

Corporate Governance Systems and Firm Value:  
Empirical Evidence from Japan's Natural Experiment

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## ABSTRACT

This study uses panel data to explore economic efficiency of corporate governance systems by examining the effects of cross-sectional differences among Japanese firms selecting one of two legal systems. The paper presents evidence that the adoption by Japanese firms of a shareholder-oriented, more transparent, system of corporate governance creates greater corporate value in comparison to the traditional system of statutory auditors. The effect is not only significant, it is important in magnitude. This paper takes advantage of the unique opportunity afforded by Japan's introduction of a dual system of corporate governance in 2003, when companies were offered a choice to adopt a new system of outside directors, which is a shareholder-oriented committee system. Data analysis shows a significant increase in firm valuation, as measured by Tobin's  $q$ , for companies that adopted the committee system, even though comparative financial data show little difference. This finding is attributed to signal sending, as companies that adopted this system signal a choice toward transparency via monitoring by outsiders, suggesting a reduction of asymmetric information agency costs.

Keywords: Corporate Governance, Japan, Committee System, Directors

## 1. INTRODUCTION

Recent economic turmoil has refocused examination of corporate governance systems. Seen by some observers as the standard of corporate governance, the US system of shareholder-oriented governance by board committees and independent directors has come under re-examination. Before September 2008, some streams of academic thought pictured a *de facto* convergence on the US governance model because, it is reasoned, economic efficiency will motivate governments seeking efficient systems to adopt legal structures to emulate US norms (Hansmann and Kraakman 2001). Moreover, (Nottage and Wolff 2005) tell us how, in Japan, some firms, such as Sony and Hitachi, sought to create Anglo-American firm-level governance institutions within the laws that then existed in Japan. However, the question of whether different corporate governance systems result in demonstrably differential corporate value—so that the supposed efficiency gains that may drive convergence can be studied—is incompletely addressed. Now, with US corporate governance being called into question for failures of incentives and monitoring inefficacies, examination of the purported efficiency gains from an Anglo-American corporate governance system seems beneficial.

Despite the abundant academic research on comparative corporate governance systems, where much attention is paid to the issue of convergence, the issue remains unresolved. (Jacoby 2002), argues that the dynamic economy and increasing assets values on financial markets during the 1990s—in contrast to Japan and Europe—drove firms to seek listings on US exchanges and consequently caused those firms to adopt US corporate practice. Other scholars take the position that economic efficiency drives corporate governance systems toward convergence (Hansmann and Kraakman 2001). Indeed, they propose that convergence has already occurred towards the Anglo-American, shareholder-oriented model. That is what Nottage and Wolff (2005) called a “shareholder-oriented model of corporate governance, involving extensive use of market-based control mechanisms to guide corporate activity and corporate law.” There is some evidence that at least a convergence of opinion on corporate governance principles, such as the necessity of transparent information systems (Khanna, Kogan et al. 2006), or the US market for corporate control (Jensen and Ruback 1983) has occurred.

In contrast, other scholars, for example, (Bebchuk and Roe 1999), (Schmidt and Spindler 2002), and (Gordon, Roe et al. 2004), argue that the path-dependent nature of corporate governance structures—via the presence of sunk costs, the logic of corporate governance, complementarity, or institutional inertia—implies that any convergence will be gradual, at best, if it will not meet outright resistance. Moreover, comparative institutional analytic literature suggests path-dependence from the systems of corporate governance deriving from the underlying local organizational and industrial architecture (Aoki and Jackson 2008), or historical-economic context (Greif 2006). (Gilson 2001) proposes that, even if governance practices should follow path-dependent trajectories and retain formal structures, there may be a convergence in functionality, given similar economic forces. He demonstrates how both convergence and path dependence can be present at the same time.

Resolution of the debate between convergence and path-dependence is incompletely resolved because it is difficult to adjudicate with only theoretical work. In recent years, changes in legal structure occurred in the United States, Germany (Crane and Schaede 2005), Japan (Milhaupt 2003), and other countries. Nevertheless, empirical study, beyond the analytic understanding of system changes, seems necessary in order to determine whether observed changes in the explicit legal structures manifest themselves in actual corporate value. That is, do changes in the rules or institutional structure of the boardroom create changes in corporate behavior or shareholder perception that result in measurable effects?

Japan provided an opportunity to study this empirical conundrum in a law passed in 2002 that provided a natural experiment by letting two corporate governance systems operate concurrently in the same corporate domain. The Japan Commercial Code revision of 2002 introduced a new committee system similar to Anglo-American systems, explicitly as a competitor to the then extant stakeholder-oriented system. By April 2009, 112 publicly traded companies, including prominent business groups like Hitachi, Nomura, and Sony, adopted the new system<sup>1</sup>. This study proposes that by examining the differences in value among firms in the same national economy at the same time, useful data might be generated that can contribute to this inquiry. Such opportunity for study, by having two legal structures operate in one economy at the same time, is seldom available.

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<sup>1</sup> Interestingly, forty-seven private, newly-formed companies have adopted the *iinkai* system (Teikoku Data Bank, 2008).

Since enactment of the new corporate law establishing the parallel systems, few empirical studies have compared the two systems given the little time that has passed since companies began adopting the new system. Because it is very rare for countries to legislate two parallel systems, studies of *intra*-country corporate governance advantages have tended to rely on assessments of governance practice compliance, usually via scores. For example, (Black, Jang et al. 2006), (who also use Tobin's q to evaluate firm value) found that firms in Korea with a high proportion of outside directors have significantly higher share prices. (Miyajima 2006), using similar methods and also using Tobin q as a dependent variable, studied Japanese firm performance under varying corporate governance variations by assigning scores to normalize the firms' sometimes complex policies to study firm performance. Miyajima's study, while not explicitly testing the two systems, found that Japanese firms with higher scores did have better performance as measured by return on assets and Tobin's q. Interestingly, he found that increasing economic pressure from capital markets encouraged corporate managers to attempt corporate governance reform and found reform more likely the higher the percentage of foreign investors and a lower percentage of long-term, stable shareholders. His study did not find evidence that companies with committee style, shareholder-dominant systems, possess superior performance.

Using event-study methods to examine share prices, (Gilson and Milhaupt 2004) found little discernable difference in the value of the firms as tested by stock price trajectories. More recently, (Buchanan and Deakin 2007) conducted a survey of CEOs, directors and senior managers, academics and government officials to determine how divergent assessments of Japan's corporate governance experimentation are. They found it paradoxical, as they put it, that changes in corporate governance practice did not depend on whether a firm selected the *iinkai* system or not. Further, they conclude that the adoption of western structures, as envisioned in the *iinkai* system, does not result in actual practices that diverge widely from the more traditional models. Resolution of these paradoxes is difficult without empirical evidence of the value of a systematic corporate change.

This paper, seeking to address the empirical need, examines the comparative change in corporate value upon a Japanese firm's adoption of the committee system of corporate governance, and finds higher value, as measured by Tobin's q, among adopting firms. It may be that by selecting the new system, wherein management submits its books and other

records to outside directors for examination, away from the supervision of the CEO and the board of directors, a firm signals a willingness to be examined by outsiders.<sup>2</sup> To the extent that transparency is the disclosure of accurate information to outsiders, (Bushman, Piotroski et al. 2004), the *iinkai* system is more transparent and might therefore accrue greater value in the capital markets. The implication of this result is relevant to research on corporate governance convergence as well as transparency. Section 2 will describe the legal and functional nature of the two parallel corporate governance regimes and compare them descriptively; section 3 contains the methodology for the empirical results in the paper using univariate and a fixed-effects longitudinal regression analysis. Section 4 discusses the results of both the univariate descriptive statistics and panel regression. Section 5 concludes.

## 2. Japanese Corporate Governance Changes

In what has come to be called the “J-firm” (Aoki 1990); (Aoki and Dore 1994), describe the contingent governance system of Japanese firms characteristic of the postwar period. The firm manages its own affairs, supervised by boards usually composed of insiders promoted from the managerial ranks - unless the corporation found itself in financial difficulty. In that contingency, the financiers of the firm, usually the bank, would rescue or liquidate the firm (Aoki and Patrick 1994). In part to detect such contingencies, a monitor, or committee of monitors, called a “statutory auditor,” or *kansayaku* in Japanese, is legally chartered to audit and present the financial and legal condition of the firm to shareholders with the purpose of informing all stakeholders: management, financiers (e.g., the main bank), and the shareholders (JCAA 2008). In addition, while the *shareholders elect the kansayaku*, he is nominated by the board that is aligned with the president, who, in turn, was thought to disperse the auditors’ constituency amongst stakeholders.

A broad academic and business practitioner criticism arose of this contingent governance and associated monitoring system during the 1980s and accelerated during the 1990s in response to changes in Japan’s socio-economic environment in the post-bubble period.<sup>3</sup> Beginning in 1997, in response to these criticisms, the continuing broad economic

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<sup>2</sup> In Japanese law, “outside” directors are legally distinct from the more Anglo-American concept of “independent” directors. In Japanese law, “outside,” while meaning the officer is not, and never has been, employed by the subject company; family ties, affiliation, and being the employee of a parent firm, conform to the legal definition of “outside” director.

<sup>3</sup> For an excellent discussions, see Milhaupt 2001, Gilson & Milhaupt 2004, and Nottage & Wolfe 2005.

slowdown and the equity market boom in the United States, Japan underwent a series of aggressive reforms to its corporate governance legal structure, (Schaede 2008). Stock option plans were liberalized, repurchasing of company shares was liberalized, merger law was rewritten, holding companies were allowed, startup capital requirements were severely lowered, limits placed on director liability, and bankruptcy laws were reformed—to name just a few examples.

These reforms were undertaken with five explicit goals in the forefront minds of the policy makers in the Japanese government. First, the reforms were intended to create a more transparent corporate governance system from the standpoint of shareholders and, secondly, to modernize corporate law to accommodate the demands of funding new industries. Third, reformers hoped to improve financial intermediation, especially venture capital fundraising measures and, fourth, to create a greater congruence with the increasing internationalization of corporate legal practice and norms. Finally, there was a technical objective of modernizing language terms and consolidating provisions of the company law, (Egashira 2005).

In 2002, one of the series of reforms to the commercial code permitted the optional adoption of a shareholder-oriented, Anglo-American form of corporate governance option for Japanese firms called the “committee system” (*iinkai secchi kaisha*; abbreviated to “*iinkai*” in this paper.). Alternatively, firms could continue with the incumbent “statutory auditor” system, called *kansayaku secchi kaisha*, termed “*kansayaku*” in this paper. The law became effective in 2003 and some 40 public firms adopted the *iinkai* system in its first year, growing to 103 firms by January 2007, even though a few firms have rescinded the adoption (JCAA 2008).

### The Kansayaku System

Until additional reforms were promulgated in 2005, a *kansayaku* company had at least one representative director and one auditor. The board of directors appoints a representative director, who legally (and personally) represents the company, and may optionally appoint subordinate executive directors. The representative director and executive directors manage the company under the supervision of the board of directors. The *kansayaku* are nominated by the representative directors and confirmed by the shareholders.

While their role differs depending on the size of the company, fundamentally the *kansayaku* is to audit financial accounting and certify the directors' proper and legal execution of affairs.<sup>4</sup> In larger companies, more than one auditor performs these tasks.

In a *kansayaku* firm, both the board of directors and the corporate auditors are expected to monitor and control the firm, but the *kansayaku* gained a reputation of ineffectiveness in this role (Sarra and Nakahigashi 2002). Firstly, the *kansayaku* structure as an institution was ineffective. They were rarely rejected by shareholders, thus becoming beholden to the CEO that nominated them, were poorly supported with staff—typically inside staff with divided loyalties—and had poor status as they were often considered senior employees who failed to become directors (Ahmadjian 2003). Secondly, the *kansayaku* lacked sanctioning authority—the power to nominate, appoint, or remove directors—and thus could not necessarily represent shareholder or employee interests. Third, the auditors were nominated by a board of directors - a board consisting largely of managers whom only infrequently could effectively challenge an opportunistic chief executive without risking their careers. The question of who monitors the monitor was thus inadequately resolved in this system. With management retaining both selection and retention decisions with respect to the *kansayaku*, the incentives of the system simply did not include the primary interests of shareholders and employees (Milhaupt and Gilson 2004), somewhat at variance with the concepts of stakeholder representation in Japanese corporate governance.<sup>5</sup>

### The *Iinkai* System

The *iinkai* system option is a shareholder-oriented alternative to the *kansayaku* system enacted in 2002 that became available for adoption in 2003. It was METI's original intention, during the formulation of reforms in the late 1990s, to simply replace the *kansayaku* system with an Anglo-American system, giving primacy to shareholders through a governing system by committees of independent directors modeled on reforms innovated by

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<sup>4</sup> In Japanese corporate law, additional rules exist for the auditing system, depending on the size of the company, Takahashi, E. S., Madoka (2005). "The Future of Japanese Corporate Governance: The 2005 Reform." The Journal of Japanese Law 19(35).. For small firms, for example, the full *iinkai* structure is not required. In addition, the role of a corporate auditor in a small company is only to audit accounting and does not include the corporate auditor function. For this study, examines only public firms, which are all large by legal definition, and the commentary is restricted to those features of Japanese law that are relevant to large companies.

<sup>5</sup> Starting in 2006, committees of *kansayaku* were required by law permitting more outside *kansayaku* to serve.



Sony. Honoring the wishes of Keidanren and constituencies within METI, the reform was instead offered as a choice. Firms can choose either system following shareholder approval. Its designers supposed that this might also create competition between the two systems and thus perhaps the market would select the more efficient system and improvements to corporate governance would follow (Nottage and Wolff 2005).

Instead of statutory auditors, *iinkai* companies are required to have three committees—a nominating committee, an audit committee, and a compensation committee—and must appoint one or more executive officers. The board of directors appoints the members of each committee of three or more directors, with outside directors holding the majority of each committee. Of some importance, these committee's decisions cannot be overruled by either the whole board or the management, including the president, (Ohara 2009).

In an *iinkai* firm, similar to a *kansayaku* firm, executive authority rests with the president and subordinate executive officers. On the other hand, in an *iinkai* company, the nominating committee appoints the president and executive officers, and compensation for the president and executive officers is determined by another board level committee, subject to confirmation by the shareholders. Moreover, the financial information reported to shareholders as well as the legal veracity of company actions are monitored and certified by an audit committee. Since these key functions—executive pay, executive appointment, and financial monitoring—are supervised by committees, the majority of whose members are outsiders, and which cannot be overruled by the president, the *iinkai* system was, and is, hoped by its designers to provide more transparent and effective monitoring.

The *iinkai* law prohibits co-mingling features of both auditor and *iinkai* systems. That is, a company cannot have, for example, only one or two of these three committees, or both a corporate auditor and the audit committee. Nevertheless, this is not to say that *kansayaku* firms eschew all forms of the committee system. In a corporate governance form-versus-function phenomenon anticipated by Gilson in 2001, essential features of the *iinkai* system such as outside directors and the separation of executive management from board management are increasingly being adopted by many traditional firms. While only about 100 firms adopted the *iinkai* system, a Tokyo Stock Exchange Survey of 2006 found that 42.3% of all listed companies had outside directors (TSE 2007). Further, the distinction between them diminished after 2005 and is more completely explored in the next section.

## The *Kansayaku* Reforms of 2005

In 2005, Japan enacted a further revision to its commercial code, which reformed the authority and responsibilities of *kansayaku* firms, that both allows and requires them to more closely resemble *iinkai* firms (Takahashi 2005). The law provided that, for large public companies, the majority of the auditors must be legally classified as outside and that at least one of a firm's auditors must be engaged on a full-time basis. Moreover, the new law required firms to optionally set up either governing bodies, such as a board of *kansayaku* consisting of accounting consultants (*kaikei san'yo*), or the three committees (nominating committee, audit committee and compensation committee), which is closely analogous to the *iinkai* system.

With the 2005 law, then, a *kansayaku* firm could closely mimic an *iinkai* system firm in almost all its essential features. *Kansayaku* companies, by adopting the system of a committee of auditors, the majority of whom are outsiders, recreate the audit committee of the *iinkai* company with the exception that it is not a board-level committee. It seems likely that this law might diminish the differential effects between *kansayaku* and *iinkai* corporate governance systems.

## **3. EMPIRICAL METHODOLOGY**

### The Sample

Proprietary and government databases are used for this research. To ascertain company financial information for Tobin's q computations, two sources are employed. The primary source is the Thomson Financials database that presents financial information in standard format conforming to Japanese standard accounting practices. Thomson compiles its data from the reports that all public Japanese companies, *iinkai* or *kansayaku*, are required to file (equivalent to US 10K forms) (Thomson Corporation 2003). For non-financial statement data that is not available from the Thomson reports, such as the presence of a stock option, we relied on our second source from the Financial Services Agency of the Japanese Government, (Financial Services Agency (2008)).

The data for this study consists of *kansayaku* and *iinkai* companies, with the *iinkai* firms identified by the Japanese Corporate Auditors Association, [www.kansa.or.jp](http://www.kansa.or.jp), (JCAA 2008). They include 103 Japanese firms that have adopted the system through December 2007.<sup>6</sup> To control for differences across industries, the 103 companies were grouped into industry groups using the Japan Standard Industrial Classification system. Selected firms are publicly traded and have data on relevant variables available during the study period of the 2005–2007 fiscal years.

Of the 103 total, a market price cannot be directly obtained for 21 firms because they are subsidiaries of other companies. Further, independence of board committees might be compromised by assigning parent company employees to the committees. Moreover, ten firms were financial companies subject to regulations regarding their capital and other assets that this study deems inappropriate for this analysis. Of the remaining seventy-two, forty *iinkai* companies were unsuitable for the analysis because fifteen companies were private and 25 firms had insufficient available information due to bankruptcy or insufficient filing of financial data. The remaining thirty-two *iinkai* firms were classified into five company-type categories: electronics, pharmaceuticals, manufacturing, trade, and internet/communications. Four dummy variables control for these differing industries in the regression analysis.

For *kansayaku* companies, the study grouped all companies from the “Kaisha Shikiho (会社四季報) 2007,” into JSI classifications and then into one of the five company-type categories. From these categories, 51 companies were selected at random proportionate to the industries in the *iinkai* sample. The study uses this proportional sampling technique because the frequency of pharmaceutical and Internet companies in the *iinkai* sample that was substantially different from the population of *kansayaku* companies that bias might occur if a simple random sampling was used. We lost five of the randomly selected *kansayaku* companies because of incomplete data leaving eighty-one companies spanning four years (fiscal years 2004–2007) for 294 observations. Most sampled companies have a March 31 fiscal year end and the study uses year-end data. In the few cases where the fiscal year is not 3/31, the actual close is within one quarter and should not introduce bias into the results. Complete lists of *iinkai* and *kansayaku* study companies are in Appendices 1 and 2 respectively.

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<sup>6</sup> As of April 11, 2009, 114 public, or subsidiaries of public firms have selected the *iinkai* system as reported by the Japanese Corporate Auditors Association.

### Tobin's q

This study uses the Tobin's q ratio to measure a firm's value. It is well established in the financial economics literature that corporate governance plays an important role in efficient financial monitoring and thus shareholder protection, which affects firm valuation as measured by Tobin's q (Wolfe and Sauaia 2003); (Morck, Shleifer et al. 1988); (Pacheco-de-Almeida, Hawk et al. 2008). Additional literature on the association of corporate systems with firm performance has made extensive use of q (Shleifer and Vishny 1997); (Denis and McConnell 2003); (Gompers, Ishii et al. 2003).

The q ratio is used in studies such as cross-sectional differences in investment and diversification decisions, the relationship of managerial equity ownership and firm value, the relationship between managerial performance and tender offer gains, investment opportunities and tender offer responses, and financing, dividend, and compensating policies, (Chung and Pruitt 1994). Firms with a  $q > 1$ , as opposed to firms with  $q < 1$ , have been found to be better investment opportunities, indicate that management has performed well with the assets under its command (Lang, Stulz et al. 1989), and have higher growth potential (Brainerd and Tobin 1968). The q ratio is useful to study the effects of corporate decisions on performance, especially where standard accounting methods have failed to detect any performance effects, as in increases in intangible asset value. For example, if a firm selects a business strategy that materially improves the marginal productivity of assets at small marginal cost, the market value of the firm may increase even though no significant relationship between the selected strategy and the financial accounts are detected.

The q ratio is used extensively as a measure of a firm's intangible value based on the assumption that the long-run equilibrium market value of a firm must be equal to the replacement value of its assets, giving a q-value close to unity. Deviations from this relationship (where q is significantly greater than 1) are interpreted as signifying an unmeasured source of value and generally attributed to intangible value in the firm. Studies have exploited the relationship between q and intangible value to examine the effects of factors such as R&D, advertising, and brand equity, which are deemed to contribute to a firm's intangible value (Megna and Klock 1983); (Hall and Hall 1993); (Simon and Sullivan 1993). Recently, several studies have used the q ratio to establish important results. (Ciner

and Karagozoglu 2008) found that foreign trading activity is associated with information trading on the Istanbul Stock Exchange, and it was recently shown using Tobin's q that firms gain a valuation advantage when selecting business strategies based on service as opposed to product (Fang, Palmatier et al. 2008).

For this study, Tobin's q calculations follow the method of Chung and Pruitt (1994), which resolves the practicable difficulties of calculating the q-value since market values of assets are difficult to obtain or estimate *ex post*. Their method instead estimates the market value of the firm as the sum of the market value of common and preferred shares for the period under examination, plus the current liabilities (net of current assets), book value of inventories, and long-term debt. This sum is divided by the total book value of assets to obtain an approximate q-value for a firm. This calculation method allows use of public financial data and is robustly correlated with q-values calculated by more complex alternative methods. The method is described in detail in Appendix 3.<sup>7</sup>

### Descriptive Statistics

Table 1 presents descriptive statistics of the companies in our sample over the fiscal years 2004 through 2007. These statistics are grouped by governance system: *iinkai* and *kansayaku*.

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Insert Table 1 about here

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*Iinkai* firms, compared to *kansayaku* firms, consistently have higher Tobin's q-values. Figure 1 compares the median and inter-quartile range of each system in each year. The median Tobin's q-values are higher throughout the analysis period and the range of values is similar. A simple t-test confirms this observation ( $t=-3.4554$ . 99.9% confidence.) Noticeably, q-values for both styles of firms decline from 2005 onward and the difference between the medians narrow.

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<sup>7</sup> Chung and Pruitt (1994) found that their method of calculating q explained at least 96.6% of the variability in Tobin's q obtained via Lindenberg and Ross's more complex model Lindenberg, E. B. and S. A. Ross (1981). "Tobin's q Ratio and Industrial Organization." The Journal of Business 54(1)..

Two likely possibilities act individually or in concert to explain this narrowing of value differences. First, the *iinkai* system could be novel when selected and act to signal a welcome corporate push for increased performance. When the performance differential is not delivered, shareholder evaluations may be modified downward. Our multivariate analysis, below, finds performance differences are small and insignificant between both type of firms, and that might support this idea. Another explanation may be the diminished difference between the two systems from 2005 onward, discussed earlier. We consider this idea more likely if the cause of value is not the “American-ness” of the *iinkai* system, but rather the system’s comparative transparency. We discuss this in detail in the concluding section.

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Insert Figure 1 about here

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Within differing industries, in contrast, the data show marked differences. Figures 2–6 give the Tobin’s q medians and ranges for each studied industry: trade, electronics, manufacturing, ICT, pharmaceuticals. While those companies using the *iinkai* system retain greater median Tobin’s q-values in each industry, the range and degree of difference seems to depend on the industry. The data shows that q-values trend downward for both types of firms from 2005, and that the difference between systems’ values narrows, consistent with the convergence of laws governing *iinkai* and *kansayaku* firms after the 2005 legal reform discussed earlier.

*Iinkai* companies in the sample also differ from sampled *kansayaku* firms in closely-held shares proportion, foreign ownership and the frequency of a stock option plan but do not seem to differ in profit as a percent of sales, revenue per employee, cash flow as a percent of sales, or return to assets. *Iinkai* firms, while apparently performing no better than *kansayaku* firms, are more broadly owned by foreign interests (26% versus 12%), are held more closely by insider shareholders (45% to 35%), and much more frequently have stock option plans (83% to 34%).

It is interesting that the size of the board of directors in *iinkai* and *kansayaku* firms differ little on average, 8.9 versus 8.7 respectively (Figure 9),<sup>8</sup> but that *kansayaku* firms do include the large (n = 20) boards that are characterized in much Japanese corporate governance literature.

### Performance Comparison

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Insert Table 2 about here

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To consider whether the differences in the governance systems on corporate value or behavior might be expressed in corporate performance outcomes, the study examined profits, normalized by sales, and compared them between the two types of firms. We examined these for each year of data and found indications that profit rates are higher for *kansayaku* companies, but the difference does not seem significant. Table 2 shows that the median profit rate is greater for these firms in each year studied. However, t-tests to compare the means for each year found no significant difference. The study cannot find a profit performance difference between the two types of firms.

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Insert Table 3 about here

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The study can find significant performances between the two types of firms within specific industries,<sup>9</sup> (see Table 3). When compared within industry classifications, the electronics, manufacturing, and pharmaceutical industries show profit rates difference between *iinkai* and *kansayaku* firms. Noticeably, the direction of the difference is inconsistent between industries. In the case of manufacturing, higher profit rates are reported for *iinkai* companies while for electronics and pharmaceuticals, *kansayaku* firms seem to have the advantage in this regard.

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<sup>8</sup> It is also interesting for comparative scholars of United States/Japan corporate governance that, in spite of the common perception that Japanese boards are large, the averages of the Japanese companies studied here are *lower* than US companies (US firms average 10.) This study found a mean of under nine for both *iinkai* and *kansayaku* firms (Monks & Minow 2008)

<sup>9</sup> These are the study's own classifications for purposes of useful grouping of the panel data. Please see the discussion above.

Given the data, we cannot find a performance advantage to either system in terms of profit when firms in different industry classifications are pooled. However, the differing effect between industries is important for our analysis in the conclusions and is further explored in the regression analysis.

To better understand these apparent differences in value, it is of interest to see if we can determine at which point after adoption of the new system exactly the value difference manifests itself. For if increased value manifests soon after adoption of the new system, it suggests that the market value of the firm has changed (the numerator of the  $q$  calculation) rather than the liquidation value or efficiency of the firm's assets (the denominator). We examine the trajectory of Tobin's  $q$ -values for companies that selected the *iinkai* system in 2003 and compare them to *kansayaku* firms. We track the period 2001 through 2007, two years before the system could be formally adopted to capture changes in value upon both adoption—in 2003—and announcement to the shareholders, which must have occurred in 2002.

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Insert Figure 7 about here

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According to Figure 7, there is no significant difference between *kansayaku* and *iinkai* companies in 2001, but an apparent difference in favor of the soon-to-be *iinkai* companies in both 2002 data (the date the change must have been announced to shareholders) and 2003 (the year of implementation). More rigorous event study methods may add clarity, and we leave that to subsequent study. However, this data is suggestive of an immediate manifestation of value upon announcement, not upon implementation, and is consistent with the idea that shareholders changing evaluations of the firm cause the change in  $q$ .<sup>10</sup> It should also be noted that the difference in Figure 7 between systems diminishes after the period of 2003–2007.

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<sup>10</sup> The  $q$ -value can be increased through its denominator, if, for a given market value, less assets are used, or through the numerator, by increasing the market value on the stock market. Since value increased in *anticipation* of *iinkai* system adoption, sufficient time for changing the productivity of assets is unlikely.



### *Model Specification and Econometric Concerns*

To extend these univariate results and determine whether they are robust to controlling for financial and governance variables, as well as controlling for the firm's industry, a Tobit random-effects panel regression, using the fiscal year as a grouping variable, is used to analyze the data.

The dependent variable of the study, Tobin's  $q$ , is a continuous variable and takes only non-negative values between zero and one. Since the percentile value is left-censored, the Tobit regression model's assumptions of homoskedastic, normally distributed errors with censored data are thus consistent with our dataset. We regress the Tobin's  $q$  data against the independent variable of the corporate governance system, a set of variables to control for governance and financial effects, and on a set of dummy variables for the different categories of companies. For the study's independent variable, the *iinkai* system is modeled as a dummy variable that takes a value of one if the company has selected that system.

### *Variables*

*Governance Controls*—From the available literature, limited to the studies consistent with the data available for our study, five indicators of corporate governance were selected: the proportion of foreign ownership, the size of the board of directors, the presence of a stock option plan, the ratio of debt to equity, as a measure of the risk of the firm and as a variable of choice of corporate structure, and the proportion of closely held shares

Agrawal and Knoeber (1996) examine mechanisms to mitigate agency costs with control mechanisms such as debt structure. They find that controlling shareholders, outside directors, board composition and debts structure among other aspects, are interdependent and decisive in determining a firm's value in terms of Tobin's  $Q$ . Following that literature, our board size variable captures the idea that larger boards are more amenable to control by a small faction allied with the CEO who might have an opportunity to advance private interests. Since it is argued that differing corporate governance aspects will determine the debt structure of a firm, we employ the debt-to-equity ratio to capture this. That this is an exogenous selection of policy is supported by the control literature similar to Agrawal, and (CTF). In contrast, we find that other authors argue that debt-to-equity is purely endogenous

Similarly, since a board that owns a larger proportion of shares is presumed to be motivated differently than a board owning few shares, a variable capturing the proportion of closely held shares is used to control for the differing effect of entrenchment in firms. Several empirical studies have made much of the closely held proportion of shares as an entrenchment mechanism (Kaplan and Minton 1994); (Bebchuk, Cohen et al. 2004)).<sup>11</sup> Moreover, (Bebchuk and Fried 2004) associate high rates of closely held shares with lower CEO pay and better governance.<sup>12</sup> Schmidt and Spindler (2002) theorize that controlling interests seek status quo governance structures as a means to extract ownership rents. In the context of this paper, firms with controlling owners, motivated as Schmidt and Spindler hypothesize, might resist adoption of the *iinkai* system. Accordingly, we control for this effect by including a variable of the percentage of shares held by officers. Although, since this data is not available for all firms, we analyze this effect in a third model, consisting of the sample of 221 observations that report closely held shares.

We capture the influence of foreign business practice by including two variables, the foreign ownership percentage, and the presence of a stock option plan. In Japanese corporate governance literature, the shareholder-oriented *iinkai* system is viewed as an Anglo-American, or at least a foreign system, and there is some evidence in the literature that foreign ownership and influence can change the value of a firm (Asaba 2005). To control for foreign influence on firm governance, the study measured foreign ownership as a percentage of total shares outstanding. Another measure of foreign influence might be the recent stock option plan implementations in Japan. While initially promulgated in 1997, these plans were reformed in 2002 in the same corporate law change that created the *iinkai* system. This study uses the adoption of this, an innovation in Japan, as a control for foreign influence and its potential effect on *q*, similar to foreign ownership, and thus includes a dummy variable that takes on a value of one if the firm has a stock option plan.

*Financial Performance Controls*—For financial performance controls, the study relied on the empirical literature in economics, finance, law, and Japanese corporate

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<sup>11</sup> Entrenchment, in this regard, means structures and mechanisms of corporate governance that impede the replacement of managers who control the assets.

<sup>12</sup> In contrast, Miyajima's 2006 study, using corporate governance scores to capture entrenchment, finds the closely held proportion of shares unrelated to performance.

governance that had modeled firm performance (Hoshi, Kashyap et al. 1991); (Bebchuk, Cohen et al. 2004). Other studies for the United States have found that Tobin's  $q$  is related to common financial measures (Hermalin and Weisbach 1991); (Gompers, Metrick et al. 2002) such as cash flow from operations. To examine the performance variables suggested by this literature, we present models using *total revenue*, *operating cash flow*, and *dividends*. Revenue is expressed as the logarithm of annual sales, and operating cash flow (expressed as a logarithm) is used as a more consistent measure of profitability since generally accepted accounting principles allow less leeway with the presentation of this versus net profit and investors frequently use this as a more consistent measure of corporate profitability, (CTF).

La Porta, Lopez-de-Silanes et al. (2000) found, in an empirical analysis across several countries, that higher dividends may be associated with shareholder rights. To control for this effect, we also include the dividend, measured as a log, following the prior analysis of ultimate returns from agents to principals. In calculating logarithms, we ensure a minimization of bias by retaining all firms, including those with zero dividends, by using an infinitesimal epsilon quantity in otherwise zero cells.

All models also control for the industry classification of the firm with four dummy variables for the machinery, electronic, manufacturing, and trade (retail and wholesale) industries holding the pharmaceutical industry as the baseline.

We present four models all of which are random effects Tobit regressions with panel data. Model 1 enters the corporate governance variables only, to avoid econometric difficulties given some firms did not report ownership data, does not include the managerial control variable. Model 2, enters the financial controls. Model 3 uses the somewhat reduced sample of firms that report managerial share to control for managerial ownership with both governance and financial controls. The fourth model uses instruments to address the concern that the financial controls are endogenous by using one period lagged variables as instruments for *log revenue* and *log cash flow*. Table 4 reports the results of all four models.

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Insert Table 4 about here

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#### 4. Discussion

The coefficient on the governance system variable is positive and highly significant in all four models. This finding suggests that selection of the *iinkai* system robustly seems to confer a value advantage. The magnitude of the coefficient is material economically implying that selecting the *iinkai* system increases a companies Tobin 1 value by over .3 in models 1,2 and 4 and over .45 in model 3, nearly doubling the q value for a *kansayaku* firm in 2007 in all models. The study also found that amongst the study's governance variables, there were significant coefficients on the size of the foreign ownership variable and with lesser significance on the size of the board of directors.

The coefficient on foreign ownership is materially large and begs the question of whether foreign investors arrive first and are causal to the selection of the *iinkai* system, or if foreign investors arrive after the selection, or Japanese investors depart. Moreover, there has been a several year trend in increasing foreign shareholding of Japanese firms and the coefficient may be responsive to that trend in part, (Schaeede 2008). Complete causative analysis is left to later studies, but some insight can be gained from the trend of foreign shareholding in studied firms in Figure 9.

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Insert Figure 9 about here

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In figure nine, we observe that foreign ownership of *iinkai* firms increases monotonically over the study period while foreign ownership of studied *kansayaku* firms remained static. Since the overall trend during the period was for increased ownership, and since the percentage rises even after most firms selected the new system and even as the value difference was narrowing, the implication is that foreign investors preferential invested in *iinkai* firms after selection of the system. More detailed study will need to be done to establish this observation.

In terms of financial controls, we find that the coefficients on all variables were not significant suggesting that the increased q value in *iinkai* firms is not the results of operating or payout performance.

This is consistent with the idea that corporate governance changes are a signal, rather than an operational enhancement, and the signal manifests itself as intangible value. To add robustness to the idea that intangibles might be driving q-values, the coefficients on the dummy variables for the electronics, trade, and manufacturing industries are negative, with the pharmaceuticals being the base industry in the regression. Only the ICT industry has a positive coefficient in this respect; so, it further suggests that value is associated with technical industries with potentially high intangibles.

It is notable that the results in models 3 and 4 find no significant coefficient on the closely held share variable. We hypothesized that firms with a larger proportion of ownership by outsiders would tend to resist the adoption of the *iinkai* system with its requirement of injecting outsiders into board decisions. However, the small value and insignificance of the coefficient make it also possible that, since *iinkai* companies certainly overcame any opposition, residual effects on firm value from continued resistance, if present, are not detected.

## 5. Conclusions

The objective of the study was to detect if there is empirical evidence of differing company value between differing corporate governance systems co-existing in the same economy. We find that the *iinkai* corporate governance system produces higher corporate value than the traditional *kansayaku* governance. The study also finds evidence that it is the governance signal provided by adoption of the legally credible system, not the financial performance variables, which account for this difference. For, without evidence of clear performance advantages, and with the diminishing advantage as the institutional differences lessened, the value seems to derive from the key difference between the systems, which is the inclusion of outsiders that are independent of board and managerial control on committees. These results provide empirical evidence of the economic efficiency, in terms of investor value, of the *iinkai* system with implications for the corporate governance convergence debate. Moreover, since the new system is a shareholder-oriented model of governance, as opposed to the incumbent stakeholder-oriented model, some support is offered to the cross-country research that has yielded similar findings.

The detection of increased value from the western, shareholder-oriented style governance system in Japan leads to two issues that we wish to probe. First, it seems important to determine what might cause the increased value. Second, why did so few companies adopt the system given that greater value follows adoption of the *iinkai* system? Efficiency should motivate companies, but little more than 100 adoptions from some 3000 public companies in Japan over five years seems hardly a remarkable phenomenon.

To analyze the first question, we adopt the framework of Gilson and Milhaupt in their 2004 paper where they argue that there might be four reasons why a difference in performance or value might exist between firms using different Japanese governance systems. The first potential reason is signaling of perceived good corporate governance practice improves shareholder value if the new system is perceived as superior because of a belief that US systems are superior. Secondly, endogeneity is suggested if the firm adopts the *iinkai* system because it is more efficient for the particular firm. The third potential reason to adopt an *iinkai* system is to permit a corporate group to express group control over subsidiary firms since the legal definition of outsiders permits parent companies to supply parent company employees as “outsiders.” The final proposed motivation is simple indeterminacy, because the rule was legislated as a compromise in the political economy context of Japan, and similar processes may be involved in the selection of a governance system at the firm level.

Unfortunately, this study is not useful to analyze control of subsidiary groups because controlled subsidiaries were not examined. Moreover, indeterminacy cannot be analyzed since the adoption process is beyond the scope of the study. However, this study can add insight to the endogeneity and signaling arguments and suggest that it is indeed signaling that motivates adoption.

This study’s data does not support the idea of endogeneity. We propose two arguments. First, since we find no empirical evidence of efficiency gains, the increased value must come from shareholder evaluations and this suggests unlikely information symmetry between management and shareholder. If companies adopt the *iinkai* system for internal reasons *ex ante*, the speed with which value manifests itself even before the formal adoption of the system suggests symmetry of information between management and shareholder that is unlikely from an agency theory perspective. This follows from the data of the first companies to adopt the *iinkai* system, which are not significantly different from q-

values associated with traditional firms in 2001. Subsequently, starting in 2002 (when shareholders must necessarily be informed of the *iinkai* system adoption), a significant value gain in comparison to *kansayaku* companies even before formal implementation can be shown. Since the value gain in 2002 simply cannot be causal from an operational or managerial change to, say, efficiency of assets, the rise in Tobin's  $q$  must be a change in the relative market value of the firm as shareholders increase their bids. If endogeneity were a dominant cause of adoption, it would imply that management, by adopting, was aware of the implied efficiency gain and shareholders, by bidding up value, were also aware of the future efficiency gain. This seems a singularly unlikely symmetry of information.

The data, on the other hand appears consistent with the idea that management signals improved corporate behavior by adopting a (at least perceived) superior governance system. Signaling is particularly well supported by the data from the initial adopters when the value increase occurred upon the 2002 announcement as opposed to implementation in 2003. Nevertheless, is it true, as Gilson and Milhaupt (2004) write that the US system is perceived as superior since the *iinkai* system is seen as American?

While it seems clear that an aura of American-ness during the time of rising equity prices affected initial selection of an *iinkai* system, the narrowing of the difference in value between systems in subsequent years - as the functional differences decreased - suggests that perhaps it is the features of the *iinkai* system, as opposed to its "American-ness," that are attractive to shareholders. First, the *iinkai* system's institutional forms seem to enhance transparency from the standpoint of a shareholder. The *iinkai* system's committees of outsiders that cannot be overruled can appear to mitigate opportunistic behavior on the part of managers. In addition, transparency is implied as financial information is vetted by outsiders (on the audit committee) as opposed to an insider *kansayaku*. Further, the adoption of the *iinkai* system is an unambiguous statement from management that outsiders will scrutinize its internal operations and data. Because of its unambiguity and perceived verifiability, it is credible to suppose that it motivates shareholders. A notable body of literature argues that increased value might come from increased transparency (Damodaran 2006) and (Francis, Khurana et al. 2008) for example. Furthermore, in 1994, (Kaplan and Minton 1994) found that outsiders on the boards of Japanese corporations play an important monitoring and disciplinary role on corporate boards to the notable benefit of shareholders.

Second, the gradual decline in the difference between systems as measured by Tobin's  $q$  is consistent with the reduction of the structural differences between the systems in law. If, on the other hand, it were the system's American-ness that drove valuation, it would be inconsistent that  $q$  differences declined during the time of increased equity market valuation in the United States. We conclude, then, that it is likelier that the shareholders respond to the transparency aspects of the new system when management signals the adoption.

A remaining puzzle, however, is why most companies resist adopting the committee system in Japan. Further research may investigate what mechanisms might account for the slow pace of adoption: is path-dependence deterrence operating? Do controlling interests block adoption? Are switching costs too high? This may lend support to Schmidt and Spindler's (2002) arguments that when switching costs are high, suboptimal choices can result even if rational processes are followed. While this study does not provide demonstration of efficiency beyond firm valuation in context of a public market, our data supports the central idea that corporate governance laws have consequences and encourages additional study of the effects of corporate transparency and the consequences of convergence or path-dependence.

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TABLE 1

## Descriptive Statistics Comparisons - Auditor vs. Committee System Firms

	Mean		S.D.		Median	
	<u>Audit</u>	<u>Committee</u>	<u>Audit</u>	<u>Committee</u>	<u>Audit</u>	<u>Committee</u>
Tobin's Q	.803	1.014	.578	.813	.673	.858
<i>Governance Variables</i>						
Management Held Shares (%)	39.1	40.6	18.8	20.6	34.1	37.7
Foreign Ownership (%)	12.6	26.8	11.6	23.3	9.15	21.8
Board Size	8.72	9.33	3.47	2.84	8	9
Stock Option Plan (% adopting)	36.2	84.7	48.2	36.1		
Debt-to-Equity Ratio	476	47	5587	267	38.8	49.1
<i>Performance Variables</i>						
Revenue (millions Yen)	220.7	127.8	643.9	271.4	663.9	100.4
Cash Flow from operations (mY)	13.2	82.7	42.1	182.6	2.4	3.2
Profit (% of sales)	2.18	-0.13	8.5	121.8	2.5	2.2
Dividend (millions Yen)	2202	6291	7214	10748	340	554
Dividend (pct sales)	1.01	1.50	1.48	3.88	0.71	.44

Table 2

## Profit as a Percentage of Sales

Fiscal Year	2004	2005	2006	2007
Median				
<i>Inkai</i>	1.82	2.69	1.89	1.78
<i>Kansayaku</i>	2.58	2.92	2.35	2.14
N	70	71	75	78

Table 3

## Profit Rate Comparisons within Industry Classifications

## Profit as a Percent of Sales

	Trade	Electro	Info	Manuf	Pharma
<i>Kansayaku</i>					
Mean	-2.01	4.77	2.36	0.87	8.50
Standard Error	1.72	0.88	0.89	1.14	1.09
<i>Inkai</i>					
Mean	1.10	2.72	-.93	8.59	-102.73
Standard Error	0.45	0.42	1.98	2.11	71.17
t-statistic	-1.39	2.32**	1.46	-3.46***	2.61

Figure 1

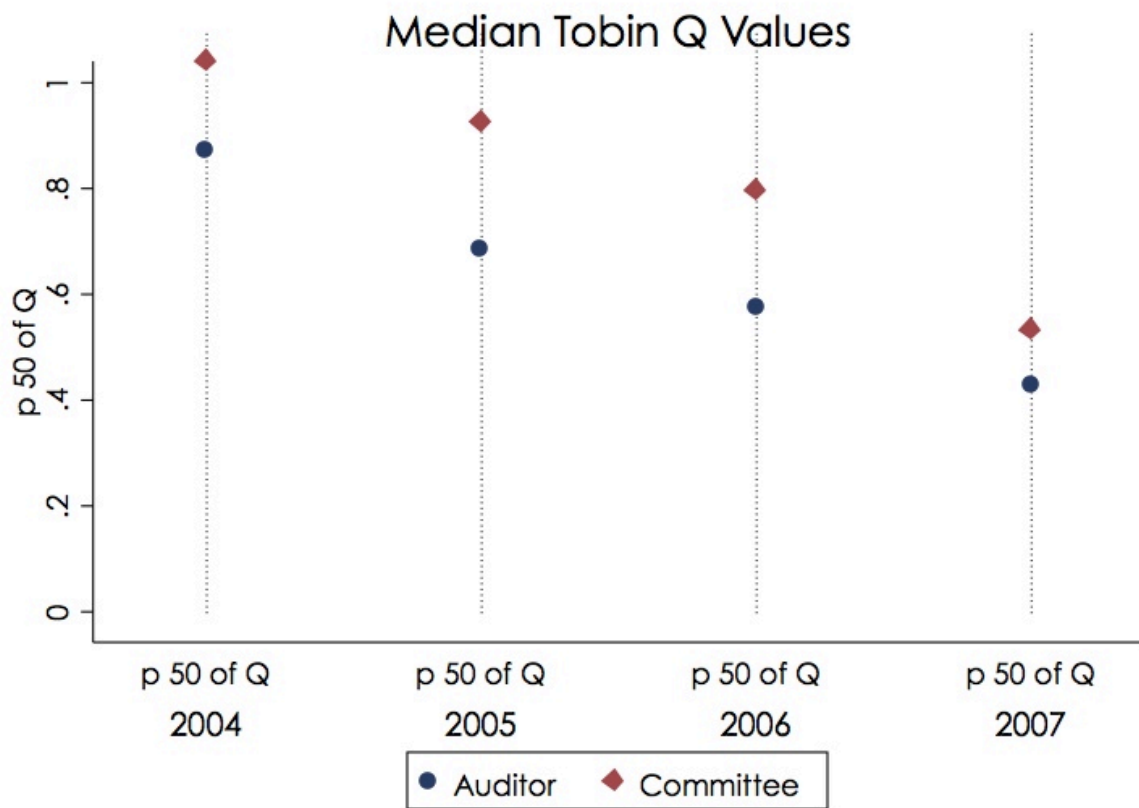
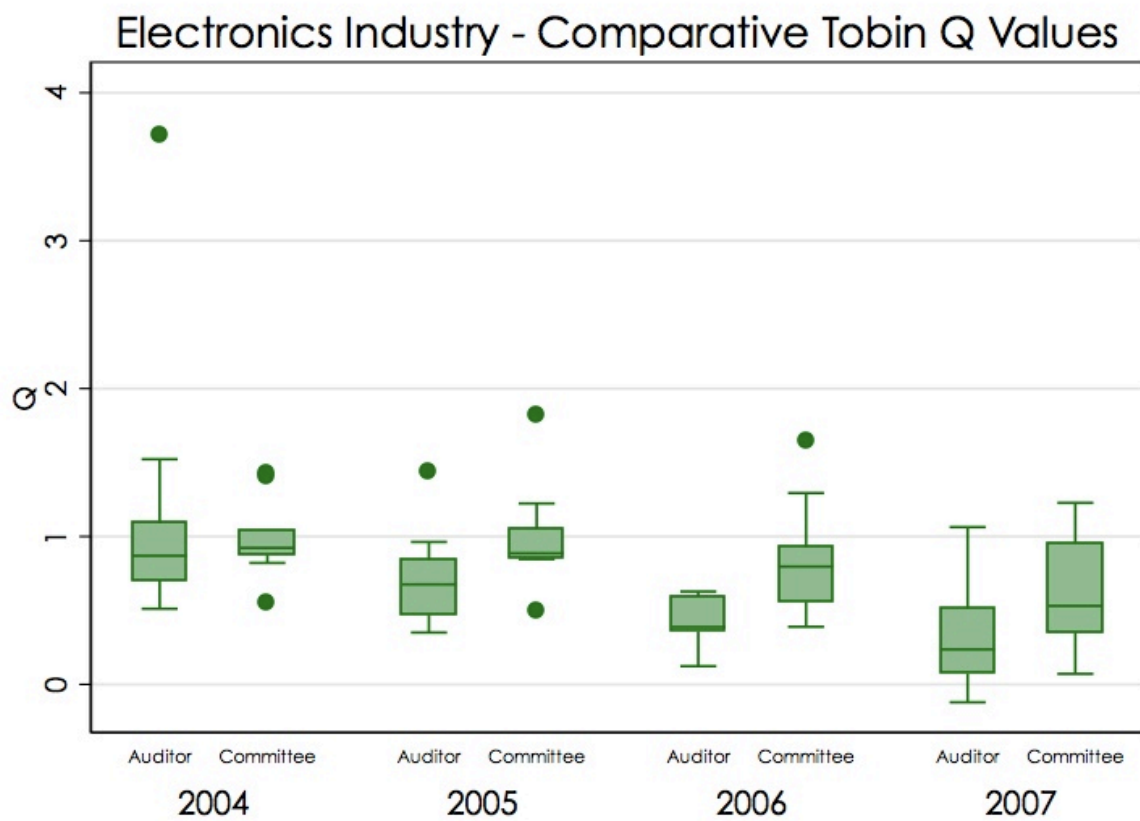
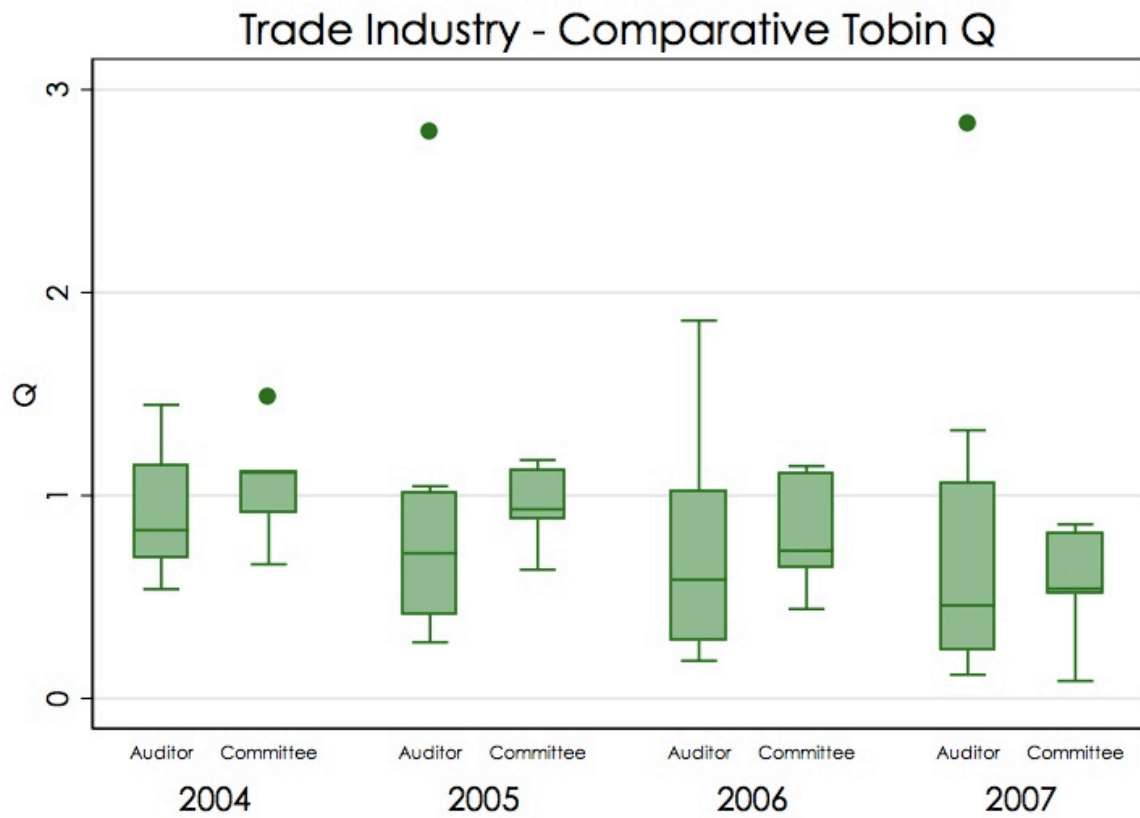
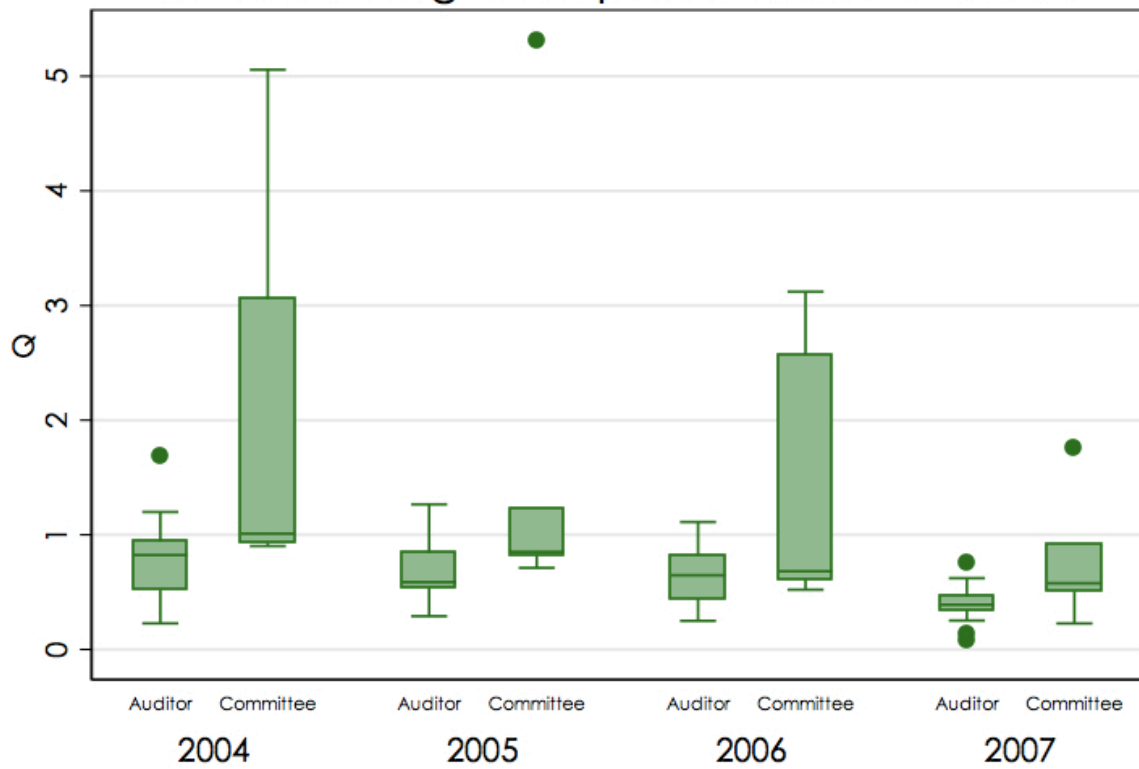


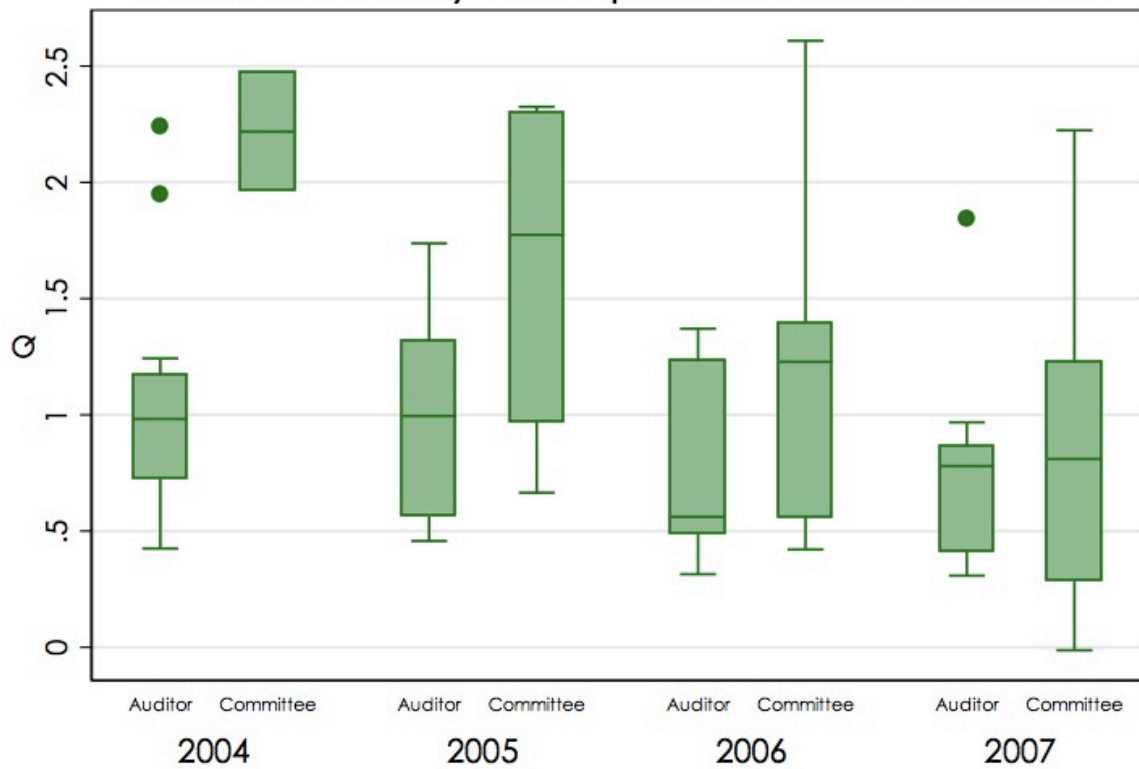
Figure 2



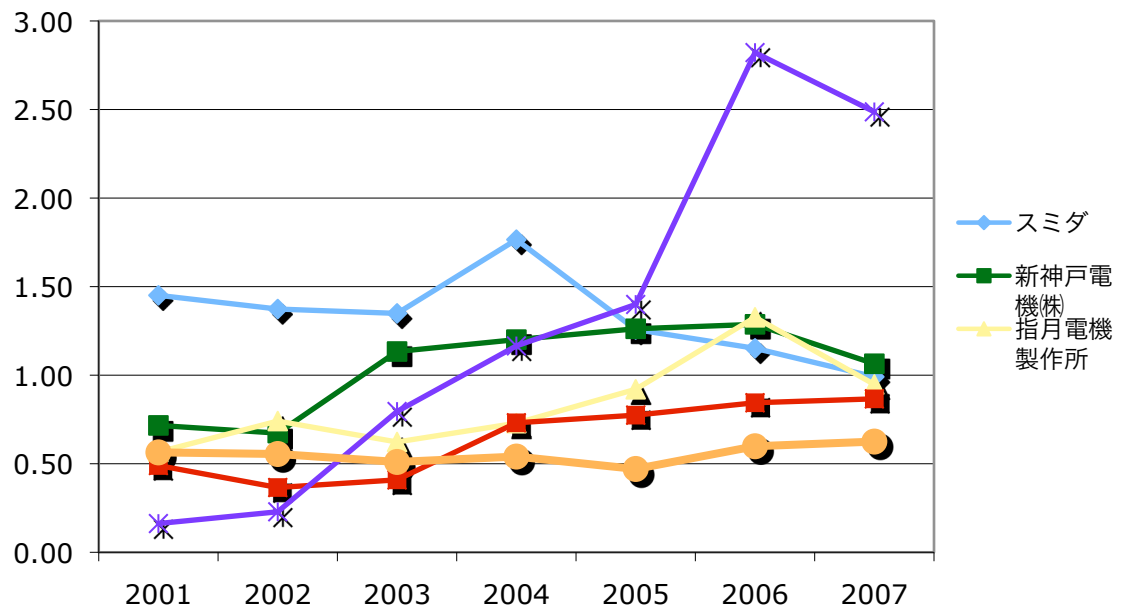
### Manufacturing - Comparative Tobin Q Values



### Pharma Industry - Comparative Tobin Q Values



Class of 2003 Tq History



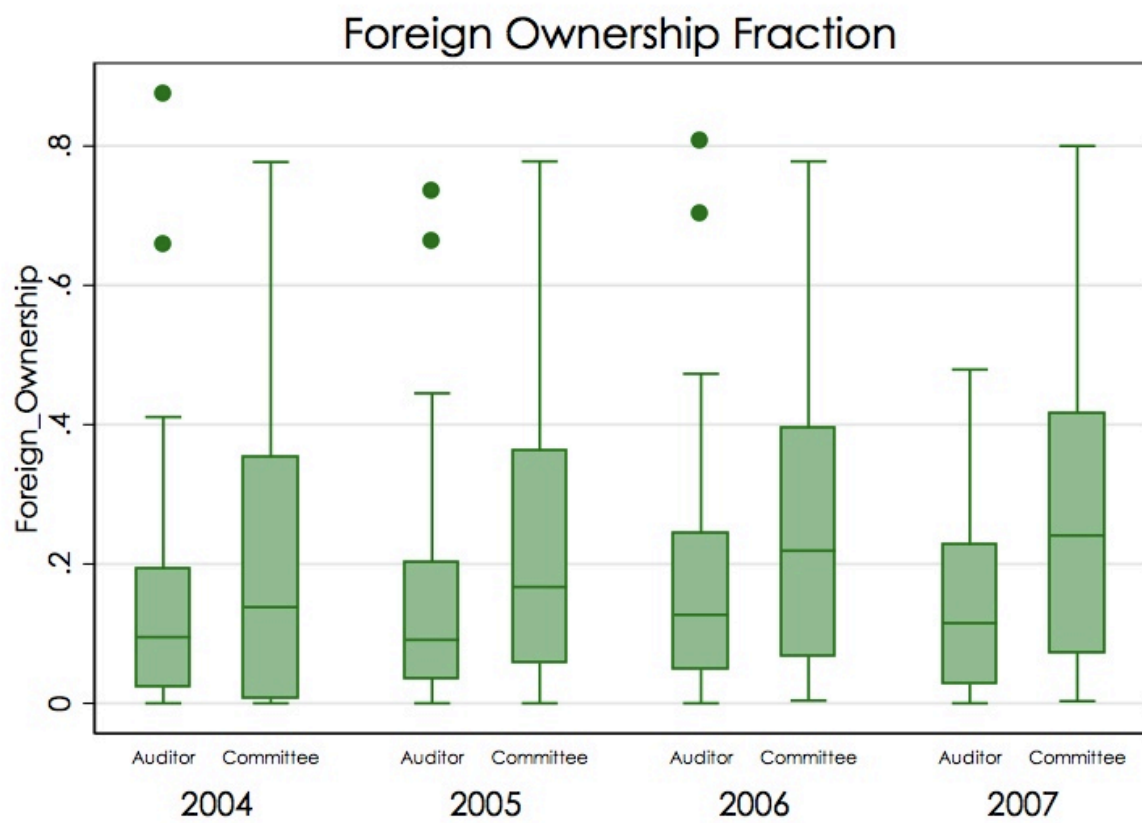




Table 4

Random Effects Tobit Regression

Governance System as a predictor of Company Value

Dependent Variable: Tobin's q (after Chung &amp; Pruitt)

Independent Variables	Model 1	Model 2	Model 3	Model 4
Governance System	.3187*** (.0895)	.3164*** (.0902)	.4286*** (.1105)	.3796*** (.1388)
Board Size	- .0107 (.0116)	- .0238* (.0135)	- .0198 (.0159)	- .0170 (.0176)
Foreign Ownership	.5105** (.2292)	.3626 (.2401)	.8432*** (.3127)	.7752*** (.3447)
Stock Option Plan	- .0141 (.0874)	- .0447 (.0879)	- .0086 (.1072)	.0393 (.1178)
Debt-to-Equity	.0001* (8.15 e-6)	.00001 (8.14 e-6)	.0002 (.0003)	.0003 (.0002)
Closely Held Shares			- .0007 (.0028)	- .0014 (.0031)
log Dividend		- .0287 (.0395)	.0072 (.0389)	.0361 (.0423)
log Operating Cash Flow		.1625 (.1371)	.1989 (.1577)	.2128 (.1736)
log Revenue		.0774 (.0902)	.1250 (.1269)	- .1955 (.1388)
Manufacturing		- .1687 (.1053)	- .1341 (.1259)	- .0781 (.1389)
ICT Industry		.0493 (.1691)	.3594* (.2098)	.4051 (.2313)
Electronics		- .3464*** (.1074)	- .3436** (.1243)	- .2850 (.1363)
Trade		- .1845 (.1156)	- .0677 (.1399)	- .0479 (.1543)
Constant		.0861 (.4509)	.6990 (.5815)	.8772 (.6264)
Wald chi <sup>2</sup>	47.86***	47.85***	47.86***	34.16***
Number of Observation	290	290	221	221
Instrumented Variables	N/A	N/A	N/A	<i>log revenue, log cash flow</i>

\*\*\* The coefficient is significant at the 1% level (two-tailed)

\*\* “ 5% “

\* “ 10% “