Essays on Global Corporate Governance Issues

by

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To My Mother and Father

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Abstract

My dissertation studies the issues on corporate governance in a global context. In the first chapter, I study a well-documented but little understood phenomenon that foreign acquirers target only well-performing in emerging markets. To explain this phenomenon, I develop a law and finance model, in which I argue that controlling shareholders of acquiring firms from strong-investor protection (IP) countries consume fewer private benefits and, hence, value control premia lower than does a controlling shareholder in a weak-IP country. Within a weak-IP country, controlling shareholders of well-performing firms have less incentive to consume private benefits because of greater opportunity costs of foregoing profitable investment opportunities. Thus, these firms demand lower control premia, making them more palatable to a foreign acquirer from a strong-IP country.

These hypotheses are supported by data on cross-border acquisition bids. They reveal that foreign acquirers target only well-performing firms in weak-IP countries, but not in strong-IP countries. I also conduct a difference-in-difference estimation using corporate governance reforms (CGRs) undertaken by 29 countries since 1999. I find that the cherry picking tendency declines when target countries undertake CGRs, narrowing the gap in IP between acquirer and target countries. Conversely, the cherry picking tendency increases when acquirers' home countries undertake CGRs, enlarging the IP gap.

These findings imply that CGRs have important impacts on underperforming firms' accessibility to foreign investors; however, whether the impact is favorable or unfavorable depends on which country undertakes the reform.

The second chapter is based on a paper co-authored with E. Han Kim. We find a hump shaped relation between Tobin's Q and CEO share ownership, but only when external pressure for good governance is weak, where the pressure is measured by

product market competition and institutional ownership concentration. When external governance is strong, CEO share ownership is unrelated to Tobin's Q. These results are robust to firm or CEO-firm pair fixed effects, alternative definitions of key variables, different statistical properties between strong and weak external governance regimes, founder effects, reverse causality, and other endogeneity issues. The hump shaped relation appears to be a manifestation of some CEOs capturing incentive contracts under weak external governance, while no relation under strong external governance is consistent with the contracting view that CEO ownership is a component of equilibrium contracts.

Chapter 1

Introduction

My dissertation, "Essays on Global Corporate Governance Issues", includes two papers.

Chapter 2 is entitled "Do corporate governance reforms help underperforming firms gain access to foreign acquirers". In this chapter, I study a well-documented but little understood phenomenon, underperforming firms in emerging markets are unlikely to receive foreign capital. With data on cross-border acquisition bids by acquirers from 17 strong-investor protection (IP) countries in 21 weak-IP target countries, I find that these acquirers exhibit more willingness to pursue underperforming firms after target countries undertake corporate governance reforms (CGRs). Conversely, these acquirers' tendency to select well-performing firms increases in response to their home countries' CGRs. These findings imply that weak IP of capital importing countries protects local firms in grater need for capital and improvement from gaining access to foreign investors. CGRs have important impacts on underperforming firms' accessibility to foreign capital and management. Whether the impact is favorable or unfavorable depends on which country undertakes the reform.

Chapter 3 entitled "Ownership and valuation" and co-authored with E. Han Kim. In this chapter, we find that a hump shaped relation between Tobin's Q and CEO share ownership, but only when external pressure for good governance is weak, where the pressure is measured by product market competition and institutional ownership concentration. When external governance is strong, CEO share ownership is unrelated to Tobin's Q. These findings indicate that strong external governance mechanisms may enhance the efficiency of incentive contracts of corporate insiders.

Chapter 2

Do corporate governance reforms help underperforming firms gain access to foreign acquirers?

2.1 Introduction

Cherry picking, foreign acquirers' tendency to target only well performing firms in emerging markets, is a well documented phenomenon. Aitken and Harrison (1999) use panel data on Venezuelan plants and find that foreign equity acquisition is positively correlated with plants' pre-acquisition productivity. Sabirianova, Svejnar, and Terrell (2005) demonstrate a similar phenomenon with data on Eastern European firms. Leuz, Lins, and Warnock (2008) show that foreign investors invest less in poorly governed firms in countries with weak legal investor protection. Such phenomena seem to be unique in emerging markets. Haskel, Pereira, and Slaughter, (2007) find no evidence of cherry picking of U.K. firms by foreign acquirers. Furthermore, data on U.S. acquisitions show that underperforming firms are more, not less, likely to become targets of domestic acquirers (e.g., Maksimovic and Phillips, 2001; Liu, 2008).

The cherry picking phenomenon implies that the market for cross-border acquisitions is not fully functioning in emerging markets. Underperforming firms may be in greater need for foreign capital and operational improvement, presenting opportunities for greater synergies to foreign acquirers, who can provide the necessary capital, advanced technologies, and superior managerial skills. Why do foreign acquirers shy away from underperforming firms in spite of the greater potential benefits? And why do we observe such phenomenon only in emerging markets?

To address these questions, I present a simple law and finance model that predicts that (1) when the bidder country has stronger investor protection (IP) than does the target country, the bidder tends to select well-performing firms and (2) this tendency becomes

stronger (weaker) when the gap in IP between the two countries increases (decreases). I conduct a test on the joint hypotheses that both predictions hold via a difference-in-difference approach by examining how bidders change their cross-border target selections in response to major corporate governance reforms (CGRs) undertaken by either target or bidder countries. I also provide a direct test of the first prediction by employing Probit analyses using data on target countries with varying strength of IP. The data support both predictions.

I follow La Porta et al (2002) and assume that a controlling shareholder derives two types of benefits: (1) cash flows from share holdings and (2) private benefits through control rights.[1] When an acquisition takes place, both cash flow and control rights are transferred, making the transaction price reflect the values of both rights. The value of cash flow rights is reflected in the value of traded assets. Control rights are priced as control premia at the value of the private benefits (Dyck and Zingales, 2004).

Weak IP allows controlling shareholders to consume more private benefits than those in strong-IP countries. However, there are important within-country differences across firms. Durnev and Kim (2005) show that within the same legal regime the incentive to steal corporate resources—i.e., consume private benefits—is smaller when firms have more profitable investment opportunities because of greater opportunity costs of forgoing profitable investments. Thus, controlling shareholders of well-performing firms consume fewer private benefits and demand lower control premia, making them more palatable to acquirers domiciled in countries with strong IP. Strong IP forces acquirers to consume fewer private benefits; hence, the acquirers are less willing to pay high control premia and are naturally attracted to well-performing targets.[2]

This preference for well-performing targets is caused by the gap in IP between acquirer and target countries; thus, the cherry picking tendency will get stronger (weaker) when the gap in IP increases (decreases). Since target selection can also be affected by other country factors, we focus on corporate governance reforms (CGRs) to isolate the effects of the IP gap.   When a target (acquirer) country with weak IP undertakes a CGR

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[1]Private benefits of control can be derived in various ways: tunneling companies' resources, paying abnormally high compensation, enjoying excessive perks, and so on.
[2]Dyck and Zingales (2004) empirically show that acquirers from stronger-IP countries tend to pay lower control premia in corporate acquisitions.

to improve IP, it will decrease (increase) the gap in IP between the target and bidder country, assuming the bidder country has stronger IP than the target country.

Of 38 acquirer and target countries, I identify 29 countries that have enacted major CGRs over the past decade. These CGRs generate within-country variation in legal environments. When the acquirer country has a stronger IP than the target country, everything else being equal, the gap in IP will be narrowed by a CGR undertaken by the target country and enlarged by a CGR undertaken by the acquirer country.

I examine how acquirers from 17 strong-IP countries change their cross-border target selections in 21 weak-IP countries in response to CGRs undertaken by target and acquirer countries. The strength of IP is defined according to an IP index based on the *Anti-self-dealing* index of Djankov et al. (2008) and the *Law-and-Order* index of International Country Risk (ICR). A similar approach has been used in Branstetter, Fisman, and Foley (2006), which examines how intellectual property rights reforms affect technology transfer by U.S. multinational firms. I find that acquirers from strong-IP country reduce their tendency to cherry pick in weak-IP countries when target countries undertake CGRs. Conversely, when the IP gap increases due to bidder countries' CGRs, the cherry picking tendency increases significantly.

These results are obtained by using a difference-in-difference estimation approach. Because the acquirer country has stronger IP than the target country, an effective CGR by the target country will narrow the IP gap, allowing comparison of the type of firms being targeted before and after the CGR by controlling for observable and unobservable time invariant effects. However, the difference in the type of firms being targeted before and after the CGR may also reflect time trend in the type of firms being targeted. To control for this time effect, the acquisition bids in countries not undertaking CGRs in the same year are used as the control group. The difference in the difference between acquisition bids in CGR target countries (treatment group) and those in non-CGR target countries (control group) can serve to identify the impact of a CGR undertaken by the target country.

A similar approach is applied to examining how acquirers change their foreign target selections in response to their own home countries' CGRs. The difference in the difference in the type of firms targeted by acquirers from CGR countries (treatment group)

before and after the CGR year and the difference in the type of firms targeted by the acquirers from non-CGR countries (control group) before and after the same CGR year can serve to identify the effect of a CGR undertaken by the acquirer country.

To check the robustness of the results, I conduct a battery of tests. First, CGRs undertaken by either target or acquirer countries may also affect the type of acquirers, which in turn may affect the type of firms being targeted. To address this concern, acquirer size and acquirer's Tobin's Q are included as control. Although the sample size is substantially reduced due to the data availability, the results become stronger in terms of both the level of significance and magnitude.

Second, the impact on the type of firms being targeted in terms of firm performance may simply reflect the impact of CGRs on the performance of all firms in the same country. To address this concern, pre-acquisition performance of target firms is measured by cumulative density function (CDF), which measures relative performance of target firms within a country. The results are robust. Furthermore, they reveal that after a target country undertakes a CGR, the pre-acquisition performance of target firms is about 28.8 percentile lower, indicating that CGRs help less well-performing firms attract foreign bidders. By contrast, a CGR by the acquirer country increases the pre-acquisition performance of target firms by 26.2 percentile, indicating a significant increase in the cherry picking tendency.

Third, CGRs may not occur randomly. CGRs are often triggered by financial crises and business scandals. If these events cause the time path of the type of firms being targeted in the treatment group to be different from that of the control group, the estimation results may be biased. To address this concern, I control for financial crises and business scandals by interacting CGR dummies with indicator variables for financial crises and business scandals. Although the results are qualitatively unchanged, they reveal that CGRs triggered by financial crises in weak-IP target countries are especially effective in reducing the cherry picking tendency by foreign acquirers.

Finally, to address the confounding effects around CGR years, I borrow the method in Branstetter, Fisman, and Foley (2006) by introducing a set of dummies corresponding to the periods before and after the CGR. This alternative specification indicates that none of the main results is driven by the confounding effects.

I also provide a direct test of the hypothesis that it is the gap in IP between the target and acquirer countries that leads to foreign acquirers' cherry picking in weak IP countries. To this end, I employ the traditional Probit target selection model using all available firm-level panel data on 40 countries from WorldScope. The results show that acquirers from strong-IP countries target only well-performing firms in weak-IP countries; but the cherry picking tendency is not observed when targets are located in strong-IP countries.

This study makes contributions on several fronts. In the law and finance literature, it is well documented that IP plays important roles in the development of economy and financial markets, firm valuation and ownership, corporate restructuring decisions, M&A activities, and so on--e.g., La Porta et al. (1997, 1999, 2002), Nenova (2003), Dyck and Zingales (2004), Atanassov and Kim (2007), and Rossi and Volpin (2004).

This paper adds to this literature by documenting differential impacts of CGRs on the accessibility of poorly performing firms in emerging markets to foreign capital and management via cross-border acquisitions.[3] The cherry picking tendency implies that cross-border acquisition markets work only for well-performing local firms, but not for poorly performing firms. I document that it is the gap in IP between capital importing and exporting countries that prevents cross-border acquisition markets from fully functioning. Perhaps more important, I document that CGRs by target countries improve the accessibility to cross-border acquisition markets for poorly performing firms, yielding an important policy implication. However, when the reforms are undertaken by capital exporting countries, the accessibility is reduced for poorly performing firms because they increase the IP gap.

This paper also belongs to the international capital flow literature. Previous studies have paid considerable attentions to how legal environments affect international capital flows across countries. For example, Gelos and Wei (2005) and Alfaro, Ozcan, and Volosovych (2008) demonstrate that weak legal environments can be a reason for insufficient capital flow from rich to poor countries; namely, the "Lucas Paradox." This paper extends their findings and provides evidence on how legal environments affect

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[3] In the corporate governance literature, there are several country specific studies (Chnaochharia and Grinstein, 2007; Black, and Khanna, 2007) estimating the impact of a CGR on firm value or corporate policies.

international capital allocation at the firm level. The results suggest that governance reforms initiated by weak-IP nations may induce foreign investors to reach out to poorly performing firms that have been previously neglected. However, when governance reforms are enacted by strong-IP capital exporting countries, we find an unintended consequence of discouraging investments in poorly performing firms, further distorting capital flows from rich to poor countries.

There are two recent studies on the cherry picking phenomenon. Leuz et al. (2008) find that U.S. investors invest less in firms that reside in countries with poor outside investor protection and have ownership structures conducive to governance problems. Kim, Sung, and Wei (2008) proxy the strength of corporate governance by the average wedge between cash flow and control rights at the country level. They find that investors from low wedge countries (strong governance countries) disfavor high wedge stocks (weak governance firms) in Korea, but investors from high wedge countries display no such tendencies. This paper covers a broader range of capital importing and exporting countries, rendering the results more general. More important, this paper provides an in-depth analysis of CGRs undertaken by various countries and how they affect the IP gap and the accessibility to cross-border acquisition markets by firms in emerging markets.

The paper proceeds as follows. A simple model is presented in Section 2.2. Section 2.3 investigates how changes in IP gap generated by CGRs affect the type of firms being targeted. Section 2.4 estimates the traditional acquisition target selection model and shows how the relation between the likelihood of being targeted and firm performance is affected by the IP gap between the acquirer and target countries. Section 2.5 concludes.

2.2 Theoretical framework

To make investor protection (IP) and the value of control rights relevant for acquisition decisions, I only consider publicly traded target firms that are not 100% owned by the controlling shareholder.[4] For simplicity, I allow firm-level heterogeneity

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[4] When a firm is 100% owned by the controlling shareholder, there is no agency problem and, hence, IP becomes irrelevant.

only among target firms, treating acquirers from a given country identical. Strong-IP reduces the asymmetry of information between the controlling shareholder and minority shareholders. Information asymmetry may also exist between acquirers and targets; however, I ignore such asymmetry because in practice bidders tend to spend considerable resources to narrow the information gap during the due diligence process prior to an acquisition.

The controlling shareholder derives two types of benefits from the firm: cash flow from share holdings and private benefits via control rights. When an acquisition takes place, both cash flow and control rights are transferred from the controlling shareholder of the target to the acquirer. The value of cash flow rights reflects the market value of shares. Control rights are priced as control premia equal to the value of the private benefits that the incumbent controlling shareholder consumes (Dyck and Zingales, 2004). After the acquisition, private benefits the acquirer's controlling shareholder is allowed to consume are restricted by the stronger IP of the acquirer and target countries.

The setting is similar to those of La Porta et al. (2002) and Durnev and Kim (2005). The controlling shareholder has α fraction of a firm's outstanding shares, and firm's profitability is denoted by π, representing the gross return per unit of investment. The controlling shareholder diverts d percent of π for private benefits and leaves the rest in the firm. The cost of diversion is $(1/2)c(\pi d)^2$, where $c > 0$ is the cost of diversion reflecting the strength of IP. A higher c indicates stronger IP. The cost of diversion is convex in the amount diverted, a standard assumption made by previous authors (e.g., Johnson, et al., 2000; La Porta et al., 2002; Shleifer and Wolfenzon, 2002; Doidge, Karolyi, and Stulz, 2004; and Durnev and Kim, 2005).

The total benefits the controlling shareholder derives from a firm consist of the value of cash flow rights after the diversion and the value of diversion net of diversion costs: $\alpha(1-d)\pi + d\pi - (1/2)c(\pi d)^2$. The value of the controlling shareholder's cash flow rights at zero private benefits is $\alpha\pi$; and her net private benefits is $(1-\alpha)d\pi - (1/2)c(\pi d)^2$. Thus, the controlling shareholder chooses d to maximize:

$$\alpha\pi + (1-\alpha)d\pi - (1/2)c(\pi d)^2 \qquad (1)$$

Differentiating (1) with respect to d and setting it equal to zero, the controlling shareholder's optimal level of diversion is:[5]

$$d* = (1-\alpha)/(\pi c) \qquad (2)$$

Differentiating (2) with respect to c and π, we obtain:

$$\partial d*/\partial c = -(1-\alpha)/(\pi c^2) < 0 \qquad (3a)$$

$$\partial d*/\partial \pi = -(1-\alpha)/(\pi^2 c) < 0 \qquad (3b)$$

The inequality in (3a) suggests that a controlling shareholder diverts less from the firm, when a firm is located in a stronger-IP country, since stricter and more effective IP regulations make tunneling and stealing more difficult and costly for the controlling shareholder (La Porta et al., 2002).

The inequality in (3b) suggests that controlling shareholders of firms with more profitable investment opportunities also divert less from the firm (Durnev and Kim, 2005). Diversion for private benefits reduces corporate resources that can be invested in profitable projects and may result in rejecting NPV projects, which in turn reduce the value of cash flow rights, i.e., the market value of shares held by the controlling shareholder. The damage to the value of cash flow rights will be greater, the better investment opportunities (more positive NPV projects). Thus, when a firm has more profitable investment opportunities, the controlling shareholder will divert less for private benefits.

Let $PB = (1-\alpha)d\pi - (1/2)c(\pi d)^2$ denote the net private benefits, where PB_A^* and PB_T^* are the optimal level of private benefits consumed at the target by the acquirer after the acquisition and by the target's controlling shareholder before the acquisition, respectively. When the acquirer purchases α percent of target shares, the reservation price of the target's controlling shareholder is equal to the sum of $\alpha\pi$ and PB_T^* (Barclay and Holderness, 1989; Dyck and Zingales, 2004). Thus, the rate of return that the acquirer's controlling shareholder obtains from the acquisition is:

$$R = (((\alpha\pi + PB_A^*) - (\alpha\pi + PB_T^*)) / (\alpha\pi + PB_T^*)) + G, \qquad (4)$$

where G is the operating synergies generated by the acquisition. To simplify, G is assumed to be unrelated to target's pre-acquisition π.[6]

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[5] Since the controlling shareholder cannot steal more than 100% of the firm, it is impossible to have $d* \geq 1$.

Now let c_A and c_T represent the strength of IP in the acquirer and target countries. If $c_A > c_T$, then $PB^*_A < PB^*_T$, because after an acquisition the foreign acquirer is still subject to their home countries' regulations. However, the target country's IP may be no weaker than that in the acquirer country, i.e., $c_A \leq c_T$. (For example, a Russian firm acquires a US firm.) Then, $PB^*_A = PB^*_T$ and $R = 0 + G$ because after the acquisition, the acquired firm will be still subject to the stronger regulations in the target country. Thus, a more precise definition of the rate of return from an acquisition is:

$$R = (PB^*_A - PB^*_T) / (\alpha\pi + PB^*_T) + G, \qquad if\ c_A > c_T \qquad (5a)$$

$$R = 0 + G,$$

$if\ c_A \leq c_T$ (5b)

Substituting d^* into PB_A^* and PB_T^* and differentiating R with respect to π yields:[7]

$$\partial R/\partial\pi > 0,\ if\ c_A > c_T \qquad (6a)$$

$$\partial R/\partial\pi = 0,\ if\ c_A \leq c_T \qquad (6b)$$

These inequalities imply that the return from a cross-border acquisition is higher when the target has more profitable investment opportunities, only when the acquirer country has stronger IP than does the target country. No such relation is predicted when the target country's IP is no weaker than the acquirer country. Therefore, we obtain:

Prediction 1: A foreign acquirer will target well-performing firms when it enters a country with IP weaker than its home country's IP. But it will exhibit no such tendency in countries with IP no weaker than its own.

The intuition is that strong IP forces a controlling shareholder to consume fewer private benefits, making them value control premia lower than does a controlling shareholder in a weaker-IP country. Within a given legal regime, the controlling shareholders of well-performing firms divert less (i.e., condition (3b)), making PB^* smaller relative to the value of cash flow rights, in comparison to poorly performing

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[6]The gains will be unaffected by targets' pre-acquisition performance when the synergy arises mainly from the acquirer's specialized resources. Such would be the case foreign acquirer launches a new project with a technology unavailable to local firms or manufacture goods using processes inaccessible to local firms. Combining the new technology or process with resources unique to the target country, such as natural resources or cheap labor, may generate operating synergies unique to the acquirer. The gains may also arise from target's specialized resources. An example would be utilization of target's resources that can be redeployed to higher-valued uses under a stronger management. Such synergistic gains can also be obtained by domestic acquisitions. I ignore such possibilities to examine how gains unique to cross-border acquisitions affect target selection.

[7]$\partial R/\partial\pi = -(((1-\alpha)^2/2c_A-(1-\alpha)^2/2c_T))\alpha)/(\alpha\pi+(1-\alpha)^2/2c_T)^2 = ((1-\alpha)^2(1/2c_T - 1/2c_A)\alpha)/(\alpha\pi+(1-\alpha)^2/2c_T)^2$.

firms. As a result, better-performing firms are more palatable to an acquirer from a stronger-IP country.[8] In contrast, when the target country has IP no weaker than does the acquirer country, private benefits consumed at the target will not change after the acquisition because the acquirer must abide by the target country's stronger IP. Thus, targets' pre-acquisition performance will not affect the acquirer's target selection decisions.

These predictions apply to 100 percent acquisitions of outstanding shares of target firms partially owned by a controlling shareholder. When an acquirer from a stronger-IP country buys shares of a target located in a weaker-IP country, it must pay a control premium to the controlling shareholder and the stock price reflecting the increased value of cash flow rights under the new controlling shareholder, who the minority shareholders know will consume fewer private benefits. Thus, the total price the acquirer has to pay is lower when the target is better performing because its controlling shareholder will demand a lower control premium.

Prediction 1 also applies to block share acquisitions, which do not involve complete transfers of control rights. A block share acquisition by a foreign acquirer from a strong-IP country may raise the costs of diversion for the remaining incumbent controlling shareholders because of additional monitoring from their foreign block shareholders. As a result, such loss of private benefits for the incumbent management will also be priced as control premia.

To obtain additional predictions concerning how the cherry picking tendency may change with changes in IP, I differentiate (6a) with respect to c_A and c_T and obtain[9]:

If $c_A > c_T$,

$$\partial^2 R/\partial\pi\partial c_T < 0 \qquad (7a)$$
$$\partial^2 R/\partial\pi\partial c_A > 0 \qquad (7b)$$

These inequalities provide:

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[8] When the acquirer country has weaker IP than the target country, equation (6b) shows that the gap in IP does not affect PB and, hence, the acquirer will be indifferent about the pre-acquisition performance of the target firm.

[9] $\partial^2 R/\partial\pi\partial c_A = ((1/(2c_A^2))\alpha(1 - \alpha)^2) /(\alpha\pi + (1 - \alpha)^2/(2c_T))^2$; $\partial^2 R/\partial\pi\partial c_T = (- \alpha(1 - \alpha)^2(1/(2c_T^2))) /(\alpha\pi + (1 - \alpha)^2/(2c_T))^2 + (1/(2c_T) - 1/(2c_A))((\alpha(1 - \alpha)^4(1/(2c_T^2)))/ (\alpha\pi + (1 - \alpha)^2/(2c_T))^3$

Prediction 2a: The tendency of an acquirer from a strong-IP country to target well-performing firms in weak-IP countries decreases when the target country strengthens its IP.

Prediction 2b: The tendency of an acquirer from a strong-IP country to target well-performing firms in weak-IP countries increases when its home country strengthens its IP.

2.3 Corporate governance reforms and target selection

In this section, to test these predictions, I proxy changes in IP by using corporate governance reforms (CGRs). These CGRs allow for a difference-in-difference estimation approach.

2.3.1 Identifying CGRs

Since the late 1990s a number of countries have undertaken CGRs, which are defined as deliberate interventions in a country's corporate governance traditions by the state, local security and exchange commission, or local stock exchanges. Usually, CGRs are undertaken in the forms of publishing a set of codified corporate governance norms or the amendments of countries' corporate law or security law pertaining to such issues as the role and composition of the board of directors; the installment of board subcommittees (e.g., audit, compensation, and nomination committees); the appointment and rules of operation applying to external auditors; the distribution of rights and powers over professional managers, shareholders, and other stakeholders; the role of media in information dispersion; and the protection of whistle blowers (Aguilera and Cuervo-Cazurra, 2004). Typical CGRs include Indian Clause 49, Australian Corporate Law Economic Reform Program (CLERP 9), and U.S. Sarbanes-Oxley Act (SOX).

To identify CGRs, I collect information by searching websites of European Corporate Governance Institute, Asian Corporate Governance Association, the International Finance Corporation (IFC) at the World Bank, Financial Standards Foundation, and countries' stock exchanges, book chapters, journal articles, and media news. The basic identification criteria are as follows:

1. The central intent of the reform is to improve financial transparency, provide monitoring by independent board members or audit systems, empower shareholders, and

establish effective legal systems. The content of the reform focuses on the following four issues: enhancing disclosure requirements; strengthening the mechanisms of internal governance by specific requirements concerning the role and composition of the board of directors; empowering shareholders; and strengthening public enforcement.

2. The reform should be applied to most publicly listed firms.[10] Although some reforms (e.g., Indian Clause 49 and Sabanse-Oxley Act) exempt small firms, they are still considered CGRs.

3. The reform must involve legal rules or comply-or-explain regulations rather than purely voluntary recommendations.[11] Usually, each reform includes a set of issues associated with different levels of enforcement. The enforcement level of a reform is defined as the strictest level of enforcement among all issues covered by the reform.

4. The reform has received generally positive comments on influence and effectiveness.[12] When phrases, such as *"milestone"* or *"the most important development of financial markets"*, are used to describe the new rules, I infer that the rules are effective.

5. Improving corporate governance is normally a long-run gradual process involving multiple regulatory regimes. When a country has multiple reforms, the most influential one is considered the CGR of the country. If the multiple reforms are more or less equivalent, the earliest one is considered the CGR of the country. In as much as each regime is part of a broader set of legal reforms geared toward enhanced corporate governance system, the earlier one contains implicit information about the future schedule of corporate governance improvement.

Although the regulations contained by these CGRs are not identical, these screening criteria generate strong commonalities in terms of treatment targets, central

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[10]Some regulations apply only to a subgroup of firms instead of all publicly listed firms in the country. For example, in Finland, Handling of Corporate Governance Issues (2000) only applies to State-Owned companies and their associated companies. My definition of CGRs does not include these regulation regime changes.

[11]In practice, in terms of the level of enforcement, there are three types of regulations: legal rules, comply-or-explain regulations, and voluntary compliance recommendations. Since the last one (e.g., Danish Shareholders' Association Guidelines of 2000 and Berlin Institutive Code of 2000) does not have precise enforcement date and criteria, they are not considered CGRs.

[12]Some reforms may not significantly affect country's corporate governance system. For example, Japan enacted some new regulations in 2002 to introduce more "U.S.-style" governance practices. However, the outcome was not encouraging. So, this legislative activity in Japan is not considered a CGR.

intents, contents, and effectiveness. These CGRs may not be directly comparable across countries, but they help identify the years in which significant improvement in IP has taken place in the sample countries.

Out of 38 acquirer and target countries, I identify 29 countries that have undertaken CGRs over the sample period. Among these 29 CGR countries, there are 14 weak-IP target countries and 15 strong-IP acquirer countries. The Appendix describes each CGR and how the CGR year of each country is defined.

2.3.2 Empirical methodologies

Acquirer and target countries are chosen to have an acquirer country initially has stronger IP than the target country. I then assume that the gap in IP between acquirer and target countries is narrowed by a CGR enacted by the target country, and is enlarged by a CGR enacted by the acquirer country. To illustrate, consider the CGR of Korea in 1999. The change in the type of Korean firms being targeted pre- and post-1999 could be caused by Korean 1999 CGR or a time trend in the type of firms being targeted for cross-border acquisitions. Using acquisition bids taken place in countries not undertaking a CGR in 1999 (e.g., China, which undertook the CGR in 2001) as controls would help isolate Korean CGR effect from time effects. The difference of those two differences serves to identify the impact of Korean CGR on the type of firms being targeted.

One important distinction between this example and the regression framework below is that the regression accounts for staggered passages of many CGRs over time. Thus, all acquisition bids taken place in countries not enacting CGRs in year t are treated as the control group for the acquisition bids taken place in countries undertaking CGRs in year t. The impact of CGRs undertaken by acquirer countries can be identified by a similar approach. The specification is:

$$Y_{ijmnkt} = \alpha + \gamma X_{ijmnkt} + \delta TCGR_{mt} + \lambda ACGR_{nt} + \sum_{j=1}^{J-1} d_j + \sum_{m=1}^{M-1} d_m + \sum_{n=1}^{N-1} d_n + \sum_{t=1}^{T-1} d_t + \varepsilon_{ijmnkt}$$

(8)

Subscript i indexes target firms; j indexes industries of target firms; m indexes target countries; n indexes acquirer countries; k indexes acquirers; and t indexes years. The dependent variable, $Y_{ijmnt,}$ is targets' performance prior to the announcement of the acquisition bid; d_j is target industry dummy; d_t is year dummy; d_m (d_n) is target (acquirer)

country dummy; X_{ijmnkt} is a vector of control variables; $TCGR_{mt}$ is an indicator equal to one if the CGR has been undertaken by target country m by the announcement of an acquisition bid; $ACGR_{nt}$ is an indicator equal to one if the CGR has been undertaken by acquirer country n by the announcement of an acquisition bid;[13] and ε_{ijmnkt} is the error term. To account for the presence of serial correlation among target firms within a country, the model is estimated by clustering at the level of target countries. Table I describes key variables used in this study.

The variables of interest are *TCGR* and *ACGR*. The coefficient on *TCGR*, δ is expected to be negative, suggesting that the acquirers' tendency to pursuing well-performing firms decreases after weak-IP target countries undertake CGRs. In contrast, the coefficient on *ACGR*, λ, is expected to be positive, indicating that the tendency of an acquirer from a strong-IP country to pursue well-performing firms in weak-IP countries increases after the acquirer's home country undertakes a CGR.

This identification has several advantages. First, unlike traditional law and finance studies which test predictions relying on legal indexes that are highly correlated with many other country level factors, this specification controls for country time-invariant unobservable factors and provides cleaner results. Second, this specification only requires identifying target firms, avoiding the need to identify all potential targets, as in traditional Probit target selection estimation. Assembling a sample representative of the population of the target firms is difficult because the existing databases on international firm-level data, such as WorldScope, contain coverage bias towards larger firms and industrialized countries.

2.3.3 Data

2.3.3.1 Sample construction

The relevant acquisition bids are identified using the following criteria.

1. In each acquisition bid, the acquirer and target have different nationalities. To remove noise arising from "round-tripping capital," firms' nationalities are defined by the nationalities of their ultimate parents.[14]

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[13]The CGR year for each country is in the Appendix.

[14]"Round-tripping capital" means that capital is originally from a country (usually a developing country), and then routes to another place before re-entering the original country as FDI inflows. In some developing countries (e.g., China), round-tripping capital is a popular phenomenon. For example, Prasad and Wei

2. Acquirers are from strong-IP countries and targets are located in weak-IP countries. Strong-IP and weak-IP countries are defined by the strength of an IP index incorporating both de jure and de facto aspects of regulations. The *Anti-self-dealing* index in Djankov et al. (2008) measures de jure minority shareholder protection against controlling shareholders' actions that may hurt shareholder value. This index is country-specific and time invariant. The *Law-and-Order* index provided by International Country Risk Guide (ICR) measures the effectiveness of the enforcement of formal rules. This index is updated monthly. Yearly averages are used to construct the IP index. The IP index is a weighted average of the normalized *Anti-self-dealing* index and *Law-and-Order* index with 0.2 and 0.8 weights.[15] I start with 41 sample countries. Strong-IP and weak-IP countries are separated by the median value of the index, yielding 20 strong-IP countries and 21 weak-IP countries. Strong-IP countries include Australia, Austria, Belgium, Canada, Denmark, Finland, France, Germany, Hong Kong, Ireland, Israel, Japan, Netherlands, New Zealand, Norway, Singapore, Sweden, Switzerland, the United Kingdom, and the U.S. Weak-IP countries include Argentina, Brazil, Chile, China, Czech Republic, Greece, India, Indonesia, Italy, Malaysia, Mexico, Peru, Philippines, Poland, Russia, South Africa, South Korea, Spain, Taiwan, Thailand, and Turkey.

3. Acquisition bids are announced during January 1, 1991 to December 31, 2007. Many emerging economies opened up domestic stock markets to foreign investors in the late 1980s (e.g., Bekaert and Harvey, 2000; Henry, 2000; Kim and Singal, 2000).[16] Consequently, there were not many cross-border acquisition bids in emerging markets before the early 1990s.

(2005) estimate that round-tripping capital represents as much as one-third of Chinese FDI. Round-tripping capital often is associated with tax evasion (Fisman and Wei, 2004).

[15]An alternative de-jure measure is *Anti-director* index, which was compiled by La porta et. al (1998) and was subsequently revised by Djankov et al. (2008) in response to the criticism by Pagano and Volpin (2005). I use *Anti-self dealing* index as the de jure measure and the *Law-and-Order* index as the de facto measure. How to weight these two measures to construct a measure of IP requires a subjective judgment. A simple approach would be to give an equal weight to each. However, the equal weight approach would rank countries such as China and Thailand ahead of France in terms of IP strength. Although France has Civil law origination, such low relative ranking for France seems unreasonable. Thus, I experiment with different combinations of weights to come up with a reasonable ranking of countries in IP. The final choice is to give 20 – 80 percent weights to the *Anti-self-dealing* and *Law-and-Order* indices, at which point Italy is the only G-7 country that ranks as a weak-IP country.

[16]In a number of East Asian countries, prohibitions on foreign investors gaining control of local firms continued until the mid-1990s.

4. Both acquirers and targets are publicly listed. Thus, there is no target firm 100% owned by a controlling shareholder (family).

5. The acquirer does not own any shares of the target before the acquisition bid. This eliminates pre-existing foreign investor influence on target firms.

6. Following Dyck and Zingales (2004), bids are made for acquisitions of at least 10% of outstanding target shares. This is also consistent with the definition of FDI by Bureau of Economic Analysis.

Because the objective is to study target selection, not transaction outcome, I focus on acquisition bids and do not distinguish whether bids are successful or unsuccessful. Nor do I distinguish whether acquisition bids are friendly or hostile.[17] These screens yield 273 cross-border acquisition bids by firms in 17 strong-IP countries[18] for targets in 21 weak-IP countries. The mean and median percentage shares acquired are 72.4% and 90.73%, respectively. Of the 273 acquisition bids, 205 acquisition bids took place before and 68 after target countries undertook CGRs; and 215 bids took place before and 58 after the passage of CGRs by acquirer countries. Panels A and B of Table II present the sample distribution for target and acquirer countries, respectively.

The information on the acquisition bids are taken from SDC Thompson's International M&A database. Other firm level data are taken from various sources, such as WorldScope, Bloomberg Fundamental Wizard, and Datastream. To estimate Regression (8), the sample is constructed at the acquisition bid level. There are no multiple acquisition bids for a target firm in the sample, making each target firm correspond to an acquisition bid.

2.3.3.2 Firm performance variable

Target firm types are defined by targets' pre-acquisition-bid performance. The primary measure of performance is the growth rate of the ratio of sales to total assets, *SALES/TA_Gr*. The ratio of sales to total assets is less affected by accounting rules and earnings management than other accounting based performance measures. The growth

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[17] Schwert (2000) finds that economic differences between friendly and hostile takeovers are indistinguishable. Under a strong view of managerial entrenchment, managers may wish to avoid any type of changes in control, including those appearing "friendly" in the press.
[18] Of 20 countries defined as strong-IP countries, three countries (i.e., Ireland, Israel, and New Zealand) have no acquirers conducting cross-border acquisitions in the weak-IP countries during the sample period. These three countries, however, have acquirers conducting cross-border acquisitions in other strong-IP countries. These acquisitions are included when I estimate Probit target selection model in Section IV.

rate, rather than the level, of this ratio is employed for three reasons. First, Durnev and Kim (2005) show that sales growth rate is positively related to the strength of firm-level corporate governance. Second, Liu (2008) shows that changes in performance, rather than performance levels, are related to the likelihood of being targeted in the U.S. Third, both SDC and other datasets covering international firms cover more firms in industrialized countries than emerging markets, which leads to a coverage bias toward bigger or better-performing firms. The growth rate might be less sensitive to this bias. Columns (11) and (12) of Table II present the mean and standard deviation of the *SALES/TA_Gr* of target firms, respectively. The mean is 0.047 and is significantly greater than zero at the 10% level.

2.3.4 Results
2.3.4.1 Basic results

Table III presents the baseline results concerning how CGRs by either target or acquirer country affect target selection in weak-IP countries. The variables of main interest are *TCGR* and *ACGR*. Column (1) shows estimation results without any control variables other than year, target industry, target country and acquirer country dummies. The results are consistent with the predictions. The coefficient of *TCGR* is negative and significant at the 10% level, indicating that acquirers from strong-IP countries are more willing to target less well-performing firms after the target country enacts a CGR. In contrast, the coefficient of *ACGR* is positive and significant at the 10% level, suggesting that the tendency to target well-performing firms increases after the acquirer country undertakes a CGR.

Column (2) includes deal-, target firm-, and target country-specific variables. *Cross List* is an indicator for cross-listing of the target shares in a foreign stock exchange at the time of an acquisition announcement. Cross-listed firms are subject to regulations of both countries and, hence, may practice higher quality governance.[19] *Num of Deals* is the number of cross-border acquisition bids occurring in the target country during the year of an acquisition announcement. It counts the number of acquisition bids which are

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[19]For a robustness check, I control for an *ADR* dummy, instead of this *Cross List* dummy. The results do not change.

reported by SDC and have acquirers from the strong-IP countries defined above. The purpose is to control for merger waves in a particular country during a particular year. CGRs in target countries may attract more foreign direct investments by improving legal environments, resulting in greater variation in the types of firms being targeted. *Non Diversified* is an indicator variable equal to one, if the acquirer and target have the same first two-digit SIC-code. Diversification motivated acquisitions may have different strategic purpose and lead to different target choices. *Crisis1* is an indicator variable equal to one, if the observation is in the following target country-year combinations: Thailand, 1997-99; South Korea, 1997-99; Indonesia, 1997-99; Argentina, 2001-02; Brazil, 1998-99; Mexico, 1994-95; Turkey, 1994, and 2000-01; Russia, 1998. Acquirers may alter their acquisition strategies in response to a financial crisis in the host country (Aguiar and Gopinath, 2005).[20] Financial crises also tend to have direct impact on firm performance. *GDPPA Distance* is the ratio of GDP per capita of the acquirer country to that of the target country one year prior to the acquisition announcement. The acquirer may be more willing to pursue poorly performing firms when the target country's economic development is closer to its own country. Controlling for these variables does not materially change the baseline results either in terms of magnitude or the level of significance.

CGRs by either the acquirer or target country may also affect the type of acquirers, which in turn may affect the type of firms being targeted. To address this concern, Column (3) controls for two acquirer-specific variables, *Acquirer Size* and *Acquirer Tobin's Q*. *Acquirer Size* is measured by the logged value of total assets of the acquirer one year before the announcement of the acquisition bid. *Acquirer Tobin's Q* is measured as a ratio. The numerator is the book value of total assets plus the market value of equity and minus the book value of equity. The denominator is the book value of total assets. All variables are measured in the year prior to the announcement. Although the sample size is reduced to 160 from 273 due to data unavailability to construct the variables, the results are stronger. The coefficients on *TCGR* and *ACGR* are now significant at the 1%. In addition, the coefficient on *Acquirer Tobin's Q* is significantly positive, indicating that

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[20]Aguiar and Gopinath (2005) find that the nature of M&As during a crisis contradicts productivity-based explanations of acquisitions. They also find that the number of foreign M&As in East Asia increased by 88% between 1996 and 1998.

acquirers with higher market valuation tend to target better-performing targets. Apparently, better performing acquirers are more attracted to better performing targets.

2.3.4.2 Controlling for overall changes in the performance of firms in the same country and year

These changes in the type of firms being targeted may simply reflect the changes in the performance of all firms in the same country, industry, and year, which either coincide or are caused by the target country's CGR. For example, CGRs may deflate accounting-based performance through higher accounting standards. Thus, the negative coefficient of *TCGR* in Table III could be overestimated and simply reflect the overall changes in firm performance in the same country during the same year.

To address this concern, I estimate the impact of the CGRs on the change in the location of target firms in the distribution of all firms' performance in the same country, year, and industry. The dependent variable now is the numerical cumulative density functions (CDFs) of a target firm's *SALES/TA_Gr* based on all available observations within the same country, year, and industry (defined as the first-two digit SIC codes) in WorldScope. CDF represents the relative performance position of a firm in its country-year-industry matched sample. It also reduces the importance of outliers by normalizing the variable into a unit interval. One weakness of the CDF approach is that it is based on the number of observations in each country-year-industry sample from WorldScope. When the number of observations is small, which typically is the case in emerging market countries, CDF is a noisy measure of relative performance.

The estimation results are reported in Table IV. Column (1) is estimated with the OLS. However, the value of CDFs is truncated by zero and one; thus, Column (2) estimates the relation with a standard censored Tobit model (i.e. type I Tobit model). Both estimation methods yield similar results in terms of magnitude and significance. The coefficient of *TCGR* in Column (2) is significant at the 1% level, implying that after a target country undertakes a CGR, the pre-acquisition performance of target firms is about 28.8 percentile lower within the country-year-industry matched sample. Conversely, after an acquirer country undertakes a CGR, acquirers domiciled in that country tend to

pursue firms with pre-acquisition performance 26.2 percentile higher within the country-year-industry matched sample.

With the CDF as the dependent variable, the coefficient on *Num of Deals* becomes significantly negative. Perhaps the availability of well-performing firms in a target country is limited. Thus, when there are more foreign acquisitions, even cherry picking acquirers may have to reach for less well-performing firms. The regressions in Table IV control for this.

2.3.4.3 Non-random occurrence of CGRs

CGRs do not occur randomly. There are three main contributing factors. The first is international pressure for domestic institutional evolution. For example, the OECD issued its corporate governance principles in 1999 and 2004,[21] putting pressures on policymakers, regulators, and market participants of member countries to improve their corporate governance. They also have been used extensively by the World Bank as a framework for policy dialogue to promote regional reforms and for roundtable discussions in non-OECD countries.

The other two more direct triggering events are financial crises and major corporate scandals. Weak corporate governance is generally considered an important contributor to the Asian financial crisis (e.g., Johnson et al., 2000). Reforms on corporate governance system are an important component of post-crisis restructuring process for affected countries. For example, Korean government responded to its 1997 financial crisis by amending the Commercial Code and the Securities Exchange Act to change the country's corporate governance tradition, which has had noticeable impacts on accountability, transparency, and governance structure (Kim and Kim, 2008).

The best known example of scandal triggered CGR is the U.S. Sarbanes-Oxley Act (SOX). SOX and the scandals also influenced corporate governance systems around the world. For example, in response to the collapse of Enron and WorldCom, the UK introduced the New Combined Code on Corporate Governance, which is viewed as the

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[21]OECD corporate governance principles (1999, 2004) is one of the most important and influential standards of worldwide corporate governance. There are six broad principles: ensuring the basis for an effective corporate governance framework; the rights of shareholders and key ownership functions; the equitable treatment of shareholders; the role of stakeholders in corporate governance; disclosure and transparency; the responsibilities of the board.

most important recent CGR in the UK. (Global Corporate Governance Guide, 2004; Hodge, 2007). Furthermore, many countries had their own shares of corporate scandals (e.g., Lernout & Hauspie in Belgium; Yin Guang Xia in China; Vivendi in France; Leo Kirch in Germany; Parmalat in Italy), which served warning to the local governments to improve their corporate governance systems. The Appendix contains the details of how international pressures, financial crises, and scandals have led to major CGRs in the sample countries

By using within-country variation in IP caused by CGRs, any observable and unobservable time-invariant factors of both acquirer and target countries are controlled. However, if there are some country level time-variant factors related to the occurrence of CGRs that are also causing the time path of the type of firms being targeted in the treatment group to be different from that of the control group, the above results might be biased.

To address this concern, I follow Duflo (2001), and add interaction terms between post-CGR dummy and the dummy indicating the CGR triggering events. *TCGR By Crisis* is an indicator equal to one, if the target country' CGR is triggered by a local financial crisis. These target countries include Thailand and Korea. *TCGR By Scandal* is an indicator equal to one, if the target country's CGR is triggered by local business scandals. These target countries include China, Spain, and Italy. *ACGR By Scandal* is an indicator equal to one, if the acquirer country's CGR is triggered by local business scandals. These acquirer countries include Belgium, Australia, France, Germany, Ireland, Netherlands, Sweden, and United States. For each CGR, I search media news, journal articles, book chapters, and related websites to determine whether it is motivated by a financial crisis, business scandals or international pressures. See the Appendix for more detailed description.

The results are reported in Table V. In Column (1), only *TCGR By Crisis* is added. The estimated coefficient on *TCGR* is still negative, and the level of significance drops to 10% from 1%. However, the coefficient of *TCGR By Crisis* is negative and significant at the 5% level, indicating that CGRs triggered by financial crises are effective in reducing the cherry picking tendency by foreign acquirers. The estimated coefficient of *ACGR* is largely unaffected by the inclusion of this variable. In Column (2), *TCGR By Scandal* and

ACGR By Scandal are included. Neither of these variables is statistically significant, and the estimated coefficients on both *TCGR* and *ACGR* continue to be significant.

Finally, all three variables are included in Columns (3) and (4). While Column (3) shows relatively weak results, the results in Column (4) using CDF and Tobit regression show significant coefficients on *TCGR* and *ACGR*. In sum, the results are robust to controlling for events triggering CGRs. This exercise also reveals that CGRs in weak-IP target countries triggered by financial crises are particularly effective in reducing foreign acquirers' tendency to cherry pick.

2.3.4.4 Timing of reforms and confounding effects

Although non-random occurrence of CGRs caused by financial crises or business scandals has been accounted for, there might be other changes coincident with CGRs that drive both the changes in legal environments and the measured changes in the type of firms being targeted. For example, once a country reaches a certain level of development, internal and external pressure may build for stronger corporate governance system. A country may also adopt a CGR when local companies are in greater needs for foreign capital. A typical example is Clause 49 in India.

To examine the effects of these potential confounding effects, I borrow a method from Branstetter, Fisman, and Foley (2006) and Bertrand and Mullainathan (2003). The explanations based on coincident changes in economic and business environments may predict that the type of firms being targeted begins to changes in the years prior to the CGR year. Thus, whether the above results are driven by these coincident changes can be tested by introducing a set of dummies corresponding to the periods before and after the CGR. The specifications displayed in Table VI provide more detailed estimates of the timing of changes in the type of firms being targeted. *TCGR_t-4* is equal to one for all years that predate the CGR undertaken by the target country by four or more years and zero in all other years. *TCGR_t+2* is equal to one for all years at least two years after the CGR undertaken by the target country and zero during other years.[22] Other reform-year dummies are equal to one in specific year relative to the CGR and zero during other years.

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[22] I do not include the dummies of t+3 and t+4 post-CGR years, because most CGRs are enacted in the 2000s, providing insufficient observations for those post-CGR years.

It is not possible to have a dummy for the year immediately preceding reform (i.e., year t-1), because the coefficients on the reform dummies provide estimates relative to that year. A set of dummies of *ACGR* is constructed by a similar approach.

The results presented in Table VI suggest that the coefficients on dummies for years prior to both *TCGR* and *ACGR* fail to show any evidence of a clear trend in the changes in the type of firms being targeted prior to the reform. The coefficients on the dummies for post-TCGR years are negative and significant. These results suggest that the estimated timing of changes is consistent with a shift in activities that follows soon after the enactment of reforms. A similar but weaker pattern is found for the dummies of *ACGR*. The coefficients on the dummies indicating the CGR year are positive and significant, suggesting that CGRs undertaken by acquirer countries may lead to a fairly rapid reaction for cross-border investment activities. But the CGRs enacted by target countries seem to require longer time to have an influence on foreign acquisition decisions.

Alternative concern on the timing of CGRs is that during a certain CGR year, non-CGR countries may also introduce regulations improving corporate governance but the impact is not substantive enough to be considered a major CGR. However, such regulatory actions are likely to strengthen rather than weaken IP, and thus their presence in non-CGR countries will only weaken the power of the test.

Finally, one may also argue that if foreign acquirers always favor well-performing firms in weak-IP countries, the number of well-performing firms that can be acquisition targets will get smaller over time. Hence, the reduction in the cherry picking tendency following target countries' CGRs could be simply reflecting this time effects. If this were true, however, we would not observe an increase in the cherry picking following acquirer countries' CGRs, which we do.

2.3.4.5 Additional robustness tests

This section contains the brief description of additional robustness results. Foreign acquisitions of state owned enterprises (SOEs) could be a part of privatization of a target country. Privatization sometimes coincides with other regulatory regimes such as a CGR. SOEs may have some uniqueness with respect to firm performance and

governance. When controlling for an indicator for SOE target firms, the results do not change and the coefficient of *SOE* is insignificant. Legal environments may also be correlated with some attributes of acquisitions. For example, Faccio and Masulis (2005) demonstrate that legal environments can affect the choice of payment in M&As. Acquisitions with different payment methods may be associated with different targets. Thus, rather than CGRs affecting target selection, they may affect payment methods, which in turn may affect the type of firms being targeted. Thus, to control for these omitted deal characteristics, I include indicator variables for friendly acquisitions, tender offer, and cash payment. The results are robust.

2.4 Investor protection disparity and target selection

In this section, I estimate the traditional acquisition target selection model suggested by Palepu (1986) to test Prediction 1. Namely, foreign acquirers target well-performing firms in countries with IP weaker than its home country's IP, but they exhibit no such tendency in acquiring firms in countries with IP no weaker than their own.

The dependent variable is a binary choice variable $TARGET_{ijmt}$, equal to one if firm i in industry j in target country m receives an acquisition bid in year t, and zero otherwise,

$$TARGET_{ijmt} = 1, \text{ if } TARGET^*_{ijmt} > 0 \tag{9}$$
$$= 0, \text{ Otherwise}$$

$TARGET^*_{ijmt}$ is a continuous latent variable determined by the following specification:

$$TARGET^*_{ijmt} = \alpha_j + \alpha_t + \alpha_m + \theta Y_{i,t-1} + \lambda Z_{ijm,t-1} + e_{ijmt} \tag{10}$$

$Y_{i,t-1}$ is a measure of firm performance; $Z_{ijm,t-1}$ is a vector of control variables; α_j, α_t, and α_m represent industry,[23] year, and target country fixed effects used to control for industry characteristics and related regulations, time trends, and other country factors (e.g., macro economic conditions, business culture, and regulations) that may affect both firm performance and target selections;[24] and e_{ijmt} is the error term. To account for the

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[23]Industries are defined as the first two-digit SIC codes.
[24]For example, Kim and Singal (1993) demonstrate that market power is an important motivation of acquisitions. Weaker anti-trust regulations may make it easier to acquire large and well-performing firms.

presence of serial correlation among the observations within a country, the model is estimated by clustering of the observations at the target country level.

All target countries are separated into strong-IP and weak-IP countries. I consider acquirers only from strong-IP countries; thus, the gap in IP between acquirer and target countries is substantially positive for the sample of weak-IP target countries, but no material difference for the sample of strong-IP target countries. Thus, θ is expected to be positive only for the sample of weak-IP target countries.[25]

To estimate model (9) and (10), the sample is constructed in the following ways. The full sample covers firms located in 40 target countries. U.S. firms are excluded from the sample of potential target firms, because otherwise the sample will be dominated by U.S. firms. The targets of acquisition bids by U.S. firms are still included in the target sample. The full sample is separated into 19 strong-IP and 21 weak-IP target countries based on the median IP.[26] Strong-IP countries include Australia, Austria, Belgium, Canada, Denmark, Finland, France, Germany, Hong Kong, Ireland, Israel, Japan, Netherlands, New Zealand, Norway, Singapore, Sweden, Switzerland, and United Kingdom. Weak-IP countries include Argentina, Brazil, Chile, China, Czech Republic, Greece, India, Indonesia, Italy, Malaysia, Mexico, Peru, Philippines, Poland, Russia, South Africa, South Korea, Spain, Taiwan, Thailand, and Turkey.

WorldScope provides the panel data of listed firms located in more than 80 countries and covers both target and non-target firms. Target firms indicated by SDC are manually merged with firms covered by WorldScope according to company names. Target and non-target firms are matched by country, year, and industry. For any non-target firm in the sample, there must be at least one matched target firm in the same country, year, and industry. These steps yield a large cross-country, firm-level panel data including both target- and non-target firms. The full sample covers 9,580 firm-year

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[25]An alternative specification is employing an interaction of firm performance and the IP index with the full sample. I do not employ this specification, because it requires an assumption that the impacts of all control variables on the likelihood of being an acquisition target are identical. In fact, the results estimated with the separated samples reveal that several control variables have different impacts on the likelihood of being a target under different legal regimes.

[26] The median value of the IP index occurs at Italy and Thailand. Both countries are treated as weak-IP countries, yielding 21 weak-IP countries.

observations in 40 target countries during the period from 1992 to 2005[27], 707 target firm-year observations, accounting for 7.38% of the full sample, and 8,873 non-target firm-year observations.

Panel A of Table VII shows the country distribution of target and non-target firms. As expected, industrialized countries have more observations than do emerging economies. The pair-wise correlation in the number of observations between the target and non-target sample of each country (i.e. Columns (3) and (5)) is 0.95 and significant at the 1% level, indicating that target and non-target observations are evenly distributed across target countries. Panel B reports the sample distribution by acquirer, strong-IP target and weak-IP target countries.

Firm-level control variables include firm size (*Firm Size*), market-to-book ratio (*MB*), leverage (*Leverage*), and liquidity (*Liquidity*). They have been documented to be important predictors of acquisition targets by Palepu (1986). *Firm Size* is log of the book value of total assets. *MB* is the ratio of the market value of common equity to the book value of equity. *Leverage* is the total debt (Long term + Short term debt) divided by the book value of total assets. *Liquidity* is the ratio of current assets to current liabilities. Firms with negative *MB*s and *Leverage* greater than one are dropped from the sample. Summary statistics of all firm-level variables for the full-, target-, and non-target samples are presented in Panel A, B, and C of Table VIII, respectively.

Because of the international nature of the investigation, several country level variables are also included as control variables. To control for the impact of financial crises, an indicator, *Crisis2*, is included. It is equal to one if a firm-year observation has any of the following country-year combinations: Thailand, 1997-99; South Korea, 1997-99; Indonesia, 1997-99; Argentina, 2001-02; Brazil, 1998-99; Mexico, 1994-95; Turkey, 1994, and 2000-01; Russia, 1998. Macroeconomic conditions, measured as GDP per Capita (*GDPPA*) denominated in 2000 U.S. dollars, may affect foreign acquisitions. Firms in low-income countries may be more capital constrained, making it easier for foreign firms to acquire them. Country openness, measured as FDI net inflows as percent of GDP (*Inward FDI/GDP*) is also controlled for. It is easier for foreign firms to acquire

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[27]WorldScope data are only available from 1992 to 2006. Because WorldScope stopped compiling data in 2006, the number of observation in 2006 is much smaller than in previous years.

firms in a country more open to FDI, because openness may induce more competition among acquirers, affecting bargaining power between acquirers and targets (Bradley, Desai, and Kim, 1988).

Table IX reports Probit estimation results. The regression coefficients are reported in Columns (1) and (3) and the marginal effects are reported in Columns (2) and (4). Columns (1)-(2) and Columns (3)-(4) present estimation results for weak-IP and strong-IP target countries, respectively. The coefficient of *SALES/TA_Gr* is positive and significant in Columns (1) and (2), indicating that when *SALES/TA_Gr* increases by one unit, the likelihood of receiving an acquisition bid from acquirers from strong-IP countries increases by 2.8% at the mean. By contrast, Columns (3) and (4) show insignificant coefficients for *SALES/TA_Gr* when targets are located in strong-IP countries. These results suggest that acquirers from strong-IP countries target well-performing firms in weak-IP countries, but exhibit no such cherry picking tendency when targeting firms located in strong-IP countries.

Table IX also show a similar but stronger pattern for *MB*. Firms with higher *MB* are more likely to become acquisition targets only in weak-IP countries. Since *MB* measures investors' expectation of firms' future performance, the *MB* results also imply that acquirers from strong-IP countries target well-performing firms in weak-IP countries but not so in strong-IP countries.

Of the other control variables, *GDPPA* is significant only for strong-IP countries. This suggests that when IP is strong, richer countries tend to attract more cross-border acquisitions; however, when IP is weak, the local economic condition does not matter. In contrast, *Inward FDI/GDP* is significant only for weak-IP countries. *Leverage* is significant regardless of the strength of host countries' IP, suggesting that more capital constrained firms are more likely become targets of foreign acquirers and this relation holds in both strong-IP and weak-IP countries.

2.5 Conclusions

This paper provides an explanation for the well-documented but little understood phenomenon on international capital flows; namely, foreign acquirers' tendency to target only well-performing firms in emerging markets. When the acquirer country has stronger

IP than does the target country, an acquirer values control premia less than does the target controlling shareholder. Within a country, controlling shareholders of well-performing firms consume fewer private benefits because of greater opportunity costs of foregoing profitable projects and, hence, demand lower control premia. Lower control premia make them more palatable to acquirers who are subject to stronger-IP regulations, which put more restrictions on the consumption of private benefits. This tendency to select well-performing firms becomes weaker (stronger) as the IP gap decreases (increases) bigger, because smaller (bigger) IP gap causes less (greater) disagreement on the value of control premia.

These predictions are tested with data on cross-border acquisition bids. First, out of all acquirer and target sample countries, I identify major corporate governance reforms (CGRs) undertaken by 29 countries and use them to estimate of the impact of changes in the IP gap between acquirer and target countries on the cherry picking tendency. Using a difference-in-difference approach, I find that acquirers exhibit greater willingness to target underperforming firms after weak-IP target countries undertake CGRs, reducing the IP gap. CGRs undertaken by acquirer countries have the opposite effect of increasing the IP gap; and thus, acquirers' tendency to pursue well-performing firms increases following CGRs by their come countries. Second, I estimate the cherry picking tendency using a traditional Probit acquisition target selection model. The results reveal that acquirers from strong-IP countries tend to target well-performing firms in weak-IP countries, but exhibit no such tendency when targeting firms in strong-IP countries.

These findings imply that weak IP of host countries impedes cross-border M&A markets from fully functioning. In particular, weak-IP prevents poorly performing local firms from gaining access to foreign capital and technology. Since poorly performing firms have greater room for improvement through gaining access to foreign acquirers, this negative impact of weak IP is particularly damaging in spreading the potential benefits of globalization (e.g., Djankov and Hoekman, 2000). More generally, the results in this paper highlight the importance of IP in guiding international capital flows not only across countries, but also across firms within countries.

Finally, recent studies (e.g., Rossi and Volpin, 2004; Bris and Cabolis, 2009; Chari, Ouimet, and Tesar, 2009) demonstrate that cross-border acquisitions work as an

important channel of transferring corporate governance system from strong to weak legal regimes. However, the results in this paper demonstrate a distortion in that channel. The transmission of governance systems through cross-border acquisition markets may occur only for firms that already have relatively sound governance systems, leaving firms with weak governance untouched. Governance reforms initiated by weak-IP nations help alleviate the distortion by inducing foreign acquirers to reach out to poorly performing firms. However, governance reforms enacted by strong-IP capital exporting countries exacerbate the distortion by inducing foreign acquirers to further shy away from poorly performing firms.

Table 2.1 Variable Des cription

Panel A: Legal Variables   *(Note: A higher score indicates stronger investor protection)*

Anti-self-dealing	Measures the amount of disclosure before and after the transaction has occurred, the need for approval by disinterested shareholders and litigation governing a specific self-dealing transaction. It is time invariant and at the country level. (Source: Djankov, et al. (2008))
Law-and-Order	Measures the strength and impartiality of the legal system and of the popular observance of the law. It is annual frequency and at the country level. (Source: International Country Risk Guide)
IP	Measured as (*0.2*Anti-self-dealing + 0.8*Law-and-Order*).

Panel B: Corporate Governance Reform Variables

TCGR	An indicator, which equals one if a CGR (found in Appendix 2) has been undertaken in the target country, when the acquisition bid is announced.
ACGR	An indicator, which equals one if a CGR (found in Appendix 2) has been undertaken in the acquirer country, when the acquisition bid is announced.
TCGR By Crisis	An indicator, which equals one if when the acquisition is announced, the target country has undertaken the CGR (found in Appendix II) which is stimulated by a financial crisis taken place in this target country. These target countries include Thailand and Korea.
TCGR By Scandal	An indicator, which equals one if when the acquisition is announced, the target country has undertaken the CGR (found in Appendix II), which is stimulated by business scandals taken place in this target country. These target countries include China, Spain, and Italy.
ACGR By Scandal	An indicator, which equals one if when the acquisition is announced, the acquirer country has undertaken the CGR (found in Appendix II), which is stimulated by business scandals taken place in this acquirer country. These acquirer countries include Belgium, Australia, France, Germany, Netherlands, Sweden, and United States.

Panel C: Firm and Deal Variables

SALES/TA Gr	The growth rate of sales divided by book value of total assets, winsorized at the 1 and 99 percentile. (Source: SDC, Bloomberg, and WorldScope)
Cross List	An indicator, which equals one, if the target firm's listing location is different from its nationality, when the acquisition bid is announced. (Source: SDC)
Non Diversified	An indicator, which equals one if the first two-digits of SIC codes for the acquirer and target are the same. (Source: SDC)
Acquirer Tobin's Q	It is a ratio. The numerator is the book value of total assets subtracting the book value of equity, and then adding the market value of equity. The denominator is the book value of total assets. All variables are measured in the year prior to the announcement. (Source: SDC)
Acquirer Firm	

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Size	The natural logarithm value of the book value of total assets of acquirers one year before the announcement of the acquisition bid. The book value of assets is denominated in 2000 $US. (Source: SDC)
Firm Size	The natural logarithm value of the book value of total assets; the book value of total assets is denominated in 2000 $US. (Source: SDC, Bloomberg, and WorldScope)
Leverage	The ratio of total debt (long term + short term debt) to the book value of total assets. (Source: SDC, Bloomberg, and WorldScope)
MB	The ratio of the market value of the common equity to the book value of equity; observations with negative *MBs* are replaced by zero. (Source: SDC, Bloomberg, and WorldScope)
Liquidity	The ratio of current assets to current liabilities. (Source: SDC, Bloomberg, and WorldScope)
Panel D: Other Country-level Variables	
GDPPA	GDP per capita, denominated in 2000 $US. (Source: Except Taiwan, the data are taken from the World Development Indicators; for Taiwan, the data are taken from Global Insights)
GDPPA Distance	The ratio in GDP per capita between the acquirer and target countries one year prior to the acquisition announcement.
Inward FDI/GDP	Net inflows of foreign direct investments as the percent of GDP. (Source: Except Taiwan, the data are taken from the World Development Indicators; for Taiwan, the data are taken from Global Insights)
Num of Deals	The number of deals taken place in each country during each year. (Source: SDC)
Crisis1	An indicator, which equals one if the acquisition bid is announced in the following country-year specific combinations: Thailand, 1997-99; South Korea, 1997-99; Indonesia, 1997-99; Argentina, 2001-02; Brazil, 1998-99; Mexico, 1994-95; Turkey, 1994, and 2000-01; Russia, 1998.
Crisis2	An indicator, which equals one if the firm-year observation has any of the following country-year specific combinations: Thailand, 1997-99; South Korea, 1997-99; Indonesia, 1997-99; Argentina, 2001-02; Brazil, 1998-99; Mexico, 1994-95; Turkey, 1994, and 2000-01; Russia, 1998.

Table 2.2 Sample Description by Target and Acquirer Countries

This table reports the sample description by target and acquirer countries. Panel A and B present the sample description by target and acquirer countries, respectively. Columns (1)-(2) and (3)-(4) present the sample distribution for pre- and post-CGR of target countries, respectively. Columns (5)-(6) and (7)-(8) present the sample distribution for pre- and post-CGRs of acquirer countries, respectively. Columns (9) and (10) present the sample distribution of the full sample. Columns (11) and (12) present the mean and standard deviation of the growth rate of sales divided by total assets of target firms, respectively.

Panel A:												
Target Country	**Pre-TCGR**		**Post-TCGR**		**Pre-ACGR**		**Post-ACGR**		**Full sample**		**SALES/TA_Gr**	
	N	**%**	**N**	**%**	**N**	**%**	**N**	**%**	**N**	**%**	**Mean**	**Std. Dev.**
	(1)	**(2)**	**(3)**	**(4)**	**(5)**	**(6)**	**(7)**	**(8)**	**(9)**	**(10)**	**(11)**	**(12)**
Argentina	3	1.46	0	0	3	1.4	0	0	3	1.1	0.110	0.421
Brazil	11	5.37	2	2.94	12	5.58	1	1.72	13	4.76	-0.143	0.330
Chile	4	1.95	0	0	4	1.86	0	0	4	1.47	0.146	0.197
China	4	1.95	11	16.18	9	4.19	6	10.34	15	5.49	-0.059	0.398
Czech Republic	9	4.39	0	0	9	4.19	0	0	9	3.3	-0.048	0.266
Greece	6	2.93	0	0	4	1.86	2	3.45	6	2.2	-0.123	0.235
India	8	3.9	3	4.41	6	2.79	5	8.62	11	4.03	-0.043	0.224
Indonesia	11	5.37	0	0	8	3.72	3	5.17	11	4.03	0.276	0.714
Italy	20	9.76	0	0	16	7.44	4	6.9	20	7.33	0.078	0.268
Malaysia	6	2.93	0	0	10	4.65	9	15.52	19	6.96	0.605	1.342
Mexico	10	4.88	0	0	13	6.05	0	0	13	4.76	-0.020	0.243
Peru	5	2.44	1	1.47	5	2.33	1	1.72	6	2.2	0.223	0.208
Philippines	13	6.34	0	0	13	6.05	0	0	13	4.76	-0.259	0.383
Poland	10	4.88	0	0	10	4.65	0	0	10	3.66	0.052	0.213
Russian Fed	5	2.44	0	0	1	0.47	4	6.9	5	1.83	-0.080	0.116
South Africa	19	9.27	0	0	16	7.44	3	5.17	19	6.96	-0.027	0.382
South Korea	9	4.39	22	32.35	27	12.56	4	6.9	31	11.36	0.139	0.383
Spain	22	10.73	4	5.88	22	10.23	4	6.9	26	9.52	0.019	0.183
Taiwan	4	1.95	9	13.24	5	2.33	8	13.79	13	4.76	-0.066	0.488
Thailand	20	9.76	0	0	19	8.84	1	1.72	20	7.33	-0.029	0.208
Turkey	6	2.93	0	0	3	1.4	3	5.17	6	2.2	-0.065	0.189
Total	205		68		215		58		273		0.047	0.503
Panel B:												
Acquirer Country	**Pre-TCGR**		**Post-TCGR**		**Pre-ACGR**		**Post-ACGR**		**Full sample**		**SALES/TA_Gr**	
	N	**%**	**N**	**%**	**N**	**%**	**N**	**%**	**N**	**%**	**Mean**	**Std. Dev.**
	(1)	**(2)**	**(3)**	**(4)**	**(5)**	**(6)**	**(7)**	**(8)**	**(9)**	**(10)**	**(11)**	**(12)**
Australia	5	2.44	2	2.94	5	2.33	2	3.45	7	2.56	0.139	0.346
Austria	3	1.46	1	1.47	2	0.93	2	3.45	4	1.47	-0.009	0.088
Belgium	7	3.41	0	0	7	3.26	0	0	7	2.56	-0.034	0.245
Canada	10	4.88	2	2.94	11	5.12	1	1.72	12	4.4	-0.015	0.465
Denmark	3	1.46	0	0	3	1.4	0	0	3	1.1	-0.043	0.072
Finland	2	0.98	0	0	1	0.47	1	1.72	2	0.73	0.085	0.114
France	24	11.71	5	7.35	20	9.3	9	15.52	29	10.62	-0.003	0.268
Germany	15	7.32	9	13.24	16	7.44	8	13.79	24	8.79	0.191	0.587
Hong Kong	10	4.88	4	5.88	11	5.12	3	5.17	14	5.13	0.053	0.222

Japan	14	6.83	7	10.29	21	9.77	0	0	21	7.69	0.002	0.319
Netherlands	9	4.39	0	0	8	3.72	1	1.72	9	3.3	0.039	0.134
Norway	1	0.49	0	0	1	0.47	0	0	1	0.37	0.074	.
Singapore	5	2.44	3	4.41	4	1.86	4	6.9	8	2.93	-0.283	0.585
Sweden	3	1.46	0	0	3	1.4	0	0	3	1.1	0.363	0.206
Switzerland	7	3.41	1	1.47	6	2.79	2	3.45	8	2.93	-0.023	0.220
United Kingdom	33	16.1	8	11.76	31	14.42	10	17.24	41	15.02	0.184	0.880
United States	54	26.34	26	38.24	65	30.23	15	25.86	80	29.3	0.006	0.449
Total	205		68		215		58		273		0.047	0.503

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Table 2.3 Impacts of CGRs on the Type of Firms being Targeted

This table reports the results of the impact of CGRs on the type of firms being targeted. The dependent variable is *SALES/TA_Gr* of the target firm prior to the announcements of acquisition bids. All variables are defined in Table I. All regressions are estimated with year, industry (defined as first-two digit SIC codes), target country, and acquirer country dummies. Standard errors (in parentheses) are corrected by clustering of the observations by target countries. *, **, and *** indicate significance at the 10%, 5% and 1%, respectively.

	Dependent Variable: SALES/TA_Gr		
	(1)	(2)	(3)
TCGR	-0.251*	-0.252*	-0.467***
	(0.147)	(0.152)	(0.160)
ACGR	0.331*	0.336*	0.484***
	(0.172)	(0.177)	(0.166)
Cross List		0.000	-0.073
		(0.130)	(0.138)
Non Diversified		0.050	0.153
		(0.094)	(0.093)
Num of Deals		-0.013	0.116
		(0.079)	(0.130)
Crisis1		-0.009	0.178
		(0.168)	(0.190)
GDPPA Distance		-0.013	-0.001
		(0.010)	(0.010)
Acquirer Firm Size			0.006
			(0.028)
Acquirer Tobin's Q			0.005**
			(0.002)
Constant	0.034	-0.031	-1.880***
	(0.798)	(0.809)	(0.612)
Year Dummies	Y	Y	Y
Target Industry Dummies	Y	Y	Y
Target Country Dummies	Y	Y	Y
Acquirer Country Dummies	Y	Y	Y
Observations	273	273	160
R-squared	0.47	0.47	0.72

Table 2.4 Accounting for Overall Changes in the Performance of Firms in the Same Country, Industry, and Year

This table reports the results of the impact of CGRs on the type of firms being targeted accounting for overall changes in the performance of firms in the same country, industry and year. The dependent variable is the numerical cumulative density functions (CDFs) of *SALES/TA_Gr*. Column (1) is estimated with the OLS and Column (2) is estimated with the Tobit model. All variables are defined in Table I. All regressions are estimated with year and acquirer country dummies. Standard errors (in parentheses) are corrected by clustering of the observations by target countries. *, **, and *** indicate significance at the 10%, 5% and 1%, respectively.

	Dependent Variable: CDF(SALES/TA_Gr)	
	OLS	Tobit
	(1)	(2)
TCGR	-0.230***	-0.288***
	(0.079)	(0.081)
ACGR	0.220*	0.262**
	(0.120)	(0.124)
Cross List	0.056	0.073
	(0.079)	(0.082)
Non Diversified	0.059	0.046
	(0.061)	(0.062)
Num of Deals	-0.182**	-0.205**
	(0.088)	(0.090)
Crisis1	-0.070	-0.108
	(0.097)	(0.101)
GDPPA Distance	0.001	0.000
	(0.002)	(0.002)
Acquirer Firm Size	0.019	0.021
	(0.014)	(0.014)
Acquirer Tobin's Q	0.001*	0.002*
	(0.000)	(0.001)
Constant	0.506	0.626**
	(0.307)	(0.261)
Year Dummies	Y	Y
Acquirer Country Dummies	Y	Y
Observations	119	119
R-squared (Pseudo R-squared)	0.38	(0.48)

Table 2.5 Impacts of CGRs and Non-random Occurrence of CGRs

This table reports the results of the impact of CGRs on the type of firms being targeted accounting for the CGR contributing factors. The dependent variable is *SALES/TA_Gr* in Columns (1) to (3) and the numerical cumulative density function (CDF) of *SALES/TA_Gr* in Column (4). Columns (1) to (3) are estimated with the OLS and Column (4) is estimated with the Tobit model. All variables are defined in Table I. Columns (1) to (3) are estimated with year, industry (defined as the first-two digit SIC codes), acquirer country, and target country dummies and Column (4) is estimated with year and acquirer country dummies. Standard errors (in parentheses) are corrected by clustering of the observations by target countries. *, **, and *** indicate significance at the 10%, 5% and 1%, respectively.

	Dependent Variable: SALES/TA_Gr			
	Value			CDF
	OLS			Tobit
	(1)	**(2)**	**(3)**	**(4)**
TCGR	-0.311*	-0.421**	-0.220	-0.163*
	(0.177)	(0.173)	(0.190)	(0.097)
ACGR	0.490***	0.429*	0.367*	0.299**
	(0.171)	(0.220)	(0.214)	(0.142)
Cross List	-0.082	-0.045	-0.058	0.109
	(0.136)	(0.142)	(0.138)	(0.086)
Non Diversified	0.167*	0.161	0.157*	0.045
	(0.093)	(0.097)	(0.094)	(0.061)
Num of Deals	0.139	0.070	0.130	-0.250***
	(0.138)	(0.141)	(0.139)	(0.091)
Crisis1	-0.068	0.230	-0.052	-0.094
	(0.230)	(0.200)	(0.231)	(0.099)
GDPPA Distance	-0.005	-0.002	-0.004	0.001
	(0.010)	(0.011)	(0.010)	(0.002)
Acquirer Firm Size	0.000	0.003	-0.006	0.021
	(0.027)	(0.029)	(0.028)	(0.014)
Acquirer Tobin's Q	0.005**	0.005**	0.005**	0.002*
	(0.002)	(0.002)	(0.002)	(0.001)
TCGR by Crisis	-0.521**		-0.580**	-0.198*
	(0.254)		(0.258)	(0.112)
TCGR by Scandal		-0.274	-0.401	-0.228*
		(0.343)	(0.337)	(0.132)
ACGR by Scandal		0.146	0.180	-0.202
		(0.230)	(0.223)	(0.144)
Constant	-0.729	-1.923**	-1.869**	0.690***
	(0.730)	(0.760)	(0.737)	(0.256)
Year Dummies	Y	Y	Y	Y
Target Industry Dummies	Y	Y	Y	N
Target Country Dummies	Y	Y	Y	N
Acquirer Country Dummies	Y	Y	Y	Y
Observations	160	160	160	119
R-squared (Pseudo R-Squared)	0.74	0.73	0.75	(0.52)

Table 2.6 Timing of Reforms and Confounding Effects

This table reports the results of the tests on the possibilities of the impact of confounding factors on the type of firms being targeted. The dependent variable is *SALES/TA_Gr* in Column (1) and the numerical cumulative density function (CDF) of *SALES/TA_Gr* in Columns (2). *TCGR_t-4* is equal to one for all years that predate the CGR undertaken by the target country by four or more years and is equal to zero in all other years. *TCGR_t+2* is equal to one for all years at least two years after the CGR undertaken by the target country and zero during other years. *ACGR_t-4* is equal to one for all years that predate the CGR undertaken by the acquirer country by four or more years and is equal to zero in all other years. *ACGR_t+2* is equal to one for all years at least two years after the CGR undertaken by the acquirer country and zero during other years. Column (1) is estimated with the OLS controlling for year, industry (defined as the first-two digit SIC codes), target country, and acquirer country dummies. Column (2) is estimated with the Tobit model controlling by year and acquirer country dummies. Standard errors (in parentheses) are corrected for clustering of the observations by target countries. *, **, and *** indicate significance at the 10%, 5% and 1%, respectively.

	Dependent Variable: SALES/TA_Gr	
	Value	CDF
	OLS	Tobit
	(1)	(2)
TCGR_t-4	0.058	0.082
	(0.359)	(0.152)
TCGR_t-3	0.162	-0.058
	(0.441)	(0.241)
TCGR_t-2	0.148	0.655***
	(0.225)	(0.157)
TCGR_t	-0.251	-0.043
	(0.251)	(0.134)
TCGR_t+1	-0.679**	-0.135
	(0.316)	(0.140)
TCGR_t+2	-0.740**	-0.326***
	(0.325)	(0.093)
ACGR_t-4	-0.140	-0.385*
	(0.338)	(0.201)
ACGR_t-3	-0.436	-0.146
	(0.367)	(0.194)
ACGR_t-2	-0.310	-0.015
	(0.237)	(0.146)
ACGR_t	0.538**	0.294**
	(0.210)	(0.124)
ACGR_t+1	0.266	0.086
	(0.254)	(0.159)
ACGR_t+2	0.164	0.085
	(0.308)	(0.229)
Cross List	-0.015	0.075
	(0.151)	(0.082)
Non Diversified	0.171*	0.074
	(0.100)	(0.063)
Num of Deals	0.052	-0.155*
	(0.151)	(0.089)
Crisis1	0.064	-0.249**
	(0.215)	(0.113)
GDPPA Distance	-0.001	0.000
	(0.011)	(0.002)
Acquirer Firm Size	0.018	0.018
	(0.031)	(0.014)

Acquirer Tobin's Q	0.005**	0.002*
	(0.002)	(0.001)
Constant	-0.568	0.772**
	(0.839)	(0.360)
Year Dummies	Y	Y
Target Industry Dummies	Y	N
Target Country Dummies	Y	N
Acquirer Country Dummies	Y	Y
Observations	160	119
R-squared (Pseudo R-Squared)	0.77	(0.56)

Table 2.7 Country Distribution of the Sample for Estimating the Probit Target Selection Model

This table reports the distribution of the sample for estimating the Probit target selection model. Panel A reports country distribution for full, target and non-target sample, respectively. Columns (1), (3) and (5) present the number of firm-year observations of the full-, target-, and non-target sample for each target countries. Columns (2), (4) and (6) present the percentage of firm-year observations of each target country for the full-, target-, and non-target sample, respectively. Target sample includes only the firms that receive acquisition bids from strong-IP countries' acquirers in year t+1. Target and non-target sample are matched by country, year, and industry (defined by the first-two digit SIC codes). Panel B presents country distribution of the sample by acquirer countries, strong-IP target countries, and weak-IP target countries, respectively.

Panel A:

Target Country	Full		Target		Non-target	
	N	%	N	%	N	%
	(1)	(2)	(3)	(4)	(5)	(6)
Argentina	3	0.03	1	0.14	2	0.02
Australia	756	7.89	50	7.07	706	7.96
Austria	22	0.23	4	0.57	18	0.2
Belgium	38	0.4	7	0.99	31	0.35
Brazil	8	0.08	1	0.14	7	0.08
Canada	1,135	11.85	106	14.99	1,029	11.6
Chile	7	0.07	2	0.28	5	0.06
China	141	1.47	7	0.99	134	1.51
Czech Republic	6	0.06	2	0.28	4	0.05
Denmark	28	0.29	7	0.99	21	0.24
Finland	33	0.34	9	1.27	24	0.27
France	537	5.61	45	6.36	492	5.54
Germany	673	7.03	35	4.95	638	7.19
Greece	15	0.16	4	0.57	11	0.12
Hong Kong	120	1.25	9	1.27	111	1.25
India	71	0.74	6	0.85	65	0.73
Indonesia	27	0.28	4	0.57	23	0.26
Ireland-Rep	21	0.22	7	0.99	14	0.16
Israel	30	0.31	6	0.85	24	0.27
Italy	35	0.37	5	0.71	30	0.34
Japan	875	9.13	17	2.4	858	9.67
Malaysia	111	1.16	7	0.99	104	1.17
Mexico	42	0.44	8	1.13	34	0.38
Netherlands	107	1.12	24	3.39	83	0.94
New Zealand	23	0.24	7	0.99	16	0.18
Norway	99	1.03	19	2.69	80	0.9
Peru	4	0.04	1	0.14	3	0.03
Philippines	34	0.35	4	0.57	30	0.34
Poland	2	0.02	1	0.14	1	0.01
Russian Fed	2	0.02	1	0.14	1	0.01
Singapore	155	1.62	16	2.26	139	1.57
South Africa	52	0.54	5	0.71	47	0.53
South Korea	277	2.89	21	2.97	256	2.89
Spain	38	0.4	10	1.41	28	0.32
Sweden	256	2.67	31	4.38	225	2.54
Switzerland	106	1.11	17	2.4	89	1

Taiwan	371	3.87	5	0.71	366	4.12
Thailand	76	0.79	11	1.56	65	0.73
Turkey	2	0.02	1	0.14	1	0.01
United Kingdom	3,242	33.84	184	26.03	3,058	34.46
Total	9,580		707	7.38% of the full sample	8,873	92.62% of the full sample

Panel B								
Acquirer Country			**Target Country**					
			Weak-IP			**Strong-IP**		
	N	%		N	%		N	%
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Australia	20	2.83	Argentina	3	0.23	Australia	756	9.16
Austria	4	0.57	Brazil	8	0.6	Austria	22	0.27
Belgium	14	1.98	Chile	7	0.53	Belgium	38	0.46
Canada	19	2.69	China	141	10.65	Canada	1,135	13.75
Denmark	6	0.85	Czech Republic	6	0.45	Denmark	28	0.34
Finland	11	1.56	Greece	15	1.13	Finland	33	0.4
France	43	6.08	India	71	5.36	France	537	6.5
Germany	49	6.93	Indonesia	27	2.04	Germany	673	8.15
Hong Kong	11	1.56	Italy	35	2.64	Hong Kong	120	1.45
Ireland	8	1.13	Malaysia	111	8.38	Ireland	21	0.25
Israel	1	0.14	Mexico	42	3.17	Israel	30	0.36
Japan	17	2.4	Peru	4	0.3	Japan	875	10.6
Netherlands	25	3.54	Philippines	34	2.57	Netherlands	107	1.3
New Zealand	5	0.71	Poland	2	0.15	New Zealand	23	0.28
Norway	2	0.28	Russian Fed	2	0.15	Norway	99	1.2
Singapore	10	1.41	South Africa	52	3.93	Singapore	155	1.88
Sweden	16	2.26	South Korea	277	20.92	Sweden	256	3.1
Switzerland	22	3.11	Spain	38	2.87	Switzerland	106	1.28
United Kingdom	54	7.64	Taiwan	371	28.02	United Kingdom	3,242	39.27
United States	370	52.33	Thailand	76	5.74	Total	8,256	
Total	707		Turkey	2	0.15			
			Total	1,324				

Table 2.8 Statistics of Firm-level Variables Used in the Probit Target Selection Estimation

This table reports the statistics of the firm level variables used in the Probit target selection regressions. Panel A, B and C report the statistics of the variables in the full-, target- and non-target sample, respectively. All variables are described in Table I.

Variable	Obs	Mean	Median	Std. Dev.	Min	Max
Panel A:						
SALES/TA_Gr	9580	0.074	0.008	0.413	-0.807	3.540
Firm Size	9580	5.534	5.183	2.410	0.272	11.096
Leverage	9580	0.199	0.165	0.184	0	0.995
MB	9580	3.558	1.202	18.485	0	835.737
Liquidity	9580	4.139	1.660	6.054	0.156	20.390
Crisis2	9580	0.016	0.000	0.126	0	1
Panel B:						
SALES/TA_Gr	707	0.067	0.009	0.367	-0.749	3.137
Firm Size	707	5.951	5.751	2.228	0.272	11.096
Leverage	707	0.272	0.225	0.235	0	0.995
MB	707	6.108	1.660	28.222	0	429.556
Liquidity	707	4.724	1.567	6.890	0.167	20.390
Crisis2	707	0.033	0.000	0.178	0	1
Panle C:						
SALES/TA_Gr	8873	0.074	0.007	0.416	-0.807	3.540
Firm Size	8873	5.501	5.144	2.420	0.272	11.096
Leverage	8873	0.193	0.160	0.178	0	0.943
MB	8873	3.355	1.132	17.464	0	835.737
Liquidity	8873	4.093	1.660	5.981	0.156	20.390
Crisis2	8873	0.015	0.000	0.121	0	1

Table 2.9 Probit Target Selection Regressions

This table reports the results of the Probit target selection regressions. The dependent variable is a binary variable indicating that the firm becomes a target of an acquirer from a strong-IP country in year $t+1$; zero otherwise. Columns (1) and (2) report the results estimated with the sample of weak-IP target countries; and Columns (3) and (4) report the results estimated with the sample of strong-IP target countries. The list of acquirer countries, weak-IP target countries, and strong-IP target countries can be found in Panel B of Table VII. The regression coefficients are reported in Columns (1) and (3) and the marginal effects of independent variables are reported in Columns (2) and (4). The marginal effects are calculated at the mean level. All regressions are estimated with year, industry (defined as the first-two digit SIC codes) and target country fixed effects. Standard errors (in parentheses) are corrected by clustering of the observations at the target country level. *, ** and *** indicates significance at the 10%, 5% and 1%, respectively.

	Dependent Variable: Target=1			
	Weak-IP		**Strong-IP**	
	Coefficient	**Marginal Effect**	**Coefficient**	**Marginal Effect**
	(1)	**(2)**	**(3)**	**(4)**
SALES/TA Gr	0.333**	0.028*	0.013	0.001
	(0.168)		(0.050)	
Firm Size	0.028	0.002	0.006	0.001
	(0.051)		(0.011)	
Leverage	1.922***	0.161***	0.817***	0.090***
	(0.336)		(0.132)	
MB	1.265***	0.106***	0.002	0.000
	(0.175)		(0.001)	
Liquidity	0.053*	0.004	0.013*	0.001*
	(0.031)		(0.007)	
GDPPA	-0.385	-0.032	0.061***	0.007***
	(0.300)		(0.015)	
Inward FDI/GDP	0.452***	0.038**	0.002	0.000
	(0.154)		(0.006)	
Crisis2	-0.798	-0.040**		
	(0.537)			
Constant	2.431		-2.769***	
	(5.978)		(0.380)	
Observations	1324		8256	
Year FE	Y		Y	
Industry FE	Y		Y	
Target Country FE	Y		Y	
Pseudo R-Squared	0.505		0.110	

2. A: Corporate Governance Reforms

This Appendix contains details of the key features associated with the CGR of each country. The following table summaries the CGR year of each sample country (if the country is identified to have undertaken a CGR during the sample period) and the compliance level of each CGR. In the section of country details, each CGR is described from the following five perspectives. The first is the general information of corporate governance background of the country, including the motivation of the CGR, important but unsuccessful legislative activities regarding on enhancing corporate governance system in the country (if there is any), etc. The second is the general description of the CGR, including the announcement date, effective date, policy makers, general comments of the reform etc. The third is a CGR's major purposes and contents. The fourth is the brief description of supplementary regulatory events or related legislative activities taking place around the same period of the CGR (if there is any). The last is about how to define the CGR year of the country according to the facts and the criteria. Not all countries have the complete information of all five sections. The above is only the basic organization of the description of the CGR of each country, and the details covered for each CGR may vary from country to country.

Country	CGR Year	Compliance Level	
		Comply-or-explain	Legal Rule
Argentina	2001		x
Australia	2004	x	
Austria	2002		x
Belgium	2005	x	
Brazil	2002		x
Canada	2006		x
Chile	2001		x
China	2001	x	
Finland	2004	x	

Country	Year		
France	2003		x
Germany	2002	x	
Hong Kong	2005	x	
India	2005		x
Italy	2006		x
Malaysia	2000	x	
Mexico	2001		x
Netherlands	2004	x	
Norway	2005	x	
Peru	2005	x	
Poland	2002	x	
Singapore	2003	x	
South Korea	1999		x
Spain	2003	x	
Sweden	2005	x	
Switzerland	2002	x	
Taiwan	2002		x
Thailand	2002	x	
UK	2003	x	
US	2003		x

Country Details

Argentina (2001) (Legal Rule)

Changes in local economic conditions (e.g., foreign capital flows, moderate growth in domestic capital markets, and the emergence of the institutional investment industry) induced the government to issue new rules to upgrade companies' governance practices to enhance the competitiveness of the Argentine economy.

Decree No. 677/2001 ("Transparency Decree") has the well-intentioned goal to reform governance of publicly listed firms in Argentina. It was published at the Official Gazette on May, 2001 and officially became effective on June 1, 2001. It sets the legal framework for publicly listed companies.

Decree No. 677/2001 includes a number of governance guidelines and is inspired by international best practices and standards. It governs transparency practices, the public offering regime, illegal actions, and standards. The 2003 OECD report affirms that Decree No. 677/2001 covers several aspects of good corporate governance practices (e.g. mandatory tender offers; procedures to ensure that minority shareholders receive a "fair price" in squeeze-outs and de-listings; a majority of independent members in the audit committees; establishment of arbitration courts for the resolution of conflicts; and a greater role for shareholders through increased participation in shareholder meetings.

Following Decree No. 677/2001, the National Securities Commission (CNV), acting in its capacity as the regulatory enforcement authority, issued several regulations on audit committees.

Although Decree No. 677/2001 made only modest progress during the early stage of its implementation because of the 2001 Argentina financial crisis (Chong and Lopez-de-Silanes, 2007),[28] it still has been considered to be an important indicator of the new regulatory environment in Argentina and has played important roles in guiding publicly listed firms' governance practices (*eSTANDARDSFORUM*). The CGR year of Argentina is treated to be 2001 when Decree No. 677/2001 officially becomes effective.

References:

Aguilera, Ruth V., A Comparative Analysis of Corporate Governance Systems in Latin America: Argentina, Brazil, Chile, Colombia and Venezuela, *Corporate Governance in Developing Economies,* Forthcoming in McGee, R., Ed., (2008) Springer.

Chong, Alberto and Florencio Lopez-de-Silanes, Investor Protection and Corporate Governance: Firm-level Evidence across Latin America. (World Bank Publications, 2007, ISBN 082136913X, 9780821369135).

eSTANDARDSFORUM
    (http://www.estandardsforum.org/jhtml/country/Argentina/sp/1/6).

Organization for Economic Co-operation and Development, White paper on Corporate Governance in Latin America, Paris: Organization for Economic Co-operation and Development, 2003. (http://www.oecd.org/dataoecd/25/2/18976210.pdf).

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[28]During the 2001 Argentine crisis, firms had no incentive to upgrade their governance practices.

Australia (2004) (Comply-or-explain Rule)

The genesis of Australian CGR was the Ramsay Report of 2001, which proposed the establishment of audit committees in listed companies. However, the report was not fully welcomed by regulators.

Australia had its own share of corporate scandals (e.g., HIH Insurance). [29] The Commonwealth Government enacted the Corporate Law Economic Reform Program (Audit Reform & Corporate Disclosure) Act of 2004 (CLERP 9). It contains a number of reforms that safeguard auditor independence, as a response to the Ramsay Report, to the failure of HIH Insurance, and to the enactment of Sarbanes-Oxley Act of 2002 (Hill, 2008). The CLERP 9 is a comply-or-explain based regulation and became effective on July 1, 2004. It is viewed as the Australian version of Sarbanes-Oxley Act (Wikipedia).

The CLERP 9 includes three bodies: (1) the Financial Reporting Council to oversee standard setting for audit and accounting; (2) the Australian Securities Exchange's (ASX) Corporate Governance Council to oversee the development of best practice guidelines for corporate governance within listed companies; and (3) the Shareholders and Investors Advisory Council to provide a forum for the consideration of retail investors' concerns (Wikipedia).

Additionally, in March 2003, the ASX Corporate Governance Council released the first edition of the Principles of Good Corporate Governance (Principles) and Best Practice Recommendations (Recommendations). They represent the most comprehensive statement of best practices for Australian listed companies and include 10 Principles and 28 Recommendations supporting the Principles. These new rules apply to listed companies and other types of listed entities (e.g., trusts), listed stapled entities, and listed foreign entities. Listed companies must adopt these recommendations or explain why they do not. These changes in reporting requirements apply to the company's first fiscal year commencing after January 1, 2003. Where a company's fiscal year begins on July 1, disclosure was required in relation to the fiscal year July 1, 2003 – June 30, 2004 and was

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[29] "In Australia, a Royal Commission was established to investigate the fallout of the second largest insurance company in Australia – HIH Insurance. One of the findings of the commission was the misrepresentation of earnings by senior executives." (Simplify Financial Compliance with Commercial Cards)

made in the annual report published in 2004. (Principles of Good Corporate Governance and Best Practice Recommendations, 2003)

The CGR year of Australia is treated to be 2004 when the CLERP 9 is enacted and the first edition of the Principles of Good Corporate Governance and Best Practice Recommendations becomes fully effective.

References:

ASX Corporate Governance Council: Principles of Good Corporate Governance and Best Practice Recommendations, March 2003 (http://www.ecgi.org/codes/documents/asx_recommendations.pdf).

Australian Securities Exchange (http://www.asx.com.au/supervision/governance/index.htm).

Australian Securities & Investments Commission (http://www.asic.gov.au/asic/asic.nsf/byheadline/CLERP+9?openDocument).

Hill, Jennifer G., Evolving, "Rules of the Game" in Corproate Governance Reform, *International Journal of Corproate Governance* 1 (2008), 28-48.

He, Liyu, Sue Wright, and Elaine Evans, Does Better Corporate Governance Result in Lower Earnings Management? *Keeping Good Companies*, Sunday, July 1, 2007.

Simplify Financial Compliance with Commercial Cards (http://www.acte.org/events/munich07/Presentations/Visa%20Compliance%20White%20Paper_Oct07.pdf.).

Wikipedia (http://en.wikipedia.org/wiki/Corporate_Law_Economic_Reform_Program_Act_2004).

Wikipedia (http://en.wikipedia.org/wiki/Sarbanes-Oxley_Act).

Austria (2002) (Legal Rule)

The CGR in Austria is associated with the development of the Austrian Corporate Governance Code. It was first introduced on October 1, 2002 by the Austrian Working Group for Corporate Governance. It is mandatory for Austrian publicly listed companies. The Code comprises: (1) legal rules under Austrian laws; (2) comply-or-explain rules; and

(3) voluntary recommendations. This Code is viewed as a milestone in the drive to develop and invigorate the Austrian capital market by investors and issuers.

The Code has become an indispensable part of Austrian corporate governance system. It aims to strengthen investor confidence. It is based on the provisions of Austrian corporation law, securities law, and capital market law, as well as the OECD Corporate Governance Principles. It provides a framework for corporate management and control. It includes equal treatment of all shareholders; transparency; the independence of the supervisory board; open communication between the managing board and supervisory board; avoidance of conflicts of interest by bodies of the corporation; and efficient control by the supervisory board and auditors.

The CGR year of Austria is treated to be 2002 when the Code of Corporate Governance is first introduced in Austria.

References:

Austrian Code of Corporate Governance

(http://www.ecgi.org/codes/documents/cg_code_en.pdf).

eSTANDARDSFORUM

(http://www.estandardsforum.org/jhtml/country/Austria/sp/27/6/).

Belgium (2005) (Comply-or-explain Rule)

Belgium had its own share of corporate scandals (e.g., Lernout & Hauspie).[30] In response, the first draft of the Belgian Corporate Governance Code was published on June 18, 2004 by the Corporate Governance Committee (Committee Lippens). The comments on the Code, together with EU Commission initiatives, helped the Committee finalize the Code. On December 9, 2004, the Committee published the updated version of the Code. It applies to all Belgian listed companies and functions as a reference framework for all other companies. It has a comply-or-explain principle. The Code replaces the 1998

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[30] "For some time Lernout & Hauspie was dogged by rumors of financial impropriety, and in early 1999 the Wall Street Journal ran allegations in its *Heard on the Street* column by Goldman Sachs analyst Robert Smithson, that earnings had been overstated. Further investigation by Wall Street Journal staffer Jesse Eisinger led to the revelation on 8 August 2000 of a major financial scandal involving fictitious transactions in Korea and improper accounting methodologies elsewhere. In April 2001 founders Jo Lernout and Pol Hauspie, as well as former CEO Gaston Bastiaens, were arrested in what is considered one of the largest corporate scandals in history prior to Enron. Lernout & Hauspie finally went bankrupt on 25 October 2001 after having struggled for a year."(Wikipedia)

Recommendations on Corporate Governance, which only requires voluntary adoption. The Code entered into force on January 1, 2005. It has widely been considered to bring significant improvements to Belgian Corporate Governance Regime. (eSTANDARDSFORUM)

The Code provides the corporate governance guidelines. It covers: role and operation of the board of directors; balanced and independent nature of the board of directors; appointment of directors; chairman of the board; training for directors; performance evaluation; re-election of directors; remuneration for directors and managers; board committees; financial reporting/auditing; management organization; shareholder relations; and the annual report.

Additionally, by January 1, 2005, all Belgian listed companies must prepare their consolidated annual accounts (and reports) in accordance with international accounting standards (IAS).

The CGR year of Belgium is treated to be 2005 when the Code becomes effective and IAS is adopted by all Belgian listed companies.

References:

The Belgian Code on Corporate Governance
>   (http://www.ecgi.org/codes/documents/bel_code_dec2004_en.pdf).

Clarke, Thomas, International Corporate Governance: A comparative approach, Routledge, ISBN 041532310x, 9780415323109 (2007).

Corporate Governance Committee
>   (http://www.corporategovernancecommittee.be/en/committee/guidelines/default.a spx).

eSTANDARDSFORUM
>   (http://www.estandardsforum.org/jhtml/country/Belgium/sp/34/6/).

Global Corporate Governance Guide 2004
>   (http://www.globalcorporategovernance.com/).

Wikipedia (http://en.wikipedia.org/wiki/Lernout_&_Hauspie).

Brazil (2002) (Legal Rule)

The issuance of new Corporate Law (Law No. 10303) on October 31, 2001 is considered an important recent CGR in Brazilian financial market (e.g., Gorga, 2006; Black, Gledson De Carvalho, and Gorga, 2008). It became effective 120 days after the promulgation. Before the issuance of Law No. 10303, Brazilian companies are subject to Law 6404/76 modified by Law 9457/97. *"The 2001 reform of the Corporation Law strengthened minority shareholders' rights and improved standards for disclosure, with improved laws on tag-along rights, de-listing, non-voting shares, election of board members by minority shareholders and private arbitration. The same year, the Sao Paulo Stock Exchange (BOVESPA) launched three new market segments: "the Special Corporate Governance Levels 1 and 2" and the "Novo Mercado" with each market segment requiring progressively stricter standards of corporate governance. So far, the BOVESPA has been successful in attracting listings on the level 2 and Novo Mercado segments, implying improved standards in corporate governance practices."* (eSTANDARDSFORUM)

Additionally, in July 2002, the Securities Exchange Commission published its Recommendations on Corporate Governance applying to all listed companies on a comply-or-explain basis.

The CGR year of Brazil is treated to be 2002 when Law No. 10303 becomes effective and the Recommendations on Corporate Governance are published.

References:

Brazilian Institute of Corporate Governance (http://www.ibgc.org.br/Home.aspx).

CVM Recommendations on Corporate Governance
(http://www.ecgi.org/codes/documents/code_june2002_en.pdf).

Black, Bernard S., Antonio Gledson De Carvalho, and Erica Gorga, An Overview of Brazilian Corporate Governance, ECGI - Finance Working Paper No. 206/2008.

Gorga, Erica, 2006, Culture and Corporate Law Reform: A Case Study of Brazil, *University of Pennsylvania Journal of International Economic Law*, 27 (2006).

eSTANDARDSFORUM (http://www.estandardsforum.org/jhtml/country/Brazil/sp/3/6).

Global Corporate Governance Guide 2004 (http://www.globalcorporategovernance.com/).

Canada (2006) (Legal Rule)

On December 9, 2002, the Provincial Government of Ontario, Canada introduced an omnibus bill in the legislature entitled "Keeping the Promise for a Strong Economy Act (Budget Measures), 2002", also called Bill 198. It is known as the Canadian Sarbanes and Oxley Act (CSOX). It came into effect on December 31, 2005 as Part XXIII.1 of the Ontario *Securities Act*. For Canadian companies, the deadline for full compliance is 2006. Recent surveys of Canadian companies have revealed that more than half of surveyed Canadian company executives feel the new regulations have a positive impact on senior management's ability to run the company (Wikipedia).

Bill 198 deals with virtually all of the same issues as Sarbanes-Oxley, including auditor independence, audit committee responsibilities, CEO and CFO accountability for financial reporting and internal controls, faster public disclosure, and stiffer penalties for illegal activities.

Additionally, in 2006, the Toronto Stock Exchange (TSE) adopted the Corporate Governance Guide to Good Disclosure.

The CGR year of Canada is treated to be 2006 when Bill 198 fully comes into effect and TSE adopts the Corporate Governance Guide to Good Disclosure.

References:

eSTANDARDSFORUM (http://www.estandardsforum.org/jhtml/country/Canada/sp/4/6/).

Simplify Financial Compliance with Commercial Cards
(http://www.acte.org/events/munich07/Presentations/Visa%20Compliance%20White%20Paper_Oct07.pdf).

Wikipedia (http://en.wikipedia.org/wiki/Bill_198).

Chile (2001) (Legal Rule)

The Securities Market Law (SML) and Corporate Law (CL) govern listed companies in Chile. In December 2000, both laws were overhauled by Law No. 19,705, known as the Corporate Governance Law or *Ley de OPA (Ofertas Publicas de Adquisicion)*. It went into effect on December 20, 2000. It marks a new milestone in the road of corporate governance development of the securities market in Chile and brings the Chilean corporate legal framework close to international standards. (Escobar, 2001)

Law No. 19,705 aims to improve fairness, transparency and order in the Chilean capital market. It attempts to regulate corporate governance in two main fields: prices for the sale of a company's shares and rent extraction from controllers. It includes the establishment of a tender offer mandatory procedure; the audit committee; a derivative action to defend the interest of the company; stricter rules on related transactions, and the reinforcement of institutional investors. One of the major innovations of Law No. 19,705 is the creation of a directors committee in open stock corporations, as established in most codes of best practice and guidelines of corporate governance in many countries.

Subsequent to the enactment of Law No. 19,705, several complementary regulations have been issued by the Superintendence of Securities and Insurance (SVS), stating precisely how the new legislation should be understood and how it shall be encouraged, controlled, and enforced by the SVS itself.

The CGR year of Chile is treated to be 2001 when the first effects of the new rules introduced by Law No. 19,705 are observed.

References:

Agosin, Manuel R., and Ernesto Pasten H., Corporate governance in Chile, Central Bank of Chile Working Papers No 209 (2003).

Escobar, Ricardo, Corporate Governance in Chile: New Developments, 2001 (http://www.oecd.org/dataoecd/3/49/1823372.pdf).

World Bank Report on the Observance of Standards and Codes (ROSC) (http://www.worldbank.org/ifa/rosc_chlcg.pdf.)

China (2001) (Comply-or-explain Rule)

The corporate scandals (e.g., Yin Guang Xia scandal[31]) and capital flight cases in mid-2001 prompted officials at China Securities Regulatory Commission (CSRC) and other state regulatory bodies to put corporate governance at the top of their list of priorities.

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[31] China experienced its own version of Enron before the corporate scandals took place in the U.S. In July 2001, a blue-chip high-tech company, Yin Guang Xia, was found to have forged customs receipts and made up profit figures in order to support its extremely high and rising stock price. Since then, a few other blue chip companies were also found to have falsified accounts and disclosed misleading financial information. Yin Guang Xia is viewed as Chinese Enron.

On January 7, 2001, the CSRC and the State Economic and Trade Commission issued the Code of Corporate Governance for Listed Companies in China, also called Zhenjianfa No.1. of 2002 (http://www.csrc.gov.cn).[32] It applies to all listed companies and is based on the comply-or-explain principle. It became effective on the date of issuance. This is the first such code in China. It has strictly followed the OECD Principles of Corporate Governance, indicating that the authorities have sought to bring Chinese corporate governance standards in line with international best practices (*eSTANDARDSFORUM*).

Using the U.S. legal and regulatory systems as the model, the new code aims to introduce solid corporate governance in listed companies by elevating requirements on accounting procedures and information disclosure, introducing independent directors' systems, and tightening the supervision of corporate management. The Code stipulates the rights and responsibilities of shareholders, directors, the management, stakeholders, and information disclosure. It pays special attention to the protection of investors, especially small investors and prohibits expropriation of minority shareholders' wealth by controlling shareholders.

Additionally, the CSRC published guidelines for introducing independent directors to the board of directors in listed companies in August 2001. It requires each listed company to have at least one-third of the board to be independent directors by June 2003.

The CGR year of China is treated to be 2001 when the Code of Corporate Governance is enacted and the CSRC published guidelines for independent directors of listed companies.

References:

China Securities Regulatory Commission

(http://www.csrc.gov.cn/n575458/n4001948/n4002030/4062964.html).

eSTANDARDSFORUM (http://www.estandardsforum.org/jhtml/country/China/sp/5/6/).

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[32] Although the Code of Corporate Governance for Listed Companies in China is called Zhengjianfa No.1 of 2002), it is issued on January 7, 2002 by the CSRC.

Kang, Yong, Lu Shi, Elizabeth D. Brown, Chinese Corporate Governance: History and Institutional Framework, RAND center for corporate ethics and governance (2008) (http://www.rand.org/pubs/technical_reports/2008/RAND_TR618.pdf).

Simplify Financial Compliance with Commercial Cards (http://www.acte.org/events/munich07/Presentations/Visa%20Compliance%20White%20Paper_Oct07.pdf).

Finland (2004) (Comply-or-explain Rule)

The implementation of the Corporate Governance Code and the Reform of the Finnish Companies Act had significant influence on corporate governance issues in Finnish law.

HEX Plc, the Central Chamber of Commerce of Finland, and the Confederation of Finnish Industry and Employers appointed a working group on February 17, 2003 to clarify the need to review 1997 corporate governance recommendations and adopted a new corporate governance code for listed companies. The Code has the comply-or-explain principle. It entered into force on July 1, 2004. It increases operational transparency and improves the quality of disclosure.

The Code includes the key issues on general shareholder meeting, supervisory board, board committees, managing directors, other management, compensation, internal control, risk management and internal audit, insider administration, external audit, and communication and disclosure.

Additionally, the working group appointed by the Ministry of Justice issued its proposal on May 6, 2003 and revised the Companies Act. The new Limited Liabilities Companies Act entered into force on September 1, 2006, replacing the Limited Liabilities Companies Act of 1978. The new Act was designed to strengthen the legal protection of creditors and minority shareholders.

Since both events play significant roles in improving corporate governance in Finland, the one with earlier effective date (i.e. the implementation of the Corporate Governance Code) is treated as the CGR in Finland. The CGR year in Finland is thus treated to be 2004 when the Code enters into force.

References:

eSTANDARDSFORUM (http://www.estandardsforum.org/jhtml/country/Finland/sp/73/6).

Global Corporate Governance Guide 2004

(http://www.globalcorporategovernance.com/).

Corporate Governance Recommendation for Listed Companies

(http://www.ecgi.org/codes/documents/recommendation_en_final.pdf).

France (2003) (Legal Rule)

The French market was rocked by several scandals in 2002 (e.g., accounting scandal at Vivendi)[33]. These scandals raised the legislator's awareness of issues on French corporate governance.

The Financial Security Law of France (known in <u>France</u> as LSF or Loi de sécurité financière), was adopted by the French Parliament on <u>July 17</u>, <u>2003</u> to strengthen the legal provisions on corporate governance. It was published in OJ No. 177, <u>August 2</u>, <u>2003</u>. It is a rule-based regulation and viewed as French <u>Sarbanes-Oxley Act</u> (Wikipedia).

Similar to the <u>Sarbanes-Oxley Act</u>, the Financial Security Law of France rests mainly on: increasing responsibility of leaders, strengthening internal control, and reducing potential sources of conflicts of interest (Wikipedia). It deals with the following areas: (1) modernization of the authorities supervising financial activities; (2) reinforcement of investor protection; and (3) modernization of the auditing of company accounts and improvement of corporate transparency.

The CGR year in France is treated to be 2003 when the Financial Security Law of France is enacted.

References:

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[33] This is an Enron-type scandal. Vivendi had tried to add 1.5 billion euros to its 2001 accounts as part of a complex transaction involving shares in BSkyB. Vivendi's efforts to distort its accounts failed after French regulators halted the move. (Hahn, 2005)

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Germany (2002) (Comply-or-explain Rule)

Before the collapse of Enron and WorldCom, Germany had its own corporate scandals (e.g., Leo Kirch).[34] To response these scandals and address the international community's criticisms on German corporate governance (e.g., inadequate focus on shareholder interests; the two-tier system of executive board and supervisory board; inadequate transparency of German corporate governance; inadequate independence of German supervisory boards; and limited independence of auditors), in September 2001, the German Federal Minister of Justice established the governmental commission, which published the initial version of the German Corporate Governance Code in February 2002. The Code has a comply-or-explain basis and entered into force on July 26, 2002. German Corporate Governance Code has been viewed as an important Corporate Law Reform (Noack and Zetzsche, 2004; Clarke, 2007). It is viewed to be German version of the Sarbanes-Oxley Act (Wikipedia).

The Code aims to make German corporate governance rules transparent for both national and international investors, thus to strengthen confidence in the management of German corporations. The key sections of the Code include shareholders and the general

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[34] "Leo Kirch and former Chancellor of Germany Helmut Kohl have been on friendly terms for decades. Kirch was always accused of preferential coverage and advertising. Kohl arranged the creation of commercial television as one of his first official acts as Chancellor in 1982, which allowed Kirch to own a TV station and sports broadcasting rights. During the 1999 CDU contributions scandal, it was revealed that Kirch had donated six million DM to the CDU during Helmut Kohl's tenure as Chancellor. In addition, Kohl, along with various other CDU/CSU politicians, was revealed to be an adviser to the firm during the insolvency process."(Wikipedia)

meeting; management board; supervisory board; transparency; and reporting and audit of annual financial statements.

The CGR year of Germany is treated to be 2002 when the Code becomes effective.

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Hong Kong (2005) (Comply-or-explain Rule)

As a former British dependent territory, Hong Kong's company law and accounting systems were built on a British model. The overall standard of corporate governance has been well regarded. However, the series of U.S. corporate scandals reminded supervisory authorities in Hong Kong to push proactively for reform in corporate governance.

On January 30, 2004, Hong Kong Exchanges and Clearing Limited published the Exposure of Draft Code on Corporate Governance Practices and Corporate Governance Report (the Exposure Paper) replacing the 1993 Code of Best Practice. The Exposure Paper was benchmarked against the best prevailing market practices and international standards, and has a comply-or-explain basis. HKEX enacted the new Code in 2005.

The CGR year of Hong Kong is treated to be 2005 when the Code becomes effective.

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India (2005) (Legal Rule)

By the mid-1990s, Indian firms began to seek capital to finance expansion into the market spaces created by liberalization and the growth of outsourcing. This led to the need for a CGR in India. The first major step was taken by the Confederation of Indian Industry (CII). CII promulgated a voluntary Corporate Governance Code in 1998. But it was an insufficient regulation. A year later (i.e. 1999), the Securities and Exchange Board of India (SEBI) announced a CGR of the Kumar Mangalam Birla Committee (KMBC Report). This became "Clause 49." Clause 49 is based on the 1998 proposed Code of corporate Governance, sponsored by the CII. Clause 49 is viewed as a watershed event in Indian corporate governance by existing studies (e.g., Black and Khanna, 2007; Clarke, 2007; Dharmapala and Khanna, 2008).

Clause 49 contained both requirements and recommendations. "*Clause 49 involved prescribing minimum percentages of independent directors (50% or 33% depending on whether the Chairman was an executive director) and providing a fairly stringent definition of "independence". It mandated the number of meetings per year, expected boards to develop a code of conduct and imposed limits on the number of directorships a director could simultaneously hold. It enhanced the power of the audit*

committee by requiring financial literacy, experience and independence of its members, and by expanding the scope of activities on which the audit committee had oversight. Executives were also expected to be more personally involved in corporate affairs as seen by the requirements for certification by the CEO and CFO of financials and overall responsibility for internal controls. This was combined with considerably enhanced disclosure obligations (on many things including accounting treatment and related party transactions) and enhanced requirements for holding companies when overseeing their subsidiaries. These series of changes appear aimed at making Boards and Audit Committees more independent, powerful and focused monitors of management. Moreover, the enhanced disclosures would aid institutional and foreign investors in monitoring management as well." (Black and Khanna, 2007). Firms that do not meet these requirements can be de-listed and also given financial penalties.

Implementation of Clause 49 was staggered. It is mandatory for all listed companies to comply with the Clause 49 by December 31, 2005 but very small firms were exempted altogether.[35] The CGR year of India is thus treated to be 2005 when Clause 49 completely comes into effect.

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Securities and Exchange Board of India (http://www.sebi.gov.in/).

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[35] Large firms were required to comply first, followed by medium-sized firms (compliance required in 2002), and then small firms (initially required to comply in 2003, compliance with principle requirements later deterred to 2005).

Italy (2006) (Legal Rule)

Although Italy is one of G7 countries, Italian corporate governance is generally considered to have limited legal protection for investors, poor enforcement of legislation, underdeveloped equity markets, pyramidal groups, and high ownership concentration (eSTANDARSFORUM). Italian corporate governance evolution is complicated. It includes Legislative Decree No. 58 of 1998 (Consolidated Law on Financial Intermediation) (Deeg, 2005); Decree-Law 6/2003; and the Law on Savings No. 262 of 2005 (Savings Law).

The enactment of the Savings Law is treated to be the CGR in Italy for the following reasons. The Savings Law introduces amendments to the Legislative Decree 58 of 1998 and covers significantly broader scope than the Legislative Decree 58 of 1998. Decree-Law 6/2003 introduced reforms to Italy's corporate governance rules by mainly focusing on giving Italian companies greater flexibility in their organizational structure by allowing them to select a unitary board, a two-tier board, or the traditional Italian model. However, the IMF report noted that, to date, virtually all listed companies continued to follow the traditional Italian model (eSTANDARDSFORUM). In response to the Italian corporate scandals (e.g. Parmalat scandal during 2003-2004)[36] and legislation recently enacted in other countries to improve corporate governance, the Savings Law was enacted on January 12, 2006[37]. It is considered the Italian equivalent of

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[36]Parmalat SpA (BIT: PLT), is a multinational Italian dairy and food corporation and is considered the Italian Enron. The leading global company in the production of UHT (Ultra High Temperature) milk, the company collapsed in 2003 with a 14bn euro ($20bn; £13bn) hole in its accounts. It remains Europe's biggest bankruptcy. The massive financial scandal involving Parmalat, underscored the fact that corporate fraud is not only an American problem. With the disappearance of more than $10 billion in declared assets, the scandal is not only one of the largest in corporate history, but it also calls into question how accounting practices, both foreign and domestic, may have contributed to the company's downfall. In December, it was discovered that Parmalat had been using its assets to offset more than a decade's worth of liabilities through a network of offshore and foreign finance companies. The problem, however, was that these assets did not exist. A comedy of errors followed as company representatives scrambled to account for the missing assets. A document from the Bank of America that was supposed to confirm the presence of a valid account containing more than $4 billion was instead determined to be a forgery. A Parmalat representative then claimed to have traced $7.7 billion to another Bank of America account, but a resulting search by the bank's representatives determined that this account, too, did not exist. This money, like Parmalat's entire profit history, may prove to be a product of the imagination. (Wikipedia; Edmondson, 2004)

[37]The Act generally took effect on January 12, 2006, except for certain provisions, including those that require amendments to a company's organizational documents or further rule-making by the National Commission for Listed Companies and Stock Exchange (CONSOB), the Italian securities regulator, or other administrative bodies.

Sarbanes-Oxley Act (Wikipedia). So, it is more internationally comparable with CGRs in other countries than Legislative Decree No. 58 of 1998 and Decree-Law 6/2003.

The Savings Law amended the Legislative Decree 58 of 1998 on the following issues: the appointment and composition of board of directors; statutory auditors and similar controlling bodies; action against directors; protecting minority shareholders; disclosure of off-shore business; voting rights of banking foundations; conflicts of interest between banks and companies; conflicts of interest in the management of investment funds; conflicts of interest in offering investment services; offers to the public of financial instruments addressed to professional investors; prospectus directive; protection of investors, financial sales representatives and regulated markets, and the duty to provide information; stock option plans; auditing activity; central bank of Italy's structure and powers and co-operation among different authorities; protective measures for investors; corporate crime and sanctions; and transitional provisions. (Italian Law on Savings)

Additionally, a new Corporate Governance Code was promulgated by the Italian Stock Exchange (Borsa Italiana) in March 2006 to strengthen corporate governance among listed companies. The new Code has a comply-or-explain basis. It replaced the Preda Code, which is voluntary for Italian listed companies.

The CGR year of Italy is treated to be 2006 when the Savings Law becomes effective and the new Corporate Governance Code is promulgated.

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Malaysia (2000) (Comply-or-explain Rule)

The 1997 Asian financial crisis made clear the need to enhance the standards of corporate governance in Malaysia to promote stronger, more responsible, transparent and accountable management in the line with international best practices.

On March 24, 1998, the minister of finance announced the establishment of a high-level finance committee. The committee's subsequent report to the ministry resulted in the introduction of the Malaysian Code on Corporate Governance and the establishment of the Minority Shareholders Watchdog Group, a body set up to spearhead shareholder activism and combat abuses by insiders against the minority shareholders (Global Corporate Governance Guide 2004). The Securities Commission of Malaysia issued its Code on Corporate Governance in March 2000, marking a significant milestone in corporate governance reform (e.g., Abdul Hadi bin Zulkafli, M.Fazilah bt. Abdul Samad, and Md Ishak Ismail). The Code has a comply-or-explain principle. The Code codified the principles and best practices of good governance and described optimal corporate governance structures and internal processes. It focuses on four areas: board of directors; directors' remuneration; shareholders and accountability; and audit.

The effective year of the Code is not clear, so the CGR year of Malaysia is treated to be 2000 when the Code is issued by the Securities Commission of Malaysia. The results are robust if the CGR year is treated to be 2001.

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Mexico (2001) (Legal Rule)

In June 1999, the Code of Business Best Practices was published, incorporating the basic principles of corporate governance generally recognised in the United States and Europe. Although the degree of compliance must be disclosed annually to the competent authorities, compliance of the code is voluntary. (Global Corporate Governance Guide 2004)

In Mexico, the two key laws affecting corporate governance are the Company Law (Ley General de Sociedades Mercantiles, or LGSM), and the Securities Market Law (Ley del Mercado de Valores, or LMV), which regulates public companies and were introduced in 1975. (eSTANDARDSFORUM) Thus, a major amendment of the LMV in June 2001 is treated to be the most relevant CGR of Mexico. This amendment adopts the standard corporate governance provisions of other leading markets around the world. (Global Corporate Governance Guide 2004) Transparency of listed companies has been greatly improved after enacting the LMV of 2001. (Price III, Roman, and Rountree, 2007)

The amended LMV provides a number of minority rights that must be incorporated into the by-laws of publicly listed companies. They include: the board of directors must be composed of no less than five and not more than 20 members, of which at least 25% must be independent member; an audit committee composed of members of the board of directors must be established, of which the chairman and the majority of its members must be independent directors. Among other duties, the audit committee must deliver an annual report to the board of directors and must render an option on certain proposed transactions of the corporation with related parties; and minority shareholders

representing stated percentages are entitled, among other rights, to call shareholders meetings, appoint directors, and initiate court actions against directors. (International Financial Law Review)

The CGR year of Mexico is treated to be 2001 when the major amendments of the LMV went into effect.

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(http://www.globalcorporategovernance.com/).

International Financial Law Review

(http://www.iflr.com/Article/1984906/Mexico-updates-securities-regulation.html)

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Price III, Richard A., Francisco J. Roman, and Brian Rountree, "Governance Reform and Transparency: The Case of Mexico", SSRN Working paper, 2007.

Netherlands (2004) (Comply-or-explain Rule)

The first corporate governance committee, the Peters Committee, was an initiative of representatives from the Association of Securities Issuing Companies and Amsterdam Stock Exchange. The committee published forty recommendations in 1997 and initiated a public corporate governance debate to introduce the best practice provisions and to improve board practices. But the 1997 Peters Report only requires a voluntary adoption..

In 2003, Netherlands experienced its own share of corporate scandals (e.g., Ahold).[38] In response to it, the second corporate governance committee published the Tabaksblat Code in 2003. The Code was an initiative of the Ministry of Finance and Economic Affairs. Its scope was wider and aimed at legislative changes. It became effective on January 1, 2004. It applies to listed companies and has the comply-or-explain principle.

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[38]"The Ahold scandal became public in February 2003, when the company announced that a series of accounting irregularities had overstated more than $500 million in profit booked in the previous two years (i.e. 2001 and 2002). Subsequent disclosures revealed that Ahold's publicly reported earnings overall had been overstated by more than $1 billion and that prior revenue had been overstated by $24 billion." (Ahold Settles Lawsuit for $1.1 Billion: Giant Food's Parent Resolves Securities Fraud Class Action)

The Code has five sections: (1) the management board; (2) the supervisory board; (3) the shareholders and general meeting of shareholders; (4) the audit of the financial reporting; and (5) the position of the internal auditor function and the external auditor. Its main purpose is to improve the corporate governance system by providing principle-based best practice.

The CGR year of Netherlands is treated to be 2004 when the Code becomes effective.

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    (http://www.washingtonpost.com/wp-dyn/content/article/2005/11/28/AR2005112 800144.html).

Norway (2005) (Comply-or-explain Rule)

The Norwegian Code of Practice for Corporate Governance is based on the provisional national code of practice for corporate governance published in December 2003. The provisional code was the subject of wide consultation, with a deadline of May 30, 2004 for responses from companies and other interested parties. This helped to form the basis for the publication of the Norwegian Code of Practice for Corporate

Governance dated December 7, 2004. The Code has a comply-or-explain basis. It became effective from the 2005 fiscal year.

The Code intends to strengthen shareholders' confidence in listed companies and helps ensure the greatest possible value creation in the interests of shareholders, employees, and other stakeholders. The Code consists of a large number of separate recommendations which can be categorized into three types: issues relating to the protection of minority shareholders; issues relating to the company leadership; and issues relating a company's relationship with the public, external investors and creditors (International Financial Law Review).

The CGR year of Norway is treated to be 2005 when the Code becomes effective.

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eSTANDARDSFORUM
(http://www.estandardsforum.org/jhtml/country/Norway/sp/134/6/).

Peru (2005) (Comply-or-explain Rule)

In 2002, a committee under the leadership of the National Supervisory Commission of Companies and Securities (Comisión Nacional Supervisora de Empresas y Valores - CONASEV) issued a voluntary Code of Good Corporate Governance. The year of 2005 is the first year when the Code was required to comply or explain the adherence in annual reports for listed companies.

The Code is mainly based on the Principles of the OECD (1999 version). It includes general recommendations on board organization and functions, as well as

protection of minority rights. It covers the issues relating to: shareholders' rights; equal treatment of shareholders; role of stakeholders in corporate governance; disclosure and transparency of financial information; responsibilities of the board of directors; and securities market registry.

The CGR year in Peru is treated to be 2005 when Peruvian publicly listed companies are required to document their adherence to the Code in their annual reports on a comply-or-explain basis.

References:

eSTANDARDSFORUM (http://www.estandardsforum.org/jhtml/country/Peru/sp/141/6/).

Principles of Code Governance for Peruvian Companies

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Poland (2002) (Comply-or-explain Rule)

The Best Practice Committee was founded in May 2001 for the preparation of corporate governance principles. The Code of Best Practices in Public Companies was implemented into Warsaw Stock Exchange Rules in 2002. The Best Practices constitute a set of detailed rules of conduct addressed to both authorities of companies and members of such authorities, and to majority and minority shareholders. They have a comply-or-explain basis.

The Best Practices include: five general rules; best practices for general meetings; best practices for supervisory boards; best practices for management boards; and best practices in relation to third party institutions.

Additionally, in 2002, the Corporate Governance Code for Polish Listed Companies was issued. This Code also has a comply-or-explain basis.

The CGR year of Poland is treated to be 2002 when the Code of Best Practices in Public Companies was implemented into Warsaw Stock Exchange Rules.

References:

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Singapore (2003) (Comply-or-explain Rule)

The Code of Corporate Governance was promulgated by the Corporate Governance Committee on March 21, 2001. The Government announced its acceptance on April 4, 2001 at the OECD Third Asian Roundtable on Corporate Governance. The Code took effect in 2003. For annual general meetings held from January 1, 2003 onwards, in their annual reports, listed companies are required under the Listing Rules of the Singapore Exchange to describe their corporate governance practices with specific reference to the principles of the Code, as well as disclose and explain any deviation from any Guidance Notes of the Code. Listed companies are encouraged to comply with the code before the above deadline (Corporate Governance Committee, Report of the Committee and Code of Corporate Governance).

The Code is divided into four main sections: board matters; remuneration matters; accountability and audit; and communication with shareholders.

The CGR year of Singapore is treated to be 2003 when the Code becomes effective.

References:

http://www.ccdg.gov.sg/

Code of Corporate Governance (http://www.ecgi.org/codes/documents/cg_code.pdf)

Corporate Governance Committee, Report of the Committee and Code of Corporate
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South Korea (1999) (Legal Rule)

Poor corporate governance system was identified as one of the principle reasons for the 1997 Korean financial crisis by the IMF and World Bank. The IMF pushed the Korean government to conduct a series of reforms to increase financial transparency through independent audits, mandated consolidated financial statements, and rapid

chaebol reforms, which were initiated: (1) to change the traditional characteristics of chaebol; and (2) to build an Anglo-American corporate governance system. Through these forcible chaebol reform by the government, accountability, transparency and financial health in the chaebol were improved. These reforms include amending the Commercial Code, which applies to all companies, and amending the Securities Exchange Act, which applies only to companies whose securities are floated on the Korea Stock Exchange (KSE) or traded through the Korea Securities Dealers Association Automated Quotation system in 1998. Additionally, in February 1998, all firms listed on the KSE (effective April 1, 1999) were required to have at least 25% of the board composed of outside directors. They are also required to set up an audit committee. Choi et al., 2007 show that the effects of these reforms associated with independent directors on firm performance are strongly positive.

Furthermore, in 1998, the government liberalized the market for hostile M&As and introduced policies to protect minority shareholders' rights. Accounting principles compiling with international standards were introduced in December 1998. The Committee on Corporate Governance was founded as a non-government body in March 1999, to develop a code of best practices, a source to guide preparations to establish proper corporate governance structure. In September 1999, the Committee adopted the Code of Best Practice for Corporate Governance, but compliance of the Code is voluntary.

Accounting for the above facts, the CGR year of Korea is treated to be 1999 when the effects of several reforms are expected to be observed.

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Solomon, Jill, Aris Solomon and Chang-Young Park, "A Conceptual Framework for Corporate Governance Reform in South Korea," *Corporate Governance an International Review*, 10 (2002).

Spain (2003) (Comply-or-explain Rule)

The first Spanish Code of Best Practice was issued on February 26, 1998 (Olivencia Report, 1998). It sets out recommendations on the responsibilities, structure and organization of the board of directors. However, compliance with the Code was optional rather than compulsory and the compliance rate was less successful than expected. Also, this legal reform mainly aimed at liberalizing markets and privatizing SOEs (Mallin, 2006).

Following the corporate scandals at the beginning of the twenty-first century, and the subsequent Winter Report, in 2002 the Ministry of Economy appointed a committee to issue the second code of best practice. The Aldama Committee's Report (the Spanish Transparency Act, *"Ley de Transparencia,"* Order ECO/3722/2003) in January 2003 and the Spanish Securities and Exchange Commission (CNMV) Circular 1/2004 issued in March 2004 on the Annual Corporate Governance Report are the most relevant milestones of Spanish corporate governance system to date. They are viewed as a successful step in a transition toward more effective corporate governance in Spain. The Aldama Report's recommendations are similar to those of the Olivencia Report. They emphasized the need to regulate the information provided by the companies to the market, in particular, the need to regulate the corporate governance information that should be released by listed companies both in the Annual Corporate Governance Report and on the web page. The Aldama Report includes both voluntary and comply-or-explain regulations.

The Aldama Report coincided with a series of legislative reforms. At the end of 2002, the Law of Reform of the Financial System obliged companies to set up an audit committee composed of a majority of non-executive directors. In April 2003, the Spanish takeover law was modified. In July 2003, the Transparency Law reformed Spanish

Company Law and established the obligation to publish a Rule of the Board of Directors and a Rule of the Shareholders' Meetings and to register such rules with the Spanish Supervisory Agency.

As a consequence of these legislative reforms, corporate transparency and governance practices have improved significantly in 2003 and 2004 (Mallin, 2006). After accounting for these regulatory events and facts, the CGR year of Spain is treated to be 2003.

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Sweden (2005) (Comply-or-explain Rule)

Like many other countries, Sweden suffered its own corporate scandals (e.g., the Skandia scandal)[39]. In response to the business scandals, the Code Group issued the proposal for the Swedish Code of Corporate Governance in April 2004. The proposal was circulated for comments, and the final version was presented on December 16, 2004. In July 2005, the Swedish Code of Corporate Governance was enacted on a comply-or-explain basis as a supplement to the Companies Act and other legislation. It applies to all companies listed on the Nordic Exchange in Stockholm and all other listed companies whose market capitalization exceeds 3 billion SEK. The Code has been incorporated into the listing requirements of the Stockholm Stock Exchange.

The Code serves as a guideline for Swedish companies. It aims to improve the governance of Swedish companies, primarily to ensure that companies are run in the best

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[39]Insurance giant Skandia was rocked by a financial scandal. Flawed auditing and a strong management unchecked by a weak board are believed by financial experts to have been at the root of the scandal. The firm paid bonuses worth three billion kronor ($396m) to senior managers. It has also been reported that three senior bosses renovated luxury apartments using the company's money. Its chairman Bengt Braun resigned following a damning independent investigation into Sweden's biggest corporate scandal in 70 years.

interests of the owners. Another aim is to enhance understanding and confidence in Swedish corporate governance (Clarke, 2007). The Swedish code is part of the European tradition that has grown from developments in the UK in the early 1990s, but is also influenced by the OECD and the EU, as well as corporate governance codes of other countries. The Code covers five key areas: (1) shareholders' meetings; (2) appointment of board directors and auditor; (3) board of directors; (4) executive management; and (5) corporate governance reporting.

Additionally, there are two other corporate governance codes in Sweden. In 2001 the Swedish Shareholders' Association issued the Guidelines for Better Control and Transparency for owners of companies quoted on the Swedish stock market. In 2003, the Swedish Industry and Commerce Stock Exchange Committee (Näringslivets Börskommitté, or NBK) issued rules. However, the compliance results to the 2001 Guidelines for owners of companies quoted on the Swedish stock market are not very encouraging. The NBK is a mandatory regulation, but it focuses only on takeover related regulations. Therefore, the CGR year of Sweden is treated to be 2005 when the Swedish Code of Corporate Governance is enacted.

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The Swedish Code of Corporate Governance

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Switzerland (2002) (Comply-or-explain Rule)

The introduction of the two new sets of corporate governance rules in 2002 marked a milestone in the development of corporate governance system in Switzerland (Global Corporate Governance Guide 2004).

The Directive on Information relating to Corporate Governance, issued by the SWX Swiss Exchange, aims to enhance corporate transparency. It is intended to encourage publicly listed companies to make certain key information relating to

corporate governance available to investors in an appropriate form. It requires Swiss listed issuers to disclose in their annual reports important information on the management and control mechanisms at the highest corporate level. Information on remuneration is compulsory, and other broad categories of information (e.g., group and capital structure, board of directors, auditors, shareholder participation rights, change of control or defence measures, and information policy) is required to be dealt with the comply-or-explain principle. It came into force on July 1, 2002 and applies to all annual reports of listed companies for fiscal years beginning on January 1, 2002. The SWX directive has been viewed to be an efficient tool to increase the transparency of the corporate governance mechanisms of Swiss companies in general.

The Swiss Code of Best Practice for Corporate Governance was unanimously approved on March 25, 2002 by the Board of Directors of Economies Cuisse on the unanimous recommendation of the Panel of Experts. It sets corporate governance standards which have the character of non-binding recommendations. The code primarily addresses Swiss publicly listed companies, but also serves as a guideline for non-listed Swiss companies and organisations of economic significance.

The year of 2002 thus is treated to be the CGR year of Switzerland when the Directive on Information relating to Corporate Governance came into effect and the Swiss Code of Best Practice for Corporate Governance was approved.

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Taiwan (2002) (Legal Rule)

Following the 1997 Asian financial crisis, Taiwan initiated an overall reform of its corporate governance system. According to the 2006 conference report "Corporate Governance and Taiwan's Capital Markets," these reforms were later accompanied by improvements in corporate governance starting in 2002. These reforms focused on greater independence for the board of directors, audit committees, and supervisory commissions (eSTANDARDSFORUM).

The amendment of the Corporate Law of Taiwan was promulgated on July 9, 2001, and became effective on November 1, 2001. The Company Law sets out the legal position with which Taiwanese companies have to comply. It formally establishes a legal foundation for a corporate governance system in Taiwan.

In addition, Taiwan Stock Exchange (TSE) and Taiwan's GreTai Securities Market (GTSM) amended their listing rules to require all companies seeking IPO after 2002 to have at least two independent directors and one independent supervisor. The SFC mandated the definition of qualifications for independent directors and independent supervisors on April 4, 2003. To provide the legal basis for protecting investors, SFC enacted the Securities Investors and Futures Traders Protection Law. It was passed by the parliament in July 2002 and enacted on January 1, 2003. Furthermore, Taiwan Corporate Governance Best-Practice Principles were issued in 2002 by the TSE and GTSM. But the Principles are not mandatory.

The year of 2002 is treated to be the CGR year of Taiwan, because this series of intensive regulation regimes took place around 2002 and the Company Law of Taiwan became effective on November 1, 2001, close to the end of 2001.

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Thailand (2002) (Comply-or-explain Rules)

Poor corporate governance has been cited as the main cause of the East Asian Finance Crisis that origninated in Thailand in July 1997 (e.g. Johnson et al., 2000). After the crisis, Thailand conducted several legislative activities issuing the Stock Exchange of Thailand's (SET) Code of Best Practice for Directors of Listed Companies in 1999 and the 2002 Code of Best Practice for Directors of Listed Companies to improve the country's governance mechanisms and corporate transparency. This multi-facet reform process began in 1999, and the ensuing provisions by and large came into force by the end of 2002. In 2002, the landmark event appears to be the SET's statement that all listed firms are "advised" to implement the recommended 15 principles of good corporate governance, and to demonstrate in their annual registration Form 56-1 and annual report how they apply the 15 principles. Firms failing to apply these 15 principles are "required" to provide justification for their failure. The SET named 2002 the "Year of Good Corporate Governance". Ekkayokkaya and Pengniti (2008) find that corporate transaparency has been improved in the Thai stock market after 2002 (post-reform period).

The main content of the Code includes: board composition; roles and responsibilities of directors; appointements to the board; holding a director's position; directors' remuneration; board & sharehoders' meetings; and reports.

The year of 2002 is treated to be the CGR year of Thailand.

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UK (2003) (Comply-or-explain Rule)

In response to the collapse of Enron and WorldCom, the UK introduced the new Combined Code on Corporate Governance. The Code was issued in July, 2003 by the Financial Reporting Council, and was put into effect on November 1, 2003. The Code applies to publicly listed companies, on the comply-or-explain approach. The issuance of this Code is viewed as the most important recent development of corporate governance in the UK. The corporate governance system has been certainly improved, and the UK's Combined Code is effective and widely admired. (Global Corporate Governance Guide 2004; Hodge, 2007)

The Combined Code is also in the wake of the Higgs Review. The Higgs Review was published in January, 2003. In April 2002 the Secretary of State, Patricia Hewitt, and the Chancellor, Gordon Brown, appointed Derek Higgs to lead an independent review of the role and effectiveness of non-executive directors. The report by Higgs includes guidance for non-executive directors and the chairman and a proposal for a revised combined code. The proposal contains a number of recommendations relating to the

structure of the board; the role and other commitments of the chair; the role of the non-executive director; the recruitment and appointment procedures to the board; professional development of directors; board tenure and time commitment; remuneration; resignation procedures; audit and remuneration committees; board liability; and relationships with shareholders.

This Code replaced the old Combined Code introduced by the Hampel Committee on Corporate Governance in June 1998. It aims to enhance board effectiveness and to improve investor confidence by raising standards of corporate governance. The key sections of the Code include: 50% independent non-executive directors within the board (chairman excluded); separation of the roles of chairman and chief executive officer; new rules on independence of board directors; formal procedures for the appointment of new directors; provisions for more relevant management information to directors; training and performance evaluation of boards, committees and directors; the role of audit committee; and sanctions.

The CGR year of the UK is treated to be 2003 when the new Combined Code on Corporate Governance becomes effective.

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U.S. (2003) (Legal Rule)

The Sarbanes-Oxley Act of 2002 is also known as the Public Company Accounting Reform and Investor Protection Act of 2002. It is a US federal law enacted on July 30, 2002 in response to a number of major corporate and accounting scandals (e.g., Enron, Tyco International, Adelphia, Peregrine Systems, and WorldCom). President George W. Bush signed it into law, stating it included "the most far-reaching reforms of American business practices since the time of Franklin D. Roosevelt."

The legislation establishes new standards for all US public company boards, management, and public accounting firms. It covers issues such as auditor independence, corporate governance, internal controls, and enhanced financial disclosure. It contains 11 sections: public company accounting oversight board (PCAOB); auditor independence; corporate responsibility; enhanced financial disclosures; analyst conflicts of interest; commission resources and authority; studies and reports; corporate and criminal fraud accountability; white collar crime penalty enhancement; corporate tax returns; and corporate fraud accountability.(Wikipedia)

The CGR year of the U.S. is treated to be 2003.

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Chapter 3

Ownership and Valuation[40]

3.1 Introduction

When contracting theory is applied to managerial incentive contracts, most principal-agent models assume that shareholders play the role of principals. However, there is increasing evidence that CEOs capture important parts of the contracting process. The evidence includes Bertrand and Mullainathan (2000), who demonstrate that in the absence of adequate monitoring by shareholders, CEOs manipulate the compensation process to increase their pay because they become "agents without principals"; Bebchuk and Fried (2004), who argue that powerful CEOs reduce the linkage between compensation and performance to enjoy "pay without performance"; and Morse, Nanda, and Seru (2009), who show that powerful CEOs rig incentive contracts.

As if to vindicate these academic studies, amid the economic crisis of 2008-2009 media stories abound about CEOs receiving unearned bonuses in tens of millions of dollars for negative performance or tweaking "performance targets to make goals easier to achieve" (*Wall Street Journal*, March 18, 2009, B1). However, the same *Journal* article reports that of "50 big nonfinancial companies …, 16 cut bonuses (for CEOs) and two others didn't award them." Thus, while some CEOs capture the compensation process, many others do not.

In this paper we argue that the heterogeneity in CEOs' abilities and inclinations to capture incentive contracts is due to different degrees of external pressure for good governance. When external governance is strong enough to preserve shareholders' inherent rights as principal owners of capital, managerial incentive contracts are likely to be determined according to the contracting view. But when external governance is weak,

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[40]This chapter is based on a paper co-authored with E. Han Kim.

powerful CEOs may capture the contracting process, making their incentive contracts deviate from the optimality condition maximizing shareholder value.

An important component of managerial incentive contracts is share ownership. (Demsetz, 1983; Demsetz and Lehn, 1985). How ownership affects firm valuation has been a contentious issue. Morck, Shleifer, and Vishny (1988), McConnell and Servaes (1990), Hermalin and Weisbach (1991), Holderness, Kroszner, and Sheehan (1999), Anderson and Reeb (2003), Adams and Santos (2006) and others document significant non-linear cross-sectional relation between insider share ownership and firm performance--often measured by Tobin's Q. The suggested interpretation is that the relation at low levels of share ownership is positive due to the alignment of managerial incentives with those of shareholders, while the relation at high levels of ownership is less positive, or even negative, because managerial entrenchment effects negate, or even dominate, the alignment effect.[41]

This interpretation is challenged by Demsetz and Lehn (1985), Agrawal and Knoeber (1996), Kole (1996), Loderer and Martin (1997), Cho (1998), Himmelberg, Hubbard, and Palia (1999), Demsetz and Villalonga (2001), and Coles, Lemmon, and Meschke (2007). Some of these authors view share ownership as an endogenous variable within a contracting framework, wherein shareholders choose a set of optimal contracts to maximize shareholder value. Since the determinants of the optimal ownership also may affect firm valuation, the value and ownership relation may disappear if the researcher properly accounts for contracting environments. This is what Himmelberg et al. attempt to do. They control for a set of observable firm variables and time-invariant, unobservable firm characteristics with firm fixed effects. Their estimation shows no significant relation between Tobin's Q and managerial share ownership. Thus, they conclude, the previously observed relation between firm valuation and share ownership is spurious.

This paper investigates whether or not the contracting view is descriptive of most firms' CEO share ownership, motivated by the recent evidence of some CEOs capturing incentive contracts.   When a CEO captures the contracting process, the observed share

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[41] Stulz (1988) provides a theoretical model consistent with this interpretation.

ownership is unlikely to reflect the optimality conditions.[42] That is, the crux of the issue is whether share ownership is determined according to the contracting view or the capturing view, which, in turn, depends on the ability of shareholders to exercise their inherent rights as principals in determining and enforcing contracts.

For public corporations with diffuse share ownership, the ability of shareholders to perform the principals' roles may depend on the strength of external governance (EG) mechanisms, which constrain the CEO's ability and opportunity to exert their wills to alter the equilibrium contracts to their advantage. We hypothesize that, when firms are subject to strong external pressure for good governance, CEO share ownership is likely to be determined by the contracting environment and, hence, does not exhibit a systematic relation to firm valuation. However, when EG is too weak to prevent CEOs from capturing the contracting process, their share ownership is unlikely to reflect the optimal contract; instead, it will be more reflective of the capturing CEO's personal preferences. Thus, the ownership may exhibit a systematic relation to firm valuation.

The strength of EG is proxied by two distinct measures. The first is product market competition, which eliminates inefficient producers. The threat of elimination is the ultimate antidote against non-profit maximizing managerial behavior. Strong product market competition limits managerial slack and complacency, reducing agency problems between managers and shareholders (Alchian, 1950; Friedman, 1953; Stigler, 1958; Hart, 1983; Giroud and Mueller, 2008). The competition is proxied by the Herfindahl-Hirschman Index (HHI), where a lower index indicates greater product market competition.   The second proxy is institutional ownership concentration (IOC). Previous researchers demonstrate the important monitoring role of institutional investors and block holders in shaping corporate governance (e.g., Shleifer and Vishny, 1986; Bertrand and Mullainathan, 2000, 2001; Hartzell and Starks, 2003; and Cremers and Nair, 2005). Both proxies are used throughout the paper to check the robustness.

Our empirical investigation begins with replicating Himmelberg et al.'s baseline models, which control for variables related to the scope of moral hazard and risk aversion

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[42] A practical example of deviation from optimal incentive contracts is illustrated by Dittmann and Maug (2007) who show that the observed stock option contracts cannot be explained by an efficient contracting model in the standard principal-agent framework.

and time invariant unobservable characteristics by firm fixed effects. We re-estimate the relation using share ownership of up to five top executives covered by the ExecuComp database. The data cover the period 1992 through 2006 and include more firm year observations over a longer and more recent time period than those used in Himmelberg et al. Not surprisingly, the estimated relations between Tobin's Q and top managerial share ownership are mostly insignificant.

These results may be misleading, however. ExecuComp often changes the number of executives it covers for the same firm over time. Of 2,482 firms in our sample, only 99 report the same number of executives throughout the sample period. [43] The ownership variable for the remaining 96% of sample firms reflects shareholdings by different numbers of executives. Hence, the within firm variation in the fraction of shares held by up-to-five-top executives reflects not only real changes in ownership but also changes in the number of executives included in the ownership calculation. This is important for regressions using firm fixed effects, because variations for estimation come from the within firm variation. We employ two empirical strategies to eliminate the noise.

The first is restricting the sample to only firm year observations for which all top five executives are covered by ExecuComp. With this restriction, the same regression model shows a statistically significant hump shaped relation between Tobin's Q and top management share ownership. This approach risks a selection bias, however, because the firm-year observations with less than five executives reported by ExecuComp may have different unobserved firm characteristics from the rest. Thus, our second approach is to focus only on CEO ownership. ExecuComp always includes CEOs for all firms it covers. Again, we find a significant hump shaped relation between firm value and CEO ownership. These results are consistent with the more recent findings by McConnell, Servaes, and Lins (2008) and Fahlenbrach and Stulz (2008) that changes in Tobin's Q are significantly related to changes in managerial share ownership.

Perhaps more interesting, the hump shaped relation is significant for both CEOs and the top four non-CEO executives only when firms are subject to weak external governance (EG), an environment in which CEOs are more likely to capture incentive

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[43] This tabulation ignores variation between five or more executives because we cap the number of executives at five.

contracts. When firms are subject to strong EG, Tobin's Q is unrelated to ownership for either CEOs or non-CEO top executives. These results hold regardless of whether the strength of EG is measured by product market competition or by institutional ownership concentration.

Our robustness tests focus on CEO ownership. Focusing on CEOs has several other advantages. First, it allows us to control for unobserved agent characteristics with CEO-firm pair fixed effects. This is important in light of the recent finding by Graham, Li, and Qiu (2009) that time invariant manager fixed effects explain a majority of the variation in executive pay. Second, decision making authority is concentrated in the CEO, giving him the most influence on firm performance and valuation. Third, CEO share ownership in our sample has a higher mean (2.8%) and a higher average within firm variation (1.6%) than the corresponding statistics for the top four non-CEO executives combined (1.3% and 1.1%, respectively). These differences are important in light of the criticism by Zhou (2001) that the within firm variation in managerial share ownership is too small to detect any relation when firm fixed effects are included in a regression.

We conduct a battery of robustness tests. First, because the contracting environment is determined by not only firm characteristics but also by agent characteristics (Bertrand and Schoar, 2003; Graham et al., 2009), we control for both CEO and firm unobservable characteristics by including CEO-firm pair fixed effects. The results are robust. Second, we re-estimate all regressions using alternative definitions of share ownership; alternative measures of the strength of EG; alternative demarcation points for strong and weak EG; and an alternative sample construction excluding utilities and financial firms. Demsetz and Lehn (1985) argue that regulated utilities and financial institutions are subject to different monitoring and incentives and, hence, have different ownership structures from those of less regulated industries. None of the variations in variable definition and sample construction alters our conclusion. Third, we examine the sensitivity of our estimation results to differences in statistical properties between observations subject to strong and weak EG. The results are again robust. Fourth, we estimate regressions separately for founder-CEOs and non-founder CEOs to check whether our results are driven by founder-CEOs. They are not.

We also address concerns about reverse causality (Kole, 1996, and Cho, 1998) by first using one year lagged value of CEO ownership. The results are robust. We further estimate a simultaneous equation system of ownership, investment, and Tobin's Q, using three-stage least squares. The hump shaped valuation and ownership relation continues to be highly significant for the full- and weak EG samples, and not for the strong EG sample. We also account for the time-variant omitted variables problem by using the same instrumental variables used in Himmelberg et al. in two-stage least squares regressions. As Himmelberg et al. point out, using instrumental variables while at the same time controlling for fixed effects reduces the precision of estimates to the point at which such a test has little power. To counter this problem, we restrict the analysis to observations under weakest EG regimes, where the hump shaped relation is expected to be more pronounced. For these observations, the hump shaped relation is significant, regardless of whether we control for firm- or CEO-firm fixed effects.

The next section describes data and sample construction. Section 3.2 presents main empirical results followed by a number of robustness checks. In Section 3.3, we address reverse causality and other endogeneity issues. Section 3.4 contains a brief summary and implications.

3.2 Data, sample construction, and summary statistics
3.2.1 Data, sample construction

Our empirical investigation is based on panel data from 1992 to 2006. We merge the executive database in ExecuComp with accounting data in Compustat and stock return data in CRSP. Observations with incomplete data are dropped from the sample. These panel data allow us to track through time share ownership of top executives while controlling for relevant firm characteristics.

The sample is unbalanced panel data. Table I reports by year the number of firms that have ownership data for CEO and four top non-CEO executives and necessary variables to construct Tobin's Q and control variables. The ranking of non-CEO executives is determined by the sum of salaries and bonuses. We restrict our analyses to the top five executives because most companies in ExecuComp report the top five or fewer executives. The number of firms during the earlier years is smaller, reflecting the

limited coverage by ExecuComp during the years of initial data compilation. The full sample for CEO share ownership includes 19,729 firm-year observations, associated with 2,482 firms and 5,262 CEO-firm pairs. Because ExecuComp often reports a different number of executives over time for the same firm, simply summing up shares owned by all executives may not reflect real changes on managerial share holdings. Thus, we create another sample restricted to only those firm-year observations that have ownership data for five or more top executives. This screening yields 18,200 firm-year observations associated with 2,428 unique firms.

3.2.2 Proxies for external governance mechanisms

External pressure for good governance arises from many sources, such as the managerial labor market (Fama, 1980) and the market for corporate control.[44] To measure the strength of external governance (EG), we rely on the more quantifiable measures of product market competition and institutional ownership concentration. The disciplinary pressure from product market competition is proxied by the level of industry concentration as measured by the HHI, where a lower index indicates greater product market competition and stronger external pressure for good governance. The HHI is calculated based on the entire sample of firms in Compustat using 48 Fama-French (1997) industry classifications. HHI is also calculated based on the first-two-digit SIC code industry groupings for a robustness check.

The second measure of the strength of EG is the degree of monitoring by institutional investors and block-holders, proxied by institutional ownership concentration (IOC). Following Hartzell and Starks (2003), our primary measure of IOC is the sum of the squares of percentage ownership of each of the top five institutional investors. A higher IOC indicates greater concentration, which we use as a proxy for more effective monitoring by institutional investors. For every firm in the sample, we obtain institutional ownership for each year between 1992 and 2006 from the CDA Spectrum database. We also use the sum of percentage shareholdings by top five institutions as an alternative measure of IOC.

3.2.3 Variables

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[44] We do not use the anti-takeover index, first compiled by Gompers, Ishii, and Metrick (2003) and subsequently refined by Bebchuk, Cohen, and Ferrell (2004) because anti-takeover provisions are firm choice variables.

Most prior papers on the ownership and valuation relation focus on Tobin's Q. We proxy Q by the ratio of the sum of the market value of common stocks and the book value of total liabilities to the book value of total assets. The explanatory variable of main interest is share ownership of the top executives. CEO share ownership, *OWN_CEO,* is measured by the percentage of outstanding common stocks held by a CEO. We initially ignore stock options because they do not give voting rights until exercised. However, stock options, especially in-the-money options, have important incentive effects. Thus, we use *OWN_CEO_SO*, the ratio of the combined value of a CEO's stocks and in-the-money stock options (as reported by ExecuComp) to the market value of all outstanding shares as an alternative measure of CEO ownership.

The share ownership by executives ranked up to five, *OWN_Top*, is the sum of the fractions of shares held by the CEO and up to the top four non-CEO executives covered by ExecuComp; as such, this variable may represent the ownership of the top three, four, or five executives. When we restrict the sample to only those cases where ExecuComp covers five or more top executives, the ownership of top four non-CEO executives, *OWN_Top4,* is measured by the percentage of the combined outstanding shares held by the four executives. The ownership of top five executives including CEO, *OWN_Top5,* is simply the sum of *OWN_CEO* and *OWN_Top4*. When any of these ownership values is equal to or greater than one, that firm-year observation is dropped from the sample.

Because we begin by replicating Himmelberg et al.'s (1999) baseline models, the majority of our model specifications include the same control variables. To address reverse causality, we follow Cho's (1998) simultaneous equations approach and rely on a similar set of control variables. Table II describes all variables used in our study.

3.2.4 Summary Statistics

Table III contains summary statistics of variables used in this study. The variable of primary interest, CEO share ownership, has a mean of 2.8% but a median of only 0.3%, suggesting a skewed distribution. CEO ownership varies from zero to 76.1% with a standard deviation of 6.7%. Of 19,729 observations, 13,399 (67.9%) observations show CEO ownership no more than 1%. Nonetheless, 2,822 (14.3%) observations show

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CEO ownership greater than 5%; 1,735 (8.8%) greater than 10%; and 738 (3.7%) greater than 20%.

The mean CEO ownership of 2.8% is more than double the average combined share holdings by the top four non-CEO executives (1.3%), illustrating the importance of CEO ownership relative to that of her team of executives. Because of our use of firm and CEO-firm fixed effects, the table also reports the average within-firm and within-CEO-firm pair standard deviations in the last two columns. The within-firm variation is much smaller than the cross-sectional variation. For CEO ownership, the time series standard deviations within firms and within CEO-firm pairs are only 1.6% and 0.8%, respectively. These variations are even smaller for the top four non-CEO executives, with the corresponding numbers being only 1.1% and 0.7%.

3.3 Impact of managerial shareholder ownership on firm valuation

3.3.1 Re-examination of the relation between Tobin's Q and share ownership

We begin by replicating Himmelberg et al.'s (1999) baseline models with year and firm fixed effects. Two specifications are used. The first is the quadratic specification used in McConnell and Servaes (1990). The second is the piecewise linear specification used in Morck et al. (1988). The valuation model is:

$$Tobin's\ Q_{it} = \eta_t + \theta_i + \alpha_0 + \alpha\ OWN_{it} + \beta\ Z_{it} + \mu_{it} \qquad (1)$$

Subscripts i and t indicate firm i and time t, and $\eta_t\ and\ \theta_i$ are year- and firm-fixed effects. OWN_{it} includes ownership variables: OWN and OWN^2 in the quadratic specification; OWN_05, OWN_0525, and OWN_25 in the spline specification. The latter three are piecewise-linear terms that allow for changes in the slope coefficient at 5% and 25% share ownership. Table II describes their definitions for each category of ownership.

Z_{it} is a set of control variables taken from Himmelberg et al., also described in Table II. They are firm-level variables related to moral hazard and risk aversion that may influence the optimal share ownership. The first is firm size, which Demsetz and Lehn (1985) argue may have non-linear effects on the scope of moral hazard. LNS stands for firm size as measured by log of sales. We include both LNS and LNS^2 to control for the non-linear size effect.

The second set of control variables captures differences in the scope of managerial discretionary spending. K/S, the ratio of property, plant and equipment (PPE)

to sales, and its square, $(K/S)^2$, are included to measure the relative importance of fixed capital, which presumably is easier to monitor and thus calls for a lower optimal level of managerial ownership. Conversely, intangible assets and discretionary spending are harder to monitor and may lead to a higher desired level of ownership. We include R&D/K, the ratio of R&D expenditures to PPE, and A/K, the ratio of advertising expenditures to PPE. Because these variables are sometimes missing, we create RDUM and ADUM as indicator variables for the availability of relevant data for the computation of R&D/K and A/K. When they are equal to zero, indicating that their corresponding variables are missing, R&D/K or A/K are set to zero to maintain sample size and reduce the risk of sample selection bias. In addition, we include I/K, capital expenditures divided by PPE, and Y/S, operating income normalized by sales. Himmelberg et al. use them to proxy for the link between high growth and discretionary investment opportunities and for free cash flow, respectively.

Finally, we control for SIGMA, a measure of firm idiosyncratic risk. Because holding company stock reduces diversification, everything being equal, risk averse managers will own less company stock the riskier it is. As with R&D/K and A/K, we set missing values of SIGMA equal to zero, and then include a dummy variable SIGDUM equal to one when SIGMA is not missing, and zero otherwise. Himmelberg et al. find the majority of these control variables are significantly related to managerial share ownership.

Table IV reports regression estimates using the quadratic specification in Panel A and the spline specification in Panel B. The results in Column (1) of Panels A and B are based on all firm-year observations in the full sample.[45] OWN_Top is the sum of fractions of shares owned by executives ranked up to the top five. The number of executives represented in this variable varies over time because ExecuComp sometimes covers less than five executives. This is in the spirit of Himmelberg et al., who include all shares held by managers and directors reported in proxy statements, with the number of the insiders ranging from less than five to over 60. The results reported in Column (1) of Panel A show insignificant coefficients for both OWN_Top and $(OWN\_Top)^2$. These insignificant coefficients are consistent with Himmelberg et al.'s regression estimates

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[45] Three observations are dropped because the sum of fractions of share holdings exceeds one.

with firm fixed effects (i.e., 6th column, Table 5 (A), p. 374.) Signs and statistical significance for the control variables also are mostly consistent with those in Himmelberg et al. F-statistic reported at the bottom of the table, however, rejects the joint hypothesis that both OWN_Top and (OWN_Top)^2 are unrelated to Tobin's Q. The inconsistency between the t-test and F-test is due to the multicollinearity between OWN_Top and (OWN_Top)^2 (correlation = 0.902). When we re-estimate Column (1) while omitting (OWN_Top)^2, the coefficient on OWN_Top is 2.308 with a standard error of 1.343.[46] The spline specification estimation in Column (1) of Panel B also indicates a positive relation between Tobin's Q and ownership up to 5% of top management share ownership.

These mixed results may be due to the noise stemming from the variation in the number of executives covered by ExecuComp over time. Of 2,872 firms ever covered by ExecuComp, it consistently covers five or more executives for only 132 firms. Of our sample of 2,482 firms, only 99 report the same number of executives over the sample period even when we treat the number of executives more than five as five. This means that for 96% of the firms, OWN_Top represents ownership held by different numbers of executives over time for the same firm. A substantial portion of the within-firm time series variation in OWN_Top arises from changes in the number of executives included in its calculation.

To eliminate this noise, Column (2) restricts the sample to only those firm-year observations in which ExecuComp covers at least the top five executives. This restriction prevents equal treatment of ownership representing the top five executives' combined share ownership with cases where, say, the top fourth and fifth executives' share holdings are missing for the same firm. The impact of this sample restriction is rather dramatic. Panel A, Column (2) shows a positive coefficient on OWN_Top5 and a negative coefficient on (OWN_Top5)^2, both significant at the one percent level. The partial F-statistic is also reported at the bottom of the table. The coefficients of OWN_Top5 and (OWN_Top5)^2 indicate that the inflection point occurs when ownership reaches about 26%. There are 713 firm-year observations with OWN_Top5 greater than 26%, representing 3.92 % of the sample.

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[46] The coefficients on the control variables are virtually the same.

Panel B, Column (2) also shows a significantly positive relation up to 5% ownership and a significantly negative relation beyond 25% ownership. The coefficients indicate that for ownership between 0% and 5%, Q rises by an average 0.0614, such that Q for firms with 5% ownership exceeds that for firms with zero ownership by over 0.3. For ownership beyond 25%, Q declines at a rate of 0.018 for each 1% increase in ownership. The hump shaped relation between Tobin's Q and managerial share holdings seems to be resurrected with this sample restriction.

As mentioned earlier, restricting the sample to observations with five or more executives may introduce a selection bias. To avoid this risk of selection bias, we re-estimate the regression using only CEO share ownership, which is always reported in ExecuComp. Columns (3) in Panels A and B report the estimation results. The hump shaped relation continues to hold for both quadratic and spline specifications. For the sake of completeness, we also re-estimate the same set of regressions for the top four non-CEO executives and report the results in Column (4) of both panels. For these non-CEO executives, the quadratic specification shows an incomplete hump shaped relation, while the spline specification reveals a but a semi-hump shaped relation with a flat right tail.

3.3.2 Interaction with external governance mechanisms

If the hump shaped relation between firm valuation and CEO ownership is indeed due to CEOs' capture of the contracting process, the effects of CEO ownership on valuation should depend on factors affecting CEOs' abilities or opportunities to capture the contracting process. We argue that one such factor is external governance (EG) mechanisms constraining the ability of CEOs to alter the contracting process to their advantage. Thus, we examine the interactive effects between the strength of EG and share ownership by re-estimating the Tobin's Q and ownership relation while separating the sample into strong and weak EG. We consider a firm-year observation to be subject to strong (weak) EG if it belongs to an industry with below (above) the median HHI, LHHI (HHHI), or if its IOC is above (below) the median IOC, HIOC (LIOC).

The results for CEO ownership are presented in Table V. As before, Panel A reports estimation results of the quadratic specification; and Panel B, the spline specification. All regressions in the first four columns include firm- and year fixed effects.

The coefficients on ownership variables reveal that the hump shaped relation is significant only when EG is weak (Columns (2) and (4)), regardless of whether the strength of EG is measured by product market competition or institutional ownership concentration.[47] This is true whether we use the quadratic or spline specification. Control variables show coefficients mostly consistent with those reported in Table IV.

Equally important, there is no evidence of CEO ownership affecting firm valuation when EG is strong (Columns (1) and (3) of both panels). This is consistent with Demsetz (1983), Demsetz and Lehn (1985), and Himmelberg et al. (1999) who argue that managerial share ownership is determined by the contracting environment

We also test whether the coefficients on the ownership variables differ between the strong and weak EG. We re-estimate the regressions using the full sample with interaction terms between ownership variables and an indicator variable for weak EG. The results (unreported) are consistent with the hypothesis that the valuation and ownership relation is significantly different between the strong and weak EG. First, we use a weak EG indicator variable, HHHI, equal to one for observations belonging to above the median HHI and zero otherwise. The estimation results show insignificant coefficients on OWN_CEO and $(OWN\_CEO)^2$, a significantly positive coefficient on the interaction term OWN_CEO*HHHI, and a significant negative coefficient on the interaction term $(OWN\_CEO)^2$ *HHHI. Similar results are obtained when we use an indicator variable for low IOC.

3.3.2.1 CEO-firm pair fixed effects

The contracting environment includes not only firm characteristics but also agent characteristics, such as agents' abilities, risk preferences, preferences for work vs. shirking, and so on. Many of these characteristics are not observable to the researcher. Yet they have important effects on contracting, as aptly demonstrated by Graham et al. (2009), who document that time-invariant manager fixed effects explain a majority of the variation in executive pay. Thus, we include CEO-firm pair fixed effects to account for

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[47] Interestingly, Column (2) of Panel A of Table V indicates a peak at 28.4%, very close to the peak at 29% for the undivided sample in Column (3) of Table IV. There are 388 firm-year observations with CEO ownership greater than 28%, representing about 2.0% of the sample. They are distributed more or less evenly between high and low HHI samples (200 and 188 firm-year observations, respectively.)

both CEO and firm characteristics. Because firms often experience CEO turnovers during the sample period, our sample of 2,482 unique firms yields 5,262 CEO-firm pairs.

The results with CEO-firm pair fixed effects are reported in the last four columns of Panels A and B of Table V. The estimated relations between firm valuation and CEO ownership are consistent with specifications that control for only firm fixed effects. For observations subject to strong EG (Columns (5) and (7)), there is no relation between Q and ownership. For those under weak EG, the hump shaped relation is robust to controlling for CEO effects.[48] With CEO-firm fixed effects, the spline specification shows a more significant hump shaped relation under weak EG than with only firm fixed effects.

3.3.2.2 Non-CEO top executives

To examine whether non-CEO top executives' share ownership also exhibit similar relations to Tobin's Q, we re-estimate the same set of regressions using the top four non-CEO executive sample while separating it into strong and weak EG regimes. To avoid repetition, hereafter, we only report results with CEO-firm fixed effects. Estimation results with only firm fixed effects are similar and do not change any of the conclusions in the remainder of the paper. The estimation results reported in Table VI show no relation for the strong EG subsamples and a significant hump shaped relation for weak EG subsamples. This is true whether we use the quadratic or spline specification, whether EG is defined by HHI or IOC, or whether we control for only firm fixed effects. Interestingly, the coefficients in Column (2) indicate a peak at 17%, close to the peak at 15% for the undivided sample in Table IV.

These results imply that, on average, non-CEO executives' share ownership also does not reflect the optimal contracts when EG is weak. Taken together with the results on CEOs' share ownership, it appears that a CEO's capture of the incentive contracting process not only influences her ownership but also those of her top management team. When EG is strong, by contrast, non-CEO top executives' share holdings are also unrelated to firm valuation, consistent with the contracting view that managerial share ownership is determined by the contracting environment.

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[48] We also re-estimate the regressions with CEO fixed effects only, not CEO-firm fixed effects. The results (unreported) are consistent with those with firm or CEO-firm fixed effects.

3.3.2.3 Alternative Measures of Key Variables

The results in Tables V and VI may be specific to the ways in which the key variables are defined and the sample is constructed. To check robustness, we re-estimate the regressions in Table V with the following modifications: (1) OWN is defined as the ratio of the combined value of a CEO's stocks and in-the-money stock options (as reported by ExecuComp) to the market value of all outstanding shares, (2) HHI is calculated based on the first two-digit SIC code, (3) IOC is defined as the sum of percentage share ownership held by top five institutions, (4) strong and weak EG is defined as the top third and the bottom third instead of above and below the median, and (5) utility and financial firms are excluded from the sample.

All robustness tests are conducted on CEO ownership for reasons mentioned earlier. We also conduct the tests only for the quadratic specification to avoid duplication. The re-estimation results with the alternative definitions of variables and sample construction are reported in Table VII without reporting coefficients on control variables. All the results are remarkably consistent with those reported in Panel A of Table V. Both no relation under strong EG and the hump shaped relation under weak EG are robust to all the alternative variable definitions and sample construction.

3.3.2.4 Difference in Statistical Properties between Firms Subject to Strong and Weak External Governance

An alternative explanation for the difference in the valuation and ownership relation between firms under strong and weak EG is that the two samples have different statistical properties of ownership. For example, the correlation of IOC and OWN_CEO is -0.032 and significant, suggesting that firms with higher IOC tend to have lower CEO share ownership. In our sample, both the mean and within-firm variation in CEO share ownership among firms subject to strong EG are smaller than those of firms with weak EG. The mean CEO ownership is 0.023 and 0.034 for the high and low IOC sample, and 0.027 and 0.029 for the low and high HHI sample. The corresponding within-firm standard deviation of CEO ownership is 0.012 and 0.017 for the high and low IOC sample, and 0.012 and 0.015 for the low and high HHI sample. The smaller mean and within-firm variation in share ownership may make it difficult to identify effects of ownership for firms with strong EG, even when ownership is related to valuation.

To check this possibility, we re-estimate the regressions for strong EG firms with two subsamples that have the mean and within-firm variation of CEO ownership comparable to those of the weak EG sample. The first subsample includes only firm-year observations with CEO ownership greater than 0.03. The second includes only observations that have a within-firm standard deviation of CEO ownership greater than 0.017. Table VIII reports the estimation results: Columns (1)-(2) report results for the high ownership level subsample; and Columns (3)-(4), the high within firm variation subsample. The results are robust. Signs of many coefficients are inconsistent with the hump shape, and none of the regressions show significant coefficients for either OWN_CEO or (OWN_CEO)^2, regardless of whether EG is defined by product market competition or institutional ownership concentration. Apparently, the insignificant relation between Tobin's Q and CEO ownership for firms subject to strong EG is not driven by lower levels of CEO ownership or the lower within-firm variation.

3.3.2.5 Founder-CEO Effects

An alternative explanation of the hump shaped relation between Q and CEO ownership is the presence of founders in our sample. Several researchers identify distinct founder effects on firm valuation (Morck et al., 1988; Adams, Almeida, and Ferreira, 2003; Fahlenbrach, 2004; and Villalonga and Amit, 2006.) The most recent study, Villalonga and Amit, documents significant positive founder-CEO impacts on firm valuation. In our sample, founder-CEOs' average share ownership is 9.2%, substantially greater than that of non-founder CEOs (1.8%). Thus, it is possible that the positive relation between Q and CEO ownership is driven by the favorable founder effect on firm valuation. In addition, Morck et al. document that the presence of the founding family as one of the top two officers reduces Tobin's Q for old firms; thus, the downward sloping portion of the hump shaped relation could be driven by founder-CEOs of old firms.

To investigate these possibilities, we separate the sample into observations with founder-CEOs and non-founder CEOs and repeat the same set of regressions for each subsample. To identify founder-CEOs, we follow Bebchuk, Cremers, and Peyer (2008) and define a CEO as a founder if he was the CEO of the firm five years prior to going public, where the date of going public is assumed to be the first date the firm appears on

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the CRSP database. The estimation results are reported in Table IX. Panel A reports the results for non-founder CEOs; and Panel B, founder-CEOs.

The two subsamples show markedly different patterns. For non-founder CEOs, all the preceding results hold: While there is no relation for observations subject to strong EG, the hump shaped relation continues to be highly significant for observations subject to weak EG. For the founder-CEO sample, in contrast, no relation of any kind is apparent regardless of the strength of EG. This lack of relation for founder-CEOs could be due to the small sample size, but within firm standard deviation of CEO ownership for this sample (2.3%) is more than twice that of non-founder CEO sample (1.1%). Perhaps what motivates founders is fundamentally different from non-founders, and the majority of founders do not capture the incentive contracting process even when EG is weak. Although investigating these possibilities is beyond the scope of this paper, it is clear that our results are not driven by founder-CEOs.

3.4 Endogeneity issues

In this section, we address endogeneity issues concerning reverse causality and time-varying omitted variables. The reverse causality in the ownership-valuation relation is first raised by Kole (1996), who suggests that corporate value could be a determinant of the ownership structure because managers may prefer equity compensation when they expect their firm to perform well. Cho (1998) extends this line of inquiry by estimating simultaneous regressions, and finds that investment affects firm value which, in turn, affects ownership structure.

To address the reverse-causality issues, we begin by simply repeating the regressions with one-period lagged value of CEO ownership. To account for the confounding effects of CEO turnover in this specification, we exclude the year of and the year after CEO turnover. Table X presents the results with lagged CEO ownership variables. As with the contemporaneous ownership variables, we observe a hump shaped relation for the full and the weak EG sample, and no relation for the strong EG sample.

We also reexamine Cho's simultaneous equation system of ownership, firm value, and investment using three-stage least squares (3SLS). There are three differences from Cho (1998): First, we use the 1992-2006 panel data with CEO-firm fixed effects instead of Cho's 1991 cross-sectional data with industry fixed effects. Second, we measure risk

with *SIGMA* and *SIGDUM* instead of standard deviation in changes in profit rate. Third, we estimate the quadratic specification instead of piecewise regression. The CEO ownership equation, Equation (2), is also similar to the one estimated by Demsetz and Lehn (1985).

$$OWN\_CEO_{it} = \alpha_0 + \alpha_1 Mktval_{it} + \alpha_2 Tobin'sQ_{it} + \alpha_3 Liquidity_{it} + \alpha_4 SIGMA_{it-1} + \alpha_5 SIGDUM_{it-1} + \alpha_6 Investment_{it} + \eta_t + \theta_i + \varepsilon_{it}$$
(2)

$$Tobin'sQ_{it} = \beta_0 + \beta_1 OWN\_CEO_{it} + \beta_2 (OWN\_CEO)^2_{it} + \beta_3 Investment_{it} + \beta_4 Leverage_{it-1} + \beta_5 Assets_{it} + \eta_t + \theta_i + v_{it}$$
(3)

$$Investment_{it} = \gamma_0 + \gamma_1 Tobin's\ Q_{it} + \gamma_2 OWN\_CEO_{it} + \gamma_{32} (OWN\_CEO)^2_{it} + \gamma_3 Liquidity_{it} + \gamma_4 SIGMA_{it-1} + \gamma_5 SIGDUM_{it-1} + \eta_t + \theta_i + \mu_{it}$$
(4)

The variables are defined in Table II.

Table XI reports the results of 3SLS simultaneous regressions. To stay close to Cho's specifications, regressions are first estimated for the full sample in Panel A. We then divide the sample into strong and weak EG in Panel B. The estimation results in both panels do not rule out the possibility that Tobin's Q affects CEO ownership and investments. However, the hump shaped relation between Tobin's Q and CEO ownership remains significant for both the full- and weak EG samples. For the strong EG sample, by contrast, none of the ownership variables is significantly related to Tobin's Q. This is true regardless of whether the strength of EG is measured by product market competition or institutional ownership concentration and whether we control for only firm fixed effects (unreported) or CEO-firm fixed effects.

Our final test addresses the time variant omitted variables problem. We follow the instrumental variables approach used in Himmelberg et al. (1999), who admit that a good instrumental variable for managerial ownership is difficult to find because any variable that plausibly determines the optimal level of managerial ownership may also affect firm value. They nontheless use the firm size and stock price volatility as instrumental variables of managerial ownership in two-stage least squares regressions. We conduct the same exercise with our sample using *LNS, (LNS)^2, SIGMA*, and *SIGDUM*

as instruments, while controlling for year and CEO-firm pair fixed effects. The variance of the predicted *OWN_CEO* and *(OWN_CEO)²* in the second stage are adjusted with robust standard errors. The results (not reported) do not show any significant relation between Tobin's Q and CEO ownership for any subsamples.

This finding could be misleading because using instrumental variables while controlling for fixed effects reduces the precision of estimates so much that the test has little power to detect a relation. To counter this problem, we restrict the analysis to observations under weakest EG regimes, where the hump shaped relation is expected to be more pronounced. If the hump shaped relation for the weak EG subsample is caused by time-varying omitted variables, even these very weak EG subsamples will not exhibit any systematic relation between Tobin's Q and CEO share ownership. We define a firm-year observation as under weak EG if it is in the top third, top quintile, or top decile in HHI, or in the bottom third, bottom quintile, or bottom decile in IOC.

The results are reported in Table XII. They show a significant hump shaped relation between Tobin's Q and CEO share ownership for subsamples with the weakest EG (HHI > 90% and IOC < 10%), even though the sample sizes are much smaller than any other weak EG subsamples we have examined so far. For the second weakest subsamples (HHI > 80% and IOC < 20%), the signs indicate a hump shape and is significant when product market competition is used to identify weak EG and firm fixed effects are included in the regression (results unreported).

3.5 Summary and implications

This paper reexamines a rather contentious issue concerning the effects of managerial share ownership on firm valuation. We find that the ownership and valuation relation depends on the strength of external pressure for good governance. The results imply that the contracting view prevails when the pressure is strong. With shareholders playing the role of principals in contracting, CEO share ownership reflects equilibrium contracts. As such, share ownership per se is unrelated to firm valuation.

When EG is weak, however, the capturing view seems more descriptive. For low levels of share ownership, an increase in ownership makes the CEO more closely aligned with shareholder value, leading to higher firm value. This relation holds as long as the level of shareholdings is small enough to constrain the risk of entrenchment. At a certain

threshold point of share ownership, the entrenchment risk starts to kick in. A further increase in voting rights may help the CEO pursue private benefits with less fear of reprisal from within or outside the firm.[49] Although a higher ownership means that the CEO must share a higher fraction of the costs of private benefits, his cost is less than the benefits because he owns less than 100%. Thus, beyond a certain threshold point, the entrenchment effects may negate, or even dominate the benefits of the alignment effect.

Our main contribution to the literature is the empirical identification of external governance as the key variable in explaining the heterogeneity in the ownership and valuation relation. External governance (EG) is important in today's corporations, which are often characterized by diffuse share ownership with imperfect oversight by the board of directors. Such firms' incentive contracts are susceptible to capture by CEOs, unless deterred by strong EG. Once captured, the predictions of contracting theory as applied to managerial incentive contracts may not hold. Thus, we interpret the hump shaped relation under weak EG as a manifestation of some CEOs usurping the role of principals from shareholders. The lack of relation between CEO share ownership and firm valuation under strong EG, by contrast, implies the prevalence of the contracting view. The threat of elimination in highly competitive product markets and close monitoring through concentrated institutional ownership appear to help preserve shareholders' inherent rights as principal owners of capital.

Our interpretation of the hump shaped relation under weak EG, however, raises an interesting question: Why can't stockholders find a way to prevent CEOs from capturing incentive contracts under weak EG? Perhaps some of them do, in ways not known to us. Given our exhaustive robustness tests conducted here, the only explanation we can offer is that governance problems in large, diffusely held corporations are persistent problems that cannot be easily cured. Consistent with this conjecture, numerous researchers have documented persistency in institutions and corporate governance across time and countries and in firm characteristics over time.[50]

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[49] Greater voting rights may also give the CEO greater protection against dismissal for poor performance (Volpin, 2002; Atanassov and Kim, 2009) and against external shareholder challenges.

[50] See Acemoglu, Johnson, and Robinson (2001), LaPorta, et al. (1998), LaPorta, Lopez-de-Silances, and Shleifer (1999), and Balas et al. (2009) for evidence of persistency in economic and legal institutions and corporate governance across time and countries. Also see Acemoglu and Robinson (2008) for a model of "captured democracy" providing a theoretical explanation for the persistency of economic institutions

These conclusions have important policy implications. One policy debate amid the financial crisis of 2008 – 2009 is the "say on pay," the shareholder right to cast non-binding votes on the executive pay recommended by the board of directors. Our results, combined with the recent finding of Ferri and Spindler (2009), [51] suggest that shareholders' "say on pay" may help preserve shareholders' role as the principals when firms are under weak EG. However, it will be superfluous, and could be harmful, for firms subject to strong EG. When the market forces in the form of product market competition and/or monitoring by institutional investors function properly in disciplining CEOs, it is best to leave the solution to the market forces.

Finally, our results have an implication for the design of research on how managerial attributes and other contractual arrangements influence firm behavior and valuation. The results in this paper illustrate the importance of the interplay between external governance and the ownership-valuation relation. Thus, how attributes such as CEO power and social networks affect managerial decisions and firm performance may also depend on the strength of external governance. A research design failing to account for this important difference may yield only an average effect, masking an important distinction that can lead to more appropriate prescriptions for corporate and public policies.

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over time, and Gordon and Roe (2004) for a collection of articles devoted to the issue of persistence in corporate governance. As for firm level characteristics, Lemmon, Roberts and Zender (2008) document persistency in corporate capital structure, and Cronqvist, Low, and Nilsson (2009) document persistency in investment and financing policies.

[51] Using a large sample of UK firms, Ferri and Spindler (2009) document an increase in the sensitivity of CEO pay to poor performance subsequent to the 2002 UK legislation mandating an annual, non-binding shareholder vote on the executive pay report prepared by the board of directors.

Table 3.1 Firm-year Observations with Relevant Share Ownership

This table lists the number of firms with ownership for CEO and four top non-CEO executives in each year of the sample period. Data is drawn from ExecuComp for the period 1992-2006. Firm-year observation is included if accounting and stock return data to construct Tobin's Q and control variables are available from Compustat and CRSP.

Year	Firms with CEO Ownership	Firms with 4 Top non-CEO Executives' Ownership
	(1)	(2)
1992	309	280
1993	965	902
1994	1,296	1,192
1995	1,358	1,252
1996	1,405	1,296
1997	1,435	1,325
1998	1,413	1,291
1999	1,494	1,378
2000	1,452	1,340
2001	1,397	1,270
2002	1,422	1,318
2003	1,454	1,337
2004	1,453	1,342
2005	1,453	1,350
2006	1,423	1,327
Total Firm-year Observations	**19,729**	**18,200**
Total Firms	**2,482**	**2,428**

Table 3.2 Variable Descriptions

Panel A: Performance and Ownership Variables

Tobin's Q	The market value of common equity plus the book value of total liabilities divided by the book value of total assets.
OWN_CEO	The total common equity holdings of the CEO as a fraction of common equity outstanding.
OWN_CEO_05	Equals *OWN_CEO* if *0.00 < OWN_CEO < 0.05; 0.05* if *OWN_CEO ≥ 0.05*
OWN_CEO_0525	Equals *OWN_CEO – 0.05* if *0.05 < OWN_CEO < 0.25; 0.00* if *OWN_CEO ≤ 0.05; 0.20* if *OWN_CEO > 0.25*
OWN_CEO_25	Equals *OWN_CEO – 0.25* if *0.25 < OWN_CEO < 1.00; 0.00* if *OWN_CEO ≤ 0.25*
OWN_CEO_SO	The ratio of the combined value of a CEO's stocks and in-the-money stock options (as reported by ExecuComp) to the market value of all outstanding shares.
OWN_Top	The sum of the fractions of shares held by executives ranked up to top five.
OWN_Top_05	Equals *OWN_Top* if *0.00 < OWN_Top < 0.05; 0.05* if *OWN_Top ≥ 0.05*
OWN_Top_0525	Equals *OWN_Top – 0.05* if *0.05 < OWN_Top< 0.25; 0.00* if *OWN_Top ≤ 0.05; 0.20* if *OWN_Top > 0.25*
OWN_Top_25	Equals *OWN_Top – 0.25* if *0.25 < OWN_Top < 1.00; 0.00* if *OWN_Top ≤ 0.25*
OWN_Top4	The sum of the fractions of shares held by four top non-CEO executives.
OWN_Top4_05	Equals *OWN_Top4* if *0.00 < OWN_Top4 < 0.05; 0.05* if *OWN_Top4 ≥ 0.05*
OWN_Top4_0525	Equals *OWN_Top4 – 0.05* if *0.05 < OWN_Top4< 0.25; 0.00* if *OWN_Top4 ≤ 0.05; 0.20* if *OWN_Top4 > 0.25*
OWN_Top4_25	Equals *OWN_Top4 – 0.25* if *0.25 < OWN_Top4 < 1.00; 0.00* if *OWN_Top4 ≤ 0.25*
OWN_Top5	The sum of the fractions of shares owned by top five executives, including CEO.
OWN_Top5_05	Equals *OWN_Top5* if *0.00 < OWN_Top5 < 0.05; 0.05* if *OWN_Top5 ≥ 0.05*
OWN_Top5_0525	Equals *OWN_Top5 – 0.05* if *0.05 < OWN_Top5 < 0.25; 0.00* if *OWN_Top5 ≤ 0.05; 0.20* if *OWN_Top5 > 0.25*
OWN_Top5_25	Equals *OWN_Top5 – 0.25* if *0.25 < OWN_Top5 < 1.00; 0.00* if *OWN_Top5 ≤ 0.25*

Panel B: External Governance Variables

HHI	Herfindahl-Hirschman Index calculated as the sum of the squares of sales by the four biggest firms in each industry during each year. Industries are defined by the Fama-French (1997) industry groupings.
HHI_Sic2	Herfindahl-Hirschman Index calculated as the sum of the squares of sales by the four biggest firms in each industry during each year. Industries are defined by the first two-digit SIC codes.
IOC	Institutional ownership concentration measured as the sum of the squares of top five institutional investor ownerships.
IOC_Top5	The sum of top five institutional investor ownerships.

Panel C: Control Variables

LNS	The natural log of sales in 2000 US dollars.
K/S	The ratio of tangible, long-term assets (property, plant, and equipment) to sales.
Y/S	The ratio of EBITDA (earnings before interest, tax, depreciation, and amortization) to sales.
SIGMA	The standard error of the residuals from a CAPM model estimated using daily data for the period covered by the annual sample.

SIGDUM	A dummy variable equal to unity if the data required to estimated RISK is available, and otherwise equal to zero (if SIGMA is missing). To maintain sample size and reduce the risk of sample selection bias, we set missing observations of SIGMA equal to zero, and then include this dummy variable to allow the intercept term to capture the mean of SIGMA for missing values.
R&D/K	The ratio of research and development expenditures to property, plant, and equipment.
RDUM	A dummy variable equal to unity if R&D data are available, and otherwise equal to zero.
A/K	The ratio of advertising expenditures to property, plant, and equipment.
ADUM	A dummy variable equal to unity if R&D data are available, and otherwise equal to zero.
I/K	The ratio of capital expenditures to property, plant, and equipment.
Mktval	The market value of common equity in 2000 US dollars (Unit: billion dollars).
Liquidity	Cash flow divided by the book value of total assets.
Investment	Capital expenditures divided by the book value of total assets.
Leverage	Total value of long term debt divided by the book value of total assets.
Assets	The natural log of the book value of total assets in 2000 US dollars.
Founder	A dummy variable equal to unity if the current CEO is one of the founders; otherwise, zero.

Table 3.3 Summary Statistics

This table presents summary statistics for all variables. S.D. indicates sample standard deviation of the variable; WFS.D. indicates the average within firm standard deviation of the variable; and WCFS.D. indicates the average within CEO-firm pair standard deviation of the variable. The definitions of all variables are given in Table II.

Variable	Obs.	Mean	Median	Min	Max	S.D.	W F S.D	W CF S.D.
Panel A: Performance and Ownership Variables								
Tobin's Q	20668	2.119	1.561	0.279	105.119	2.402	0.801	0.675
OWN_CEO	19729	0.028	0.003	0.000	0.761	0.067	0.016	0.008
OWN_CEO_SO	19559	0.029	0.003	0.000	0.762	0.068	0.016	0.008
OWN_Top	19726	0.042	0.008	0.000	0.866	0.084	0.021	0.014
OWN_Top5	18200	0.039	0.007	0.000	0.866	0.081	0.020	0.013
OWN_Top4	18200	0.013	0.002	0.000	0.636	0.040	0.011	0.007
Panel B: External Governance Variables								
HHI	20668	0.047	0.032	0.002	0.805	0.065	0.011	0.008
HHI_Sic2	20668	0.054	0.034	0.002	0.816	0.064	0.014	0.010
IOC	15740	0.020	0.015	0.000	0.872	0.032	0.010	0.009
IOC_Top5	15740	0.254	0.248	0.000	0.972	0.102	0.062	0.052
Panel C: Control Variables								
LNS	20668	7.086	7.033	-3.534	12.606	1.629	0.363	0.275
K/S	20668	0.900	0.447	0.003	303.596	3.851	0.349	0.262
Y/S	20668	-0.022	0.144	-424.447	1.330	5.640	0.389	0.286
SIGMA	20668	0.024	0.021	0.000	0.196	0.015	0.008	0.007
SIGDUM	20668	0.952	1.000	0.000	1.000	0.215	0.029	0.018
R&D/K	20668	0.137	0.000	0.000	28.184	0.557	0.058	0.048
RDUM	20668	0.563	1.000	0.000	1.000	0.496	0.039	0.027
A/K	20668	0.045	0.000	0.000	6.549	0.200	0.025	0.020
ADUM	20668	0.297	0.000	0.000	1.000	0.457	0.134	0.095
I/K	20668	0.131	0.102	0.000	4.302	0.109	0.059	0.050
Mktval	21272	6.084	1.282	0.000	475.894	20.050	3.019	2.389
Liquidity	21272	0.085	0.041	0.000	0.977	0.111	0.050	0.042
Investment	21272	0.060	0.045	0.000	1.205	0.059	0.026	0.022
Leverage	21272	0.188	0.170	0.000	0.999	0.166	0.072	0.059
Asset	21272	7.303	7.146	0.587	14.301	1.697	0.382	0.286
Founder	19059	0.100	0.000	0.000	1.000	0.301	0.041	0.000

Table 3.4 Re-examination of the Relation between Tobin's Q and Managerial Share Ownership

This table reports estimates of the relation between Tobin's Q and managerial ownership. The definitions of all variables are given in Table II. Share ownership in Column (1) includes all executives ranked up to top five; Column (2) restricts the sample to firm-year observations in which all top five executives' ownerships are available; Column (3) includes only CEO ownership; Column (4) includes the sum of share ownership by four top non-CEO executives only when all four are available. All specifications include year and firm fixed effects. Standard errors are reported in parentheses. In Panel A, ownership variables are continuous; in Panel B, they are piecewise linear terms. Coefficients marked with *, **, and *** are significant at 10%, 5% and 1%, respectively.

Panel A: Quadratic Specification		Dependent Variable: Tobin's Q		
Variable	(1)	(2)	(3)	(4)
OWN_Top	1.836			
	(1.812)			
(OWN_Top)^2	1.129			
	(7.189)			
OWN_Top5		3.610***		
		(0.869)		
(OWN_Top5)^2		-6.967***		
		(1.761)		
OWN_CEO			3.995***	
			(1.238)	
(OWN_CEO)^2			-6.861***	
			(2.466)	
OWN_Top4				1.970
				(1.219)
(OWN_Top4)^2				-6.451**
				(3.145)
LNS	-1.509***	-2.147***	-1.524***	-2.163***
	(0.463)	(0.644)	(0.467)	(0.643)
(LNS)^2	0.069**	0.115***	0.070**	0.115***
	(0.028)	(0.040)	(0.029)	(0.040)
K/S	-0.147***	-0.168***	-0.146***	-0.171***
	(0.035)	(0.052)	(0.036)	(0.052)
(K/S)^2	0.000***	0.000***	0.000***	0.000***
	(0.000)	(0.000)	(0.000)	(0.000)
Y/S	-0.019	0.002	-0.018	0.001
	(0.016)	(0.035)	(0.017)	(0.035)
SIGMA	-16.614***	-16.407***	-16.486***	-16.359***
	(5.025)	(5.956)	(5.003)	(5.966)
SIGDUM	-1.572***	-1.431***	-1.586***	-1.424***
	(0.463)	(0.413)	(0.476)	(0.413)
R&D/K	0.080	0.260**	0.079	0.263**
	(0.096)	(0.125)	(0.096)	(0.126)
RDUM	0.132*	0.117	0.122*	0.125
	(0.075)	(0.076)	(0.073)	(0.077)
A/K	1.867***	1.543***	1.871***	1.553***
	(0.626)	(0.484)	(0.629)	(0.484)
ADUM	-0.380***	-0.319***	-0.379***	-0.321***
	(0.094)	(0.092)	(0.094)	(0.092)
I/K	4.457***	4.038***	4.482***	4.077***
	(0.917)	(0.913)	(0.922)	(0.915)
Constant	10.401***	12.304***	10.501***	12.477***
	(2.193)	(2.813)	(2.221)	(2.811)
Firm FE and Year FE	Y	Y	Y	Y

Observations	19726	18200	19729	18200
# of Firms	2482	2428	2482	2428
Adj R-squared	0.39	0.40	0.39	0.40
F-statistics	9.89	8.64	5.50	2.57
Prob > F	0.000	0.000	0.004	0.077

Panel B: Spline Specification
Dependent Variable: Tobin's Q

	(1)	(2)	(3)	(4)
OWN_Top_05	5.261**			
	(2.562)			
OWN_Top_0525	1.436			
	(0.914)			
OWN_Top_25	2.556			
	(4.167)			
OWN_Top5_05		6.142***		
		(1.738)		
OWN_Top5_0525		1.068		
		(0.748)		
OWN_Top5_25		-1.818**		
		(0.875)		
OWN_CEO_05			5.177***	
			(1.896)	
OWN_CEO_0525			2.012**	
			(0.895)	
OWN_CEO_25			-1.897*	
			(1.099)	
OWN_Top4_05				9.219***
				(2.035)
OWN_Top4_0525				-3.601***
				(1.163)
OWN_Top4_25				0.353
				(1.991)
LNS	-1.507***	-2.145***	-1.522***	-2.157***
	(0.462)	(0.136)	(0.109)	(0.136)
(LNS)²	0.069**	0.114***	0.070***	0.115***
	(0.028)	(0.010)	(0.008)	(0.010)
K/S	-0.147***	-0.168***	-0.146***	-0.170***
	(0.035)	(0.022)	(0.017)	(0.022)
(K/S)²	0.000***	0.000***	0.000***	0.000***
	(0.000)	(0.000)	(0.000)	(0.000)
Y/S	-0.019	0.002	-0.018***	0.001
	(0.016)	(0.015)	(0.007)	(0.015)
SIGMA	-16.609***	-16.411***	-16.475***	-16.403***
	(5.025)	(2.051)	(1.984)	(2.051)
SIGDUM	-1.576***	-1.428***	-1.588***	-1.415***
	(0.465)	(0.145)	(0.146)	(0.145)
R&D/K	0.077	0.258***	0.079*	0.262***
	(0.096)	(0.060)	(0.046)	(0.060)
RDUM	0.131*	0.119	0.124	0.117
	(0.075)	(0.110)	(0.110)	(0.110)
A/K	1.866***	1.555***	1.873***	1.554***
	(0.619)	(0.172)	(0.167)	(0.172)
ADUM	-0.379***	-0.320***	-0.379***	-0.318***
	(0.094)	(0.064)	(0.064)	(0.064)
I/K	4.444***	4.031***	4.479***	4.046***
	(0.915)	(0.183)	(0.180)	(0.183)
Constant	10.356***	12.264***	10.486***	12.390***
	(2.184)	(0.525)	(0.420)	(0.522)
Firm FE and Year	Y	Y	Y	Y

FE				
Observations	19726	18200	19729	18200
# of Firms	2482	2428	2482	2428
Adj-Rsquared	0.39	0.40	0.39	0.40
F-statistics	7.54	8.05	8.79	7.44
Prob > F	0.000	0.000	0.000	0.000

Table 3.5 Tobin's Q and CEO Share Ownership under Strong and Weak External Governance

This table reports estimates of the relation between CEO ownership and Tobin's Q under strong and weak external governance. External governance is measured by Herfindahl-Hirschman Index (HHI) in Columns (1), (2), (5) and (6) and by institutional ownership concentration (IOC) in Columns (3), (4), (7) and (8). LHHI and HHHI indicate below and above the median HHI, corresponding to strong and weak external governance. HIOC and LIOC indicate above and below the median IOC, corresponding to strong and weak external governance. All specifications include firm and year fixed effects in Columns (1)-(4); and CEO-firm and year fixed effects in Columns (5)-(8). The definitions of all variables are given in Table II. Standard errors are reported in parentheses. All specifications include year and firm fixed effects. Standard errors are reported in parentheses. In Panel A, ownership variables are continuous; in Panel B, they are piecewise linear terms. Coefficients marked with *, **, and *** are significant at 10%, 5% and 1%, respectively.

Panel A: Quadratic Specification				Dependent Variable: Tobin's Q			
Variable	LHHI	HHHI	HIOC	LIOC	LHHI	HHHI	HIOC	LIOC
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
OWN_CEO	0.258	5.976***	0.840	6.309***	-1.636	10.007***	-2.412	19.740***
	(0.855)	(1.144)	(1.254)	(1.790)	(1.455)	(1.774)	(1.821)	(3.265)
$(OWN\_CEO)^2$	-0.308	-10.513***	-1.951	-13.142***	1.735	-14.423***	2.482	-33.669***
	(1.948)	(2.653)	(2.839)	(4.136)	(2.660)	(3.291)	(3.384)	(6.176)
LNS	-0.696***	-0.748***	-2.690***	-4.244***	-0.797***	-0.987***	-2.097***	-5.283***
	(0.137)	(0.141)	(0.260)	(0.281)	(0.164)	(0.169)	(0.269)	(0.344)
$(LNS)^2$	0.029***	0.032***	0.154***	0.221***	0.043***	0.053***	0.120***	0.303***
	(0.010)	(0.011)	(0.019)	(0.020)	(0.012)	(0.013)	(0.019)	(0.025)
K/S	-0.155***	-0.076***	-0.647***	-0.215***	-0.220***	-0.092**	-0.751***	-0.274***
	(0.032)	(0.022)	(0.099)	(0.032)	(0.040)	(0.039)	(0.125)	(0.043)
$(K/S)^2$	0.001***	0.000*	0.040***	0.001***	0.002***	0.000	0.060***	0.001***
	(0.000)	(0.000)	(0.007)	(0.000)	(0.000)	(0.000)	(0.013)	(0.000)
Y/S	0.013	-0.025***	0.581***	0.106***	-0.012	-0.025***	0.342***	0.151***
	(0.015)	(0.007)	(0.095)	(0.020)	(0.018)	(0.007)	(0.103)	(0.027)
SIGMA	-0.003	-13.109***	-13.835***	-26.327***	-3.695*	-14.255***	-13.776***	-31.794***
	(1.851)	(2.641)	(2.945)	(4.348)	(2.125)	(2.720)	(2.861)	(4.784)
SIGDUM	0.136	-0.815***	-2.250***	-3.329***	0.169	-1.040***	-1.990***	-5.226***
	(0.177)	(0.175)	(0.261)	(0.339)	(0.236)	(0.197)	(0.286)	(0.413)
R&D/K	-0.260***	0.082*	0.251***	-0.029	-0.395***	0.024	0.175**	-0.035
	(0.085)	(0.048)	(0.089)	(0.075)	(0.093)	(0.050)	(0.077)	(0.089)
RDUM	-0.004	0.037	0.342**	0.095	0.036	0.033	0.239	0.190
	(0.145)	(0.126)	(0.154)	(0.255)	(0.171)	(0.134)	(0.166)	(0.293)
A/K	0.417**	0.979***	0.049	4.879***	0.608***	1.198***	0.331	3.946***
	(0.194)	(0.199)	(0.282)	(0.382)	(0.206)	(0.200)	(0.244)	(0.438)
ADUM	-0.211***	-0.134*	0.018	-0.595***	-0.087	-0.219**	0.003	-0.480***
	(0.068)	(0.081)	(0.091)	(0.137)	(0.079)	(0.087)	(0.092)	(0.162)
I/K	2.891***	2.792***	3.736***	4.714***	2.504***	2.322***	2.588***	4.167***
	(0.179)	(0.227)	(0.284)	(0.337)	(0.197)	(0.237)	(0.266)	(0.375)
Constant	5.043***	6.257***	14.868***	24.118***	5.070***	7.113***	12.688***	28.747***
	(0.567)	(0.543)	(1.001)	(1.091)	(0.677)	(0.640)	(1.034)	(1.347)
Firm FE and Year FE	Y	Y	Y	Y	N	N	N	N
CEO-Firm FE and Year FE	N	N	N	N	Y	Y	Y	Y
Observations	9186	10543	7889	7250	9186	10543	7889	7250
# of Firms	1537	1752	1557	1465				

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# of CEO-firm Pairs					2448	2913	2472	2293
Adj R-squared	0.56	0.64	0.43	0.41	0.57	0.71	0.61	0.44
F-statistics	0.06	14.68	0.25	6.21	0.89	16.62	1.14	18.30
Prob > F	0.939	0.000	0.779	0.002	0.412	0.000	0.3186	0.000

Panel B: Spline Specifications			Dependent Variable: Tobin's Q					
Variable	LHHI	HHHI	HIOC	LIOC	LHHI	HHHI	HIOC	LIOC
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
OWN_CEO_05	0.181	8.101***	6.242**	2.141	-6.045*	10.089***	-7.173*	19.929***
	(1.930)	(2.456)	(2.843)	(4.049)	(3.333)	(3.882)	(3.985)	(7.432)
OWN_CEO_0525	0.168	2.928**	-1.529	4.501**	-0.043	7.481***	0.557	10.800***
	(0.941)	(1.182)	(1.402)	(1.768)	(1.290)	(1.545)	(1.771)	(2.602)
OWN_CEO_25	0.074	-3.097**	-0.589	-4.991**	-0.464	-3.424**	-1.815	-7.503***
	(1.137)	(1.437)	(1.775)	(2.095)	(1.273)	(1.559)	(1.903)	(2.540)
LNS	-0.696***	-0.747***	-2.676***	-4.254***	-0.800***	-0.988***	-2.101***	-5.297***
	(0.137)	(0.141)	(0.260)	(0.281)	(0.164)	(0.169)	(0.269)	(0.344)
$(LNS)^2$	0.029***	0.032***	0.154***	0.222***	0.043***	0.054***	0.121***	0.304***
	(0.010)	(0.011)	(0.019)	(0.020)	(0.012)	(0.013)	(0.019)	(0.025)
K/S	-0.155***	-0.076***	-0.648***	-0.216***	-0.222***	-0.092**	-0.752***	-0.274***
	(0.032)	(0.022)	(0.099)	(0.032)	(0.040)	(0.039)	(0.125)	(0.043)
$(K/S)^2$	0.001***	0.000*	0.040***	0.001***	0.002***	0.000	0.059***	0.001***
	(0.000)	(0.000)	(0.007)	(0.000)	(0.000)	(0.000)	(0.013)	(0.000)
Y/S	0.013	-0.025***	0.577***	0.106***	-0.012	-0.025***	0.340***	0.151***
	(0.015)	(0.007)	(0.095)	(0.020)	(0.018)	(0.007)	(0.103)	(0.027)
SIGMA	-0.001	-13.068***	-13.879***	-26.123***	-3.645*	-14.231***	-13.841***	-31.796***
	(1.851)	(2.640)	(2.948)	(4.339)	(2.125)	(2.720)	(2.866)	(4.776)
SIGDUM	0.136	-0.821***	-2.250***	-3.338***	0.165	-1.038***	-1.992***	-5.230***
	(0.177)	(0.175)	(0.261)	(0.339)	(0.236)	(0.197)	(0.286)	(0.413)
R&D/K	-0.260***	0.082*	0.254***	-0.026	-0.397***	0.024	0.172**	-0.034
	(0.085)	(0.048)	(0.089)	(0.075)	(0.093)	(0.050)	(0.077)	(0.089)
RDUM	-0.004	0.042	0.342**	0.099	0.032	0.040	0.238	0.200
	(0.145)	(0.126)	(0.154)	(0.255)	(0.171)	(0.134)	(0.166)	(0.293)
A/K	0.417**	0.976***	0.062	4.887***	0.618***	1.196***	0.303	3.957***
	(0.194)	(0.198)	(0.282)	(0.382)	(0.206)	(0.200)	(0.245)	(0.438)
ADUM	-0.211***	-0.135*	0.024	-0.598***	-0.084	-0.220**	0.007	-0.491***
	(0.068)	(0.081)	(0.091)	(0.137)	(0.079)	(0.087)	(0.092)	(0.162)
I/K	2.891***	2.786***	3.716***	4.722***	2.498***	2.323***	2.581***	4.180***
	(0.179)	(0.227)	(0.284)	(0.337)	(0.197)	(0.237)	(0.266)	(0.376)
Constant	5.043***	6.220***	14.690***	24.171***	5.139***	7.087***	12.760***	28.782***
	(0.567)	(0.543)	(0.975)	(1.092)	(0.678)	(0.641)	(1.038)	(1.350)
Firm FE and Year FE	Y	Y	Y	Y	N	N	N	N
CEO-Firm FE and Year FE	N	N	N	N	Y	Y	Y	Y
Observations	9186	10543	7889	7250	9186	10543	7889	7250

# of Firms	1537	1752	1557	1465				
# of CEO-firm Pairs					2448	2913	2472	2293
Adj-Rsquared	0.56	0.64	0.43	0.41	0.57	0.71	0.61	0.44
F-statistics	0.04	11.48	1.72	4.16	1.32	13.81	1.43	11.82
Prob > F	0.991	0.000	0.160	0.001	0.267	0.000	0.232	0.000

Table 3.6 Tobin's Q and Non-CEO Top Four Executives' Share Ownership under Strong and Weak External Governance

This table reports estimates of the relation between Tobin's Q and the sum of four top non-CEO executives' ownership under strong and weak external governance. External governance is measured by Herfindahl-Hirschman Index (HHI) in Columns (1), (2), (5) and (6) and by institutional ownership concentration (IOC) in Columns (3), (4), (7) and (8). LHHI and HHHI indicate below and above the median HHI, corresponding to strong and weak external governance. HIOC and LIOC indicate above and below the median IOC, corresponding to strong and weak external governance. All regressions include CEO-firm pair and year fixed effects. The definitions of all variables are given in Table II. All specifications include year and firm fixed effects. Standard errors are reported in parentheses. In Panel A, ownership variables are continuous; in Panel B, they are piecewise linear terms. Standard errors are reported in parentheses. Coefficients marked with *, **, and *** are significant at 10%, 5% and 1%, respectively.

Variable	Dependent Variable: Tobin's Q							
	Panel A: Quadratic Specification				Panel B: Spline Specifications			
	LHHI	HHHI	HIOC	LIOC	LHHI	HHHI	HIOC	LIOC
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
OWN_Top4	-0.884	4.872***	-1.594	5.555**				
	(1.62)	(1.625)	(2.213)	(2.625)				
(OWN_Top4)^2	-0.011	-14.514***	2.151	-18.882**				
	(4.578)	(4.53)	(5.914)	(7.397)				
OWN_Top4_05					-3.063	11.020***	0.571	18.707***
					(2.733)	(2.784)	(3.509)	(5.007)
OWN_Top4_0525					0.653	-2.377	-2.422	-5.413**
					(1.572)	(1.577)	(2.537)	(2.404)
OWN_Top4_25					-3.136	-3.025	0.822	-2.323
					(2.784)	(2.681)	(3.617)	(4.340)
LNS	-0.753***	-1.886***	-2.024***	-5.320***	-0.748***	-1.863***	-2.020***	-5.275***
	(0.18)	(0.207)	(0.291)	(0.357)	(0.180)	(0.207)	(0.291)	(0.357)
(LNS)^2	0.041***	0.103***	0.114***	0.319***	0.041***	0.102***	0.114***	0.317***
	(0.013)	(0.015)	(0.021)	(0.025)	(0.013)	(0.015)	(0.021)	(0.025)
K/S	-0.197***	-0.846***	-0.871***	-0.389***	-0.197***	-0.843***	-0.869***	-0.387***
	(0.042)	(0.094)	(0.137)	(0.045)	(0.042)	(0.094)	(0.137)	(0.045)
(K/S)^2	0.002***	0.036***	0.064***	0.001***	0.002***	0.036***	0.064***	0.001***
	(0.000)	(0.007)	(0.014)	(0.000)	(0.000)	(0.007)	(0.014)	(0.000)
Y/S	-0.006	0.103***	0.265**	0.038	-0.006	0.101***	0.265**	0.037
	(0.019)	(0.025)	(0.11)	(0.037)	(0.019)	(0.025)	(0.110)	(0.037)
SIGMA	-3.903*	-7.610***	-15.725***	-31.238***	-3.874*	-7.587***	-15.772***	-31.473***
	(2.329)	(2.755)	(3.108)	(4.612)	(2.330)	(2.753)	(3.106)	(4.610)
SIGDUM	0.213	-0.990***	-2.311***	-3.295***	0.209	-0.985***	-2.311***	-3.263***
	(0.267)	(0.184)	(0.311)	(0.382)	(0.267)	(0.184)	(0.311)	(0.382)
R&D/K	-0.104	0.112**	0.199**	-0.003	-0.105	0.113**	0.199**	-0.015
	(0.108)	(0.056)	(0.082)	(0.160)	(0.108)	(0.056)	(0.082)	(0.160)
RDUM	0.014	0.04	0.243	-0.008	0.016	0.032	0.242	-0.030
	(0.182)	(0.125)	(0.181)	(0.261)	(0.182)	(0.125)	(0.181)	(0.261)
A/K	0.711***	0.468**	0.394	1.984***	0.710***	0.465**	0.395	2.003***
	(0.226)	(0.201)	(0.277)	(0.429)	(0.226)	(0.201)	(0.277)	(0.429)
ADUM	-0.116	-0.121	0.016	-0.328**	-0.117	-0.118	0.016	-0.320**
	(0.084)	(0.082)	(0.099)	(0.151)	(0.084)	(0.082)	(0.099)	(0.151)
I/K	2.400***	1.899***	2.247***	3.248***	2.400***	1.912***	2.246***	3.241***
	(0.210)	(0.232)	(0.292)	(0.345)	(0.210)	(0.232)	(0.292)	(0.345)
Constant	4.998***	10.708***	12.972***	26.742***	4.998***	10.568***	12.944***	26.587***
	(0.741)	(0.783)	(1.129)	(1.368)	(0.740)	(0.784)	(1.130)	(1.386)
CEO-Firm FE and Year FE	Y	Y	Y	Y	Y	Y	Y	Y
Observations	8450	9750	7280	6717	8450	9750	7281	6716
# of CEO-firm Pairs	2360	2812	2377	2203	2360	2812	2377	2203
Adj R-squared	0.56	0.74	0.6	0.48	8450	9750	7281	6716
F-statistics	0.64	5.21	0.37	3.30	0.85	5.99	0.35	5.39
Prob > F	0.527	0.001	0.694	0.037	0.464	0.001	0.789	0.001

Table 3.7 Robustness to Alternative Definitions of Key Variables and Sample Construction

This table reports the robustness of the results in Table V to various measures of key variables and to an alternative sample construction. External governance is measured by Herfindahl-Hirschman Index (HHI) in Columns (1), (2), (5) and (6) and by institutional ownership concentration (IOC) in Columns (3), (4), (7) and (8). LHHI and HHHI indicate below and above the median HHI, corresponding to strong and weak external governance. HIOC and LIOC indicate above and below the median IOC, corresponding to strong and weak external governance. All regressions include CEO-firm pair and year fixed effects and the same control variables used in Table V but not reported. The definitions of all variables are given in Table II. Standard errors are reported in parentheses. Coefficients marked with *, **, and *** are significant at 10%, 5% and 1%, respectively.

Variable		LHHI	HHHI	HIOC	LIOC
		(1)	**(2)**	**(3)**	**(4)**
CEO_OWN including in-the-money stock options (OWN_CEO_SO)	*(OWN_CEO)*	-1.369	9.818***	-1.563	15.402***
		(1.382)	(1.656)	(1.731)	(2.821)
	(OWN_CEO)^2	0.456	-13.206***	0.51	-22.066***
		(2.258)	(2.735)	(2.95)	(4.392)
	Adj R-squared	0.57	0.72	0.62	0.44
	Obs.	9102	10455	7837	7205
	F-statistics	1.29	17.95	1.03	14.93
	Prob > F	0.275	0.000	0.359	0.000
HHI measured by the first two-digit SIC Code (HHI_Sic2)	*(OWN_CEO)*	0.259	8.426***		
		(1.874)	(1.891)		
	(OWN_CEO)^2	-0.288	-11.457***		
		(3.524)	(3.527)		
	Adj R-squared	0.53	0.58		
	Obs.	9184	10545		
	F-statistics	0.01	10.94		
	Prob > F	0.987	0.000		
IOC measured by the sum of top five institutional investor ownership (IOC_Top5)	*(OWN_CEO)*			-2.381	21.527***
				(1.565)	(3.43)
	(OWN_CEO)^2			2.613	-35.991***
				(3.23)	(6.236)
	Adj R-squared			0.68	0.46
	Obs.			7911	7228
	F-statistics			1.56	19.72
	Prob > F			0.210	0.000
Different cutoff points in HHI and IOC (Top/Bottom 1/3)	*(OWN_CEO)*	-2.898	6.375***	-3.469	34.383***
		(2.22)	(2.003)	(2.535)	(4.943)
	(OWN_CEO)^2	2.395	-10.326***	4.332	-59.193***
		(4.353)	(3.593)	(4.779)	(9.328)
	Adj R-squared	0.55	0.57	0.63	0.43
	Obs.	5567	7149	5394	4627
	F-statistics	1.79	5.07	1.04	24.19
	Prob > F	0.168	0.006	0.352	0.000
Sample without utility and financial firms	*(OWN_CEO)*	-1.56	8.783***	-2.528	20.425***
		(1.778)	(1.758)	(1.93)	(3.574)
	(OWN_CEO)^2	1.668	-12.796***	2.485	-34.157***
		(3.14)	(3.246)	(3.51)	(6.722)
	Adj R-squared	0.54	0.72	0.61	0.43
	Obs.	7026	10217	7306	6051
	F-statistics	0.53	12.89	1.14	16.39
	Prob > F	0.591	0.000	0.32	0.000

Table 3.8 Difference in Statistical Properties between Firms Subject to Strong and Weak External Governance

This table reports the results of testing whether the results in Table V are driven by differences in statistical properties between firms subject to strong and weak external governance. All regressions are estimated with strong external governance subsamples. In Columns (1), (2), (5), and (6), the samples include only firm-year observations with CEO ownership greater than 0.03, and are subject to strong external governance. In Columns (3), (4), (7), and (8), the samples include only firm-year observations with within firm standard deviation of CEO ownership greater than 0.017. External governance is measured by Herfindahl-Hirschman Index (HHI) in Columns (1), (2), (5) and (6) and by institutional ownership concentration (IOC) in Columns (3), (4), (7) and (8). LHHI and HHHI indicate below and above the median HHI, corresponding to strong and weak external governance. HIOC and LIOC indicate above and below the median IOC, corresponding to strong and weak external governance. All regressions include CEO-firm pair and year fixed effects and the same control variables used in Table V (not reported). The definitions of all variables are given in Table II. Standard errors are reported in parentheses. Coefficients marked with *, **, and *** are significant at 10%, 5% and 1%, respectively.

Variable	Dependent Variable: Tobin's Q			
	OWN_CEO>0.03		WFSD(OWN_CEO)>0.017	
	LHHI	HIOC	LHHI	HIOC
	(1)	(2)	(3)	(4)
OWN_CEO	-0.993	1.018	-1.814	-3.126
	(2.199)	(3.219)	(1.471)	(2.011)
(OWN_CEO)^2	-0.225	-2.193	2.009	3.03
	(3.418)	(4.789)	(2.605)	(3.682)
CEO-Firm FE and Year FE	Y	Y	Y	Y
Observations	1660	1313	1592	1488
Adj-Rsquared	0.63	0.73	0.65	0.7
F-statistics	0.74	0.13	1.01	1.70
Prob > F	0.480	0.877	0.366	0.184

Table 3.9 Impact of Founder on the Relation between Tobin's Q and CEO Share Ownership

This table reports the results of testing whether the results in Table V are driven by the founder effects. In Panel A, all regressions are estimated with the sample only including non-founder CEO firm-year observations. In Panel B, all regressions are estimated with the sample only including founder CEO firm-year observations. External governance is measured by Herfindahl-Hirschman Index (HHI) in Columns (1), (2), (5) and (6) and by institutional ownership concentration (IOC) in Columns (3), (4), (7) and (8). LHHI and HHHI indicate below and above the median HHI, corresponding to strong and weak external governance. HIOC and LIOC indicate above and below the median IOC, corresponding to strong and weak external governance. All regressions include CEO-firm pair and year fixed effects and the same control variables used in Table V (not reported). The definitions of all variables are given in Table II. Standard errors are reported in parentheses. Coefficients marked with *, **, and *** are significant at 10%, 5% and 1%, respectively.

Variable	Dependent Variable: Tobin's Q							
	Panel A: Non-founder Sample Regressions				**Panel B: Founder Sample Regressions**			
	LHHI	HHHI	HIOC	LIOC	LHHI	HHHI	HIOC	LIOC
	(1)	**(2)**	**(3)**	**(4)**	**(5)**	**(6)**	**(7)**	**(8)**
OWN_CEO	-1.05	10.178***	-2.904	29.234***	-6.189*	3.411	-1.069	0.28
	(1.916)	(2.13)	(2.381)	(4.444)	(3.257)	(4.226)	(3.428)	(5.327)
(OWN_CEO)²	4.649	-14.364***	3.78	-46.861***	3.5	-4.891	-3.793	-5.786
	(3.577)	(3.849)	(4.164)	(8.412)	(6.06)	(7.726)	(8.048)	(9.502)
CEO-Firm FE and Year FE	Y	Y	Y	Y	Y	Y	Y	Y
Observations	7565	8828	6673	6027	934	924	818	734
Adj-Rsquared	0.58	0.73	0.59	0.46	0.58	0.63	0.71	0.47
F-statistics	1.14	11.85	0.75	22.27	5.06	0.35	1.27	0.96
Prob > F	0.320	0.000	0.473	0.000	0.007	0.705	0.281	0.382

Table 3.10 Tobin's Q and Lagged CEO Share Ownership

This table reports the robustness of the results to reverse-causality between CEO ownership and Tobin's Q using one-period lagged value of CEO ownership. For all regressions, the observations in the year of and the year after CEO turnover are excluded. The full sample is used in Columns (1) and (6). Subsamples divided by the strength of external governance are used in Columns (2)-(5) and (7)-(10). External governance is measured by Herfindahl-Hirschman Index (HHI) in Columns (2), (3), (7) and (8) and by institutional ownership concentration (IOC) in Columns (4), (5), (9) and (10). LHHI and HHHI indicate below and above the median HHI, corresponding to strong and weak external governance. HIOC and LIOC indicate above and below the median IOC, corresponding to strong and weak external governance. All regressions include CEO-firm pair and year fixed effects. The definitions of all variables are given in Table II. Standard errors are reported in parentheses. Coefficients marked with *, **, and *** are significant at 10%, 5% and 1%, respectively.

Variable	Dependent Variable: Tobin's Q				
	Full	LHHI	HHHI	HIOC	LIOC
	(1)	(2)	(3)	(4)	(5)
OWN_CEO_lag1	4.084***	0.633	4.848***	1.928	6.675**
	(1.126)	(1.386)	(1.688)	(1.800)	(2.658)
$(OWN\_CEO\_lag1)^2$	-5.774***	0.245	-8.079***	-4.157	-11.274**
	(2.062)	(2.503)	(3.076)	(3.651)	(4.812)
LNS	-0.540***	-0.497***	-0.668***	-0.664**	-2.177***
	(0.109)	(0.183)	(0.152)	(0.28)	(0.307)
$(LNS)^2$	0.028***	0.024*	0.048***	0.028	0.122***
	(0.008)	(0.013)	(0.011)	(0.02)	(0.021)
K/S	-0.103***	-0.167***	0.078**	-0.748***	-0.213***
	(0.025)	(0.047)	(0.039)	(0.155)	(0.054)
$(K/S)^2$	0.000*	0.001***	-0.000***	0.074***	0.003***
	(0.000)	(0.000)	(0.000)	(0.02)	(0.001)
Y/S	-0.034***	-0.021	-0.012*	0.280***	0.084***
	(0.005)	(0.031)	(0.006)	(0.098)	(0.025)
$SIGMA$	-1.31	-1.414	-1.778	-2.711	-2.124
	(1.784)	(2.224)	(2.554)	(2.823)	(3.949)
$SIGDUM$	-0.074	0.292	-0.24	0.05	-1.210**
	(0.188)	(0.416)	(0.223)	(0.364)	(0.484)
$R\&D/K$	0.044	-0.221**	0.071	0.161**	0.012
	(0.041)	(0.097)	(0.048)	(0.068)	(0.079)
$RDUM$	-0.071	0.034	-0.145	0.191	-0.304
	(0.106)	(0.181)	(0.13)	(0.171)	(0.236)
A/K	0.437***	0.632***	0.001	0.354*	0.474
	(0.149)	(0.208)	(0.199)	(0.213)	(0.387)
$ADUM$	-0.092	-0.085	0.019	0.063	-0.138
	(0.061)	(0.082)	(0.086)	(0.091)	(0.14)
I/K	2.040***	2.436***	1.605***	2.294***	1.488***
	(0.165)	(0.229)	(0.22)	(0.284)	(0.320)
Constant	4.199***	3.652***	4.112***	5.082***	12.533***
	(0.442)	(0.817)	(0.601)	(1.124)	(1.305)
CEO-Firm FE and Year FE	Y	Y	Y	Y	Y
Observations	14302	6802	7500	5940	5307
# of CEO-firm Pairs	3508	1924	2147	1912	1781
Adj R-squared	0.57	0.63	0.64	0.53	0.58
F-statistics	7.10	0.66	4.14	0.68	3.15
Prob > F	0.001	0.518	0.016	0.507	0.043

Table 3.11 Simultaneous Equation Estimation   of the Relation between CEO Share Ownership, Tobin's Q, and Investment

This table reports the robustness to reverse-causality between CEO ownership and Tobin's Q by estimating simultaneous equations with the three-stage least squares method. The specifications are similar to the one used in Cho (1998), but not identical. Each simultaneous equation system includes three equations; CEO ownership equation, Tobin's Q equation, and Investment equation. All regressions include CEO-firm pair and year fixed effects. Panel A reports results estimated with the full sample; Panel B reports results estimated with the subsamples separated by the strength in external governance. LHHI and HHHI indicate below and above the median HHI, corresponding to strong and weak external governance. HIOC and LIOC indicate above and below the median IOC, corresponding to strong and weak external governance. The definitions of all variables are given in Table II. Standard errors are reported in parentheses. Coefficients marked with *, **, and *** are significant at 10%, 5% and 1%, respectively.

Panel A: Full Sample			
Variable	**(1)**	**(2)**	**(3)**
	OWN_CEO	**Tobin's Q**	**Investment**
Mktval	-0.001***		
	(0.000)		
Tobin's Q	0.018***		0.003***
	(0.001)		(0.001)
Liquidity	-0.098***		-0.051***
	(0.007)		(0.005)
SIGMA	0.157***		-0.057
	(0.038)		(0.036)
SIGDUM	0.017***		0.006***
	(0.003)		(0.002)
Investment	-0.856***	-152.541**	
	(0.070)	(66.390)	
OWN_CEO		2,056.707**	1.046***
		(921.919)	(0.182)
(OWN_CEO)²		-3,192.458**	-2.418***
		(1,530.748)	(0.304)
Leverage		-5.328	
		(4.433)	
Assets		9.919**	
		(4.457)	
Constant	-0.000	-0.036	0.000
	(0.000)	(0.125)	(0.000)
CEO-Firm FE and Year FE	Y	Y	Y
Observations	20297	20297	20297
Chi2	420.88	378.77	2788.18

Panel B: Strong and Weak External Governance Subsamples

Variable	LHHI			HHHI			HIOC			LIOC		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
	OWN_CEO	Tobin's Q	Investment	OWN_CEO	Tobin's Q	Investment	OWN_CEO	Tobin's Q	Investment	OWN_CEO	Tobin's Q	Investment
Mktval	0.000			-0.001***			0.000			-0.001***		
	(0.000)			(0.000)			(0.000)			(0.000)		
Tobin's Q	-0.011***		0.012***	0.024***		0.003***	-0.004***		0.001	0.021***		0.002**
	(0.002)		(0.001)	(0.002)		(0.001)	(0.001)		(0.001)	(0.002)		(0.001)
Liquidity	0.051***		-0.052***	-0.104***		-0.048***	0.049***		-0.042***	-0.236***		-0.051***
	(0.007)		(0.006)	(0.010)		(0.006)	(0.007)		(0.007)	(0.020)		(0.008)
SIGMA	0.056		-0.060	0.141**		-0.056	0.125**		-0.132**	0.185		-0.065
	(0.041)		(0.046)	(0.061)		(0.050)	(0.055)		(0.059)	(0.118)		(0.056)
SIGDUM	-0.006*		0.005	0.016***		0.007**	-0.012***		0.009**	0.047***		0.007*
	(0.003)		(0.004)	(0.004)		(0.003)	(0.004)		(0.004)	(0.009)		(0.004)
Investment	0.954***	5.619		-0.885***	-164.239**		0.999***	-11.093		-2.705***	-244.734***	
	(0.064)	(7.515)		(0.098)	(76.623)		(0.046)	(11.060)		(0.159)	(87.441)	
OWN_CEO		-101.021	1.007***		2,037.659**	0.750***		-75.246	1.582***		1,865.949***	1.259***
		(124.111)	(0.328)		(1,007.682)	(0.212)		(155.892)	(0.345)		(646.770)	(0.282)
$(OWN\_CEO)^2$		112.498	-0.125		-3,154.615*	-1.739***		116.753	-0.977*		-3,287.035***	-2.903***
		(200.993)	(0.534)		(1,628.204)	(0.346)		(242.296)	(0.540)		(1,124.449)	(0.489)
Leverage		-1.367***			-9.057			-0.442			-15.468**	
		(0.396)			(6.100)			(0.648)			(7.395)	
Assets		-0.780*			11.327**			-0.922			7.675**	
		(0.467)			(5.535)			(0.601)			(3.361)	
Constant	0.000	0.008	-0.000	-0.000	0.013	0.000	0.000	0.001	-0.000	0.000	-0.061	0.000
	(0.000)	(0.017)	(0.000)	(0.000)	(0.138)	(0.000)	(0.000)	(0.014)	(0.000)	(0.001)	(0.161)	(0.000)
CEO-Firm FE and Year FE	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Observations	9692	9692	9692	10605	10605	10605	8094	8094	8094	7546	7546	7546
Chi2	356.72	1150.58	6804.68	234.07	109.09	1092.81	512.12	276.63	6916.2	356.39	29.73	2772.6

Table 3.12 Tobin's Q and CEO Share Ownership with Instrumental Variables Used in Himmelberg et al. (1999) for Observations under Weakest External Governance

This table reports the estimates of the two-stage least squares regressions. The instrumented variables are *OWN_CEO* and *(OWN_CEO)^2*. The instrumental variables are *LNS, (LNS)^2*, *SIGMA,* and *SIGDUM,* used in Himmelberg et al., (1999). Weakest external governance is defined as HHI being in the top third in Columns (1); the top quintile in Columns (2); and the top decile in Columns (3). The corresponding IOCs are the bottom third in Columns (4); the bottom quintile in Columns (5); the bottom decile in Columns (6). All regressions include CEO-firm pair and year fixed effects. The definitions of all variables are given in Table II. Robust standard errors are reported in parentheses. Coefficients marked with *, **, and *** are significant at 10%, 5% and 1%, respectively.

Variable	Dependent Variable: Tobin's Q					
	HHI>66.66%	HHI>80%	HHI>90%	IOC<33.33%	IOC<20%	IOC<10%
	(1)	(2)	(3)	(4)	(5)	(6)
OWN_CEO	-376.816	61.608	106.495**	389.505*	480.058	2,209.186**
	-382.548	-296.74	-46.721	-230.497	-520.433	-859.553
(OWN_CEO)^2	1564.423	-177.584	-341.769*	-744.686	-763.744	-5,495.927**
	-1472.729	-1039.672	-192.823	-646.769	-1363.469	-2296.002
K/S	-0.955***	-1.088	-0.342	0.179	0.197	0.699
	-0.365	-0.666	-0.472	-0.276	-0.487	-0.513
(K/S)^2	0.039***	0.036**	0.028***	-0.002	-0.001	-0.004
	-0.011	-0.014	-0.009	-0.003	-0.005	-0.005
Y/S	0.76	0.288	1.384***	0.044	0.095	0.42
	-0.497	-0.38	-0.425	-0.079	-0.126	-0.333
R&D/K	3.485*	0.413	8.611**	-0.251	-0.247	-0.52
	-2.103	-0.801	-3.541	-0.221	-0.279	-0.757
RDUM	-1.026	-0.128	-0.271	0.731	-0.178	3.893
	-1.004	-0.516	-0.214	-1.537	-6.045	-4.707
A/K	2.981	-0.299	-2.523	6.056**	4.636	-12.976*
	-6.489	-4.181	-8.162	-2.542	-4.711	-7.272
ADUM	-0.52	-0.023	0.27	-0.199	0.052	1.997
	-0.859	-0.248	-0.669	-0.553	-2.076	-2.239
I/K	0.529	1.489	-0.741	6.272***	10.536**	33.009***
	-0.481	-6.028	-2.386	-2.419	-4.181	-12.714
Constant	0.008	0.002	0	0.006	0.015	-0.026
	-0.125	-0.021	-0.064	-0.053	-0.076	-0.33
CEO-Firm FE and Year FE	Y	Y	Y	Y	Y	Y

Observations	7149	4180	2127	4628	2760	1381
Wald chi2	58.87	107.26	65.81	45.54	47.34	22.2
F-statistics	1.27	1.34	5.21	9.09	7.88	7.02
Prob > F	0.530	0.512	0.074	0.011	0.020	0.030

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