS	2 nd -stage Tobit, IV regression
<i>Constant</i>		70.145 *** (3.875)	0.066 (0.455)
<i>CG Total</i>		---	-0.010 ** (0.005)
<i>CG Total, instrumented</i>		---	---
<i>Leverage</i>		-6.052 * (3.465)	0.539 ** (0.262)
<i>Dividend payout</i>		-1.104 (1.844)	-0.325 * (0.177)
<i>Tobin's Q</i>		-1.692 (1.388)	0.002 (0.110)
<i>Tangibility</i>		-0.543 (3.378)	0.132 (0.272)
<i>LnAssets</i>		3.610 *** (1.114)	-0.094 (0.091)
<i>Control dummy</i>		-3.069 (2.169)	0.066 (0.179)
<i>ROA</i>		0.498 (0.896)	-0.215 *** (0.068)
<i>Talk only dummy</i>		11.225 *** (2.298)	0.459 ** (0.187)
<i>Violations, 1990-2002</i>		-1.181 (3.551)	0.649 *** (0.247)
<i>High/low profit</i>		1.006 (2.067)	0.217 (0.165)
<i>Consolidation dummy</i>		1.399 (1.918)	-0.261 * (0.149)
<i>Directors on other boards</i>		11.407 *** (3.811)	---
<i>Observations</i>		256	256
<i>Adj. R²</i>		0.166	---
<i>Wald test of exogeneity</i>		---	0.810
<i>p-value</i>		---	(0.369)

Note: standard errors in parentheses. *, **, ***: significant at 10%, 5% and 1% level, respectively.

Figure 1

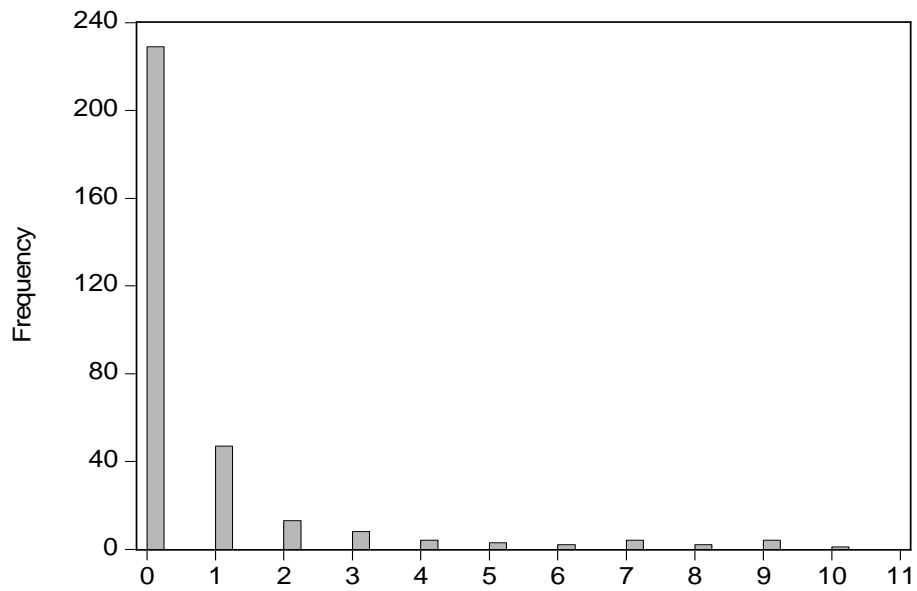
Panel A

Histogram: Average violations per year listed, 2003-2006



Panel B

Histogram: Round(4 * Average violations per year)



Appendix A: Good Governance Principles from the Thai Code Not Used for Measuring Formal Policy Adoption

A. Principles with sub-scores partially based on substantive implementation

The sub-score for the following principles might have some substantive aspects that overlap with our SET and SEC violations data:

Principle 3: “Rights of Various Groups of Stakeholders”

- The sub-score for this principle is based on accusation/prosecution concerning violation of stakeholders' legal rights.

Principle 6: “Conflicts of Interest”

- Sufficient measures are in place to prevent the use of inside information.
- No connected transactions took place, or directors/audit committee are of the opinion that the price/condition is equivalent to transactions with third party.

Principle 15: “Investor Relations”

- Information disclosure complies with the rules and regulations.
- There is an investor relations unit or staff.

B. Principles with sub-scores measuring only information disclosure:

We do not use the sub-scores for the two principles listed below, as they do not contain information about adoption of formal governance policies that could be decoupled from practice (firms either disclose the information or not).

Principle 10: “Directors and Management Remuneration”

- The company provides detailed information on the remuneration of Board members and management.

Principle 11: “Board of Directors’ Meetings”

- Each director’s attendance record is disclosed in the company’s annual report.

C. Principle deemed not relevant for good governance:

Finally, we do not use the following principle, as it does not consider the relation between the firm and its various stakeholders, but rather internal risk management procedures.

Principle 13: “System of Control and Internal Auditing”

Appendix B: Partial Observability and Count Data Models

The standard Tobit model ignores the fact that not all violations committed by firms are detected by the regulators, i.e. violations are only partially observed. Following Poirier (1980), Feinstein (1990) and others, we add one equation modeling the probability that a firm's violations are detected. We let the binary variable D_i indicate whether violations are detected: $D_i = 1$ if one or more violations are detected; and $D_i = 0$ otherwise. Violations are only observed when a firm intends to violate the rules ($F_i^* > 0$) and violations are detected ($D_i = 1$): $F_i = F_i^* D_i$ when $F_i^* > 0$ and $D_i = 1$; and $F_i = 0$ otherwise. The resulting model is called a Tobit model with partial observability:

$$(B1) \quad D_i^* = X_{2i} \beta_2 + u_i,$$

$$D_i = 1, \quad \text{if } D_i^* > 0,$$

$$D_i = 0, \quad \text{if } D_i^* \leq 0,$$

$$(B2) \quad F_i^* = X_{1i} \beta_1 + \varepsilon_i,$$

$$F_i = D_i F_i^*, \quad \text{if } F_i^* > 0 \text{ and } D_i = 1,$$

$$F_i = 0, \quad \text{otherwise.}$$

where X_{2i} is a $(1 \times k_2)$ -vector of observations on k_2 explanatory variables for firm i that help predict detection of violations, β_2 is a $(k_2 \times 1)$ vector containing the corresponding regression coefficients and u_i is a random error term.

The Tobit model assumes that the error term ε_i in the Tobit equations (B2) is normally distributed. As the dependent variable in our study is derived from a count of violations and violations occur infrequently, the residuals are unlikely to follow a normal distribution. We use the Lagrange-Multiplier (LM) test of Chesher and Irish (1987) to test the normality assumption, using generalized residuals. In case of violations of normality, we can transform the dependent variable back to count data with almost no loss of information. After multiplying the average

number of violations per year by four, the length of the 2003-2006 period for firms with complete data, the resulting series has only three non-integer values. Rounding these three values to the nearest integer, we are left with a dependent variable that closely resemble count data (with excess zeros), as illustrated in Figure 1B.

The transformed dependent variable, denoted by y_i , can be modeled with a count data regression model, e.g. the negative binomial model (NB):

$$(B3) \quad P[Y = y_i | X_{1i}] = \frac{\theta^\theta \lambda_i^{y_i} \Gamma(\theta + y_i)}{(\theta + \lambda_i)^{\theta + y_i} \Gamma(\theta) y_i!}, \quad \lambda_i = \exp(X_{1i} \beta_1)$$

where $\theta > 0$ is an overdispersion parameter.

A zero-inflated negative binomial model has an additional equation to model the probability of zero outcomes separately, which allows us to model the partial observability of violations. As before, let the dummy variable D_i denote whether violations are detected or not, modeled by probit equation (B1). A count model data for y_i with partial observability is then defined as follows:

$$(B4) \quad P[Y = 0 | X_{1i}] = \phi \frac{\theta^\theta}{(\theta + \lambda_i)^\theta} + (1 - \phi),$$

$$P[Y = y_i | X_{1i}] = \phi \frac{\theta^\theta \lambda_i^{y_i} \Gamma(\theta + y_i)}{(\theta + \lambda_i)^{\theta + y_i} \Gamma(\theta) y_i!}, \quad \text{for } y_i > 0$$

with $\phi = P[D_i = 1] = P[D_i^* > 0]$ denoting the probability of detection.

The comparison fit of similar models with and without partial observability is non-standard, as the model specifications are non-nested. We can use Vuong's test statistic (Vuong, 1989) for this purpose.