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Managerial Entrenchment of Anti-Takeover Devices:
Quasi-Experimental Evidence from Korea

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Abstract

With the removal of statute-based anti-takeover provisions during the aftermath of Asian crisis, a significant number of Korean firms started to introduce charter-based measures. In this paper, we make use of this unique situation where firm-level anti-takeover provisions (ATP) vary over time (making firm fixed effects regression feasible) and its amendment requires a shareholder approval (making event study feasible), when investigating the link between ATP and firm performance. Using a sample during 1999-2009, we find that firms with charter-based anti-takeover provisions are smaller in size, have lower inside and foreign ownerships, and upon adoption, experience lower share prices, the extent of which drops with inside ownership. Consistent with the overinvestment hypothesis in Jensen (1986), we also find that these firms increase capital expenditure. Our finding also shows that ATP adoptions are followed by lower profitability and lower dividend payouts. Firms with ATPs also experience greater de-listings after the global financial crisis.

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Keywords: Anti-Takeover Charter Amendment, Korea, Entrenchment

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1. Introduction

When investigating the relationship between anti-takeover provisions (ATP) and firm performance, most of the empirical work in the existing literature studies U.S. firms (Gompers, Ishii, and Metrick 2003, Bebchuk, Masulis, Wang, and Xie 2007, and Bebchuk, Cohen, and Ferrell 2009).[3] Also, given the time-invariant nature of U.S. anti-takeover measures, firm fixed effects regressions, which control for unobserved time-invariant firm characteristics, are usually not feasible. For this reason, Gompers, Ishii, and Metrick (2003) reject the use of firm fixed effects regressions. Masulis, Wang, and Xie (2007) try industry fixed effects in their robustness check, but make no attempts to try firm fixed effects. Bebchuk, Cohen, and Ferrell (2009) do run firm fixed effects regressions, but finds evidence of entrenchment effect only for a subset of anti-takeover provisions.

Moreover, most of the anti-takeover provisions are not charter-based, which means that boards can adopt them without shareholders' approval. This makes most of the anti-takeover provisions subject to the shadow pill problem à la Coates (2000) and makes event studies meaningless. That is, given the ease to adopt anti-takeover provisions via board decision, market participants view as if such provisions are already in place and share prices reflect the entrenchment effect even before their adoptions. Last but not least, the adoption of anti-takeover measures is an endogenous choice variable. A manager foreseeing the fall in share price, and therefore concerned with the heightened possibility of hostile takeover, may choose to introduce anti-takeover measures. In this case, the causality is running from firm value to the adoption of anti-takeover measures, not the other way around.

In this paper, we attempt to overcome these four shortcomings or challenges by making use of a unique situation in Korea. Before the Asian crisis, no Korean firm adopted charter-based ATPs, such as supermajority requirement on director dismissals, golden parachutes, supermajority requirement on mergers, and so on. Although, their adoption was not illegal, firms did not adopt any as they were already protected by statute-based anti-takeover provisions. The removal of statute-based anti-takeover provisions during the aftermath of the Asian crisis, however, created a totally new environment. Individual firms were forced to make decisions whether or not to adopt ATPs. This abrupt shift in environment, in our view, constitutes an experimental setting.[4]

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[3] There are a limited number of exceptions, which include Lange, Ramsay, and Woo (2000) that studies Australian anti-takeover devices and Arikawa and Mitsusada (2008) and Kato, Fabre, and Westerholm (2009) that studies poison pills in Japan.

[4] To constitute a natural experiment, (i) we need to have an exogenous shock and (2) this shock must be treated to a subset so that we have a control group, against which we evaluate the treatment effect. The setting we investigate in our paper, however, lacks the second requirement, which is why we do not use the term natural experiment, but prefer to use the term quasi-experiment.

During the post-crisis period, a significant number of Korean firms started to introduce charter-based ATPs. This created a setting, where one can have within-firm variation in ATPs and which allows one to investigate the relationship between ATPs and firm performance in a firm fixed effects framework. Also, given that all the provisions newly introduced are charter-based that require shareholders' approval, we are not subject to the shadow pill problem that often plagues U.S. studies. Moreover, their adoption at the shareholders' meeting is an unexpected news item that constitutes a valid event, allowing one to conduct meaningful event studies. Firm fixed effects regressions and event studies greatly alleviate the endogeneity problem since it investigates whether firm value drops when it should. In other words, we have identification in time.[5]

Besides providing evidence outside of U.S. and using firm fixed effects regressions and event studies, this paper makes another contribution to the literature by investigating anti-takeover measures in a country setting where firms typically have concentrated ownership structure. Specifically, we investigate how the level of inside ownership – control rights, to be exact – is associated with the choice of anti-takeover provisions. Also, we study how the link between anti-takeover provisions and firm performance is influenced by the level of inside ownership.

Using public firms in Korea, over 1999-2009, we first investigate the factors behind the adoption of anti-takeover provisions. We find that firms with charter-based anti-takeover provisions have lower inside ownership, lower foreign ownership, and smaller firm size. We then ask our main question whether anti-takeover charter amendments are associated with lower firm value, and if so, why? Using the same sample of firms, we find that firms with anti-takeover provisions experience lower share prices. This is so in our event studies and also in our firm fixed effects regressions. We also find that the extent of such share price drop is greater for firms with low inside ownership, suggesting that the level of inside ownership and charter-based anti-takeover measures are substitutes.

We next test three hypotheses that identify the channels through which the adoption of anti-takeover measures lead to lower firm value. The channels we investigate include investment (capital expenditure), profitability, and dividend payouts. Consistent with the overinvestment hypothesis in Jensen (1986), we find that firms with anti-takeover measures experience higher capital expenditures, lower profitability, and lower dividend payouts. Lastly, we test how firms with anti-takeover provisions fared during the global financial crisis by investigating the firms that were delisted either in 2009 or 2010. We find that firms with anti-takeover provisions resulted in a greater number of de-listings than the ones without such provisions.

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[5] In some sense, firm fixed effects regressions and event studies are equivalent to difference-in-difference (DiD) analyses with a relatively crude treatment group.

Testing the entrenchment effect of anti-takeover charter amendments can also shed light on the current policy debate in Korea over the adoption of poison pill. The present Commercial Code in Korea does not allow firms to issue poison pills. The government, however, proposed a Commercial Code revision bill in 2010 that allows it. Even though we do not directly study poison pills in this paper, we can make inference about their consequences. This is because the anti-takeover measures we study are weaker defense tools, and if we find evidence of managerial entrenchment from them, we can safely infer the existence of entrenchment effect from a stronger defense tool, such as poison pill.

The paper is organized as follows. Section 2 discusses the anti-takeover devices in Korea, with a focus on charter-based anti-takeover provisions, which is the main subject of this paper. We also briefly discuss the recent debate in Korea whether to introduce poison pill. Section 3 outlines our hypotheses and section 4 explains the data and the sample. Section 5 provides the empirical results and Section 6 concludes.

2. Anti-Takeover Measures in Korea

A. Statute-Based Anti-Takeover Provisions before the Crisis

Before the financial crisis in 1997, Korean corporate managers were fully entrenched. Until Dec. 1996, they were protected by the 10 percent rule in the Securities and Exchange Act. Under this rule, no shareholder, besides the controlling shareholder at the time of IPO, can own more than 10 percent of voting shares in public companies. This rule, which existed since 1976, was necessary in earlier years to induce Korean firms to publicly float their shares on the stock exchange and thereby enlarge the size of the Korean capital market.

In January 1997, this rule was replaced by three others.[6] One was a mandatory bid rule in the Securities and Exchange Act, where any shareholder acquiring more than 25 percent of voting shares, must acquire additional shares to own more than 50 percent of the total voting rights. Given the chronic scarcity of capital in those years and the difficulty to externally finance acquisition deals, this rule was also regarded as a statute-based anti-takeover device. The other two rules were against foreign acquisitions. Foreign Investment and Foreign Capital Inducement Act introduced a rule where any foreigner wishing to acquire more than 10 percent of pre-existing shares must obtain board approval. It

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[6] The 10 percent rule was removed from the Securities and Exchange Act in 1994, but with the grace period of 3 years, it lasted until the end of 1996. It was also in January 1994, when the Securities and Exchange Act allowed Korean firms to engage in stock repurchases and strengthened the 5 percent block holding disclosure requirement (adding shares owned by related-party into the calculation of 5 percent).

also introduced a rule where any foreigner wishing to acquire shares of a large firm (book asset value above 2 trillion won) must obtain approval from the Minister of Finance and Economy. By law, the Minister was obliged to approve the acquisition if aggregate foreign ownership was less than 15 percent of total outstanding shares and no foreigner can become the largest shareholder.

These three rules, however, lasted only a year. As part of an effort to induce foreign capital inflow during the aftermath of the financial crisis, Korean government repealed all three rules in February 1998. The limit on foreign aggregate ownership, which increased gradually from 10 percent in Jan. 1992 to 26 percent in Nov. 1997, also jumped to 50 percent in Dec. 1997 and then finally lifted to 100 percent in May 1998.

B.   Charter-Based Anti-Takeover Provisions after the Crisis

Dominated by firms with concentrated family ownership, hostile takeover threats are limited in Korea.[7] But, a number of factors lead a significant number of Korean firms to adopt charter-based anti-takeover provisions in recent years. First, foreign investment in Korea Exchange (KRX) increased significantly since the limit on foreign aggregate ownership was lifted in 1998. According to Financial Supervisory Service (FSS), foreigners' 18.6 percent share of total market capitalization increased to 42.0 percent in 2004 (excluding KOSDAQ market). As of December 2009, they take up 32.6 percent. According to FSS, the number of foreign block holdings (ownership above 5%) also increased to 406 block holders in 614 companies as of Dec. 2007.

Second, a number of prominent shareholder activism cases led by foreign investors served as a wake-up call for Korean managers. Such examples include the proxy fight between Sovereign Asset Management and SK (2004 and 2005) and that of Icahn Partners Master Fund and KT&G (2006). Though these activists did not have the intension to acquire control, Korean managers in general took the matter seriously and started to entrench themselves by adopting charter-based anti-takeover measures. It was also around this time when stock repurchase suddenly became a popular anti-takeover device. By selling treasury stocks to friendly shareholders, incumbent managers were able to strengthen their *de facto* voting rights.

Third, the absence of statute-based anti-takeover measures obviously must have influenced firms to adopt charter-based measures. Since the proxy fight between Sovereign Asset Management and SK, there

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[7] According to Kim (2010), during the recent past 10 years (2000-2009), there were only a total of 15 cases reported as hostile tender offers in Korea. Among the 15 cases, 4 failed, including the one launched by a foreigner. According to the same source, there were only a total of 55 cases reported as hostile proxy flights over board seats, during the recent past five years (2005-2009). Among the 55 cases, only 6 succeeded to take over the board.

were calls from the business community to allow poison pill, dual class shares, and many others. But no action was taken by the government until 2010 when Ministry of Justice submitted to the National Assembly the Commercial Code revision bill that allows poison pill. During this period, anxious managers devised their own anti-takeover measures and secured charter amendments.

According to the Solidarity for Economic Reform (SER), a civil organization, the newly emerging charter-based anti-takeover measures can be categorized into six types: (i) supermajority requirement when dismissing directors, (ii) prohibiting dismissal of directors above a certain percentage, (iii) golden parachutes, (iv) supermajority requirement for mergers, (v) supermajority requirement for control-related charter amendments, and (vi) delaying the effective date of control-related charter amendments.[8] SER (2009) also documents detailed examples of each measure. For example, the corporate charter of Curocom (a banking solution provider) requires 90 percent or higher approval by participating shares and 80 percent or higher approval by outstanding shares to dismiss a director. This requirement is substantially higher than the one prescribed in the Commercial Code.[9] Maniker (a meat processing company), on the other hand, has a corporate charter that limits the fraction of dismissed directors to be below one fourth of directors that were serving at the end of last fiscal year. Another example is Pointi (a mobile solution provider), which has a golden parachute provision in its corporate charter. According to this provision, the representative director of Pointi can claim 10 billion won (approximately 10 million US dollars) upon his dismissal in the event of hostile takeover.

Biosmart (a magnetic stripe card manufacturer) has a supermajority requirement for mergers. If a merger is determined by board decision as hostile, a merger requires 90 percent or higher approval by participating shares and 70 percent of higher approval by outstanding shares. Again, this requirement is substantially higher than the one prescribed in the Commercial Code.[10] Another example is Curoholdings (a semiconductor testing device manufacturer), which is subject to a supermajority requirement on control-related charter amendments. In its charter, it first has a provision regarding supermajority requirement on director dismissals. It then has another provision that requires a supermajority approval to amend the first provision. Synopexgreentech (a machinery equipment manufacturer), on the other hand, has a golden parachute (5 billion won) provision in its charter and also a provision that delays the effective date if one amends the golden parachute provision.

C. Debate over Poison Pill

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[8] See SER (2009).

[9] To dismiss a director, the Commercial Code requires approval by at least two thirds of participating shares and one third of outstanding shares.

[10] According to the Commercial Code, a merger requires approval by at least two thirds of participating shares and one third of outstanding shares.

As mentioned earlier, in 2010, the Korean government submitted to the National Assembly a Commercial Code revision bill that allows poison pill. The proposed pill, however, has a number of unique features that differentiates it from the ones popularly adopted in the U.S. First, it is a charter-based anti-takeover measure. That is, the board's decision to issue poison pill must be based on a provision in the corporate charter. Second, when issuing poison pill, board must obtain approval from at least two thirds of board members.

Despite such features, critics argue that the pill is more likely to be misused and eventually harm corporate performance, especially in a country setting like the one in Korea, where independent board members are rare, outside monitoring by institutional investors is weak, and level of control-related private benefits are high.[11] They also criticize government's justification for allowing the pill. One of government's arguments is that, in the absence of statute-based anti-takeover measures, firms excessively engage in stock repurchases, which divert corporate resources away from productive activities. For the government's argument to be justified, firms should experience higher firm value and increased capital expenditure during the post-pill period. The critics, however, predict otherwise. That is, managers will effectively entrench themselves and engage in value-decreasing investments, which will lower firm value.

We believe the empirical results of our study can shed light on this debate. Even though we do not directly study poison pill, we can make inference about its consequences by examining the anti-takeover measures of our study. This is justified because, compared to poison pill, the measures we study in this paper are weaker anti-takeover tools. If we find evidence of managerial entrenchment from a weaker ATP, we can safely infer that there would be an entrenchment effect from a stronger ATP.

3. Hypotheses

A. Which Firms Choose to Adopt Anti-Takeover Measures?

We first investigate the factors that motivate corporate insiders to adopt anti-takeover charter provisions. Here, we consider two factors: inside ownership and firm size. First, we hypothesize that firms with lower inside control are more likely to adopt charter-based anti-takeover measures. This is self-explanatory. Firms with concentrated ownership are insulated from hostile takeover threats, and therefore should not have much incentive to adopt anti-takeover measures.

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[11] For detailed criticism against the proposal, see Kim (2010).

Second, we investigate if firm size matters. One view is that large firm size serves as an effective takeover defense, since it takes more resources to acquire a larger target. According to this view, larger firms would have less incentive to adopt ATPs, thus resulting in a negative relationship between firm size and ATP. An alternative view is that firms with more ATPs are more likely to be a bidder and this leads to a larger firm size, thus resulting in a positive relationship between the two (see Masulis, Wang, and Xie 2007, Offenberg 2009, Humphery-Jenner and Powell 2011). Yet there is another story specific to Korea. Given that charter-based anti-takeover provisions were relatively new and therefore firms did not want to draw attention, one hypothesize that smaller firms that are seldom covered by the media or by equity analysts, are more likely to go for anti-takeover charter amendments.

As an additional control, we also consider foreign ownership. A priori, the relationship is ambiguous. If corporate managers are threatened by greater foreign share ownership, and therefore motivated to adopt anti-takeover measures, we would see firms with higher foreign ownership more frequently adopting anti-takeover measures. But, the opposite relationship may also hold. In the presence of high foreign ownership, corporate managers may not be able to secure shareholders' approval to adopt anti-takeover measures, thereby lowering the incidents of anti-takeover charter amendments in firms with high foreign ownership. This latter conjecture is consistent with recent papers that document the activist roles played by foreign investors (Kim, Kim, and Kwon 2009 and Kim, Sung, and Wei 2010).

B. Are Anti-Takeover Charter Amendments Associated with Lower Firm Value? If So, Why?

The free cash flow hypothesis of Jensen (1986) predicts, in the absence of hostile takeover threats, managers with free cash flow tend to invest in value-destroying projects and therefore make less cash dividend payouts. One of the key objectives of this paper is to test these predictions using Korean firms. Our detailed hypotheses are broken down into five parts.

First, we test if firms with anti-takeover charter amendments exhibit lower firm value during the post-amendment period. If outside shareholder expects that corporate insiders will engage in negative NPV projects after adopting charter-based anti-takeover measures, share price will drop immediately after their adoption announcements and also remain low for an extended period of time. We test this hypothesis using two approaches: event studies and panel regressions. In either case, we also test if the level of inside ownership matters. If market participants view the level of inside ownership as a substitute to charter-based anti-takeover measures, share price reactions will be lower for firms with high inside ownership. As for event studies, we also test if firm size matters. As for small cap firms, anti-takeover charter amendments may not have drawn much attention from the business media or from equity analysts. This

leads to a prediction that firms with larger market cap are more likely to experience negative market reactions upon the adoption of anti-takeover measures.

We next test three hypotheses that identify the channels through which the adoption of anti-takeover measures may lead to lower firm value. The channels we investigate include investment (capital expenditure), profitability, and dividend payouts. Specifically, we test if the adoption of anti-takeover measure leads to increased capital expenditure, lower profitability, and lower dividend payouts. Notice that these channels are directly related to Jensen's free cash flow hypothesis. Capital expenditure increases because managers will engage in more negative NPV projects. Profitability falls because the new projects are not profitable. Dividend payouts drop because retained earnings are used to finance new projects.

Lastly, we test how firms with anti-takeover provisions fared during the global financial crisis by investigating the firms that were delisted either in 2009 or 2010. If entrenched managers engaged in negative NPV projects and thereby lowered profitability, we predict that firms with ATP fared worse during the global financial crisis and thus resulted in a greater number of de-listings.

4. Data

The data on anti-takeover provisions is from the Economic Reform Research Institute (ERRI), a private think tank specialized in economic reform issues in Korea. ERRI collected the data by going through the corporate charter of each and every listed firm on the Korea Exchange over a nine year period (2001-2009).[12]

The dark grey bars in the first bar chart in Figure 1 shows the cumulative number of nonfinancial listed firms with at least one charter-based ATP over a period of 1999-2009. ATP first emerged in 2001 and then increased exponentially up until 2008.[13] As of 2008, there are 250 nonfinancial firms with at least one charter-based ATP. This is approximately 15 percent of all nonfinancial listed firms (=250/1,700). The light grey bars use firms that exist throughout the 1999-2008 period. This is to show within-firm variation in ATP adoption using a sample free from any improvement in data coverage or from new firm listings. These bars clearly show that there exists a significant degree of within-firm variation in ATP adoption.

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[12] In case of 2009, ERRI collected the data only during Jan-March. Since firms with fiscal year ending in December take up approximately 93 percent of all listed firms and they must hold their shareholders' meeting by March in the following year, ERRI's 2009 data approximately covers 93 percent of listed firms. As for the remaining 7 percent of firms, we simply extrapolated the data in 2008.

[13] ERRI collected the data from 2001. To make sure no ATP adopter exists before then, we went through the corporate charters in 1999-2000. We failed to find any during this period.

The figure in dark grey bar, however, drops down to 208 firms in 2009. This is largely due to massive delisting that took place during the aftermath of global financial crisis. The second bar chart effectively shows this. Each bar represents the number of delisted nonfinancial firms from Korea Exchange (KRX) in each year. Among the 80 nonfinancial firms delisted in 2009, a disproportionately large number of firms (31 firms) were those with anti-takeover provisions. None of the 31 de-listings were voluntary.

Table 1 shows the types of ATPs and the number of firms for each type of provision during the entire sample period (2001-2009). The total number of firms with at least one ATP during the entire sample period is 250, matching the figure in Figure 1. This indicates that no firm removed such provision from their corporate charter during our sample period. Table 1 also shows that the most popular ATP is supermajority requirement on director dismissals (197 firms), followed by golden parachute (130 firms), and supermajority requirement on control-related charter amendments (119 firms).

Our default measure of entrenchment in this paper is a dummy variable named ATP, which takes a value of 1 if anti-takeover provision (ATP) exists, and 0 otherwise. Since we measure ATP each year, ATP is a time-varying dummy. In our robustness tests, we experiment with other entrenchment measures. Following the tradition in the existing literature, we try ATP Index, which equals the number of anti-takeover provisions (Gompers, Ishii, and Metrick 2003 and Bebchuk, Cohen, and Ferrell 2009). We also try ATP N, which takes a value of 1 if at least N number of anti-takeover provisions exists, and 0 otherwise (see Harford, Humphery-Jenner, and Powell 2010).[14]

Table 2 gives definitions (Panel A) and summary statistics (Panel B) of principal variables used in our empirical analyses. We compute summary statistics over 1999-2009, the sample period which we use to run panel regressions. To allow at least two years of pre-adoption period, we add two years of data (1999 and 2000) before the first year of APT adoption (2001). Since capital expenditure is one of our key dependent variables, we drop financial firms from all of our panel regressions. Stock returns and market capitalizations data are respectively from Korea Capital Market Institute (KCMI) and Korea Exchange (KRX). Financial statements and ownership data are from TS2000, a DB compiled by the Korea Listed Companies Association (KLCA).

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[14] There are pros and cons of using ATP dummy over ATP Index. One merit is that we do not have to worry about how to assign weights on each provision when constructing an index. Similarly, we do not have to make an arbitrary assumption that each provision has equal value. There is a problem though. We are assuming that firms do not get more entrenched by adding more anti-takeover provisions. Firms with one ATP are assumed to be equally entrenched as firms with all six ATPs. But, using ATP Index that simply counts the number of ATPs is not a solution. This is because it ignores that ATPs are to some extent substitutes and that simply adding ATPs do not necessarily increase the level of entrenchment proportionately.

5. Results

A. Which Firms Choose to Adopt Anti-Takeover Measures?

To investigate the factors behind the charter-based anti-takeover amendments, we run Probit regression for ATP (1 if anti-takeover provision exists, 0 otherwise). Table 3 shows the results. Column (1) includes 2-digit industry dummies, while column (2) includes 4-digit industry dummies.[15] Both regressions include year dummies. Point estimates denote marginal effects on probability. Standard errors are clustered by firm. As expected, the coefficient on inside ownership is negative and highly significant, indicating that firms with concentrated inside ownership are less likely to adopt charter-based anti-takeover measures. Alternatively, one can interpret that they are substitutes when it comes to anti-takeover defense measures. The coefficient of -0.0004 (in column (2)) suggests that a 25%p increase in inside ownership drops the probability of ATP adoption by 1%p. Given that pooled sample mean of ATP is only 5%, this can be considered as a substantial drop in probability. Table 3 also shows that foreign ownership lowers the likelihood of ATP adoption. The coefficient is negative and statistically significant. But, the economic magnitude is relatively small. The coefficient of -0.0002 (in column (2)) suggests that a 25%p increase in foreign ownership drops the probability of ATP adoption by 0.5%p. One can interpret that the monitoring role of foreign investors discourages corporate managers from introducing anti-takeover provisions.

The result in Table 3 also shows that smaller firms are more likely to introduce anti-takeover charter amendments. The coefficient on firm size is negative and highly significant. This is consistent with our earlier conjecture that large firm size serves as an effective takeover defense, since it takes more resources to acquire a larger target. According to this view, larger firms would have less incentive to adopt ATPs, thus resulting in a negative relationship between firm size and ATP. Our result is also consistent with the conjecture that large firms refrain from adopting anti-takeover charter amendments for fear of media and analyst attentions. The coefficient of -0.003 (in column (2)) suggests that one standard deviation increase in firm size (1.51) drops the probability of ATP adoption by approximately 0.5%p (=-0.003 x 1.51). On the other hand, operating profit does not show up as a significant factor.

B. Are Anti-Takeover Charter Amendments Associated with Lower Firm Value? If So, Why?

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[15] We do not include firm fixed effects since it would worsen the incidental parameters problem (unconditional fixed effects Probit estimates are biased). Random-effects and population-average Probit models did not converge.

We next investigate if firms with anti-takeover charter amendments exhibit lower firm value during the post-amendment period. In doing so, we take two approaches: event studies and firm fixed effects regressions.

Event Study Results

Figure 2 shows our event study results, where the day of shareholders' meeting is used as an event day. We estimate abnormal returns from market model (KOSDAQ Composite Index for KOSDAQ firms and KOSPI for all other listed firms) using past 250 trading days from day -260 to -11 as the estimation period. The figures plot cumulative average abnormal returns (CAARs) from day -10 through day +20.[16] The first figure (A), which uses the full sample of firms, suggests the existence of negative announcement effect. Firms with anti-takeover provisions experience a share price fall of 3% over a 30-day period. Table 4 shows whether this announcement effect is statistically significant. When average abnormal returns (AAR) are cumulated from day -10 (columns (1) and (2)), t-stats are low and CAARs are marginally significant only in day +18. This is partly because the CAAR value at day 0 is above zero (0.6%). When we cumulate average abnormal returns (AAR) from day 0 (columns (3) and (4)), the statistical significance improves substantially. CAAR is significantly different from zero from day +2 and in most of the days during the event period.

We also test if the negative announcement effect strengthens in firms with low inside ownership. If market views the level of inside ownership as a substitute to charter-based anti-takeover measures, the magnitude of announcement effect would be greater in firms with low inside ownership. The second figure (B) shows the test results. We conduct the same event study using a sample restricted to those with inside ownership less than 10 percent. The magnitude of share price fall is around 9%, which is substantially greater than the one we have seen using the full sample. This is so even if we take into account the share price fall that took place before the event day (3.5%). Statistical significance, however, is rather weak. When average abnormal returns (AAR) are cumulated from day -10 (Table 4, columns (5) and (6)), CAARs are marginally significant in nine days out of a 30-day event period. If we cumulate average abnormal returns (AAR) from day 0 (columns (7) and (8)), CAARs are marginally significant in five days out of a 30-day event period.

Next, we test if the negative announcement effect strengthens with firm size. If media and analyst coverage facilitate new information to be incorporated in share prices, the magnitude of announcement effect would be greater at the time of adoption in firms with large capitalization stocks. To test this, we

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[16] To compute CAAR, we first average abnormal returns across sample firms, and then cumulate them over the event window. Since we use log returns, this is equivalent to computing average CAR.

restrict to firms with market capitalization greater than 50 billion won (approximately 50 million dollar). The third figure (C) shows the result. The magnitude of share price fall is around 5%, which is again substantially greater than the one when using the full sample. Table 4 shows the statistical significance of CAAR. When average abnormal returns (AAR) are cumulated from day -10 (columns (9) and (10)), CAARs are insignificant throughout event period. This is probably because the CAAR value at day 0 is above zero (1.3%). When we cumulate average abnormal returns (AAR) from day 0 (columns (11) and (12)), the statistical significance improves substantially. CAAR is significantly different from zero from day +2 and in most of the days during the event period.

Lastly, we conduct event studies using firms that adopt ATPs, but do not experience a fall in NI/Assets during the immediate past fiscal year.[17] This is because, in Korea, newly audited earning figures are released immediately before the shareholders' meeting (by regulation, no later than a week before) and such announcements may affect share prices. The fourth figure (D) shows the result for ATP adopters with inside ownership less than 10% that did not experience drop in NI/Assets. The fifth figure (E) shows the result for ATP adopters with market capitalization above 50 billion Korean won that did not experience drop in NI/Assets. One can easily observe that the negative share price reactions are much sharper in these subsamples. In other words, our finding strengthens as we drop the events that are contaminated by new earning announcements.[18]

In unreported analyses, we test if share price reacts at the time of meeting notification, which is typically two weeks (or 10 business days) before the day of shareholders' meeting.[19] If shareholders react at the time of notification, their reaction on the day of shareholders' meeting may underestimate the true wealth effect of entrenchment. The CAR figures, where the notification day is used as day 0, show that nothing much happens at the time of notification. One possibility is the uncertainty of ATP's adoption. Before the shareholders' meeting market participants do not know for sure whether the ATPs would be adopted.

Firm Value

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[17] Note that we do not use earnings surprises here. This is because equity analysts in Korea usually do not publish earnings forecasts for small firms, which take up a significant fraction of our ATP adopters.

[18] In unreported figures, we show the results for ATP adopters that did experience a fall in NI/Assets during the immediate past fiscal year. We verify that share prices respond negatively even before day 0. This is consistent with share price responding to negative earnings announcement, which may dilute the effect of ATP adoption.

[19] According to the Korean Commercial Code (article 363), the minimum notice period is 14 days, which approximately 10 business days. According to Kim (2010), 53% of the firms have a prior notice period of 15 days and only 8% of firms have a prior notice period equal to or longer than 21 days.

We next turn to firm fixed effects regressions, and test if within-firm adoption of anti-takeover provision leads to a within-firm drop in firm value.[20] Firm value is measured by Tobin's q. To fix its skewed distribution, we use its logarithm. On top of standard controls, we include lagged Tobin's q.[21] This is to control for any auto-correlation in corporate performance, and to control for firm behavior adopting ATP after experiencing poor performance. Regressions are estimated over the 1999-2009 period using nonfinancial firms listed on the Korea Exchange. t-values are based on standard errors clustered by firm.

Table 5 shows the results. When using the full sample (column (1)), we do not find any association between ATP and firm value. The coefficient on ATP is insignificant. So, in columns (2) – (5), we run sub-sample regressions, where the sub-samples are grouped by the level of inside ownership. If market views the level of inside ownership as a substitute to charter-based anti-takeover measures, the drop in firm value would be greater in firms with low inside ownership. The estimated coefficients on ATP confirm this conjecture. The coefficient is negative and statistically significant when inside ownership is less than 30 percent, and the coefficient magnitude drops monotonically with the level of inside ownership, reaching -0.2657 when inside ownership is less than 10 percent (column (5)). As for these firms, an adoption of ATP drops ln(Tobin's q) by 0.266, or Tobin's q by 26.6 percent. At median Tobin's q value of 0.95 and the median debt/assets ratio of 0.46 in our full sample, this is equivalent to a drop in share price by 51 percent.[22]

Column (6) adds inside ownership and its interaction terms with ATP on the right-hand side of the regression. The coefficient on the interaction term is negative and statistically significant, meaning that firms with lower inside ownership experience a greater fall in share price upon ATP adoption. The coefficient of -0.1402 on ATP and 0.0037 on the interaction term indicate that 37.9 percent (=0.1402/0.0037) is the inside ownership threshold, below which ATP charter amendment lowers firm value.

As robustness check, we experimented with industry-adjusted Tobin's q following Bebchuk (2009). In unreported tables, we show that our results remain intact. The coefficient magnitude drops

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[20] In the tables reported in this paper, we do not lag our ATP dummy variable. There are two reasons behind this. First, ATPs are adopted at the shareholders' meetings, which are usually held in March. For firms with fiscal year ending in December, which take up most of our sample firms, ATP in the same year is already lagged by nine-month. Second, in case of firm value, there is no reason to believe that it would react with a time lag to the adoption of ATP. Nonetheless, we conducted a robustness check where we lagged our ATP dummy variable. Although statistical significance weakened, most of our key results remained intact.

[21] As a robustness test, we tried free cash flows over assets in lieu of operating profits (EBIT) over assets. Our key results remain intact.

[22] Given the median Tobin's q value of 0.95 and the median debt/asset ratio of 0.46, the median (market value of equity/asset) ratio is 0.49 (= 0.95 - 0.46). Also, after a 26.6 percent drop in Tobin's q, the new Tobin's q is 0.7 and the new (market value of equity/asset) ratio is 0.24 (= 0.7 – 0.46). Provided that the size of asset remains constant, a drop of (market value of equity/assets) from 0.49 to 0.24 is a 51 percent drop in market value of equity.

monotonically with the level of inside ownership and the coefficient on the interaction term is negative and statistically significant.

We also experimented with other entrenchment measures: ATP Index (equals the number of anti-takeover provisions) and ATP *N* (takes a value of 1 if at least *N* number of anti-takeover provisions exits, and 0 otherwise). Our key results in Table 5 remain intact when using ATP Index, ATP 2, and ATP 3. These measures are negatively associated with firm's market value for firms with inside ownership less than 10%, and the coefficients are significant either at 1 or 5 percent level. We, however, do not get similar results when using ATP 4, ATP 5, or ATP 6. This is most likely because there is very little time variation in these variables. Summary statistics in Table 2 Panel B shows that the standard deviations are respectively 0.06, 0.01, and 0.00.

Capital Expenditures

Next, we test the overinvestment hypothesis of Jensen (1986). Investment is measured by capital expenditures scaled by previous fiscal year-end total assets. To fix its skewed distribution, we use its logarithm. In our regressions, we control for growth opportunity, which is measured by Tobin's *q*. Since we also control for operating profit, Tobin's *q* in our regression captures growth opportunity rather than firm performance. Regressions are estimated over the 1999-2009 period using nonfinancial firms listed on the Korea Exchange. *t*-values are based on standard errors clustered by firm.

Table 6 shows the results. When using the full sample, however, we do not find any association between ATP and capital expenditure (column (1)). As in the case of firm value regressions in Table 5, we run sub-sample regressions, where the sub-samples are grouped by the level of inside ownership (columns (2)-(5)). We find that within-firm adoption of anti-takeover provision leads to a within-firm increase in capital expenditure in firms with lower inside ownership. When restricting the sample to those with inside ownership less than 10 percent, the coefficient on ATP is 0.7994. As for these firms, an adoption of ATP increases *ln*(CAPEX/Assets) by 0.8 or CAPEX/Assets by 80 percent. This is a substantial jump in investment. This result alone does not constitute evidence that firms with ATP engage in overinvestment. But, if one puts together this with the evidence in Table 5, one can conclude that most of the capital expenditures were value decreasing, consistent with the overinvestment hypothesis of Jensen (1986). In the absence of hostile takeover threats (adoption of anti-takeover measures in firms with inside ownership less than 10 percent), managers tend to invest in value-destroying projects (increase in capital expenditure) and this lowers firm value.

Column (6) adds inside ownership and its interaction terms with ATP on the right-hand side of the regression. The coefficient on the interaction term is negative and statistically significant, meaning that firms with lower inside ownership experience a greater increase in capital expenditure upon ATP adoption. The coefficient of 0.2275 on ATP and -0.0116 on the interaction term indicate that 24 percent (=0.2275/0.0116) is the inside ownership threshold, below which ATP charter amendment increases capital expenditure.

We also experimented with other entrenchment measures: ATP Index (equals the number of anti-takeover provisions) and ATP *N* (takes a value of 1 if at least *N* number of anti-takeover provisions exits, and 0 otherwise). Our key results in Table 6 remain intact when using ATP Index, ATP 2, and ATP 3. These measures are positively associated with capital expenditure for firms with inside ownership less than 10%, and the coefficients are significant either at 1 or 5 percent level. We, however, do not get similar results when using ATP 4, ATP 5, or ATP 6. As discussed previously, this is most likely because there is very little time variation in these variables. Summary statistics in Table 2 Panel B shows that the standard deviations are respectively 0.06, 0.01, and 0.00.

Capital Expenditure and Firm Value

To directly test the link between investment and firm value, we estimate firm fixed effects regression of firm's market value on capital expenditure using various subsamples. Table 7 shows the results. Regressions (1) and (6) respectively report sub-sample results for ATP non-adopters and ATP adopters. Regressions (2)-(5) and regressions (7)-(10) divide the sample further by the level of inside ownership.

For ATP non-adopters, capital expenditure is positively associated with firm's market value, but for ATP adopters, there is no connection between capital expenditure and firm's market value (see regressions (1) and (6)). When we limit the sample to those with inside ownership less than 10%, capital expenditure is negatively associated with firm's market value for ATP adopters. But, we do not find this for ATP non-adopters. These results support the overinvestment hypothesis of Jensen (1986). It is also consistent with the findings of Masulis, Wang, and Xie (2009) that link the degree of entrenchment and the efficiency of capital expenditure. Using dual-class firms, they report that capital expenditures contribute significantly less to shareholder value at firms with a greater divergence between insider voting rights and cash flow rights.[23]

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[23] Masulis, Wang, and Xie (2007), on the other hand, study the efficiency of acquisitions. They find that acquirers with more anti-takeover provisions experience significantly lower announcement period abnormal stock returns.

Profitability

If entrenched managers invest in value-destroying projects, firm profitability should drop during the post-adoption period. This is what we find in Table 8 Panel A, where we use three different measures of firm profitability (NI/Assets, NI/Equity, and EBIT/Sales). Regardless of our measure of profitability, we find that within-firm adoption of anti-takeover provision leads to a within-firm drop in firm profitability. The coefficients on ATP are all negative and statistically significant. The economic magnitudes are also large. Firms with ATP have respectively 8%p, 12%p, and 10%p lower NI/Assets, NI/Equity, and EBIT/Sales than those without it. In our regressions, we include lagged profitability to control for any auto-correlation in corporate performance, and to control for firm behavior adopting ATP after experiencing poor performance. Regressions are estimated over the 1999-2009 period using nonfinancial firms listed on the Korea Exchange. *t*-values are based on standard errors clustered by firm.

Cash Dividend Payouts

If entrenched managers use up corporate resources in value-destroying projects, the firm would run out of earnings that can be distributed out to shareholders as cash dividends. We test this in Table 8 Panel B. When using firm fixed effects model, we do not find strong evidence on this. The coefficient on ATP is negative and marginally significant when we regress dividend/sales (see regression (1)). But, coefficients turn insignificant once we switch to other measures of dividend payout (see regressions (2) and (3)).

The results, however, become stronger when we move to industry fixed effects model. We find evidence that cash dividend payouts drop with the introduction of anti-takeover measures. For example, the coefficient on ATP is negative and statistically significant when *ln*[(Dividend/Sales) + 1] is used as our dependent variable (see regression (4)). The coefficient of -0.0027 indicates that with the adoption of ATP, [(Dividend/Sales) +1] drops by 0.27 percent. If the original [Dividend/Sales] is 0.02, a drop in [(Dividend/Sales) +1] by 0.27 percent means a drop in [Dividend/Sales] by 13.77 percent, which is a huge drop in dividend payout.[24]

In column 7, we investigate whether anti-takeover measures drop the fraction of dividend paying firms. It shows the result of random effects Probit regression, where Positive Dividend (1 if a firm pays dividend, and 0 otherwise) is the binary dependent variable. As expected, the coefficient on ATP is negative and highly significant. The economic magnitude is also large. The coefficient of -0.686 indicates that a firm's chance of paying dividend drop by approximately 70 percent upon the adoption of anti-

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[24] Equation 1.02 x (1 - 0.0027) – 1 = 1.0172 = 0.02 x (1 – A) holds when A = 0.1377.

takeover measure. Overall, we conclude that firms that adopt anti-takeover provisions experience lower dividend payout during the post-adoption period.

Delisting during the Global Financial Crisis

Lastly, we test how firms with ATP fared during the global financial crisis by investigating the delisted firms either in 2009 or 2010. If entrenched managers engaged in negative NPV projects and thereby lowered profitability, we can predict that they would fare worse than those without ATPs. Table 9 shows the Probit regression results where Delist (1 if firms delisted either in 2009 or 2010, and 0 otherwise) is the binary dependent variable. Column (1) includes 2-digit industry dummies, while column (2) includes 4-digit industry dummies.[25] Point estimates denote marginal effects on probability. As expected, the coefficient on ATP is positive and highly significant, indicating that firms with charter-based anti-takeover provisions fared worse than those without it during the global financial crisis. The coefficient of 0.0311 (in column (2)) suggests that an adoption of ATP increases the probability of delisting by 3.11%p. Given that the sample mean of delisting was 10% in 2009, this can be considered as a substantial increase in delisting probability. In Table 9, we also find that firm size, leverage, cash holdings, and advertising expenditure, and operating profit also matter. As expected, firms with smaller size, higher leverage, smaller cash holdings, and lower profitability have higher chances of delisting.

C. Two Endogeneity Problems

Table 3 shows that firms with certain characteristics are more likely to adopt anti-takeover provisions. That is, firms that have low inside ownership, low foreign ownership, small firm size, or small cash holdings are more likely to adopt ATPs. This suggests that our ATP dummy is not truly exogenous and its coefficient can be biased by self-selection problem. Another possibility is the reverse causality problem. That is, firm performance (or other dependent variables) influencing ATP adoption, and not vice versa. The argument is that poorly performing firms may adopt ATPs for fear of hostile takeover and this leads to a negative relationship between the two (see Core, Guay, and Rusticus 2006, Lehn, Patro, and Zhao 2007). In this subsection, we address these two endogeneity issues.

Subsamples by Propensity Score

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[25] We do not include firm fixed effects since it would worsen the incidental parameters problem (unconditional fixed effects Probit estimates are biased). Random-effects and population-average Probit models did not converge.

One obvious solution to the self-selection problem is to control for firm characteristics that influence the ATP adoption decision, which we do in all of our analyses. One can go a step further and run the regressions using a subsample of firms that share similar characteristics. Table 10 shows the results. We first obtain the fitted probabilities from Table 3 Regression (2), where we estimate a Probit model that predicts the likelihood of ATP adoption. In other words, we obtained the propensity score of each firm-year observations. Second, we drop the bottom half observations in terms of propensity score and estimate again our two key regressions (Regression (6) in Tables 5 and 6). By dropping the bottom half, we are in effect using a control group (ATP non-adopters) that is much closer to the treatment group (ATP adopters) in terms of their ATP adoption likelihood.[26]

Our key results remain intact when using this subsample. The coefficients on the interaction terms are positive (negative) when regression for firm value (capital expenditure). As a robustness check, we also tried thresholds other than the 50 percentile value. We tried 75 and 90 percentile values. Higher thresholds mean that we are limiting our control group firms so that they are much closer to the firms in the treatment group, in terms of ATP adoption likelihood. The coefficients have the expected signs and, in most cases, they are statistically significant.

GMM System Estimation

One solution to the reverse causality problem is to control for lagged performance variables on the right-hand side of our regression, which we do whenever Tobin's q or accounting profitability measures are regressed. We go a step further here and conduct GMM system estimation following Blundell and Bond (1990), where lags of dependent variables, lags of their first differences, lags of endogenous variable (ATP), and first differences of exogenous variables are used as instruments.[27]

Table 11 replicates our key regressions (Regressions (2) and (6) in Tables 5 and 6) by using GMM system estimation. Note that the lag of one year was sufficient to make the error term serially uncorrelated.

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[26] This approach, however, is different from a typical propensity score matching (PSM) method, where each individual observation in the treatment group is matched with an observation (or multiple observations) in the control group. We opt to take our *ad hoc* approach because the nature of our data did not meet the common support condition that is necessary to use the PSM method. In other words, our data does not ensure that firms with the same characteristics have a positive probability of being both ATP adopters and non-adopters. See Caliendo and Kopeinig (2005) for details on PSM method.

[27] We do not estimate two-stage least squares (2SLS). This is because we could not identify a valid instrument that is exogenous, correlated with ATP, but not with firm performance variables. Harford, Humphery-Jenner, and Powell (2010) also use GMM regression approach to address the endogeneity problem when studying entrenched manager's value-decreasing acquisitions.

Our principal results remain intact. That is, ATP destroys firm value and increases capital expenditure when inside ownership is low.

D. Alternative Hypothesis and Counter Evidence

Despite our robustness tests using propensity scores and GMM system estimation, one may still easily come up with an alternative story that can explain some of the results in this paper. Suppose there is a firm expecting lower profitability *in the future*, for a reason other than the adoption of ATP. Foreseeing lower firm value and a higher takeover possibility, this firm may adopt ATP. One can also imagine that such tendency would be greater for firms with low inside ownership. *Ex post*, the profitability of this firm falls, as expected. Consequently, the firm value and the dividend payouts also fall. With poor performance, this firm will also be hit harder by the global financial crisis and eventually get delisted in subsequent years.

This alternative story, however, is not consistent with two other pieces of evidence presented in this paper. First, it cannot explain why firms increase capital expenditure after the adoption of ATP. Firms with poor business prospects and low retained earnings should invest less. But, in this paper, we show that firms that are more likely to suffer from managerial entrenchment – firms with low inside ownership – increase capital expenditure after the adoption of ATP. Second, the alternative hypothesis cannot explain why inside ownership matters within the ATP-adopted firms. Inside ownership may influence the ATP-adoption decision, but it is hard to imagine why firms that have already adopted ATPs would suffer more if inside ownership level is low. Under the alternative story, given the assumption that inside ownership and ATPs are substitutes, the opposite is more likely. That is, firms with high inside ownership would adopt ATP only if their business prospect is extremely bad. On the contrary, firms with low inside ownership would adopt ATP even if their business prospect is only modestly bad. In this case, the extent of value-destruction during the post-ATP adoption period should be greater for firms with higher inside ownership.

6. Conclusion

Managerial entrenchment is a topic widely studied in the field of corporate finance. But, empirically quantifying the entrenchment effect has not been an easy task. The time-invariance of anti-takeover provisions, the shadow pill problem, and the endogeneity of their adoptions are the key challenges. In this paper, we try to address those challenges by making use of a unique situation in Korea. With the removal

of statute-based anti-takeover provisions during the aftermath of the Asian crisis, a significant number of Korean firms started to introduce charter-based anti-takeover measures, such as supermajority requirement on director dismissals, golden parachutes, supermajority requirement on mergers, and so on. This provides a setting where anti-takeover provisions vary over time, allowing us to investigate the relationship in a firm fixed effects framework. Also, given that all the provisions newly introduced are charter-based that require shareholders' approval, we are not subject to the shadow pill problem that often plagues U.S. studies. Moreover, their adoption at the shareholders' meeting is an unexpected news item that constitutes a valid event, allowing one to conduct meaningful event studies. Firm fixed effects regressions and event studies help us identify the causal effect by investigating whether the value of ATP-adopting firms fall when it should (identification in time).

Using public firms in Korea over 1999-2009, we find a number of interesting results. First, we find that firms with lower inside ownership, lower foreign ownership, smaller firm size, or lower cash holdings are more likely to adopt charter-based anti-takeover measures. Second, our event studies and firm fixed effects regressions show that firms with anti-takeover provisions experience lower firm value during the post-adoption period. We also find that the extent of such share price drop is greater for firms with low inside ownership, suggesting that the level of inside ownership and charter-based anti-takeover measures are substitutes. Third, consistent with the overinvestment hypothesis of Jensen (1986), we find that firms with anti-takeover measures experience higher capital expenditures, lower profitability, and lower dividend payouts. Fourth, by investigating delisted firms either in 2009 or 2010, we find that firms with anti-takeover provisions fared poorly during the global financial crisis, compared to those without such provisions. Lastly, we confirm that our principal results remain intact even when we control for self-selection and reverse causality problems.

Our result also sheds light on the current policy debate in Korea over the adoption of poison pill. Based on the findings in our paper, we expect that the introduction of poison pill will also have an entrenchment effect. Given that poison pill is seen as a stronger defense tool than the ones we study in this paper, we also conjecture that it would have a stronger entrenchment effect.

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Figure 1: Number of Firms with Anti-Takeover Charter Provisions

The dark grey bars in the first chart represent cumulative number of nonfinancial listed companies that have at least one anti-takeover charter provisions over a period of 1999-2009. The light grey bars use firms that exist throughout the 1999-2008 period. The second bar chart counts the number of delisted nonfinancial companies by year during the sample period. We split the sample of delisted firms into those with at least one anti-takeover charter provisions (in black) and those with none (in grey).
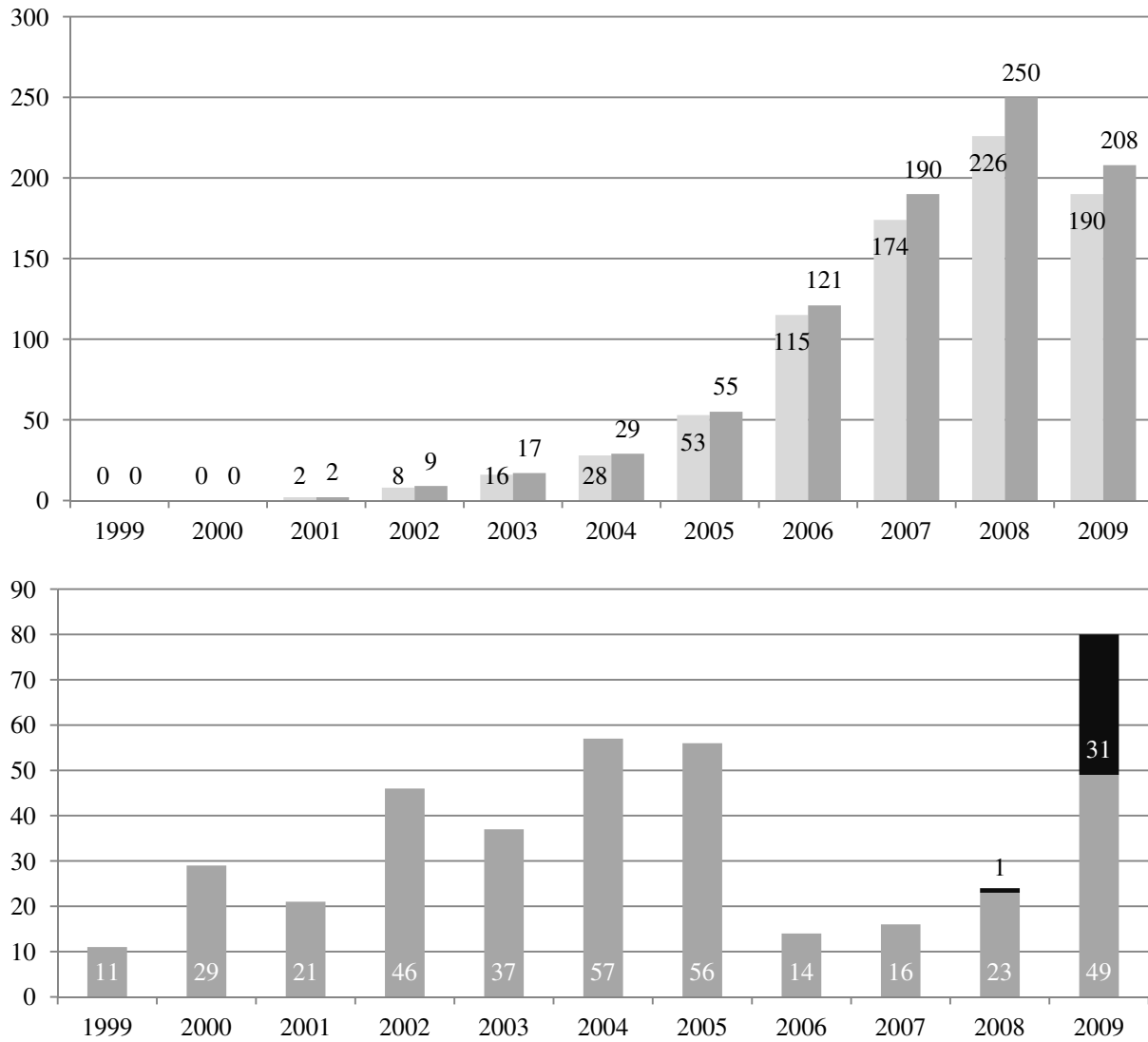
Figure 2: Announcement Effect of Anti-Takeover Charter Amendments

The figures show cumulative average abnormal returns (CAARs) before and after the adoption of anti-takeover charter provisions. The first figure (A) uses the full sample of firms. The second figure (B) limits to firms with inside ownership less than 10 percent. The third figure (C) limits to firms with market capitalization above 50 billion won (approximately 50 million US dollars). The fourth (D) and the fifth (E) figures further restrict the sample to ATP adopters that did not experience the drop in NI/Assets over the mediate past year. We report the CAARs from day -10 through day +20. The event day is the day of shareholders' meeting. Abnormal returns are estimated from market model using past 250 trading days from day -260 to -11. The sample period is from 2001 to 2009.

A. Full Sample
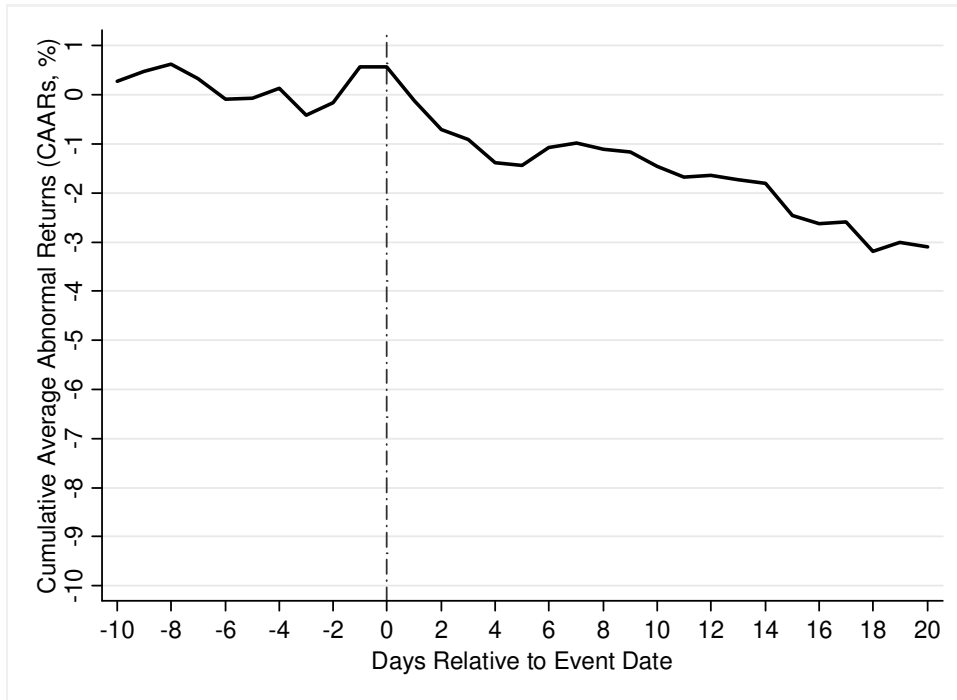
B. Inside Ownership < 10%
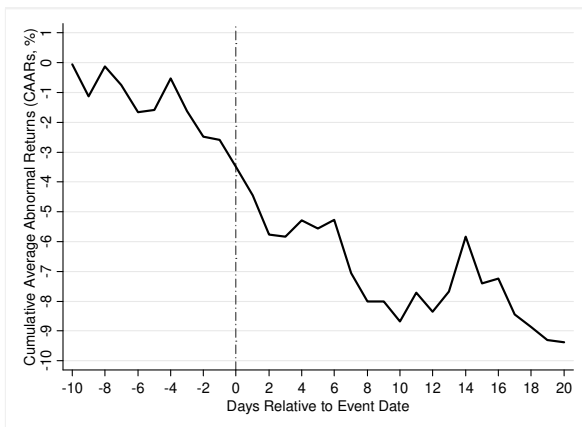
C. Market Capitalization > 50 Billion Won
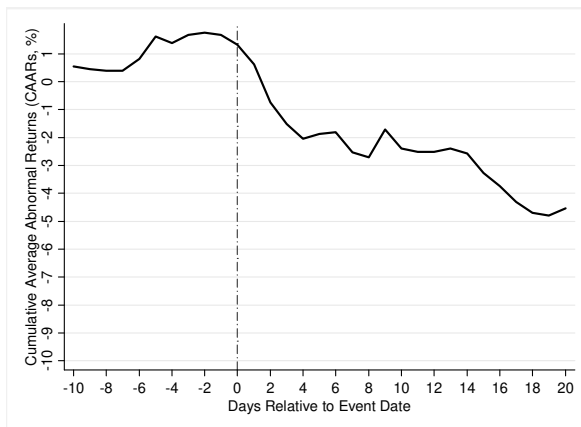
D. Inside Ownership < 10%
(Do not experience fall in NI/Assets)
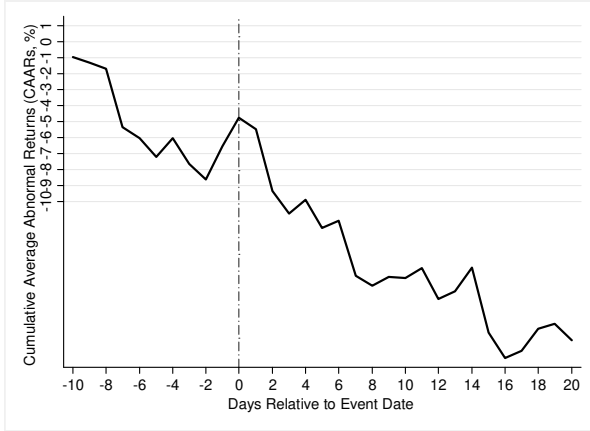
E. Market Capitalization > 50 Billion Won
(Do not experience fall in NI/Assets)
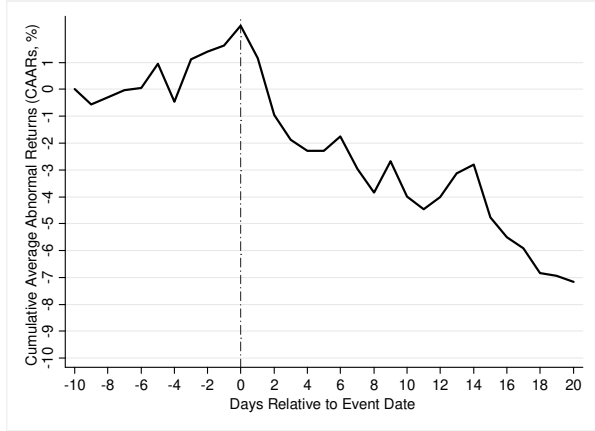
Table 1: Types of Anti-Takeover Charter Provisions

Types of anti-takeover charter provisions and the number of firms with such provisions over the sample period (2001-2009).

Types of Anti-Takeover Charter Provisions	No. of firms
Supermajority requirement on director dismissals	197
Prohibiting the dismissal of directors above a certain percentage	33
Golden parachutes	130
Supermajority requirement on mergers	12
Supermajority requirement on control-related charter amendments	119
Delaying the effective date of control-related charter amendments	23
At least one above	250

Table 2: Principal Variables

Definition and summary statistics of principal dependent and independent variables used in this paper. Panel A defines each variable. Panel B provides summary statistics. We use nonfinancial firms listed on the Korea Exchange (formally, split between KSE and KOSDAQ) during 1999-2009. Firms with negative book equity values are dropped. When scaling profits and dividends with total assets, we use the average between beginning-of-the-year and end-of-the-year asset values.

Panel A. Variable Definitions

Variables	Definition
Dependent variables	
Firm Value	ln(Tobins' q) measured at year-end. Tobin's q is defined as [(market value of common equity + book value of debt)/book value of assets]
Capital Expenditure	ln(CAPEX/previous fiscal year's total assets); firms with missing data are assumed to have zero CAPEX
EBIT/Sale	Earnings before interest and tax /sales; winsorized at the 1st and the 99th percentile values
NI/Asset	Net income/total assets; winsorized at the 1st and the 99th percentile values
NI/Equity	Net income/book value of common equity; firms with negative values of book equity are dropped; winsorized at the 1st and the 99th percentile values
Dividend/Sale	ln[(Dividend/sales) + 1]; missing values are treated as zero dividends; winsorized at the 1st and the 99th percentile values
Dividend /Asset	ln[(Dividend/assets + 1]; missing values are treated as zero ; winsorized at the 1st and the 99th percentile values
Dividend /Equity	ln[(Dividend/book value of equity) + 1]; missing values are treated as zero; firms with negative values of book equity are dropped; winsorized at the 1st and the 99th percentile values
Positive Dividend	1 if a firm pays out dividend, 0 otherwise
Delist	1 if delisted in either in 2009 or 2010, and 0 otherwise
RHS variables	
ATP	1 if anti-takeover provision exists, 0 otherwise
ATP N	1 if at least N number of anti-takeover provision exists, and 0 otherwise
ATP Index	Number of anti-takeover provisions that exist
Inside Ownership	[Common shares held by the controlling shareholder and its related parties / common shares outstanding] x 100
Foreign Ownership	[Common shares held by foreign investors / common shares outstanding] x 100
Operating Profit	ln[(EBIT/Asset) + 1]
Growth Opportunity	ln(Tobins' q) measured at year-end. Tobin's q is defined as [(market value of common equity + book value of debt)/book value of assets]
Firm Size	ln(Total assets); total assets are measured in million won (approximately thousand US dollars)
Firm Age	Number of years since a firm's establishment, measured by ln(year – year of establishment);
Leverage	ln[(Book value of debt/market value of common stock) + 1]
Cash Holdings	ln(Cash and cash equivalents/total assets); winsorized at the 1st and 99th percentile values
R&D Expenditure	ln[(R&D/Sales) + 1]; winsorized at the 1st and 99th percentile values
Advertising Expenditure	ln[(Advertising/Sales) + 1]
Sales Growth	Geometric average growth rate of sales during the past two fiscal years.

Panel B. Summary Statistics

	N	No of "1" Values	Pooled Mean	Pooled Median	S.D.	Min	Max	Inside Ownership			
								>30% Mean	<30% Mean	<20% Mean	<10% Mean
Tobin's q	15,522		1.27	0.95	1.69	0.02	102.86	1.15	1.48	1.58	1.72
ln(Tobin's q)	15,522		0.04	-0.05	0.53	-4.06	4.63	-0.03	0.19	0.24	0.30
Capital Expenditure	17,377		-3.53	-3.40	1.55	-13.81	2.86	-3.51	-3.81	-4.02	-4.20
EBIT/Sale	18,424		-0.01	0.05	0.30	-1.82	0.40	0.04	-0.13	-0.24	-0.41
NI/Asset	17,449		-0.01	0.03	0.23	-1.21	0.37	0.03	-0.13	-0.22	-0.36
NI/Equity	17,012		-0.04	0.07	0.48	-2.63	0.74	0.03	-0.26	-0.43	-0.66
Dividend/Sale	18,424		0.01	0.00	0.01	0.00	0.09	0.01	0.00	0.00	0.00
Dividend /Asset	17,449		0.01	0.00	0.01	0.00	0.06	0.01	0.00	0.00	0.00
Dividend /Equity	17,012		0.01	0.00	0.02	0.00	0.09	0.02	0.01	0.01	0.00
Positive Dividend	18,435		0.48	0.00	0.50	0.00	1.00	0.62	0.32	0.20	0.11
Delist	1,752	167	0.10	0.00	0.29	0.00	1.00	0.04	0.22	0.32	0.46
ATP	18,435	881	0.05	0.00	0.21	0.00	1.00	0.02	0.12	0.17	0.22
ATP 2	18,435	504	0.03	0.00	0.16	0.00	1.00	0.01	0.07	0.10	0.14
ATP 3	18,435	242	0.01	0.00	0.11	0.00	1.00	0.00	0.04	0.06	0.08
ATP 4	18,435	65	0.00	0.00	0.06	0.00	1.00	0.00	0.01	0.02	0.04
ATP 5	18,435	1	0.00	0.00	0.01	0.00	1.00	0.00	0.00	0.00	0.00
ATP 6	18,435	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
ATP Index	18,435		0.09	0.00	0.46	0.00	5.00	0.04	0.24	0.35	0.48
Inside Ownership	16,142		39.22	38.26	18.32	0.00	100.00	48.96	19.23	12.91	6.51
Foreign Ownership	16,142		5.76	0.39	11.78	0.00	107.21	5.75	5.78	5.17	4.71
Operating Profit	17,449		0.00	0.03	0.05	0.13	-0.52	0.32	0.05	-0.03	-0.07
Firm Size	18,430		11.24	11.01	1.52	4.85	18.27	11.46	11.30	11.18	11.02
Firm Age	18,286		2.82	3.00	0.85	0.00	4.71	2.97	2.87	2.89	2.93
Leverage	15,510		0.87	0.63	0.88	0.00	12.26	0.82	0.95	1.03	1.22
Cash Holdings	17,449		0.07	0.04	0.08	0.00	0.91	0.07	0.07	0.07	0.06
R&D Expenditure	18,424		0.03	0.01	0.05	0.00	0.29	0.02	0.04	0.04	0.03
Advertising Expenditure	18,417		1.33	0.87	1.30	0.00	10.53	1.27	1.48	1.56	1.65
Sales Growth	16,382		0.16	0.08	1.35	-1.00	135.35	0.12	0.12	0.10	-0.01

Table 3: Which Firms Choose to Adopt Anti-Takeover Measures?

Industry fixed effects Probit regression of ATP (1 if anti-takeover provision exits, 0 otherwise) on ownership variables, operating profit, firm size, and other control variables. Point estimates denote marginal effects on probability. Regressions are estimated over the 1999-2009 period using a sample of nonfinancial firms. Regressions (1) and (2) respectively include 2-digit and 4-digit industry fixed effects. All regressions use year dummies. *t*-values, in the parenthesis, are based on standard errors clustered by firm. *, **, and *** respectively indicate significance at 10%, 5%, and 1% levels. Significant results (at 5% level or better) are shown in **boldface**.

Dependent Variable = ATP	(1)	(2)
Inside Ownership	**-0.0006***	**-0.0004***
	(-10.20)	**(-11.22)**
Foreign Ownership	-0.0002*	**-0.0002**
	(-1.69)	**(-2.33)**
Firm Size	**-0.0034***	**-0.0030***
	(-4.57)	**(-5.26)**
Firm Age	-0.0001	0.0004
	(-0.10)	(0.40)
Leverage	-0.0009	0.0001
	(-0.88)	(0.14)
Cash Holdings	**-0.0127**	**-0.0098**
	(-1.98)	**(-2.05)**
R&D Expenditure	-0.0023	-0.0001
	(-0.20)	(-0.01)
Advertising Expenditure	0.0009*	0.0006
	(1.65)	(1.44)
Operating Profit	-0.0048	-0.0031
	(-1.07)	(-0.89)
Intercept term	Yes	Yes
Year dummies	Yes	Yes
Industry Fixed Effects	2-digit	4-digit
Observations	14,138	13,513
Pseudo R-squared	0.304	0.334

Table 4: Announcement Effect of Anti-Takeover Charter Amendments

This table shows cumulative average abnormal returns (CAARs) before and after the adoption of anti-takeover charter provisions. In the first four columns ((1)-(4)), we report CAARs and their corresponding t-stats when using the full sample of firms (203 firms on day 0). In the next four columns ((5)-(8)), we report the results when limiting to firms with inside ownership less than 10 percent (29 firms on day 0). In the last four columns ((9)-(12)), we report the results when limiting to firms with market capitalization above 50 billion won (approximately 50 million won, 52 firms on day 0). In columns (1), (2), (5), (6), (9), and (10), we cumulate AARs from day -10. In all other columns, we cumulate AARs from day 0. The event day is the day of shareholders' meeting. Abnormal returns are estimated from market model using past 250 trading days from day -260 to -11. The sample period is from 2001 to 2009. *, **, and *** respectively indicate significance at 10%, 5%, and 1% levels.

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
	Full Sample				Inside Ownership < 10%				Market Capitalization > 50 billion won			
Day	[-10, t]		[0, t]		[-10, t]		[0, t]		[-10, t]		[0, t]	
	CAAR (%)	t-stat	CAAR (%)	t-stat	CAAR (%)	t-stat	CAAR (%)	t-stat	CAAR (%)	t-stat	CAAR (%)	t-stat
-10	0.27	(0.77)			-0.05	(0.05)			0.54	(0.91)		
-9	0.48	(0.95)			-1.12	(0.80)			0.44	(0.52)		
-8	0.63	(1.01)			-0.13	(0.08)			0.39	(0.37)		
-7	0.33	(0.46)			-0.74	(0.37)			0.40	(0.33)		
-6	-0.09	(0.11)			-1.66	(0.75)			0.82	(0.61)		
-5	-0.06	(0.07)			-1.59	(0.66)			1.62	(1.11)		
-4	0.14	(0.15)			-0.52	(0.20)			1.39	(0.88)		
-3	-0.42	(0.42)			-1.62	(0.58)			1.67	(0.99)		
-2	-0.16	(0.15)			-2.48	(0.84)			1.75	(0.98)		
-1	0.58	(0.51)			-2.59	(0.83)			1.68	(0.89)		
0	0.56	(0.47)	0.04	(0.12)	-3.47	(1.06)	-0.88	(0.89)	1.33	(0.67)	-0.37	(0.64)
1	-0.12	(0.09)	-0.78	(1.57)	-4.46	(1.30)	-1.87	(1.34)	0.62	(0.30)	-1.32	(1.60)
2	-0.70	(0.54)	-1.44 ***	(2.38)	-5.76	(1.62)	-3.17 *	(1.85)	-0.74	(0.35)	-2.66 ***	(2.63)
3	-0.90	(0.67)	-1.58 **	(2.26)	-5.83	(1.58)	-3.24 *	(1.64)	-1.53	(0.68)	-3.56 ***	(3.05)
4	-1.39	(1.00)	-1.96 ***	(2.50)	-5.29	(1.38)	-2.70	(1.22)	-2.05	(0.89)	-4.03 ***	(3.09)
5	-1.43	(1.00)	-1.95 **	(2.27)	-5.56	(1.41)	-2.97	(1.23)	-1.87	(0.79)	-3.59 ***	(2.52)
6	-1.07	(0.73)	-1.62 *	(1.74)	-5.26	(1.29)	-2.67	(1.02)	-1.81	(0.74)	-3.50 **	(2.27)
7	-0.98	(0.65)	-1.56	(1.58)	-7.06 *	(1.68)	-4.47	(1.60)	-2.54	(1.00)	-4.15 ***	(2.52)
8	-1.11	(0.71)	-1.75 *	(1.66)	-8.01 *	(1.86)	-5.42 *	(1.83)	-2.71	(1.04)	-4.34 ***	(2.48)
9	-1.16	(0.73)	-1.82 *	(1.65)	-8.00 *	(1.81)	-5.41 *	(1.73)	-1.72	(0.64)	-3.51 *	(1.90)
10	-1.45	(0.88)	-2.05 *	(1.76)	-8.69 *	(1.92)	-6.10 *	(1.86)	-2.40	(0.88)	-4.20 **	(2.17)
11	-1.67	(0.99)	-2.07 *	(1.71)	-7.71 *	(1.67)	-5.12	(1.50)	-2.52	(0.90)	-4.19 **	(2.07)
12	-1.64	(0.95)	-1.91	(1.51)	-8.35 *	(1.76)	-5.76	(1.62)	-2.52	(0.88)	-4.06 *	(1.93)
13	-1.72	(0.98)	-2.02	(1.55)	-7.68	(1.59)	-5.09	(1.38)	-2.39	(0.82)	-3.94 *	(1.81)
14	-1.80	(1.01)	-2.18	(1.61)	-5.83	(1.18)	-3.24	(0.85)	-2.58	(0.86)	-4.12 *	(1.82)
15	-2.46	(1.34)	-2.84 **	(2.03)	-7.41	(1.47)	-4.82	(1.22)	-3.26	(1.07)	-4.69 **	(2.01)
16	-2.63	(1.41)	-2.83 **	(1.96)	-7.25	(1.41)	-4.66	(1.14)	-3.74	(1.21)	-4.86 **	(2.02)
17	-2.59	(1.37)	-2.85 *	(1.92)	-8.45	(1.62)	-5.86	(1.40)	-4.31	(1.37)	-5.39 **	(2.18)
18	-3.18 *	(1.65)	-3.44 **	(2.26)	-8.87 *	(1.67)	-6.28	(1.46)	-4.70	(1.46)	-5.95 ***	(2.34)
19	-3.01	(1.54)	-3.43 **	(2.19)	-9.31 *	(1.72)	-6.72	(1.52)	-4.79	(1.47)	-6.30 ***	(2.42)
20	-3.10	(1.56)	-3.52 **	(2.19)	-9.38 *	(1.71)	-6.79	(1.50)	-4.54	(1.37)	-6.01 **	(2.25)

Table 5: Anti-Takeover Charter Amendments and Firms' Market Value

Firm fixed effect regressions of firm's market value on ATP and other control variables. Regressions are estimated over the 1999-2009 period using nonfinancial firms listed on the Korea Exchange. Regressions (2) to (5) report sub-sample results, grouped by the level of inside ownership. Regression (6) adds inside ownership and its interaction with ATP. All regressions use year dummies. *t*-values, in the parenthesis, are based on standard errors clustered by firm. *, **, and *** respectively indicate significance at 10%, 5%, and 1% levels. Significant results (at 5% level or better) are shown in **boldface**.

Dependent Variable = *ln*(Tobin's *q*)	(1) Full Sample	(2) Sub-Sample by Inside Ownership >30%	(3) <30%	(4) <20%	(5) <10%	(6) Full Sample
ATP	-0.0405	0.0468	**-0.1062*****	**-0.1860*****	**-0.2657****	**-0.1402*****
	(-1.41)	(1.03)	**(-2.76)**	**(-3.72)**	**(-2.12)**	**(-3.19)**
x Inside Ownership						**0.0037*****
						(2.66)
Inside Ownership						**-0.0028*****
						(-6.04)
Firm Value (t-1)	**0.1904*****	**0.1610*****	**0.0810*****	0.0067	-0.0967	**0.1839*****
	(13.60)	**(9.15)**	**(3.44)**	(0.21)	(-1.56)	**(13.19)**
Foreign Ownership	**0.0045*****	**0.0035*****	**0.0060*****	0.0049*	0.0073	**0.0044*****
	(5.76)	**(3.87)**	**(3.74)**	(1.84)	(1.43)	**(5.84)**
Firm Size	**-0.1435*****	-0.0201	**-0.2912*****	**-0.3569*****	**-0.3881*****	**-0.1473*****
	(-8.80)	(-0.95)	**(-10.92)**	**(-9.12)**	**(-4.24)**	**(-9.11)**
Firm Age	-0.0138	0.0100	**-0.2063*****	**-0.3510*****	-0.8875*	-0.0252
	(-0.44)	(0.26)	**(-2.94)**	**(-3.19)**	(-1.87)	(-0.80)
Leverage	**-0.0935*****	**-0.1589*****	**-0.0560*****	**-0.0573****	-0.0593	**-0.0985*****
	(-8.36)	**(-10.83)**	**(-3.02)**	**(-2.07)**	(-1.01)	**(-8.76)**
Cash Holdings	**0.2824*****	**0.2423****	**0.2891****	0.2262	0.5319	**0.2723*****
	(3.49)	**(2.52)**	**(2.25)**	(1.28)	(1.27)	**(3.38)**
R&D Expenditure	0.0048	-0.1978	-0.0417	-0.2195	-0.8149	-0.0103
	(0.03)	(-0.76)	(-0.22)	(-0.81)	(-1.43)	(-0.06)
Advertising Expenditure	0.0106	0.0085	0.0064	0.0179	-0.0183	0.0103
	(1.41)	(0.88)	(0.57)	(1.22)	(-0.46)	(1.39)
Operating Profit	**-0.1719*****	**0.2365****	**-0.1894****	**-0.2116****	**-0.5774*****	**-0.1240****
	(-2.97)	**(2.51)**	**(-2.30)**	**(-2.18)**	**(-2.70)**	**(-2.15)**
Intercept term	Yes	Yes	Yes	Yes	Yes	Yes
No. of firm-years	14,221	9,332	4,889	2,427	684	14,221
No. of firms	1,918	1,587	1,077	704	325	1,918
within R-sq	0.265	0.295	0.270	0.309	0.343	0.270

Table 6: Anti-Takeover Charter Amendments and Capital Expenditure

Firm fixed effects regression of capital expenditure on ATP and other control variables. Regressions (2) to (5) reports sub-sample results, grouped by the level of inside ownership. Regression (6) adds inside ownership and its interaction term with ATP. Regressions are estimated over the 1999-2009 period using nonfinancial firms listed on the Korea Exchange. All regressions use year dummies. *t*-values, in the parenthesis, are based on standard errors clustered by firm. *, **, and *** respectively indicate significance at 10%, 5%, and 1% levels. Significant results (at 5% level or better) are shown in **boldface**.

Dependent Variable = *ln*(CAPEX/Assets)	(1) Full Sample	(2) >=30%	(3) <30%	(4) <20%	(5) <10%	(6) Full Sample
		Sub-Sample by Inside Ownership				
ATP	-0.0586	-0.2460*	-0.0080	**0.3044****	**0.7994*****	0.2275
	(-0.69)	(-1.89)	(-0.07)	**(2.03)**	**(2.94)**	(1.48)
x Inside Ownership						**-0.0116****
						(-2.37)
Inside Ownership						**0.0040*****
						(2.59)
Growth Opportunity	**0.1898*****	**0.2503*****	0.0499	-0.0302	-0.2366	**0.1998*****
	(5.09)	**(5.48)**	(0.75)	(-0.33)	(-1.43)	**(5.38)**
Foreign Ownership	0.0018	0.0001	0.0055*	0.0079*	0.0161	0.0018
	(1.00)	(0.02)	(1.79)	(1.74)	(1.59)	(1.01)
Firm Size	**0.4103*****	**0.4062*****	**0.4558*****	**0.5630*****	**0.7095*****	**0.4227*****
	(9.42)	**(6.73)**	**(6.32)**	**(5.14)**	**(4.15)**	**(9.63)**
Firm Age	**-0.9364*****	**-0.6599*****	**-1.3812*****	**-1.7667*****	**-2.6038****	**-0.9205*****
	(-8.62)	**(-4.92)**	**(-7.69)**	**(-7.03)**	**(-2.34)**	**(-8.48)**
Leverage	**-0.1854*****	**-0.0748****	**-0.2365*****	**-0.2342*****	-0.1533*	**-0.1773*****
	(-7.32)	**(-2.48)**	**(-6.14)**	**(-4.54)**	(-1.79)	**(-7.02)**
Cash Holdings	0.1960	-0.2172	0.6186*	0.5560	0.9052	0.2071
	(0.92)	(-0.83)	(1.84)	(1.18)	(0.88)	(0.97)
R&D Expenditure	1.0980**	1.1237	0.6014	0.6494	1.4549	**1.1238****
	(1.98)	(1.45)	(0.81)	(0.69)	(1.06)	**(2.04)**
Advertising Expenditure	**0.1385*****	**0.1494*****	**0.1438*****	0.0588	0.0363	**0.1382*****
	(4.90)	**(3.55)**	**(3.47)**	(1.12)	(0.35)	**(4.90)**
Operating Profit	**1.2681*****	**1.7813*****	**0.4869****	0.3059	-0.1488	**1.1978*****
	(7.57)	**(7.20)**	**(1.99)**	(1.01)	(-0.23)	**(7.00)**
Intercept term	Yes	Yes	Yes	Yes	Yes	Yes
No. of firm-years	15,266	10,166	5,100	2,467	682	15,266
No. of firms	1,978	1,692	1,093	712	323	1,978
within R-sq	0.114	0.0943	0.146	0.176	0.247	0.116

Table 7: Capital Expenditure and Firms' Market Value

Firm fixed effects regression of firm's market value on capital expenditure and other control variables. Regressions (1) and (6) respectively report sub-sample results for ATP non-adopters and ATP adopters. Regressions (2)-(5) and regressions (7)-(10) divide the sample further by the level of inside ownership. All regressions are estimated over the 1999-2009 period using nonfinancial firms listed on the Korea Exchange. All regressions use year dummies. *t*-values, in the parenthesis, are based on standard errors clustered by firm. *, **, and *** respectively indicate significance at 10%, 5%, and 1% levels. Significant results (at 5% level or better) are shown in **boldface**.

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Dependent Variable		ATP Non-Adopters					ATP Adopters			
= *ln*(Tobin's *q*)	Full	Sub-Sample by Inside Ownership				Full	Sub-Sample by Inside Ownership			
	Sample	>30%	<30%	<20%	<10%	Sample	>30%	<30%	<20%	<10%
Capital Expenditure	**0.0129*****	**0.0174*****	0.0030	0.0039	0.0144	0.0207	0.0162	0.0151	-0.0056	**-0.0879****
	(3.61)	**(4.21)**	(0.41)	(0.35)	(0.63)	(1.48)	(0.54)	(0.89)	(-0.24)	**(-2.13)**
Firm value (t-1)	**0.1777*****	**0.1601*****	**0.0521****	-0.0228	**-0.1345****	**-0.1256*****	**-0.2044*****	**-0.1580*****	**-0.1816*****	-0.2925*
	(12.17)	**(8.88)**	**(2.15)**	(-0.70)	**(-1.98)**	**(-3.05)**	**(-2.73)**	**(-3.10)**	**(-3.07)**	(-1.80)
Foreign Ownership	**0.0044*****	**0.0035*****	**0.0064*****	**0.0074*****	0.0085	0.0053	0.0036	0.0042	-0.0022	-0.0377
	(5.54)	**(3.80)**	**(4.29)**	**(3.78)**	(1.55)	(1.12)	(0.42)	(0.66)	(-0.22)	(-1.22)
Firm Size	**-0.1368*****	-0.0349	**-0.2769*****	**-0.3466*****	**-0.4230*****	**-0.3504*****	-0.1147	**-0.4280*****	**-0.3955*****	-0.2897
	(-8.21)	(-1.61)	**(-9.80)**	**(-9.07)**	**(-4.75)**	**(-4.80)**	(-0.84)	**(-4.92)**	**(-3.63)**	(-1.51)
Firm Age	0.0045	0.0192	**-0.1731****	**-0.2663****	-0.7212	-0.3506	0.7451	-0.7915	-1.3565*	-2.7011
	(0.14)	(0.50)	**(-2.37)**	**(-2.20)**	(-1.50)	(-0.91)	(1.34)	(-1.48)	(-1.84)	(-1.07)
Leverage	**-0.0906*****	**-0.1543*****	**-0.0545*****	-0.0443*	-0.0741	**-0.1660*****	**-0.2572****	**-0.1473****	**-0.2048*****	**-0.2306****
	(-8.03)	**(-10.49)**	**(-2.93)**	(-1.66)	(-1.36)	**(-3.02)**	**(-2.06)**	**(-2.22)**	**(-2.76)**	**(-2.33)**
Cash Holdings	**0.2903*****	**0.2449****	**0.3756*****	0.2500	0.3659	0.1287	-0.6410	0.1360	-0.0846	0.9603
	(3.54)	**(2.50)**	**(2.66)**	(1.19)	(0.70)	(0.52)	(-1.46)	(0.49)	(-0.27)	(1.29)
R&D Expenditure	-0.0913	-0.4099*	-0.0214	-0.1065	**-1.6047****	0.0022	2.7065	0.0353	-0.4134	2.2586
	(-0.49)	(-1.67)	(-0.09)	(-0.27)	**(-2.05)**	(0.01)	(1.10)	(0.08)	(-0.66)	(1.57)
Advertising	0.0112	0.0021	0.0134	0.0338*	0.0442	-0.0083	0.0323	-0.0053	-0.0054	-0.0043
Expenditure	(1.44)	(0.22)	(1.07)	(1.93)	(1.28)	(-0.33)	(0.58)	(-0.20)	(-0.19)	(-0.07)
Operating Profit	-0.1182*	**0.2063****	-0.1632*	-0.2113*	**-0.5616*****	-0.2979	-0.2079	-0.0459	-0.2253	-0.1436
	(-1.96)	(2.16)	(-1.78)	(-1.83)	**(-2.64)**	(-1.45)	(-0.32)	(-0.21)	(-0.86)	(-0.30)
Intercept Term	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
No. of firm-years	13,330	9,087	4,243	1,975	521	836	217	619	430	154
No. of firms	1,892	1,557	1,024	637	269	248	93	206	166	82
within R-sq	0.272	0.302	0.262	0.309	0.374	0.320	0.325	0.381	0.425	0.593

Table 8: Anti-Takeover Charter Amendments, Profitability, and Dividends

Sample consists of nonfinancial firms listed on the Korea Exchange during the sample period over 1999-2009. All regressions use year dummies. *t*-values, in the parenthesis, are based on standard errors clustered by firm. *, **, and *** respectively indicate significance at 10%, 5%, and 1% levels. Significant results (at 5% level or better) are shown in **boldface**.

Panel A. Fixed Effects Regressions of Profitability

Firm fixed effects regressions of indicated profitability variables on ATP and other control variables. In Regression (2), we exclude firms with negative book equity values. All regressions use firm clusters. Profitability variables are all winsorized at 1%/99%.

Dependent Variables	(1) NI/Asset	(2) NI/Equity	(3) EBIT/Sale
ATP	**-0.0588*****	**-0.0771****	**-0.0622*****
	(-4.27)	**(-2.43)**	**(-3.64)**
Profitability (t-1)	**0.1022*****	**0.1069*****	**0.3153*****
	(5.86)	**(6.27)**	**(15.13)**
Growth Opportunity	**-0.0890*****	**-0.2013*****	**-0.0218*****
	(-13.66)	**(-13.12)**	**(-2.75)**
Foreign Ownership	0.0001	0.0003	0.0001
	(0.49)	(0.43)	(0.69)
Firm Size	**0.1247*****	**0.2239*****	**0.0927*****
	(17.06)	**(12.78)**	**(10.10)**
Firm Age	**-0.1281*****	**-0.2121*****	**-0.1234*****
	(-6.91)	**(-5.37)**	**(-6.56)**
Leverage	**-0.0892*****	**-0.2251*****	**-0.0317*****
	(-16.20)	**(-15.42)**	**(-7.10)**
Cash Holdings	**0.3545*****	**0.6748*****	**0.2751*****
	(10.33)	**(9.61)**	**(6.45)**
R&D Expenditure	**-0.3790*****	**-0.7070*****	**-1.4651*****
	(-4.34)	**(-3.58)**	**(-10.16)**
Advertising Expenditure	**-0.0322*****	**-0.0562*****	**-0.0644*****
	(-7.84)	**(-6.37)**	**(-9.65)**
No. of firm-years	14,101	13,643	15,320
No. of firms	1,932	1,902	1,980
within R-sq	0.270	0.200	0.275

Panel B. Fixed Effects, Pooled OLS, and Probit Regressions of Dividends

Firm fixed effects ((1) through (3)), industry fixed effects ((4) through (6)), and random effects Probit (7) regressions of indicated dividend variables. *ln*[(Dividend/Sales) + 1], *ln*[(Dividend/Asset) + 1], and *ln*[(Dividend/Equity) + 1] are winsorized at 1%/99%. Regressions (3) and (6) exclude firms with negative book equity values. When dividends are scaled by sales, we drop sales growth as a regressor.

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Models	Firm Fixed Effects						Probit
Dependent Variables	*ln*[(Dividend /Sale) + 1]	*ln*[(Dividend /Asset) + 1]	*ln*[(Dividend /Equity) + 1]	*ln*[(Dividend /Sale) + 1]	*ln*[(Dividend /Asset) + 1]	*ln*[(Dividend /Equity) + 1]	Positive Dividend
ATP	-0.0010*	-0.0001	0.0002	**-0.0027***	**-0.0013***	-0.0014*	**-0.6858***
	(-1.86)	(-0.16)	(0.24)	**(-5.04)**	**(-2.94)**	(-1.96)	**(-5.80)**
Sales Growth		0.0002*	**0.0004**		**-0.0004**	**-0.0006**	**-0.1343***
		(1.74)	**(1.96)**		**(-2.14)**	**(-2.31)**	**(-2.59)**
Foreign Ownership	**0.0001***	**0.0001***	**0.0002***	**0.0001***	**0.0001***	**0.0002***	**0.0101***
	(3.49)	**(5.60)**	**(5.32)**	**(4.34)**	**(6.49)**	**(5.57)**	**(3.97)**
Firm Size	-0.0005	**-0.0015***	**-0.0020***	0.0000	**-0.0005***	0.0001	**0.4029***
	(-1.51)	**(-6.66)**	**(-4.39)**	(0.10)	**(-3.11)**	(0.23)	**(11.99)**
Firm Age	**-0.0047***	**-0.0036***	**-0.0038**	-0.0002	**-0.0006**	**-0.0016***	0.1049*
	(-4.58)	**(-3.89)**	**(-2.46)**	(-0.45)	**(-2.38)**	**(-3.80)**	(1.68)
Leverage	**-0.0013***	**-0.0011***	**-0.0022***	**-0.0032***	**-0.0024***	**-0.0036***	**-0.5768***
	(-7.50)	**(-7.18)**	**(-7.34)**	**(-13.00)**	**(-13.10)**	**(-11.64)**	**(-17.53)**
Cash Holdings	**0.0076***	**0.0072***	**0.0087***	**0.0080***	**0.0105***	**0.0112***	0.3774
	(3.88)	**(4.99)**	**(3.99)**	**(3.12)**	**(5.22)**	**(3.72)**	(1.28)
R&D Expenditure	0.0028	**-0.0053**	-0.0080*	0.0079*	**-0.0061**	**-0.0164***	-0.5558
	(0.58)	**(-2.00)**	(-1.91)	(1.80)	**(-2.51)**	**(-4.46)**	(-0.80)
Advertising Expenditure	0.0004	**0.0004***	**0.0007***	0.0001	0.0001	0.0000	-0.0422
	(1.45)	**(3.32)**	**(3.39)**	(0.67)	(0.65)	(0.08)	(-1.52)
Operating Profit	**0.0190***	**0.0257***	**0.0466***	**0.0331***	**0.0375***	**0.0629***	**11.8032***
	(12.72)	**(19.42)**	**(20.61)**	**(18.93)**	**(25.59)**	**(26.48)**	**(33.32)**
Intercept term	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Industry Dummies				4-digit	4-digit	4-digit	4-digit
No. of firm-years	15,321	14,849	14,497	15,321	14,849	14,497	14,849
No. of firms	1,980	1,959	1,932	1,980	1,959	1,932	1,959
Within R-sq	0.075	0.172	0.174				
R-squared				0.264	0.343	0.325	

Table 9: Firms Delisting during the Global Financial Crisis

Probit regression of Delist (takes a value of 1 for firms delisted either in 2009 or 2010, and 0 otherwise) on ATP, industry fixed effects, and other control variables. Point estimates denote marginal effects on probability. Sample consists of nonfinancial firms listed on the Korea Exchange as of year-end 2008. Regressions (1) and (2) respectively use 2-digit and 4-digit industry fixed effects. All regressions use year dummies. *t*-values, in the parenthesis, are based on standard errors clustered by firm. *, **, and *** respectively indicate significance at 10%, 5%, and 1% levels. Significant results (at 5% level or better) are shown in **boldface**.

Dependent Variable = Delist	(1)	(2)
ATP	**0.0352****	**0.0311****
	(2.43)	**(2.14)**
Foreign Ownership	0.0004	0.0006
	(0.66)	(1.07)
Firm Size	**-0.0186*****	**-0.0217*****
	(-2.58)	**(-2.99)**
Firm Age	**-0.0182****	-0.0136
	(-2.44)	(-1.44)
Leverage	**0.0340*****	**0.0355*****
	(4.37)	**(4.25)**
Cash Holdings	**-0.2616****	**-0.2973****
	(-2.31)	**(-2.53)**
R&D Expenditure	-0.0596	-0.0678
	(-0.65)	(-0.66)
Advertising Expenditure	**0.0087****	**0.0093****
	(2.12)	**(2.16)**
Operating Profit	**-0.3243*****	**-0.3386*****
	(-6.97)	**(-6.66)**
Intercept term	Yes	Yes
Industry Dummies	2-digit	4-digit
Observations	1,606	1,420
Pseudo R-squared	0.304	0.321

Table 10: Subsample Results by Propensity Score

Firm fixed effects regressions of firm's market value ((1)-(3)) and capital expenditure ((4)-(6)) on ATP and control variables. Regressions (1) and (4) drop the bottom half observations in terms of propensity score obtained from Table 3 Regression (2). Regressions (2) and (5) drop observations below the 75th percentile values and regressions (3) and (6) drop those below the 90th percentile values. All regressions are estimated over the 1999-2009 period using nonfinancial firms listed on the Korea Exchange. All regressions use year dummies. t-values, in the parenthesis, are based on standard errors clustered by firm. *, **, and *** respectively indicate significance at 10%, 5%, and 1% levels. Significant results (at 5% level or better) are shown in **boldface**.

	(1)	(2)	(3)	(4)	(5)	(6)
Dependent variable	ln(Tobin's q)			ln(CAPEX/Assets)		
Propensity Score	> 50th	> 75th	> 90th	> 50th	> 75th	> 90th
ATP	**-0.1612***	**-0.1882***	**-0.2354***	0.2478	**0.3991**	**0.5730**
	(-3.28)	**(-3.12)**	**(-2.76)**	(1.51)	**(2.25)**	**(2.50)**
x Inside Ownership	**0.0038**	0.0040*	0.0042	**-0.0113**	**-0.0173***	**-0.0260**
	(2.25)	(1.69)	(0.86)	**(-1.96)**	**(-2.59)**	**(-2.32)**
Inside Ownership	**-0.0024***	**-0.0027**	**-0.0031**	0.0025	0.0033	0.0023
	(-3.30)	**(-2.51)**	**(-2.04)**	(1.12)	(1.04)	(0.56)
Firm Value (t-1)	**0.1214***	**0.0907***	**0.0757**			
	(7.32)	**(3.89)**	**(2.49)**			
Firm Value				**0.1053**	0.0407	0.0916
				(2.13)	(0.60)	(0.88)
Foreign Ownership	**0.0049***	**0.0044**	**0.0056**	0.0020	0.0074*	0.0020
	(4.31)	**(2.46)**	**(2.16)**	(0.67)	(1.74)	(0.33)
Firm Size	**-0.2068***	**-0.2464***	**-0.2752***	**0.5329***	**0.5281***	**0.5985***
	(-9.86)	**(-9.01)**	**(-7.08)**	**(9.46)**	**(7.51)**	**(5.71)**
Firm Age	0.1009*	**0.1882**	0.1040	**-1.3772***	**-1.5919***	**-1.3135***
	(1.85)	**(2.12)**	(0.94)	**(-8.48)**	**(-7.03)**	**(-4.31)**
Leverage	**-0.0851***	**-0.0781***	**-0.1063***	**-0.3469***	**-0.3675***	**-0.3724***
	(-4.73)	**(-3.31)**	**(-3.38)**	**(-8.14)**	**(-6.56)**	**(-4.87)**
Cash Holdings	0.1874*	0.1273	-0.1513	-0.0393	0.4316	0.3109
	(1.78)	(0.92)	(-0.64)	(-0.14)	(1.28)	(0.61)
R&D Expenditure	0.1473	0.2886	0.3031	0.3123	1.3157	**2.2184**
	(0.72)	(1.15)	(0.87)	(0.46)	(1.42)	**(2.01)**
Advertising Expenditure	0.0065	0.0070	-0.0033	**0.1103***	**0.0939**	**0.1385**
	(0.71)	(0.58)	(-0.20)	**(3.37)**	**(2.09)**	**(2.28)**
Operating Profit	**-0.1379**	**-0.2187***	-0.2571**	**0.5199**	0.0965	0.0014
	(-2.09)	**(-2.59)**	(-2.09)	**(2.46)**	(0.34)	(0.00)
Intercept Term	Yes	Yes	Yes	Yes	Yes	Yes
No. of firm-years	8,066	4,855	2,931	8,533	5,164	3,144
No. of firms	1,809	1,595	1,327	1,878	1,684	1,434
No. of ATP adopted firm-years	869	760	526	869	760	526
No. of ATP adopters	250	236	199	246	234	197
within R-sq	0.275	0.278	0.315	0.157	0.172	0.199
Minimum propensity score	0.01	0.07	0.20	0.01	0.07	0.20

Table 11: GMM System Estimation

Dynamic panel-data estimation following Blundell and Bond (1998), where lags of dependent variables (firm value and capital expenditure), lags of their first differences, lags of endogenous variable (ATP), and first differences of exogenous variables are used as instruments. The model is fit by GMM. The test of no autocorrelation in first-differenced errors appears at the bottom of the table. Regressions (1) and (2) regress firm value, while regressions (3) and (4) regress capital expenditure. Regressions (1) and (3) restrict the sample to those with inside ownership greater than 30%, while regressions (2) and (4) restrict to those with less than 10%. All regressions are estimated for over the 1999-2009 period using nonfinancial firms listed on the Korea Exchange. All regressions use year dummies. z-values, in the parenthesis, are robust standard errors. *, **, and *** respectively indicate significance at 10%, 5%, and 1% levels. Significant results (at 5% level or better) are shown in **boldface**.

	(1)	(2)	(3)	(4)
Dependent Variable	ln(Tobin's q)		ln(CAPEX/Assets)	
	>=30%	<10%	>=30%	<10%
ATP	0.1142*	**-0.3295**	0.6423	**1.2210**
	(1.89)	**(-2.04)**	(0.65)	**(2.51)**
Firm Value (t-1)	**0.2658***	0.0909		
	(8.47)	(1.35)		
Capital Expenditure (t-1)			**0.3319***	**0.1979***
			(8.75)	**(2.64)**
Foreign Ownership	**0.0052***	0.0036	-0.0009	0.0085
	(3.04)	(0.38)	(-0.27)	(0.70)
Firm Size	-0.0174	**-0.4273***	**0.8236***	**0.5838**
	(-0.66)	**(-5.09)**	**(5.17)**	**(2.42)**
Firm Age	**0.1929***	**0.5127***	**-0.7118**	-0.7837
	(5.18)	**(2.71)**	**(-2.42)**	(-1.50)
Leverage	**-0.2124***	**-0.1799***	-0.0580	**-0.4496***
	(-8.14)	**(-4.59)**	(-1.11)	**(-4.36)**
Cash Holdings	0.1653	-0.2905	-0.6749	-0.9360
	(1.07)	(-0.89)	(-1.34)	(-0.93)
R&D Expenditure	-0.2797	-0.0083	-1.2874	-0.2783
	(-0.67)	(-0.01)	(-0.93)	(-0.18)
Advertising Expenditure	0.0080	-0.0022	**0.1139**	0.1042
	(0.51)	(-0.06)	**(2.51)**	(1.07)
Operating Profit	-0.0083	**-0.4775***	**1.0184***	-0.7405
	(-0.07)	**(-2.82)**	**(3.18)**	(-1.30)
Intercept term	Yes	Yes	Yes	Yes
No. of firm-years	8,812	633	9,242	616
No. of firms	1,558	307	1,618	300
z-value (at order 1)	-8.980	-3.496	-12.61	-3.632
z-value (at order 2)	1.127	0.808	1.344	0.548