Anti-takeover provisions and shareholders wealth: Evidence from a natural experiment on the supermajority provision

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Abstract

We investigate the causal relation between anti-takeover provisions and shareholders wealth by using a natural experiment to contribute to the long-standing debate on such provisions. In particular, our study focuses on two court rulings that weaken the anti-takeover force of the supermajority provision in a country where a supermajority rule is the most widely used anti-takeover provision. We examine the market reactions around the announcements of these two court rulings and find no evidence that the weakening anti-takeover force of firms is positively related to firm value. However, we find that firms with a supermajority provision significantly underperform at the two court rulings than firms with no anti-takeover provision. We also find that other anti-takeover provisions help mitigate this negative market reaction. These main results are robust to various empirical approaches that aim to address endogeneity issue. Furthermore, our additional evidence suggests that anti-takeover provisions play a more significant role for firms with long-term investment or higher complexity. Overall, our findings are consistent with the value-enhancing perspective, indicating that the market views anti-takeover provisions as inducing higher shareholders wealth.

Keywords: Anti-takeover provision; Corporate governance; Natural experiment; Firm value

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1. Introduction

Anti-takeover provisions remain one of the most controversial perspectives in the corporate governance literature. Conventional wisdom holds that such provisions weaken shareholder rights and insulate directors from dismissal. Hence, under such provisions, incumbents may become inefficient at shareholders' expense. However, anti-takeover provisions might allow directors sufficient time by making removal harder, enabling a firm's management to eventually create long-term shareholders wealth. The literature still cannot fully resolve this long-standing debate. In this study, we thus aim to shed light on these conflicting perspectives by focusing on the most widely used anti-takeover provision in our sample, in which firms require supermajority-voting rule at annual meetings.

The value-destroying perspective emphasizes the costs of anti-takeover provisions. Such provisions lead directors to become entrenched, even those who are self-interested, and thereby agency problems arise. Theoretically, shirking, private benefit expropriation, and empire-building are more likely to be encouraged in practice (Bertrand and Mullainathan, 2003; Jensen, 1993; Manne, 1965). In addition, Harris and Raviv (1988) shows that rather than the simple majority voting rule, other majority rules (e.g., supermajority voting) that can be used as takeover defenses are socially suboptimal. As a result, anti-takeover provisions increase agency costs (Jensen and Meckling, 1976) and thus are expected to reduce firm value. A stream of empirical studies support the value-destroying perspective. In particular, Bebchuk, Cohen and Ferrell (2008) and Gompers, Ishii and Metrick (2003) show the strong correlation between a higher number of anti-takeover provisions and lower firm value as measured by Tobin's Q. Furthermore, several studies find that anti-takeover provisions (described as a lower quality of corporate governance) are negatively associated with overall performance such as accounting measures, reinvestment rates, beneficial acquisition offers, and post-merger performance. (Bebchuk and Cohen, 2005; Cohen and Wang, 2013; Cremers and Ferrell, 2014; Faleye, 2007; Giroud and Mueller, 2011; Masulis, Wang and Xie, 2007).

In terms of *the value-enhancing perspective*, theoretical studies highlight the benefits of anti-takeover provisions. Stein (1988, 1989) proposes that such provisions mitigate overinvestment in short-term projects and help directors avoid inefficient short-termism (or myopic pressure). Such provisions can also encourage directors to not act opportunistically toward the firm's stakeholders (e.g., large customers). Those provisions also reduce the risk of stakeholders by securing stability and continuity in management since the firm's business plan cannot easily reversed. Therefore, the cost of the relationship between a firm and its stakeholders decreases, and firm value improves (Knoeber, 1986; Shleifer and Summers, 1988). Meanwhile, in the case of takeover attempts, anti-takeover provisions strengthen bargaining power and thus can extract a higher acquisition premium (DeAngelo and Rice, 1983; Stulz, 1988). Consistent with the value-enhancing perspective, empirical evidence supports that anti-takeover provisions raise shareholders value (e.g., Cremers, Litov and Sepe, 2017; Daines and Klausner, 2001). Specifically, a number of studies find that the positive association between anti-takeover provisions and firm value is more significant for innovative firms (or firms with long-term projects); these studies support the theoretical argument related to myopic pressure (Bhojraj, Sengupta and Zhang, 2017; Daines, 2001; Daines, Li and Wang, 2018; Duru, Wang and Zhao, 2013; Humphery-Jenner, 2014). Moreover, recent studies find that firms may benefit from anti-takeover provisions if they have important business relationships with stakeholders (Cen, Dasgupta and Sen, 2015; Johnson, Karpoff and Yi, 2015).

Although prior empirical studies robustly show a positive or negative relationship between anti-takeover provisions and firm value, one might still argue that it is unclear whether such correlations are causal because of several endogeneity concerns[1]. Therefore, we seek to contribute to

[1] For example, firms with lower market values may adopt (or continue to maintain) anti-takeover provisions, which are commonly described as poor governance practices in the literature. In addition, firms can adopt good governance practices for signaling to the market (e.g., the management will behave well), thus the signal may affect stock price, rather than the intrinsic impact of such practices. It is also possible that firms choose different governance practices endogenously (see, e.g., Adams, Hermalin and Weisbach (2010), and Demsetz and Lehn (1985)).

the large body of the corporate governance literature using a natural experiment. Consistent with corporate governance studies using the legal context as a natural experiment (e.g., Cohen and Wang, 2013; Karpoff and Wittry, 2018; Larcker, Ormazabal and Taylor, 2011), we employ two court rulings that make, for the publicly traded firms in Korea, the anti-takeover force of the supermajority provision potentially weaken.

In particular, we examine the cross-section of stock returns around the announcement of these court rulings in Korea in 2007 and 2008. We find a significantly negative market reaction over the three-day window for *treated firms* (i.e., firms with a supermajority rule as the only anti-takeover provision), –1.05 percentage points on average. Our baseline regressions show that *treated firms* significantly underperform than *control firms* (i.e., firms with no anti-takeover provision) by about 1.47–1.72 percentage points with the industry fixed effect. Overall, we find a negative association between the two court rulings weakening the anti-takeover force of the supermajority rule and announcement returns.

We adopt further empirical approaches to mitigate endogeneity concerns as follows. First, propensity score matching (PSM) can address the selection bias concern, as the market's views with respect to firm characteristics may differ between treated and control firms. For the sample matched by several firm characteristics within same calendar year and industry, treated firms still have significantly lower returns on average than control firms, by about 1.07–1.85 percentage points.

Second, we estimate the average treatment effect using multivariate regression with several firm characteristics and fixed effects and find consistent estimation results. In addition, we find that other provisions (typically, staggered boards) may help mitigate the negative impact of the weakening anti-takeover force of the supermajority rule on firm value. In other words, market participants typically view anti-takeover provisions as bringing about higher firm value in our sample, which is consistent with prior empirical findings from the value-enhancing perspective (Bhojraj, Sengupta and

Zhang, 2017; Cremers, Litov and Sepe, 2017; Daines and Klausner, 2001; Daines, Li and Wang, 2018)

Third, to address the reverse causality or omitted variable bias concern, we investigate a sample of firms whose anti-takeover provisions did not change over the first and second court rulings (i.e., sticky observations in our sample), as well as a difference-in-difference (DID) sample. The estimations using these samples and firm fixed effect regression show that our main results are consistent.

Fourth, to assess the significance of our results, we conduct placebo tests where we use alternative control group, and two simulation approaches: re-estimation using market reactions over non-event days and re-assignment of the treatment. These results strongly suggest that our main estimations are unlikely to arise from random sampling variation. Overall, various methodologies suggest that our empirical evidence is driven by the negative causality between weakening the power of the supermajority rule and firm value.

Moreover, we perform additional tests as alternatives to address potential endogeneity concerns. First, we examine possible channels for the value-enhancing perspective of anti-takeover provisions. It is worth that market participants may view anti-takeover provisions as having heterogeneous effects (e.g., Amihud and Stoyanov, 2017; Cremers, Litov and Sepe, 2017). We therefore consider the moderating effects for two possible hypotheses of the value-enhancing perspective: the myopic market hypothesis and the bonding hypothesis. We find partial evidence indicating that anti-takeover provisions play a more significant role for firms with long-term investments or higher complexity. In particular, the supermajority rule (provisions other than the supermajority rule) have a more negative (positive) impact on market reactions around the two court rulings for firms with intensive R&D. Although the supplemental proxies for moderators that we use have significant limitations, our evidence from this additional test is partially supportive of our main findings.

For the robustness test, we follow the corporate governance literature that focuses on Korean samples (Baek, Kang and Park, 2004; Baek, Kang and Lee, 2006; Black, Jang and Kim, 2006; Chang et al., 2017; Lee and Park, 2009; Shin and Park, 1999). We include large group affiliation (i.e., chaebol firms) and firm-specific governance quality that we cannot know through anti-takeover provisions as both could explain our main results. However, we find no evidence to support these alternative explanations. We also consider alternative benchmarks and windows to measure the abnormal returns in our main results. Our findings are still robust to using alternative measures of market reactions.

In conclusion, our study makes two main contributions to the literature. First, we construct our empirical setup by focusing on two court rulings that weaken the anti-takeover force of the supermajority rule, in line with prior studies using the legal setting as a natural experiment (e.g., Cohen and Wang (2013)). Compared with these studies, we present empirical evidence using relatively more comprehensive approaches such as propensity score matching, difference-in-difference analysis, and simulation tests.

Second, we find that the changes in shareholders wealth around these two court rulings are consistent with the value-enhancing perspective of anti-takeover provisions. Our results indicate that the average treatment effects (i.e., firms with a supermajority rule) in our sample are significantly negative on shareholders wealth at the two court rulings. Nevertheless, we perform an additional test to investigate the channels of our main findings. In particular, we consider the possibility of the market viewing anti-takeover provisions as having a heterogeneous effect. As a result, we find partial evidence supporting the finding that anti-takeover provisions have a significant effect on firm value for different subsets of firms, which is also consistent with that claimed in recent studies (see, e.g., Adams, Hermalin and Weisbach, 2010; Ahn and Shrestha, 2013).

The remainder of this paper is organized as follows. In Section 2, we discuss the relevant background to support the validation of our empirical design. Section 3 describes our data and sample

selection. In Section 4, we report the main results from the various empirical approaches. Section 5 presents the results of our additional tests. Section 6 concludes the paper.

2. Empirical design

This section illustrates the relevant background for our empirical design. Our study test whether weakening the power of a supermajority rule leads to positive or negative effect on shareholders' wealth by using the two decisions from local court (hereafter, the two court rulings) in Korea, in which supermajority rules are the most widely used anti-takeover provision. We begin to describe the institutional background in Korea, and summaries for the two court rulings and related anecdotal evidence. At the end of this section, we further provide an overview of the takeover market in Korea in general.

2.1. Institutional background in Korea

A company can have a provision in its bylaw or corporate charter that establishes the higher voting requirements for an important action (e.g., approving a merger or replacing directors) compared to the threshold requirements in law. This type of takeover defense is called the supermajority rule in the prior studies (Bebchuk, Cohen and Ferrell, 2008; Gompers, Ishii and Metrick, 2003; Karpoff and Malatesta, 1989). The voting requirements in a supermajority provision typically exceed the participation level of shareholders at a meeting, therefore such important actions that requires supermajority rule become very costly or nearly unachievable (Field and Karpoff, 2002).

Since our sample is composed of Korean firms, we hence describe the three following points that our empirical setup is distinct. First, we mainly consider three anti-takeover provisions for our sample: *supermajority rules*, *staggered boards* and *golden parachutes*. According to the Solidarity for

Economic Reform[2], Korean listed firms can usually adopt five types of (non-mutually exclusive) takeover defenses under the Commercial Act in Korea[3]:

(i) a supermajority rule for mergers,

(ii) a supermajority rule for a change of directors,

(iii) a supermajority rule for a change of charter,

(iv) a provision limiting the number of directors that can be replaced at a general meeting, or a staggered/classified board, and

(v) a golden parachute.

We consider account types (i)–(iii) to be supermajority rules, and type (iv) to be a staggered board. Overall, our focus on these three anti-takeover provisions (especially, supermajority rules) is consistent with prior studies using corporate governance indices[4].

Second, focusing on the supermajority provision contrasts to prior studies; however, it is well suited to our empirical setup. In general, empirical studies of the value impact of corporate governance have focused on staggered boards in the sample consists of U.S. firms (Bebchuk and Cohen, 2005; Cohen and Wang, 2013; Cremers, Litov and Sepe, 2017; Daines, Li and Wang, 2018; Faleye, 2007). It is reasonable since most U.S. firms have adopted staggered boards for takeover defenses (e.g., Bebchuk, Coates IV and Subramanian, 2002; Bebchuk and Cohen, 2005). Meanwhile, the supermajority rule is the most important and widely used anti-takeover provision for Korean firms. According to the Solidarity for Economic Reform report mentioned above, Korean firms adopt anti-

[2] The non-governmental organization in Korea established at 2006 to protect shareholders right, to improve corporate governance, and to monitor the government financial policy.

[3] The report (Economic Reform Report Vol.3 in 2009) is available at the website of Solidarity of Economic Reform (http://www.erri.or.kr/bbs/board.php?bo_table=B11&wr_id=39&page=11, in Korean, last accessed on July 1, 2019).

[4] For example, Gompers, Ishii and Metrick (2003) considers 24 individual provisions related to corporate governance provisions as G-index.

takeover provisions types (i) – (v) about 1%, 14%, 8%, 3%, and 8% of the time, respectively. Moreover, the supermajority rule for a change of directors (i.e., type (ii)) is the most selected anti-takeover provision by Korean listed firms[5]. This anecdotal evidence supports that focusing on the supermajority rule (rather than staggered boards or others) is appropriate for our sample. In sum, we argue that, for our Korean sample, focusing on the supermajority rule is economically (as well as statistically) significant.

Finally, in contrast with U.S. firms, all Korean firms are affected by a single law the Commercial Act in Korea (i.e., there is no state or local law in Korea)[6]. We also note that corporate charter in Korea is conceptually the same as combining both corporate charter and bylaw in the United States[7]. For instance, matters that can be included in bylaws for U.S. firms should be included in charters for Korean firms. Therefore, we simply use the "charter" (*Jeong-Gwan* in Korean) henceforward. We collect the charters of firms in our data collection process (naturally, bylaws are not need to be considered) to construct the variables of anti-takeover provisions. We describe in detail with regard to definitions of our variables in Section 3.

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[5] *The Korea Herald*, one of media company in Korea, reports in June, 2019 that "the supermajority rule for change of directors is the most selected (13%), the golden parachute is the second-most selected (11%), and the supermajority rule for merger is the third-most selected (2%), anti-takeover provision by Korean listed firms." (http://biz.heraldcorp.com/view.php?ud=20190625000322, in Korean, last accessed on July 1, 2019).

[6] In terms of U.S. firms, which are the most commonly used in corporate governance literature, the state law determines whether a firm can have a supermajority rule. For example, companies in California cannot adopt any form of supermajority rule if it requires more than 66.67% of the voting rights due to the CA Corp Code § 710 (2016) as follows: A supermajority vote is a requirement set forth in the articles or in a certificate of determination authorized under any provision of this division that specified corporate action or actions be approved by a larger proportion of the outstanding shares than a majority, or by a larger proportion of the outstanding shares of a class or series than a majority, but no supermajority vote that is subject to this section shall require a vote in excess of 66 2/3 percent of the outstanding shares or 66 2/3 percent of the outstanding shares of any class or series of those shares.

[7] In Commercial Act in Korea, matters to be included in the charter are more comprehensive than matters to be included in the U.S. firm's charter. Besides that, there exist a number of differences in law and judicial system between Korea and United States; because Korea is one of civil law countries and German origin, and United States is one of common law countries and English origin (La Porta et al., 1997; Porta et al., 1998). See, Choi et al. (2016) and Choi, Kang and Lee (2018) for a review of the national characteristics in Korean judicial system.

2.2. The two court rulings related to the anti-takeover force of the supermajority provision

In this subsection, we discuss the two court rulings related to the supermajority rule in the charter of a firm[8], and related anecdotal evidence. The first and second court ruling was made by a local court in Incheon in 2007 and Seoul in 2008, respectively[9].

2.2.1. The first court ruling

On February 20, 2007, the respondent firm of the first court ruling, FYD Corp. (later, Provita Corp.), had changed its own charter to impose a supermajority rule for the removal of a director at the general shareholders' meeting.

On March 6, 2007, minority shareholders of FYD turned to the local court seeking to invalidate the general shareholders' meeting held on Feb 20, 2007. They especially argued that "a supermajority rule for the dismissal of a director" (i.e., one of the resolutions adopted in the last meeting) infringe their own rights of shareholders.

On April 13, 2007, the Incheon District Court partially approved the provisional disposition suspending the validity of resolutions of the general shareholders' meeting raised by minority shareholders[10]. In short, the Incheon District Court (partially) agreed with minority shareholders, so that invalidated the supermajority provision of FYD. Three judges of the Incheon District Court made the following declaration.

「... It cannot be allowed to impair the essence of the corporation, hamper the purpose of its

[8] Original sentencings of the two court rulings consists of Korean languages, therefore we manually translate in English and summarize in this subsection.

[9] The Incheon metropolitan city is the third most populous city in South Korea after Seoul and Busan, and located next to Seoul city, where Seoul is the capital city of South Korea.

[10] Incheon District Court (Bucheon Branch) Order 2007Kahap335 Dated April 13, 2007 [Provisional Disposition Suspending Validity of Resolution of General Shareholders' Meeting]

existence, or infringe on the inherent rights of the shareholders. … The supermajority provision in the charter of the respondent firm can result the serious distortion of shareholder voting rights, therefore such a provision will be invalid. …」

2.2.2. The second court ruling

On March 28, 2008, the respondent firm of the second court ruling, GNCO Co., Ltd. held the general shareholders' meeting. In particular, GNCO changed the directors and revised its own charter to adopt a supermajority rule for the removal of a director.

On April 8, 2008, a minority shareholder of GNCO (a trustee of the fund in which approximately 8% of GNCO's shares are incorporated) and a former director who dismissed at the last shareholders' meeting argued that there were several shortcomings in the last meeting. Hence, they turned to the local court seeking to invalidate the last meeting.

On June 2, 2008, the Seoul Central District Court partially approved the provisional disposition suspending the validity of resolutions of the general shareholders' meeting[11]. In short, the Seoul Central Court (partially) agreed with minority shareholders, thus invalidated the supermajority provision of GNCO. Three judges of the Seoul Central District Court decide made the following declaration, which was similar to one in the first court ruling.

「 … When the directors are improperly managing, shareholders need to be able to quickly dismiss directors in order to protect their property. For this purpose, the Commercial Act clarify that, at any time, the directors can be removed by the special-decision in the shareholders' meeting[12]. …

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[11] Seoul Central District Court Order 2008Kahap1167 Dated June 2, 2008 [Provisional Disposition Suspending Validity of Resolution of General Shareholders' Meeting, etc.]

[12] For the special-decision of shareholders meeting such as amendments to articles of incorporation, reduction of capital, merger and acquisition, takeover of business, and removal of director, the Commercial Act in Korea states as follows: A resolution shall be adopted by the affirmative votes of no less than *two thirds of the voting*

The voting requirements which are stricter than the special-decision set in the Commercial Act could result suppressing a large number of shareholders by specific shareholders, or giving veto power to specific shareholders. Therefore, such a supermajority provision in the charter of the respondent firm contradicts the Commercial Act. Hence, the adopting such a provision is an invalid act. … 」

2.2.3. Anecdotal evidence

Joong-Ang Daily, a major media company in Korea, reported in October, 2007 that "the supermajority provision to defense merger and acquisition is invalid"[13] by using the declaration of the first court ruling. *The Law Times*, the sole legal newspaper in Korea, reported the second court ruling in full in June 2008[14]. Moreover, the Korea Corporate Governance Services (KCGS)[15] mentions that by citing the second court ruling, "supermajority-voting rule is arguable, since recently there was a court decision that the supermajority which is stricter than the threshold described in Commercial Act, is contrary to the purpose of Commercial Act"[16].

Meanwhile, the respondent firm of the second court ruling, GNCO Co., Ltd., which is listed on the Korea Exchange (KRX) and a component of KOSDAQ[17] experienced about a 5.1% stock price decrease within a post-trading day of the court ruling (i.e., from the close of market on June 2 to the

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rights of the shareholders present at a general meeting of shareholders and of at least *one third of the total issued and outstanding shares.* (Article § 434 of the Commercial Act in Korea)

[13] This news article is available at the website of *Joong-Ang Daily* (https://news.joins.com/article/2912690, in Korean, last accessed on July 1, 2019).

[14] This news article is available at the website of *The Law Times* (https://www.lawtimes.co.kr/Legal-News/Legal-News-View?serial=40530, in Korean, last accessed on July 1, 2019).

[15] The non-profit organization that has compiled the annual information of corporate governance for representative companies on the Korea Exchange (KRX) since 2002. For more detail information, we refer the reader to KCGS's website in English: http://www.cgs.or.kr/eng/index.asp.

[16] This report (KCSG Report Vol.4 No. 8 (April, 2014), p.2–6) is available at the website of KCGS (http://www.cgs.or.kr/publish/report_view.jsp?tn=53&pp=3&spyear=&skey=&svalue=, in Korean, last accessed on July 1, 2019).

[17] KRX consists of two main markets, which are Korea Composite Stock Price Index (KOSPI) market and Korean Securities Dealers Automated Quotation (KOSDAQ) market.

close of market on June 3, 2008). This market reaction was an economically significant decrease compared with the KOSDAQ and KOSPI index over same period, which decreased by 1.14% and 1.52%, respectively. Therefore, it shows that the respondent firm was abnormally affected by the court ruling (i.e., the invalidation of adopting supermajority provision), which reduced firm value. In other words, market participants may view the supermajority provision of the respondent firm as raising shareholders wealth[18].

Consistent with anecdotal evidence (news articles, institution reports, and the market reaction in which the respondent firm's stock price decrease following the second court ruling), market participants may perceive that a firm's supermajority is not as powerful as before. For example, a firm's minority shareholders can nullify the supermajority rule by taking a similar legal action to these two court rulings. Overall, we thus argue that the supermajority rule of a firm is more likely to be invalid in the legal context and that participants in the Korean financial market are also aware of the possibility of the supermajority provision becoming invalid. This is where our empirical setup becomes worthwhile. As a result, the anti-takeover force of the supermajority provision may have been weakened by the two court rulings[19].

2.2.4. The natural experiment based on announcements of the two court rulings

[18] Meanwhile, we cannot bring an example of market reaction in case of FYD Corp., which is the affected firm of the first court ruling, and listed on KOSDAQ market at that time. Because the KOSDAQ market has suspended the firm's stock transaction to protect investors due to the lawsuit until mid-May in 2007 (from mid-March).

[19] The two court rulings in this study are equivalent to the decision of Chancery Court in case of United States. However, it is worth discussing the fact that two court rulings do not strictly prohibit supermajority provision for all firms listed on KRX (for counter example, CA Corp Code § 710 (2016), which is prohibiting the supermajority vote for all firms located in California). In addition, there are High Court and Supreme Court in Korea, similar to Court of Appeals and Supreme Court in United States, respectively. However, the higher courts in Korea have not yet ruled about a supermajority provision. This criticism point might be a limitation of our study; nevertheless we note that the underlying assumption in our study is worthwhile to test empirically, in line with Cohen and Wang (2013).

We use a quasi-natural experiment setup based on the two court rulings that make the anti-takeover force of the supermajority rule potentially weaken, which is consistent with the literature[20]. In particular, we follow Cohen and Wang (2013) to investigate whether the two court rulings led to an increase or a decrease in affected firms' shareholders wealth.

Cohen and Wang (2013) focuses two court rulings at the Delaware Chancery Court in October 2010 and the Delaware Supreme Court in November 2010 as a natural experiment setup. The former court ruling weakened the potential anti-takeover force of staggered boards, whereas the subsequent ruling by the Delaware Supreme Court reversed that decision. Specifically, Cohen and Wang (2013) integrates the two events by pooling the observations for abnormal returns and shows that the positive announcement effects of the court rulings that weaken the force of staggered boards[21]. As a result, they conclude that staggered boards are negatively associated with firm value using the announcement returns of two Delaware court rulings.

Consistent with Cohen and Wang (2013), we argue that our study can estimate the underlying effect of weakening the supermajority rule on firm value. To sum up, we examine the cross-section of stock returns around the announcement of the two court rulings that we focus, and estimate the average treatment effect for affected firms (i.e., firms that have a supermajority rule prior to the two court rulings)[22]. The prediction based on the two conflicting perspective of anti-takeover provisions in the literature are summarized below.

If market participants view the supermajority rule of firms as value-destroying (i.e., if *value-*

[20] Many prior studies focus on the effects on firm value or corporate policy in the legal context under a quasi-natural experiment. For example, see Bhargava, Faircloth and Zeng (2017), Cain, McKeon and Solomon (2017), Daines, Li and Wang (2018), and Larcker, Ormazabal and Taylor (2011).

[21] Cohen and Wang (2013) multiply negative one for the latter court ruling event due to the expected opposite sign. However, in our empirical setting, we can directly use announcement returns from the two events since the expected announcement effect of two court rulings have conceptually same direction.

[22] We pool the two court rulings in our empirical setup to take the advantage of the increasing sample size and power of the test (Cohen and Wang, 2013).

destroying perspective is supported), then the weakening of the anti-takeover force of firms with the supermajority rule should be positively associated with firm value on average. Consequently, abnormal returns for the impacted firms that have a supermajority rule should be higher than those for non-impacted ones at the two court rulings. On the contrary, if the supermajority rule is regarded as value-enhancing tool (i.e., if *value-enhancing perspective* is supported), the impacted firms should underperform than non-impacted firms following the two court rulings.

2.3. The takeover market in Korea

Even though several studies provide insights into the corporate governance using non-U.S. sample[23], our study can only be valuable in corporate governance literature if there is an active takeover market in Korea. In particular, Frattaroli (2019) who studies the effect of the anti-takeover French law introduced in May 15, 2014 on the French firms, shows that the market for corporate control in France is sufficiently active compared to other G7 countries. Likewise, we also compares Korea to the G7 countries (Canada, France, Germany, Italy, Japan, United Kingdom, and United States) and China in terms of the mergers and acquisitions market in the 2000s.

Table 1 presents the average annual number and total volume of mergers and acquisitions for both of public and private target firms, using data from Securities Data Company (SDC) Platinum database. We use the standardized statistics by the gross domestic product (GDP) of each countries from the Organization for Economic Co-operation and Development (OECD).

[23] See, e.g., Frattaroli (2019) who examines the effect of the anti-takeover law in France introduced in May 15, 2014 (called the Alstom Decree) on the French firms, Serdar Dinc and Erel (2013) who uses merger attempts in the European Union to study the government reaction. In addition, for studies focusing on the board or executives with non-U.S. sample, Kang and Shivdasani (1995) and Kaplan (1994) use the Japanese corporation sample. Jiang, Wan and Zhao (2015) and Schwartz-Ziv and Weisbach (2013) exploit the Chinese and Israeli sample, respectively.

[Insert Table 1 here]

Panel A shows that Korea had a more number of completed M&A (0.1317 per billion USD of GDP) than ones of China, France, Germany, Italy, and Japan, although the volumes were lower (1.60% of GDP) than G7 countries except Japan. However, in Panel B, which only account the targets whose primary industries are not in financials or utilities industries, the M&A volumes of Korea (1.13% of GDP) were larger than ones of China, Germany, Italy, and Japan. Both panels shows that the proportion of cross-border M&A in Korea (about 11%) was lower than others but higher than one of Japan (about 5%). Furthermore, about 89% of M&A in Korea were more than one million USD (compared to only about 80% in Canada and 78% in Japan). Overall, Korea has an active market for mergers and acquisitions in 2000s, concluding that our study can be of interest in corporate governance literature.

3. Data and sample selection

3.1. Data

We first obtain data for the main independent variables of our study, which is the anti-takeover provision in the charter of non-financial firms listed on the KRX, from the Data Analysis, Retrieval and Transfer System (DART)[24] of the Financial Supervisory Service[25]. To identify the exact statement of the firm's charter, we hand-collect charter data from DART immediately before announcement dates of the two court rulings. We also obtain annual financial statement information from FN Dataguide, and board information from TS2000. These datasets are similar to Compustat and Execucomp for U.S.

[24] DART is a similar platform to EDGAR in the United States. The firms listed on Korean market should announce the annual report on DART for every fiscal year (or responsible for any major-change of the firm to protect the investors). DART also requires a restricted format for annual report similar to Form 10-K by the U.S. Securities and Exchange Commission (SEC), including the financial statement, the income statement, the firm's charter and so on.

[25] The independent agency under the Financial Services Commission of the Korean government, which is similar to the U.S. SEC.

firms, respectively.

We measure the market reaction as the cumulative abnormal returns (CARs) measured from event day −1 to event day +1 by using the market model (CAR[–1,+1]). The event day is the date of the announcement of the two court rulings: April 13, 2007 for the first court ruling and June 2, 2008 for the second. The parameters of the market model are estimated using the past 180 trading days. We use the KOSPI and KOSDAQ value-weighted index as the market return parameters for firms listed on the KOSPI and KOSDAQ markets, respectively. We obtain the data on stock prices and market returns from FN Dataguide.

To accurately estimate the effects of two court ruling events, we should exclude samples that could result in spurious treatment effects. During our data-collection process, we check whether a firm has confounding events[26] because several firm-specific events around the two court rulings may influence the market reaction at the event dates. We exclude observations that have such other events two weeks before and after the dates of two court rulings[27]. For our final sample, we also exclude observations in the top and bottom one percentile of the stock price reaction distribution so that outliers do not drive our results (Graham, Michaely and Roberts, 2003).

3.2. Summary statistics of sample

Table 2 reports the summary of our final sample of 2,286 observations available to calculate

[26] We consider announcements that have potential effect on the stock return as follows: initial public offerings (IPOs), delisting, merger and acquisition, split-up, turnover of CEO, capital reduction, bonus issues, major change of the business purpose or company identity, investors relation (IR) presentation, litigation-related announcement, capital expenditure, stock split, stock repurchase, business suspension, seasoned equity offerings (SEOs), convertible bonds and bonds with warrants offerings, corporate bond offerings, sales of fixed assets in the firm, dividend of stock or cash, and patent application.

[27] In unreported tests, we exclude observations with such events around (rather than two weeks) three days, a week, or a month before and after the dates of two court rulings, and reestimate Column (3) of Table 5. The estimated coefficients of *Treated* are still significant and negative at the 1% level. Overall, we find that our main results are not largely changed in these unreported tests.

the stock price reaction around the two court rulings. We classify the observations in Table 1 into the three main types of anti-takeover provisions and one miscellaneous: *Supermajority*, *Staggered Board*, *Golden Parachute*, and *Miscellaneous provisions*[28]. Consistent with the anecdotal evidence in Section 2.1, Table 1 shows that a supermajority provision is the most used anti-takeover provision in our final sample.

[Insert Table 2 here]

As our key independent variable, *Supermajority*, we consider that a firm has a supermajority rule if its charter requires a voting rate above the special-decision threshold stated in the Commercial Act in Korea (as described in Footnote 12, Section 2.2.2). Specifically, we consider whether the firm has a supermajority rule for the following three resolutions: (1) approve the merger, (2) change of the directors, and (3) change the provisions in a charter. Since these resolutions are directly related to the takeover, Commercial Act in Korea requires the special-decision (rather than general-decision[29]) in the shareholders' meeting for every firms in Korea; therefore, we focus on the firm with a supermajority rule for these important resolutions. Those firms typically require 70% or 80% of the voting rights of the shareholders present at the general meeting, and more than 50% of the total issued and outstanding shares, which is almost infeasible to attain without the agreement of the major shareholder. Note that The Commercial Act in Korea does not enforce a minimum requirement to attend the shareholders'

[28] There are several provisions for takeover defenses in the governance index measures for U.S. firms (e.g., FK-index of Field and Karpoff (2002), G-index of Gompers, Ishii and Metrick (2003), and E-index of Bebchuk, Cohen and Ferrell (2008)). However, due to differences in commercial law between United States and Korea, we only consider the three types as the major way to defense takeover, which are *Supermajority*, *Staggered Board*, and *Golden Parachute*. For example, *Poison Pill* and *Unequal Voting Rights* are not legally allowed in Korea. We also manually check for all possible anti-takeover provisions during our data-collection process, thus we classify the *miscellaneous provision* such as "board can be removed only for cause", "only persons who have been in the company for more than three years can be appointed as directors" and so on.

[29] For the general-decision of shareholders meeting, the Commercial Act in Korea states as follows: Unless otherwise provided for by this Act or the articles of incorporation, resolutions shall be adopted at a general meeting of shareholders by affirmative votes of *a majority of the voting rights of shareholders present* thereat and representing at least *a quarter of the total issued and outstanding shares*. (Article § 368-(1) of the Commercial Act in Korea)

meeting (for either special or general-decisions)[30]. Therefore, we also consider that a firm has a supermajority rule if it has a minimum requirement of voting rights for the shareholders present at the general meeting, to adopt three resolutions outlined above. In our sample, such firms usually require that shareholders accounting for 50% of the total issued and outstanding shares should attend a shareholders meeting (otherwise, no resolution can be adopted), which is also almost infeasible to attain when a takeover situation arises. For example, if the majority owner does not agree on a resolution related to a takeover, then he or she can make it unadoptable by being absent from the meeting.

In addition, we consider a firm has a *staggered board* (SB) for firms not only with divided classes (usually three) board of directors, but also with a provision limiting the number of directors (in our sample, typically one-third or one-quarter) that can be replaced at a shareholders' meeting. For example, a firm can have a provision in its charter that only one-third of the board of directors can be replaced at the general meeting, then such firm is exactly the same as the firm with a three-staggered board structure.

[Insert Table 3 here]

In our natural experiment setting, firms with a supermajority provision are expected to be affected by the two court rulings. However, since the anti-takeover provisions are not mutually exclusive, we define the *treated firms* as those having the supermajority rule as the only anti-takeover provision and *control firms* as those having no anti-takeover provisions at all. For instance, although the two court rulings in our study weaken the anti-takeover force of the supermajority rule, a firm with both a supermajority rule and a staggered board may be affected differently (probably less impact than *treated firms*). Therefore, our analysis basically focuses on the firms with supermajority as the only

[30] For example, in the case where one shareholder presents at the meeting, he or she can adopt a general-decision resolution only if he or she holds more than 25 percent of voting rights. If he or she holds more than 33 percent of voting rights, he or she can adopt any resolution (either the special-decision or the general-decision).

one anti-takeover provision, which are *treated firms* in our study.

Table 3 presents the descriptive statistics of our data. To avoid the potential impact of outliers and estimate the treatment effect more accurately, firm characteristics (which are continuous variables) are winsorized at the 1st and 99th levels. Our final sample comprises 2,239 total observations with firm characteristics and 2,060 observations for our pooled sample (i.e., *treated* and *control firms*). All the variables from the annual statements of firms are measured in the fiscal year prior to the year of the court ruling announcements. Appendix A provides detailed definitions of the variables.

4. Main results

4.1. Market reactions around the two court ruling events

Table 4 reports the univariate analysis for CARs around the two court rulings. Consistent with the market viewing the supermajority rule as a value-enhancing tool as opposed to a value-destroying one, the mean (median) of announcement returns is on average –1.05% (–1.36%) for *treated firms* at the 1% level. The difference in mean (median) between *treated* and *control firms* is significantly negative at the 1% level. Furthermore, if we compare *treated firms* and firms with at least one other anti-takeover provision (i.e., one or more than one of among staggered board (SB), golden parachute (GP), and miscellaneous provisions (Miscell)), the differences in mean and median are still significantly negative. Likewise, firms with a supermajority rule do not show statistically significant CARs, but the differences in the mean and median are significantly negative compared to firms with no supermajority rule at the 1% levels.

[Insert Table 4 here]

On the other hand, the differences between firms with GP or Miscell and firms without one are insignificant. However, overall CARs of firms with a SB are significantly positive on average and

the differences in the mean and median compared with firms with no SB, are significantly higher on average at the 5% level. Therefore, we interpret this finding as that market participants view not only the supermajority rule but also SB as inducing about higher firm value on average[31]. It can be reasonable since the relative importance of having other anti-takeover provisions can be larger when the anti-takeover force of the supermajority rule weakens.

[Insert Table 5 here]

Table 5 reports our baseline regression for the differences in the two court ruling announcements between *treated* and *control firms*. To account for the possible differences in the mean of announcement returns between the two court ruling events or two markets (KOSPI and KOSDAQ), we include two dummy variables, an event dummy (*Event 2*) to control the event fixed effect and a market dummy to control the market fixed effect. In addition, to control the industry fixed effect, we include industry dummies based on the first two- and three-digits codes of Korean Standard Industrial Classification (KSIC). All the columns in Table 5 show that, on average, treated firms significantly underperform than control firms by about 1.47–1.72 percentage points over the three-day event window. Therefore, the estimation results in Table 5 suggest that weakening the anti-takeover force of supermajority rule is negatively associated with firm value. In other words, market participants view the supermajority rule as a tool for enhancing shareholders wealth.

4.2. Propensity score matching

In this subsection, to mitigate the potential endogeneity concern, we use propensity score matching (PSM) methods, which are widely employed in the literature to examine causality

[31] It is possible that may view the anti-takeover provision (supermajority rule or staggered board) as having heterogeneous effects (Amihud and Stoyanov, 2017; Cohen and Wang, 2013, 2017); we cannot rule out this possibility, however our main analysis estimates the average treatment effects.

(Rosenbaum and Rubin, 1983). There exist concerns about selection bias since the treatment (i.e., *treated firms* having the supermajority rule as the only anti-takeover provision) in our study might not be randomly assigned. In other words, the differences in announcement returns in Table 4 may reflect the reaction of the market with respect to certain firm characteristics that differ between *treated* and *control firms*, rather than the causal relation between the weakening of the supermajority rule as an anti-takeover provision and shareholders wealth. Therefore, similar to Cohen and Wang (2013) and Martijn Cremers, Nair and John (2009), we compare *treated* and *control firms* that have similar firm characteristics.

[Insert Table 6 here]

Table 6 presents the estimation of the likelihood of being *treated firms*. We use the probit model to calculate the propensity score (Heckman, Ichimura and Todd, 1998; Heckman, Ichimura and Todd, 1997; Rosenbaum and Rubin, 1983). We include several firm characteristics relevant to anti-takeover provisions and takeovers as follows: firm age (*Age*), total assets (*Size*), the ratio of cash to total assets (*Cash*), the ratio of debt to total assets (*Leverage*), the market-to-book ratio (*M-to-B*), the ratio of operating cash flow to total assets (*OCF*), return on assets (*ROA*), the ratio of total expenses of the research and development and capital expenditure to total assets (*Investment*), the number of directors (*Board size*), the proportion of independent directors (*Board independence*), and the proportion of shareholdings held by the majority owner (*Majority ownership*). In addition, we consider the pre-event control variables related to abnormal returns as follows: one-month cumulative stock volatility prior to the announcement (*Stock volatility*) and one-month cumulative stock returns prior to the announcement (*Stock run-up*).

Column (1) reports the estimated coefficients of the probit model and shows that three firm characteristics (*Size*, *Board size*, and *Majority ownership*) are significantly related to the likelihood of being *treated firms*, suggesting that a matching approach can be an appropriate alternative to address

the potential bias concern. In particular, our propensity score estimation shows that, all else equal, smaller firms, firms with larger boards, and firms with lower majority ownership are more likely to be *treated firms*. Therefore, it is possible that market reacts differently to certain firm characteristics (e.g., negatively to smaller firms) rather than weakening the anti-takeover force of the supermajority rule. In Column (2), we repeat the probit regression in Column (1) for the matched sample (i.e., we match each *treated firm* to a *control firm* within same fiscal year and industry by the estimated propensity score). The insignificant coefficients for all the variables in Column (2) show that our final propensity score matched sample (hereafter, PSM sample) is on average well-balanced with respect to all the matching variables.

[Insert Table 7 here]

Next, as suggested by Lee and Wahal (2004), we estimate the bias-adjusted differences in announcement returns using three matching methods: nearest neighborhood (one-to-one), Gaussian kernel, and local linear regression. As suggested by Smith and Todd (2005), to improve matching quality, we drop 2% of the treatment observations for which the propensity score density of the control observations is the lowest. All matching methods are conducted with replacement except one-to-one nearest neighborhood matching. In addition, as in Bae, Kang and Wang (2011) and Kim and Han (2019), we report bootstrapped standard errors based on 50 replications and the bias-adjusted 95% confidence interval.

Table 7 reports the average treatment effect on the treated of the announcement returns around the two court rulings. The average treatment effect on the treated is estimated after considering propensity, which can address potential selection bias; whereas the traditional approach, which uses the average treatment effect, may be affected by self-selection bias (Heckman, Ichimura and Todd, 1998). To improve matching quality, in Panel A, we match the sample within the same fiscal year and industry (two-digit KSIC). In Panel B, we also match the sample within the same market (market

dummy) in addition to fiscal year and industry. Both panels show that *treated firms* have significantly lower announcement returns than *control firms* by about 1.07–1.85 percentage points following the court rulings. To sum up, the selection bias-adjusted estimates in Table 7 are consistent with the results in Table 5, suggesting that the two court rulings that weaken the power of the supermajority rule are negatively associated with shareholders value.

In addition, we test the differences in the means of the firm characteristics between treated and control firms. Panel A (B) of Table 8 reports our unmatched sample (PSM sample), which consists of 2,060 (280) observations. Overall, our PSM sample shows good balance in all the covariates (only except *Leverage* at the 10% level) and estimated propensity scores, which is also consistent with the insignificant coefficients for all the variables in Column (2) of Table 6.

[Insert Table 8 here]

4.3. Multivariate regression

In this subsection, we use cross-sectional multivariate regression since our baseline regression results (Table 5) may not be sufficient. Therefore, we add the explanatory variables mentioned in Section 4.2 into our cross-sectional OLS regressions and report the results in Table 9. Columns (1) and (2) ((3) and (4)) show that estimated coefficients of *Treated* are significantly negative at the 1% level for our pooled (PSM) sample. Consistent with the argument that market participants view the supermajority rule as a value-enhancing tool, *treated firms* significantly underperform around the two court rulings in our study by about 1.52–1.89 percentage points

[Insert Table 9 here]

We note that our pooled sample consists of *treated firms* that have the supermajority rule as the only anti-takeover provision and *control firms* that have no anti-takeover provisions. However, the

firm can adopt multiple anti-takeover provisions or other provision (SB or GP) instead of the supermajority rule. If those possible alternatives are not randomly decided, then our argument cannot be valid due to the sample-selection bias. Therefore, in Table 10, we account sample that have all the possible combinations of anti-takeover provisions and estimate each anti-takeover provision and its interaction effects.

Columns (1)–(4) of Table 10 report the estimation results for *Supermajority*, *SB*, *GP* and *Miscell*, as well as the interaction terms of *Supermajority* × *SB* and *Supermajority* × *GP*. Consistent with our previous estimation, the coefficients of *Supermajority* are significantly negative at the 1% level. Furthermore, the interaction term between *Supermajority* and *SB* has positive coefficients, suggesting that having a SB protects shareholders wealth when the anti-takeover force of the supermajority rule weakens. Thus, we argue that market participants view not only the supermajority rule but also a SB as bringing about higher firm value (which is also consistent with Section 4.1).

To avoid the inefficiency due to too many dummy variables, we consider the anti-takeover provisions except the supermajority rule (an indicator, *Other-provision*) and its interaction with *Supermajority* in Column (5)–(8). We find that the estimates of *Supermajority* have a slightly lower magnitude than in Column (1)–(4), but are still statistically significant. Also, the coefficients of *Supermajority* × *Other-provision* are significantly positive, which implies that other provisions may help mitigate the negative impact of weakening anti-takeover force of the supermajority rule on firm value.

[Insert Table 10 here]

In Column (9), we consider the number of anti-takeover provisions to account for the cumulative effects of multiple anti-takeover provisions. *Total anti-takeover provisions* equals zero, one, two, three, or four. For example, if a firm has the supermajority rule and a SB in its charter, then *Total anti-takeover provisions* of this firm is two. In fact, this variable is a similar concept to the G-index of

Gompers, Ishii and Metrick (2003) and the E-index of Bebchuk, Cohen and Ferrell (2008). However, on average, we find no evidence that the numbers of anti-takeover provisions is significantly related to announcement returns. Overall, Column (9) also supports that our main results are driven by the negative causality between the court rulings that weaken anti-takeover force of the supermajority rule and firm value.

4.4. Difference-in-Difference approach

The empirical test we use is based on a natural experiment setup by using the two court ruling announcements in line with Cohen and Wang (2013). However, the interval between our two natural experiments (i.e., the two court rulings in April 2007 and June 2008) is about 14 months, whereas one of Cohen and Wang (2013) is a month[32]. Hence, during this 14-month interval between two court rulings, firms could have revised their charters at their annual meetings (usually held in March[33]) and March 2008 is in this 14-month interval. In other words, our main independent variable could be endogenous for these two reasons: the market reaction of the first court ruling, which is our dependent variable, and unobservable (therefore omitted) firm-specific characteristics. In this subsection, to alleviate this potential endogeneity from reverse causality or omitted variable bias, we conduct the following two additional estimations.

[Insert Table 11 here]

First, we focus on firms whose anti-takeover provisions were unchanged between the first and

[32] Cohen and Wang (2013) uses the two court rulings at October and November 2010 in Delaware Chancery Court and Delaware Supreme Court, respectively, as a natural experiment.

[33] In general, many firms on the KRX have the month-end for fiscal year as December, so hold the annual meeting in March. Therefore, the last Friday (or last week) of March is usually called "Super-day (or Super-week) for annual meeting" in Korea. For example, *Joong-Ang Daily*, the major media company in Korea reports "Approximately 26% and 50% of firms listed on KRX hold shareholders meeting at the Super-day and Super-week for annual-meeting, respectively" in March, 2018 (https://news.joins.com/article/22440615, in Korean, last accessed on July 1, 2019).

second court rulings (hereafter, unchanged sample). Regardless whether a firm knows the result of the first court ruling, the anti-takeover provisions of this unchanged sample were decided before the first court ruling and did not change. Therefore, this approach is advantageous because such firms (i.e., our stick observations in unchanged sample) are less likely to be affected by reverse causality

Table 11 reports the re-estimations for this unchanged sample. Column (1) shows that *treated firms* still underperform about 1.41 percentage points on average than *control firms* (among 1,609 sticky observations in unchanged sample). We find that the estimated coefficients of *Treated* are still negatively significant at the 5% level in Columns (2) and (3) when we control for the firm characteristics for both the unchanged pooled sample and the unchanged PSM sample, respectively. In addition, the coefficients of *Supermajority* are negatively estimated at the 1% (5%) significance level without (with) including the control variables as in Table 6. Overall, the re-estimations for the unchanged sample are consistent with our main results, showing the causal effect between the weakening of the power of the supermajority rule and the decreasing of shareholders wealth.

[Insert Table 12 here]

Second, we support our main findings by focusing on the sample that changed their anti-takeover provisions (hereafter, the DID sample). As outlined above, a firm may have decided to change its anti-takeover provision after the first court ruling[34]. For example, a firm with no anti-takeover provisions may have realized that the market views a supermajority rule as a value-enhancing tool (by observing the market reactions to the first court ruling of other firms) and thus adopted one to maximize its value (i.e., a *control firm* at the first court ruling but a *treated firm* at the second court ruling), even though the first court ruling potentially weaken the anti-takeover force of the supermajority rule. As a result, the announcement returns of such firms at the second court ruling should be significantly

[34] In fact, we regress the changes of firms' anti-takeover provisions between two court rulings on the first court ruling announcement returns, however find no significant relation. These results are not tabulated.

different from those at the first court ruling. Using this DID approach, we can provide evidence that our results are not driven by reverse causality. To address the concern due to (omitted) time-invariant industry characteristics in our DID sample, we include two- or three-digits KSIC codes as the industry fixed effect.

Table 12 reports the DID estimations. Most importantly, our main DID estimators, which is *Control-to-Treated* × *Event2*, are significantly negative in all columns, suggesting that the market reacts to adopting or removing a supermajority rule in the opposite direction. In particular, we find that at the second court ruling, control-to-treated firms (i.e., observations with *Control-to-Treated* = 1) underperform than treated-to-control firms (i.e., observation with *Control-to-Treated* = 0) by about 3.14–5.31 percentage points on average. In addition, Columns (1)–(4) show that control-to-treated firms have significantly (at the 5% levels for Columns (1), (2), and (4), and at 10% level for Column (3)) higher announcement returns at the first court ruling by about 2.13–2.58 percentage points on average compared with treated-to-control firms, respectively, which is also consistent with our previous estimation.

[Insert Table 13 here]

Furthermore, to control unobservable firm-specific variation between two court rulings as much as possible, we perform firm fixed effect regression for our pooled sample. In this firm fixed effect model, we can identify the effect of interest from changes of anti-takeover provisions within firms, which is similar to DID estimation (Table 12). In other words, the estimation of firm fixed effect are identified from a change of *control firm* to *treated firm*, or vice versa, within the same firm.

Table 13 shows that estimated coefficients of *Treated* or *Supermajority* in all columns are negative, which is consistent with our previous estimations and Table 12. The effect is only statistically significant at the 10% level in Columns (1)–(3), and 5% level in Column (4), which is not surprising

given that it is identified from a small number of changes[35] in anti-takeover provisions between two court rulings compared to unchanged sample. Column (2) ((4)) shows that a change of *control firm* to *treated firm* (firm with no *Supermajority* to firm with *Supermajority*) experience the lower CAR at the second court ruling than at the first one by about –3.49 (–3.73) percentage points. In fact, this magnitude is similar to –3.88 in Column (6) of Table 12. The overall evidence in Tables 11–13 supports the negative causal relation between weakening the power of the supermajority rule and firm value.

4.5. Placebo test

The two court rulings (as discussed in Section 2.2) that our study focuses are expected to have the effect on the firms with supermajority rule; otherwise, our empirical setup is not valid enough. Therefore, in this subsection, we use the sample of firms with at least one other anti-takeover provision, as a placebo test.

[Insert Table 14 here]

Table 14 reports the results of placebo test. Columns (1)–(4) show that, among firms with no supermajority rule, no statistically significant differences in the announcement returns between firms with a SB or GP as the only anti-takeover provision and *control firms*. In addition, we account the firms with SB or GP (and no supermajority rule) as the placebo group in Columns (5) and (6). The estimated coefficients of placebo group indicators are not statistically different from zero in all columns, which is consistent with our expectation and supports that the two court rulings do not affect the firms without supermajority rule. Consequently, we can define these unaffected firms (i.e., firms with at least one other anti-takeover provision) as an alternative control group[36]. The results of the test

[35] We conduct the restricted DID sample in which the anti-takeover provisions in a firm's charter changed between the first and second court rulings and have CARs of the both court rulings (N=22). Appendix B.1 reports this DID estimation and shows the consistent results.

[36] This approach by using alternative control group is also valuable. Because, as shown in the corporate

for alternative control group, which are presented in Appendix B.2–5, also supports our main results.

4.6. Simulation approach

In this subsection, we use two simulation approaches to support the significance of our main results. First, we compare the treatment effect with a reference distribution that we bootstrap from the non-event days (Cohen and Wang, 2013, 2017). As suggested by Cohen and Wang (2013), this approach assess how the treatment effect as large as one in the two events can be observed in two random dates (among non-event days). We collect the stock price data of our sample from 200 trading days around event dates for each court ruling[37], and compute CARs for each three-day window in the same method as described in Section 3.1. Next, we replace CARs for each of two events and estimate regression models for such CARs over all unique pairs of non-event days.

[Insert Table 15 here]

Table 15 reports the statistics of the original models and simulation for each original model. In Column (1) ((2)), our OLS in pooled (PSM) sample estimates with control variables and industry fixed effect find that the *treated firms* significantly underperform by 1.5196 (1.8882) percentage points at the 1% level. Meanwhile, in only 0.0035 (0.0066) of our simulation trials, we observe the estimated coefficients of *Treated* — which is from regressing CARs over non-event days on *Treated* — at least as more negative as the observed coefficient in original model of –1.5196 (–1.8882). Columns (3) and (4) of Table 15 focus on the firms with supermajority (i.e., variable (in interest) is *Supermajority*), and

governance literature (e.g., Cohen and Wang (2013)), firms that have an anti-takeover provision might be different from firms without anti-takeover provision along several dimensions.

[37] To avoid the effects of two court rulings clearly, we exclude pre- and post-15 trading days. We then collect data from non-event trading days [–115, –16] and [+16, +115] for both event 1 and 2. For event 1, it is from Oct 27, 2006 to Oct 4, 2007, and for event 2, it is from Dec 7, 2007 to Nov 14, 2008. Hence, the non-event days we use cover 81.63% of trading days between two court rulings, and slightly overlap with the period when the financial crisis began to affect the Korean market.

find similar results. The simulation p-value in Column (5) of Table 15 shows that our observed DID estimation, which is significant at the 1% level in Table 11, is also still significant at the 5% level in our simulation.

[Insert Table 16 here]

Second, as suggested by Bernile, Bhagwat and Rau (2017), we randomly assign the treatment (i.e., being a *treated firm*) based on the sample distribution of *Treated*, and report the simulation results in Table 16. For example, in Column (2) of Table 16, we generate the random variable (*Simulated-Treated*) following a binomial distribution which we set to one with a probability of 0.0863 and zero with a probability of 0.9137 among the 2,060 observations from the original model (i.e., Column (2) of Table 9), since the observed sample distribution of *Treated* has a mean value of 0.0863 in the original model. Then, we re-estimate the coefficient of *Simulated-Treated* on the observed announcement returns and record it with associated p-value. We randomly re-assign our main independent variable *Simulated-Treated* for each replication and repeat this simulation procedure 1,000 times.

The first row in Table 16 reports the average coefficient for the randomly re-distributed independent variable *Simulated-Treated*. Four simulation (Columns (1)–(4)) in Table 16 show that almost zero mean value of estimated coefficients over the 1,000 repetitions. The second row in Table 15 reports percentage of coefficients that are significant at the 5% level in the brackets. All columns show that approximately 5% of the coefficients are significant at the 5% level and roughly those cases are not biased either positively or negatively. Specifically, Column (1) of Table 16 shows that the mean estimates of treatment effect for 1,000 simulation trials is –0.0025 and that 5.5% of the coefficients are significantly positive or negative at the 5% level, while the estimated coefficient in the original model is –1.6843 with p-value of less than 0.1%.

Moreover, the third row in Table 16 reports the proportion of replication trials have a larger negative impact than in the original model (also with below than the 5% significance level) in

parentheses. We find no such trials in both Columns (1) and (2), and only two and four trials in Columns (3) and (4), respectively. To sum up, the evidence from the simulation approach (Tables 15 and 16) strongly suggests that our observed market reaction of relatively negative announcement returns for treated firms is unlikely to be the result from random sampling variation or random noise.

5. Additional tests

5.1. Possible channel for the value-enhancing perspective

So far, our empirical tests argue that the market views anti-takeover provisions as value-enhancing, by investigating the negative association between the court rulings weakening the power of the supermajority rule and announcement returns. In that case, why does the market view such a provision as a tool enhancing shareholders value, rather than a value-destroying one? To answer this question, we further test for the possible channel through which the anti-takeover provision (in our study, the supermajority rule) is positively related to firm value.

In this subsection, we consider the two hypotheses that support the value-enhancing perspective of anti-takeover provisions. First, the myopic market hypothesis focuses on the long-term projects of a firm that are undervalued by myopic investors in the market (Chemmanur and Jiao, 2012; Stein, 1988, 1989). Instead of such projects, shareholders with a short horizon may press for myopic or short-term investments to the firm. Furthermore, short-horizon shareholders are likely to agree to a suboptimal takeover or want to replace management improperly. Therefore, under this myopic market hypothesis, firms with an anti-takeover provision prevent inefficient short-termism (i.e., myopic behavior) and thus enable to create long-run shareholders value, by securing the stability and continuity of the management of the firm.

Second, the bonding hypothesis focuses on the relationship with the stakeholders of the firm (Johnson, Karpoff and Yi, 2015; Knoeber, 1986; Shleifer and Summers, 1988). From the viewpoint of

stakeholders (e.g., large customers, counterparties of business contracts), a relationship with a firm that has no anti-takeover provision implicitly bears risks in the case of a hostile takeover or managerial replacement. Therefore, an anti-takeover provision can provide the firm with guarantees for its stakeholders (i.e., bonding its contractual performance with counterparties) by securing the stability and continuity of management. Also, such a provision can induce the stakeholders to invest relation-specific projects that benefit the firm. To sum up, under this bonding hypothesis, firms with an anti-takeover provision are encouraged to invest more efficiently in the business relationship than firms without it, hence increasing firm value.

Since these two possible channels are not mutually exclusive and ambiguous to separate empirically, we report the results as an additional test. Nevertheless, this subsection also can serve as an alternative to address potential endogeneity concern. As suggested by Cremers, Litov and Sepe (2017), we consider the following two supplemental proxies: the prevalence of long-term investment and firms with more complex operations.

First, for the prevalence of long-term investment, R&D investments can be a reasonable proxy. The management of firms with long-term projects may face greater pressure towards myopic or short-term investment (Bushee, 1998; Chan, Lakonishok and Sougiannis, 2001). As a result, firms with long-term investments can benefit more and protect their own value by implementing takeover defenses. Thus, under the myopic market hypothesis, we expect that the positive association between the anti-takeover provision and firm value to be more significant for firms with larger R&D investments, in line with the results of Cremers, Litov and Sepe (2017) and Duru, Wang and Zhao (2013). At the same time, firms with high R&D expenses are more likely to be sensitive about their relationships with their stakeholders, suggesting that our expectation is also plausible under the bonding hypothesis.

In our study, *treated firms* (or firms with supermajority) engaging in larger R&D investments may have larger decreases in firm value around the two court rulings weakening the anti-takeover force

of supermajority rule, under both the myopic market hypothesis and the bonding hypothesis. Meanwhile, in line with our results in Table 11, if other provisions (instead of the supermajority rule) help mitigate the negative impact of weakening anti-takeover force of the supermajority rule on firm value, this effect can be greater for firms with larger R&D investments. To sum up, we expect the interaction term of *R&D* and *Treated* (or *Supermajority*) to have a negative coefficient and interaction term of *R&D* and *Other-provision* to have a positive coefficient for announcement returns.

[Insert Table 17 here]

Table 17 report the results of OLS regression focusing on R&D investment[38] and *treated firms* (or firms with supermajority). Columns (1) and (2) show that R&D investments have a negative effect on announcement returns for *treated firms*, while they have no impact for *control firms*. These subsample results support our expectation in which the positive association between the supermajority rule and firm value is more relevant for R&D-intensive firms. We include the interaction terms in Column (3) to investigate the moderating effect. In column (3), we find that *treated firms* underperform around the two court rulings by about –1.34 percentage points on average than *control firms*, and more negative for firms with high R&D investment (estimated coefficient of interaction term is insignificant but negative). In sum, we interpret that firms with significant R&D investments and a supermajority rule underperform than those with other anti-takeover provisions when the anti-takeover force of supermajority potentially weaken.

To support our interpretation, we consider alternative samples consisting of firms with at least one anti-takeover provision. Specifically, we redefine *Treated* as one for *treated firms* and zero for firms with at least one anti-takeover provision except *treated firms* in Column (4). As a result, we find a significantly negative estimation for the interaction term between the treatment and R&D investment

[38] We include *R&D* and *CAPEX* separately, rather than *Investment*. So far, the combined expenses of R&D and capital expenditure, *Investment*, has far been included as a control variable (thus obviously, we exclude *Investment*).

(*Treated* × *R&D*) at the 10% level (see Column (4)). Similarly, in column (5), estimated coefficient of an interaction term between *Other-provision* and *R&D* is positively significant at the 10% level. Therefore, we find that other anti-takeover provisions mitigate the negative impact of the weakening anti-takeover force of the supermajority rule on firm value, especially for R&D intensive firms, which is also consistent with our main results.

To sum up, Table 17 provide supportive (but partial) evidence that *treated firms* underperform when they engage more in R&D investments, which is consistent with both the myopic market hypothesis and the bonding hypothesis. In particular, Columns (4)–(5) of Table 17 suggest that the positive association between the anti-takeover provision (not only for the supermajority rule) and firm value is more significant for firms with larger R&D investments, also consistent with those two hypotheses.

[Insert Table 18 here]

Second, to identify firms with more complex operations (Cremers, Litov and Sepe, 2017; Duru, Wang and Zhao, 2013), we consider several measures as follows: *Size* (total assets of the firm), *Ln(Sales)* (natural logarithm of total revenue), *Ln(1+IPOage)* (natural logarithm of firm age from initial public offerings), and *Board size* (natural logarithm of the number of directors). For example, firms with complex operation system may require diverse member of directors, resulting larger board size. We note that, since firms with high values of these four measures are likely to have a large number of investors in the market, such firms may have greater market pressure from short-term investors. Also, these measures may indicate firms in which stakeholder relationships are more important. Therefore, we expect that *treated firms* with higher complexity measures to have more negative effect, and it is plausible under both the myopic market hypothesis and the bonding hypothesis.

Table 18 reports the results of the regression focusing on the interaction terms between those four measures for information complexity and *Treated*. In particular, for both of our pooled and PSM

sample, the estimated coefficients of the interaction terms are negative in all the columns, suggesting that *treated firms* with a larger size, revenues, older age and larger board suffer larger decreases in announcement returns. Nevertheless, these four measures (which are positively correlated) are less directly related to either hypothesis and thus harder to interpret than R&D investments[39], thus we show these results as an additional test.

[Insert Figure 1 here]

Furthermore, Figure 1 shows the unconditional negative relation between the four measures of information complexity we use and announcement returns for *treated firms* (as the red solid line), while the positive relation for *control firms* (as the blue dotted line). To summarize this subsection, we find partially supportive evidence consistent with the myopic market hypothesis and bonding hypothesis, using our natural experiment setup: the positive association between the anti-takeover provision and firm value is more significant for firms with larger R&D investments or higher complexity.

5.2. Robustness test

Through the OLS estimation, PSM approaches, DID approach, and placebo test based on simulations, we find a negative association between court ruling announcements that weakening the power of the supermajority rule and shareholders wealth. However, the several fixed effects or matching methods cannot completely address omitted variable bias concern. In this subsection, we therefore perform an additional test to rule out alternative explanations of our results.

[39] In fact, a firm with higher R&D investments may indicate higher complexity of operations. Conversely, a firm with larger asset or revenue size may involve R&D investments. However, we note that main focus in this subsection (Section 5.1) is to provide additional evidence for value-enhancing perspective, instead to test the validities of proxies we use.

First, the corporate governance literature focusing on Korean firms emphasizes the large group affiliation (i.e., chaebol firms) and systematic differences between chaebol and non-chaebol firms. (Baek, Kang and Park, 2004; Baek, Kang and Lee, 2006; Shin and Park, 1999). Therefore, in our previous estimations, it is possible that the market reacts differently to *treated firms* in the chaebol group and those in non-chaebol group. To investigate this alternative, we add a chaebol dummy variable and its interaction with our main independent variables. We construct an indicator of the chaebol affiliation from the Korea Fair Trade Commission (KFTC). During our sample period, the business group is classified as chaebol group if the total amount of total assets of affiliated firms are greater than five trillion Korean won. We find that the estimated coefficients of *Treated* and *Supermajority* are still statistically significant with similar negative magnitude (Appendix B.6 presents the results). Therefore, our main conjecture is not influenced by the chaebol effect.

Second, it is also possible that chaebol firms have a preference for an anti-takeover provision, which may cause the selection bias of being treated by omitting the chaebol dummy variable. Typically, we find that the Pearson correlation coefficients of *Chaebol* with *Treated*, *Supermajority*, *SB*, and *GP* are –0.08, –0.09, 0.15, and –0.08 (p-value of 0.00), respectively. Therefore, we include the chaebol dummy in our propensity score estimation or matching criteria in addition to the fiscal year and industry dummies, to rule out this potential self-selection bias from the chaebol effect. In these untabulated tests, our overall estimation results also do not change.

Third, the market may react more negatively to, instead of being *treated firm*, lower quality firm-level corporate governance (Black, Jang and Kim, 2006). To investigate this possibility, we construct two proxies for firm-level corporate governance following the literature. We use two data sources: the Korea Economic Justice Institute (KEJI)[40] as in Chang et al. (2017) and KCGS as in Lee and Park (2009). A higher KEJI or KCGS score indicates a firm with better quality corporate

[40] The leading non-government institution in Korea, who annually assesses the firm's quality of corporate governance and corporate social responsibility.

governance. It is worth discussing the fact that *treated firms* are correlated with these two governance measures in our sample (also chaebol firms are strongly correlated)[41]. We thus include overall firm-level governance quality (*Gov-score*) measured by the KEJI and KCGS score and its interaction terms. However, we find that none of estimated coefficients of governance measures and interaction terms are not statistically significant, but still significantly negative coefficients of *Treated*, suggesting that our main results are not driven by omitted variable bias related to firm-level corporate governance quality (Appendix B.7 presents the results)[42].

Moreover, we use the alternative benchmarks for the market model and longer windows of CARs as the robustness tests. We use the KRX100 and KOSPI200 indices as the market return parameters, where the KRX100 index consists of 100 representative companies on the KRX (KOSPI and KOSDAQ markets) and the KOSPI200 index consists of 200 representative companies in the KOSPI market. For alternative window of CARs, we use CAR[–3,+3] or CAR[–5,+5]. We find that our main results overall do not change in these robustness tests, and report the results in Appendix B.8 and B.9.

6. Conclusion

In this paper, we seek to make an empirical contribution to the literature by examining the relationship between anti-takeover provisions and firm value. As suggested by prior studies that use legal contexts as a natural experiment approach (e.g., Cohen and Wang, 2013; Larcker, Ormazabal and Taylor, 2011), we design a quasi-natural experiment as the main empirical setup: the court rulings of two major cities in Korea in 2007 and 2008, which may weaken the anti-takeover force of the

[41] Pearson correlation coefficients of *Treated* (*Chaebol*) with KEJI score and KCGS score are –0.12 (0.21) and 0.06 (0.39) with p-value of 0.04 and 0.05 (0.00 and 0.00), respectively.

[42] We include an indicator variable for the observations with missing governance measures in Appendix B. 7 to preserve our sample size (Dou, Wong and Xin, 2019). In our unreported test when we exclude observations with missing *Gov-score*, the estimated coefficients of *Gov-score* and interaction terms are still insignificant.

supermajority provision. This approach enables us to estimate whether participants in the Korean financial market view anti-takeover provisions (typically, the supermajority rule) as value-destroying or enhancing tool.

Using a sample of non-financial firms listed on the KRX at these two court rulings, we find evidence inconsistent with prior studies of the value-destroying perspective, rather consistent with ones of the value-enhancing perspective. First, the average market reaction to the two court rulings is significantly negative for the set of firms most affected. Second, we find that affected firms significantly underperform than the non-impacted set of firms using various empirical methodologies such as propensity score matching, DID analysis, and simulation tests. Overall, our main results suggest that the market views anti-takeover provisions as inducing higher shareholders wealth on average. Further, we find additional evidence that anti-takeover provisions may have a more significant role for firms with long-term projects or higher complexity, in line with the myopic market hypothesis and bonding hypothesis.

One limitation of our study is that we cannot rule out the possibility that the effects of anti-takeover provisions on firm value are heterogeneous. Indeed, to account for this possibility, we perform a test for the channels of the value-enhancing perspective and find partially supportive evidence. Nevertheless, our findings contribute causal evidence to the long-standing debate on the average effect of anti-takeover provisions on shareholders wealth.

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Table 1. M&A incidence across Korea, G7 countries, and China

This table presents the statistics of relative incidence of M&A in Korea, G7 countries (Canada, France, Germany, Italy, Japan, United Kingdom, and United States), and China. Data for the mergers and acquisitions is from Thomson Financial's Securities Data Company (SDC) database between 2000 and 2016. Data for the U.S dollars of GDP is from the OECD. We account the mergers and acquisitions in SDC that meet the following criteria: (1) the deal is completed with disclosed deal value, (2) the acquirer holds less than 50% of the shares of the target prior to the announcement and own more than 50% of the target after the deal, (3) the nation of the target is one of South Korea, G7 countries or China. Number of M&A / GDP is the average annual number of mergers and acquisitions per billion U.S dollars of GDP. Volume of M&A / GDP is the average annual volume of deal value of mergers and acquisitions as a percentage of GDP. N denotes the total number of mergers and acquisitions. Cross-border is the proportion of mergers and acquisitions by the foreign acquirers. Deal value ≥ $ 1 million is the proportion of mergers and acquisitions in which the deal value is greater than a million U.S dollars. In panel B, we exclude the mergers and acquisitions that the target is in the financial or utilities industries (i.e., the targets in primary Standard Industrial Classification (SIC) codes between 6000 and 6999 or 4000 and 4999).

Target nation	Number of M&A / GDP ($ billions)	Volume of M&A / GDP [%]	N	Cross-Border [%]	Deal value ≥ $ 1 million [%]
Panel A: All industries					
Canada	0.4763	6.32	10,158	23.60	81.15
China	0.0534	0.59	11,216	18.00	90.00
France	0.0931	2.73	3,361	43.71	92.42
Germany	0.0586	1.93	2,951	62.01	96.95
Italy	0.0770	2.20	2,510	30.52	93.90
Japan	0.1154	1.21	8,409	5.61	78.99
South Korea	*0.1317*	*1.60*	*3,275*	*11.91*	*89.01*
United Kingdom	0.4595	8.87	15,724	25.03	90.91
United States	0.1889	6.39	43,747	17.87	93.96
Panel B: Exclude financial or utilities industries					
Canada	0.3858	4.74	8,227	24.99	78.81
China	0.0383	0.30	8,108	17.45	88.78
France	0.0689	1.56	2,466	44.32	90.92
Germany	0.0396	1.02	1,965	66.92	96.79
Italy	0.0455	0.78	1,474	34.94	92.74
Japan	0.0896	0.58	6,500	4.48	76.40
South Korea	*0.1017*	*1.13*	*2,535*	*11.48*	*88.84*
United Kingdom	0.3355	4.84	11,367	24.43	90.16
United States	0.1352	4.06	31,086	20.03	93.48

Table 2. Sample summary

This table presents the sample summary. Our sample consists of non-financial firms listed on the KRX for the two court ruling events. The first court ruling date was April 13, 2007, and the second one was June 2, 2008. Event1 and Event2 indicate the first and second court ruling events, respectively. We manually check the anti-takeover provisions in the charter of the firm before the two court ruling events, using firms' annual reports available in DART. We exclude samples that had other events two weeks before and after the court ruling announcement dates. We classify the firm-year observations into several types of anti-takeover provisions and report the number of samples and proportions as a percentage in parentheses. A detailed explanation of the variables is in Appendix A. N denotes the number of observations.

	Supermajority	Staggered Board	Golden Parachute	Miscellaneous provisions	At least one anti-takeover provisions	Only supermajority (*Treated firms*)	Zero anti-takeover provisions (*Control firms*)
Event1 (n=1,088)	117 (10.75%)	28 (2.57%)	51 (4.69%)	7 (0.64%)	160 (14.71%)	82 (7.54%)	928 (85.29%)
Event2 (n=1,198)	159 (13.27%)	36 (3.01%)	74 (6.18%)	6 (0.50%)	200 (16.69%)	95 (7.93%)	998 (83.31%)
Total (n=2,286)	276 (12.07%)	64 (2.80%)	125 (5.47%)	13 (0.57%)	360 (15.75%)	177 (7.74%)	1,926 (84.25%)

Table 3. Descriptive statistics

This table presents the summary statistics of our sample. The variables from annual statements are measured in the fiscal year before the announcement. We winsorize the continuous variables at the 1st and 99th percentiles. A detailed explanation of the variables is in Appendix A. N, SD, p25, and p75 denote the number of observations, standard deviations, and 25th and 75th percentiles, respectively.

Variables	N	Mean	SD	p25	Median	p75
CAR[–1,+1] (%)	2,286	0.5354	5.0870	-2.5595	0.1002	2.7836
Supermajority	2,286	0.1207	0.3259	0.0000	0.0000	0.0000
Staggered Board (SB)	2,286	0.0280	0.1650	0.0000	0.0000	0.0000
Golden Parachute (GP)	2,286	0.0547	0.2274	0.0000	0.0000	0.0000
Miscellaneous provisions (Miscell)	2,286	0.0057	0.0752	0.0000	0.0000	0.0000
Other-provision	2,286	0.0801	0.2714	0.0000	0.0000	0.0000
Total anti-takeover provisions	2,286	0.2091	0.5342	0.0000	0.0000	0.0000
Treated	2,103	0.0842	0.2777	0.0000	0.0000	0.0000
Age	2,239	27.7173	15.3327	14.0000	26.0000	38.0000
Size	2,239	18.5820	1.3386	17.6413	18.3054	19.2475
Cash	2,239	0.0768	0.0784	0.0212	0.0515	0.1049
Leverage	2,239	0.4318	0.2072	0.2630	0.4332	0.5908
M-to-B	2,239	1.6486	1.8486	0.7070	1.1018	1.7723
OCF	2,239	0.0338	0.1113	-0.0170	0.0411	0.0997
ROA	2,239	0.0330	0.0978	-0.0003	0.0398	0.0877
Investment	2,239	0.0618	0.0763	0.0170	0.0453	0.0922
Stock volatility	2,239	0.0290	0.0159	0.0179	0.0246	0.0361
Stock run-up	2,239	0.0554	0.1399	-0.0260	0.0441	0.1210
Board size	2,239	0.3988	0.1675	0.2800	0.3896	0.5127
Board independence	2,239	1.6057	0.3472	1.3863	1.3863	1.9459
Majority ownership	2,239	0.2501	0.1592	0.2500	0.2500	0.3333

Table 4. Market reactions around the court rulings

This table presents the average stock price reaction around the two court rulings. Mean (median) value of cumulative abnormal returns (CAR[–1, +1]) measured from a day before the announcement date to a day after the announcement date using the market model estimated over the past 180 trading days are reported (in parentheses). The first court ruling date was April 13, 2007 and the second one was June 2, 2008. We use t-tests and Wilcoxon-tests for the means, medians and differences in the means and medians, respectively. All tests are based on the null hypothesis that the value is equal to zero. A detailed explanation of the variables is in Appendix A. N denotes the number of observations. ***, **, and * denote significance at the 1%, 5%, and 10% levels, respectively.

CAR[-1,+1] (%)	*Treated firms* (n=177)	*Control firms* (n=1,926)	Difference
Mean	-1.05%***	0.67%***	-1.72%***
(Median)	(-1.36%***)	(0.18%***)	(-1.54%***)
	Treated firms (n=177)	At least one other provision (n=183)	Difference
Mean	-1.05%***	0.70%	-1.75%***
(Median)	(-1.36%***)	(0.10%)	(-1.46%***)
	Supermajority (n=276)	No Supermajority (n=2,010)	Difference
Mean	-0.15%	0.63%***	-0.78%***
(Median)	(-0.51%)	(0.15%***)	(-0.66%***)
	Staggered Board (SB) (n=64)	No SB (n=2,222)	Difference
Mean	1.81%***	0.50%***	1.32%**
(Median)	(1.02%**)	(0.08%*)	(-1.10%**)
	Golden Parachute (GP) (n=125)	No GP (n=2,161)	Difference
Mean	0.80%	0.52%***	0.28%
(Median)	(0.02%)	(0.10%**)	(-0.08%)
	Miscellanous provisions (Miscell) (n=13)	No Miscell (n=2,273)	Difference
Mean	-1.39%	0.55%***	-1.94%
(Median)	(-2.18%)	(0.10%**)	(-2.28%)

Table 5. Baseline regression results

This table presents the results from the OLS regressions where the dependent variables are the CARs around the two court rulings. A detailed explanation of the variables is in Appendix A. Robust standard errors adjusted for heteroscedasticity and clustered by firm level are reported in parentheses. ***, **, and * denote significance at the 1%, 5%, and 10% levels, respectively.

Dependent variable = CAR[-1,+1] (%)						
	(1)	(2)	(3)	(4)	(5)	(6)
Treated	-1.7157***	-1.7161***	-1.6843***	-1.6636***	-1.5024***	-1.4734***
	(0.382)	(0.382)	(0.403)	(0.430)	(0.406)	(0.430)
Event2		0.0204	0.0293	-0.0047	0.0398	0.0055
		(0.209)	(0.210)	(0.212)	(0.211)	(0.212)
Market dummy					1.0564***	1.1716***
					(0.240)	(0.250)
Constant	0.6653***	0.6547***				
	(0.118)	(0.172)				
Industry Fixed Effect	No	No	2-digit KSIC	3-digit KSIC	2-digit KSIC	3-digit KSIC
N	2,103	2,103	2,103	2,103	2,103	2,103
Adj. R-squared	0.87%	0.82%	2.39%	2.65%	3.22%	3.60%

Table 6. Propensity score estimations

This table presents the results from the probit regression where the dependent variable is *Treated*. Column (1) reports the estimated coefficients of the probit regression for the pooled sample. Column (2) reports the results of the probit regression for the PSM sample in which we match each treated firm to a control firm within the same fiscal year and industry (measured by the two-digit KSIC), to show the balance of our matched sample. A detailed explanation of the variables is in Appendix A. Robust standard errors adjusted for heteroscedasticity and clustered by firm level are reported in parentheses. ***, **, and * denote significance at the 1%, 5%, and 10% levels, respectively.

Dependent variable = Treated		
	(1)	(2)
Sample	Pooled	PSM
Age	0.0024	-0.0004
	(0.004)	(0.007)
Size	-0.1736***	0.0263
	(0.063)	(0.106)
Cash	-0.2726	0.0074
	(0.632)	(1.212)
Leverage	0.1141	-0.7106
	(0.274)	(0.496)
M-to-B	-0.0186	0.0095
	(0.023)	(0.073)
OCF	0.3336	-0.7889
	(0.503)	(0.917)
ROA	-0.5035	0.7869
	(0.570)	(1.124)
Investment	0.4382	0.4143
	(0.637)	(1.109)
Stock volatility	3.6958	-1.0625
	(3.236)	(5.560)
Stock run-up	-0.2167	0.5037
	(0.327)	(0.581)
Board size	0.3195*	-0.1546
	(0.173)	(0.340)
Board independence	-0.3165	0.0389
	(0.371)	(0.593)
Majority ownership	-1.3108***	0.3517
	(0.405)	(0.604)
Constant	1.7036	-0.0709
	(1.123)	(1.732)
N	2,060	280
Pseudo R-squared	5.66%	1.50%

Table 7. Selection bias-adjusted differences in the market reactions around the court rulings

This table presents the difference in the CARs around the two court rulings between matched treated and control firms. In Panel A, we use the estimated propensity scores from Column (1) of Table 6, matched within the same fiscal year and industry (two-digit KSIC). In Panel B, we use the estimated propensity scores from Column (1) of Table 6, matched within the same event, industry (two-digit KSIC) and market (market dummy; KOSPI vs. KOSDAQ). A detailed explanation of the variables is in Appendix A. Bootstrapped standard errors are reported in parentheses based on 50 replications. Bias-adjusted 95% confidence intervals are reported in brackets. ***, **, and * denote significance at the 1%, 5%, and 10% levels, respectively.

	Nearest neighborhood (one-to-one)	Gaussian kernel	Local linear regression
Panel A: Matched by firm characteristics; same event and industry			
CAR[–1,+1] (%)	-1.073**	-1.733***	-1.755***
	(0.469)	(0.515)	(0.504)
	[-1.994, -0.153]	[-2.744, -0.723]	[-2.743, -0.767]
Panel B: Matched by firm characteristics; same event, industry and market			
CAR[–1,+1] (%)	-1.191**	-1.481***	-1.845***
	(0.560)	(0.358)	(0.565)
	[-2.287, -0.094]	[-2.184, -0.778]	[-2.952, -0.738]

Table 8. Balance of the unmatched and matched samples

This table presents the means of the firm characteristics and propensity score estimated in Panel A of Table 7, using the treated and control firms and the differences in means. Panel A presents the means for the unmatched sample (pooled sample). Panel B presents the means for the matched sample (PSM sample), by using the method of Panel A of Table 7. We use t-tests for the differences in the means between treated and control firms. A detailed explanation of the variables is in Appendix A. ***, **, and * denote significance at the 1%, 5%, and 10% levels, respectively.

Variables	*Treated firms* (Treated = 1)	*Control firms* (Treated = 0)	Difference
Panel A: Unmatched sample (N=2,060)			
Propensity score	0.1178	0.0814	0.0364***
Age	25.6724	28.3616	-2.6892**
Size	18.1273	18.6394	-0.5121***
Cash	0.0808	0.0767	0.0041
Leverage	0.4221	0.4299	-0.0078
M-to-B	1.8335	1.5771	0.2564*
OCF	0.0230	0.0403	-0.0173**
ROA	0.0125	0.0406	-0.0281***
Investment	0.0665	0.0616	0.0049
Stock volatility	0.0322	0.0281	0.0041***
Stock run-up	0.0485	0.0586	-0.0101
Board size	1.5985	1.5992	-0.0007
Board independence	0.2233	0.2517	-0.0284**
Majority ownership	0.3372	0.4173	-0.0801***
Panel B: PSM sample (N=280)			
Propensity score	0.1047	0.1088	-0.0041
Age	27.0780	27.3885	-0.3105
Size	18.2494	18.2921	-0.0427
Cash	0.0730	0.0715	0.0015
Leverage	0.4128	0.4543	-0.0415*
M-to-B	1.4770	1.4839	-0.0069
OCF	0.0300	0.0275	0.0025
ROA	0.0287	0.0174	0.0113
Investment	0.0661	0.0646	0.0015
Stock volatility	0.0308	0.0311	-0.0003
Stock run-up	0.0570	0.0427	0.0143
Board size	1.5674	1.5967	-0.0293
Board independence	0.2241	0.2302	-0.0061
Majority ownership	0.3587	0.3456	0.0131

Table 9. Multivariate regression results

This table presents the results from the cross-sectional OLS regressions where the dependent variables are the CARs around the two court rulings. A detailed explanation of the variables is in Appendix A. PSM denotes the sample matched in Panel A of Table 7. Industry fixed effect is based on the 2-digit KSIC dummies. Robust standard errors adjusted for heteroscedasticity and clustered by firm level are reported in parentheses. ***, **, and * denote significance at the 1%, 5%, and 10% levels, respectively.

Dependent variable = CAR[-1,+1] (%)				
	(1)	(2)	(3)	(4)
Sample	Pooled	Pooled	PSM	PSM
Treated	-1.6555***	-1.5196***	-1.7521***	-1.8882***
	(0.408)	(0.407)	(0.604)	(0.626)
Age		0.0096		0.0330
		(0.009)		(0.024)
Size		0.2141*		0.2709
		(0.128)		(0.459)
Cash		1.4493		8.5806
		(1.723)		(6.093)
Leverage		0.0749		-0.0975
		(0.682)		(2.198)
M-to-B		0.0749		-0.4854**
		(0.101)		(0.243)
OCF		-0.8265		-4.8334
		(1.470)		(3.634)
ROA		0.4955		3.4649
		(1.706)		(3.769)
Investment		0.0285		-5.6793
		(1.649)		(4.180)
Stock volatility		-28.7063***		-20.1737
		(9.229)		(24.391)
Stock run-up		0.4826		4.6553
		(1.098)		(2.936)
Board size		-0.6786		2.1348
		(0.776)		(2.394)
Board independence		-0.3218		-0.5943
		(0.392)		(1.230)
Majority ownership		-0.0616		-1.4093
		(0.933)		(2.323)
Event2	0.0191	-0.0386	-0.7217	-0.3057
	(0.213)	(0.216)	(0.664)	(0.692)
Industry Fixed Effect	Yes	Yes	Yes	Yes
N	2,060	2,060	280	280
Adj. R-squared	2.39%	3.00%	1.22%	2.54%

Table 10. Multivariate regression for anti-takeover provisions

This table presents the results from cross-sectional OLS regressions where the dependent variables are the CARs around the two court rulings. Control variables indicate all the variables in Table 6 as follows: *Age, Size, Cash, Leverage, M-to-B, OCF, ROA, Investment, Stock volatility, Stock run-up, Board size, Board independence,* and *Majority ownership*. A detailed explanation of the variables is in Appendix A. Industry fixed effect is based on the 2-digit KSIC dummies. Robust standard errors adjusted for heteroscedasticity and clustered by firm level are reported in parentheses. ***, **, and * denote significance at the 1%, 5%, and 10% levels, respectively.

Dependent variable = CAR[-1,+1] (%)									
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Supermajority	-1.2655***	-1.7296***	-1.1235***	-1.5665***	-1.0282***	-1.6811***	-0.8957**	-1.5223***	
	(0.380)	(0.394)	(0.386)	(0.396)	(0.375)	(0.401)	(0.384)	(0.403)	
SB	1.3769*	-0.8235	1.0543	-1.1937					
	(0.745)	(0.889)	(0.812)	(1.031)					
GP	0.8965	-0.3273	1.2132*	0.0530					
	(0.650)	(1.018)	(0.676)	(1.064)					
Miscell	-2.3333**	-2.3703**	-2.4350**	-2.4834**					
	(1.026)	(1.020)	(1.092)	(1.080)					
Supermajority × SB		3.5756***		3.6022***					
		(1.259)		(1.355)					
Supermajority × GP		2.0135		1.9149					
		(1.281)		(1.306)					
Other-provision					0.5690	-0.7775	0.6610	-0.6711	
					(0.511)	(0.662)	(0.537)	(0.706)	
Supermajority × Other-provision						3.0566***		2.9825***	
						(0.969)		(0.991)	
Total anti-takeover provisions									-0.0865
									(0.263)
Event2	-0.0192	-0.0344	-0.0429	-0.0613	-0.0154	-0.0398	-0.0388	-0.0631	-0.0535
	(0.208)	(0.207)	(0.214)	(0.213)	(0.208)	(0.208)	(0.214)	(0.214)	(0.215)
Control variables	No	No	Yes	Yes	No	No	Yes	Yes	Yes
Industry Fixed Effect	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
N	2,286	2,286	2,239	2,239	2,286	2,286	2,239	2,239	2,239
Adj. R-squared	2.69%	3.10%	3.27%	3.65%	2.39%	2.90%	2.97%	3.45%	2.73%

Table 11. Multivariate regression for unchanged firms

This table presents the results from cross-sectional OLS regressions where the dependent variables are the CARs around the two court rulings, for the samples in which the anti-takeover provisions in a firm's charter do not changed over the first and second court rulings (Unchanged sample). All columns consist of unchanged sample. Control variables indicate all variables in Table 6 as follows: *Age, Size, Cash, Leverage, M-to-B, OCF, ROA, Investment, Stock volatility, Stock run-up, Board size, Board independence,* and *Majority ownership*. A detailed explanation of the variables is in Appendix A. PSM denotes the sample matched in Panel A of Table 7. Industry fixed effect is based on the 2-digit KSIC dummies. Robust standard errors adjusted for heteroscedasticity and clustered by firm level are reported in parentheses. ***, **, and * denote significance at the 1%, 5%, and 10% levels, respectively.

Dependent variable = CAR[-1,+1] (%)							
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Sample	Unchanged Pooled	Unchanged Pooled	Unchanged PSM	Unchanged Pooled	Unchanged Pooled	Unchanged Pooled	Unchanged Pooled
Treated	-1.4092***	-1.1413**	-1.9248**				
	(0.498)	(0.508)	(0.778)				
Supermajority				-1.3802***	-1.1350**	-1.3634***	-1.1096**
				(0.483)	(0.491)	(0.494)	(0.504)
SB				-0.9939	-1.6374		
				(1.275)	(1.507)		
GP				-1.5782	-1.2492		
				(1.045)	(1.162)		
Miscell				3.2039*	3.4235*		
				(1.726)	(1.910)		
Supermajority × SB				1.4837	1.2502		
				(1.462)	(1.506)		
Supermajority × GP				-1.9915	-2.1616		
				(1.436)	(1.811)		
Other-provision						-1.4734*	-1.4687*
						(0.756)	(0.862)
Supermajority × Other-provision						2.4856**	2.2649*
						(1.169)	(1.225)
Event2	-0.3300	-0.4523*	-0.9813	-0.3933*	-0.5026**	-0.3933*	-0.5037**
	(0.230)	(0.234)	(0.828)	(0.227)	(0.230)	(0.226)	(0.230)
Control variables	No	Yes	Yes	No	Yes	No	Yes
Industry Fixed Effect	Yes	Yes	Yes	Yes	Yes	Yes	Yes
N	1,609	1,590	209	1,703	1,681	1,703	1,681
Adj. R-squared	2.69%	3.91%	1.95%	2.94%	3.93%	2.95%	4.00%

Table 12. Difference-in-Difference (DID) regression

This table presents the results from difference-in-difference (DID) regressions where the dependent variables are the CARs around the two court rulings for the samples in which the anti-takeover provisions in a firm's charter changed between the first and second court rulings. Control variables indicate all the variables in Table 6 as follows: *Age, Size, Cash, Leverage, M-to-B, OCF, ROA, Investment, Stock volatility, Stock run-up, Board size, Board independence,* and *Majority ownership*. A detailed explanation of the variables is in Appendix A. Robust standard errors adjusted for heteroscedasticity and clustered by firm level are reported in parentheses. ***, **, and * denote significance at the 1%, 5%, and 10% levels, respectively.

Dependent variable = CAR[-1,+1] (%)						
	(1)	(2)	(3)	(4)	(5)	(6)
Control-to-Treated × Event2	-4.7720***	-4.7060***	-4.7919***	-5.3096***	-3.1444**	-3.8817**
	(1.341)	(1.417)	(1.455)	(1.526)	(1.581)	(1.631)
Control-to-Treated	2.4030**	2.5168**	2.1311*	2.5766**	0.9039	1.3823
	(1.069)	(1.079)	(1.144)	(1.173)	(1.283)	(1.328)
Event2	3.6633***	4.0006***	3.2173***	3.8560***	1.9189	2.7048**
	(1.039)	(1.095)	(1.108)	(1.181)	(1.206)	(1.282)
Control variables	No	Yes	No	Yes	No	Yes
Industry Fixed Effect	No	No	2-digit KSIC	2-digit KSIC	3-digit KSIC	3-digit KSIC
N	494	470	494	470	494	470
Adj. R-squared	2.58%	3.71%	2.57%	2.61%	5.23%	6.10%

Table 13. Firm fixed effect regression

This table presents the results from firm fixed effect regression where the dependent variables are the CARs around the two court rulings. Control variables indicate all the variables in Table 6 as follows: *Age, Size, Cash, Leverage, M-to-B, OCF, ROA, Investment, Stock volatility, Stock run-up, Board size, Board independence,* and *Majority ownership*. A detailed explanation of the variables is in Appendix A. Robust standard errors adjusted for heteroscedasticity and clustered by firm level are reported in parentheses. ***, **, and * denote significance at the 1%, 5%, and 10% levels, respectively.

Dependent variable = CAR[-1,+1] (%)						
	(1)	(2)	(3)	(4)	(5)	(6)
Treated	-2.9474*	-3.4942*				
	(1.683)	(1.781)				
Supermajority			-2.7487*	-3.7324**	-1.7564	-2.4840
			(1.578)	(1.720)	(1.480)	(1.618)
SB			4.1523	4.9885		
			(3.073)	(3.131)		
GP			1.9509	1.9795		
			(2.000)	(1.987)		
Miscell			-2.2735	-2.0700		
			(1.495)	(1.731)		
Otherprovision					1.6641	1.6445
					(1.783)	(1.765)
Event2	-0.3161	-0.5249*	-0.4302*	-0.5987**	-0.4242*	-0.5818**
	(0.225)	(0.273)	(0.221)	(0.262)	(0.221)	(0.261)
Control variables	No	Yes	No	Yes	No	Yes
N	2,103	2,060	2,286	2,239	2,286	2,239
Adj. R-squared	0.48%	2.23%	0.74%	2.28%	0.48%	1.93%

Table 14. Placebo test

This table presents the results from cross-sectional OLS regressions where the dependent variables are the CARs around the two court rulings. Placebo (only SB) is an indicator which in one if the firm has a staggered board as the only anti-takeover provision and zero for firms with no anti-takeover provision. Placebo2 (only GP) is an indicator which in one if the firm has a golden parachute as the only anti-takeover provision and zero for firms with no anti-takeover provision. Placebo3 (SB or GP) is an indicator which in one if the firm has a staggered board or a golden parachute for anti-takeover provision and zero for firms with no anti-takeover provision. Control variables indicate all the variables in Table 6 as follows: *Age, Size, Cash, Leverage, M-to-B, OCF, ROA, Investment, Stock volatility, Stock run-up, Board size, Board independence,* and *Majority ownership.* A detailed explanation of the variables is in Appendix A. Industry fixed effect is based on the 2-digit KSIC dummies. Robust standard errors adjusted for heteroscedasticity and clustered by firm level are reported in parentheses. ***, **, and * denote significance at the 1%, 5%, and 10% levels, respectively.

Dependent variable = CAR[-1,+1] (%)						
	(1)	(2)	(3)	(4)	(5)	(6)
Placebo (only SB)	-0.8764	-1.3163				
	(0.917)	(1.069)				
Placebo2 (only GP)			-0.2605	0.1215		
			(1.019)	(1.061)		
Placebo3 (SB or GP)					-0.4630	-0.3589
					(0.748)	(0.794)
Event2	0.0543	0.0017	0.0867	0.0324	0.0475	0.0045
	(0.217)	(0.223)	(0.220)	(0.225)	(0.218)	(0.223)
Control variables	No	Yes	No	Yes	No	Yes
Industry Fixed Effect	Yes	Yes	Yes	Yes	Yes	Yes
N	1,950	1,909	1,973	1,932	1,997	1,955
Adj. R-squared	2.39%	2.87%	2.00%	2.72%	2.17%	2.73%

Table 15. Simulation: market reaction over non-event days

This table presents the statistics of the simulation for the original OLS regression models where the dependent variables are the CARs around the two court rulings. Original β* for variable indicates that the estimated coefficient of variable in the original model. The bottommost rows report the likelihood of observing coefficients (simulation p-value) at least as large and negative as the observed coefficient of variable in the original model. Simulation p-value, reported in the bottommost rows, are computed using a simulated null distribution of coefficients generated from all unique pairs of non-event 200 trading days around event days for each court ruling ([–115, –16] and [+16, +115] for event 1 and 2). For example, in column (1), simulation p-value represents the proportion of times we observe the coefficient of treated that is smaller than –1.5196. Control variables indicate all variables in Table 6 as follows: *Age, Size, Cash, Leverage, M-to-B, OCF, ROA, Investment, Stock volatility, Stock run-up, Board size, Board independence,* and *Majority ownership*. A detailed explanation of the variables is in Appendix A. PSM denotes the sample matched in Panel A of Table 7. Industry fixed effect is based on the 2-digit KSIC dummies. ***, **, and * denote significance at the 1%, 5%, and 10% levels, respectively.

	(1)	(2)	(3)	(4)	(5)
Original models	Pooled OLS *(Column (2) of Table 9)*	OLS in PSM sample *(Column (4) of Table 9)*	Pooled OLS *(Column (4) of Table 10)*	Pooled OLS *(Column (8) of Table 10)*	DID regression *(Column (4) of Table 12)*
Variable (in interest)	Treated	Treated	Supermajority	Supermajority	*Control-to-Treated* × Event2
Original β* of variable	-1.5196***	-1.8882***	-1.5665***	-1.5223***	-5.3096***
Control variables	Yes	Yes	Yes	Yes	Yes
Industry Fixed Effect	Yes	Yes	Yes	Yes	Yes
N	2,060	280	2,239	2,239	470
Simulation p-value	0.0035***	0.0066***	0.0034***	0.0035***	0.0305**

Table 16. Simulation: random assignment of the treatment

This table presents the statistics of the simulation for the original OLS regression models where the dependent variables are the CARs around the two court rulings. For each replication, we randomly re-assign the *Treated* variable to each firm based on the sample distribution of *Treated* and record the estimated coefficients of the *Simulated-Treated* and corresponding p-values. We repeat this simulation procedure 1,000 times. Columns (1)–(4) report the mean of the estimated coefficients of *Simulated-Treated* across the 1,000 replications. The percentages of the estimated coefficients of *Simulated-Treated* that are significantly positive or negative at the 5% level are reported in brackets. The percentages of the estimated coefficients of *Simulated-Treated* that are significantly negative at the 5% level and have a larger absolute value than the original estimates are reported in parentheses. Original β* for *Treated* indicates that the estimated coefficient of Treated in the original model and the associated p-value appear in parentheses immediately below the Original β* for *Treated*. Control variables indicate all variables in Table 6 as follows: *Age, Size, Cash, Leverage, M-to-B, OCF, ROA, Investment, Stock volatility, Stock run-up, Board size, Board independence,* and *Majority ownership*. A detailed explanation of the variables is in Appendix A. PSM denotes the sample matched in Panel A of Table 7. Industry fixed effect is based on the 2-digit KSIC dummies. ***, **, and * denote significance at the 1%, 5%, and 10% levels, respectively.

	(1)	(2)	(3)	(4)
Original models	Pooled OLS *(Column (3) of Table 5)*	Pooled OLS *(Column (2) of Table 9)*	OLS in PSM sample *(Column (3) of Table 9)*	OLS in PSM sample *(Column (4) of Table 9)*
Mean β for Simulated-Treated	-0.0025	0.0047	-0.0096	0.0100
[% $\beta > 0$ & $\alpha \leq 5\%$; % $\beta < 0$ & $\alpha \leq 5\%$]	[2.4%; 3.1%]	[2.1%; 2.2%]	[1.8%; 2.9%]	[3.0%; 3.4%]
(% $\beta \leq \beta^*$ & $\alpha \leq 5\%$)	(0.0%)	(0.0%)	(0.2%)	(0.4%)
Original β* for Treated	-1.6843***	-1.5196***	-1.7521***	-1.8882***
(p-value)	(0.0%)	(0.0%)	(0.4%)	(0.3%)
Control variables	No	Yes	No	Yes
Industry Fixed Effect	Yes	Yes	Yes	Yes
N for each replication	2,103	2,060	280	280
Replication trials	1,000	1,000	1,000	1,000

Table 17. Possible channel for the value-enhancing hypothesis: R&D investment

This table presents the results from the cross-sectional OLS regressions where the dependent variables are the CARs around the two court rulings. Columns (1) and (2) report the results for the subsamples of treated and control firms, respectively. Columns (3) and (4) consider the interaction effects of treated firms and R&D investment for the pooled sample and alternative sample that consists of firms with at least one anti-takeover provision, respectively. Columns (5) considers the interaction effects of *Supermajority*, *Other-provision* and R&D investment for the pooled sample. Control variables indicate as follows: *Age, Size, Cash, Leverage, M-to-B, OCF, ROA, CAPEX, Stock volatility, Stock run-up, Board size, Board independence,* and *Majority ownership*. A detailed explanation of the variables is in Appendix A. Industry fixed effect is based on the 2-digit KSIC dummies. Robust standard errors adjusted for heteroscedasticity and clustered by firm level are reported in parentheses. ***, **, and * denote significance at the 1%, 5%, and 10% levels, respectively.

Dependent variable = CAR[-1,+1] (%)					
	(1)	(2)	(3)	(4)	(5)
Sample	*Treated firms* (Treated=1)	*Control firms* (Treated=0)	Pooled	*Firms with at least one anti-takeover provision*	Pooled
Treated			-1.3406**	-0.9575	
			(0.554)	(0.954)	
Treated × R&D			-9.0208	-40.1750*	
			(15.280)	(22.032)	
Supermajority					-0.6293
					(0.500)
Supermajority × R&D					-17.1924
					(15.710)
Other-provision					0.1543
					(0.605)
Other-provision × R&D					30.3367*
					(18.290)
R&D	-34.0156*	-3.2693	-3.7674	12.7957	-4.0215
	(19.429)	(4.204)	(4.239)	(13.499)	(4.411)
Event2	-1.4428	0.0377	-0.0334	-0.5975	-0.0246
	(0.912)	(0.225)	(0.216)	(0.688)	(0.213)
Control variables	Yes	Yes	Yes	Yes	Yes
Industry Fixed Effect	Yes	Yes	Yes	Yes	Yes
N	174	1,886	2,060	353	2,239
Adj. R-squared	7.99%	2.92%	3.05%	9.73%	3.43%

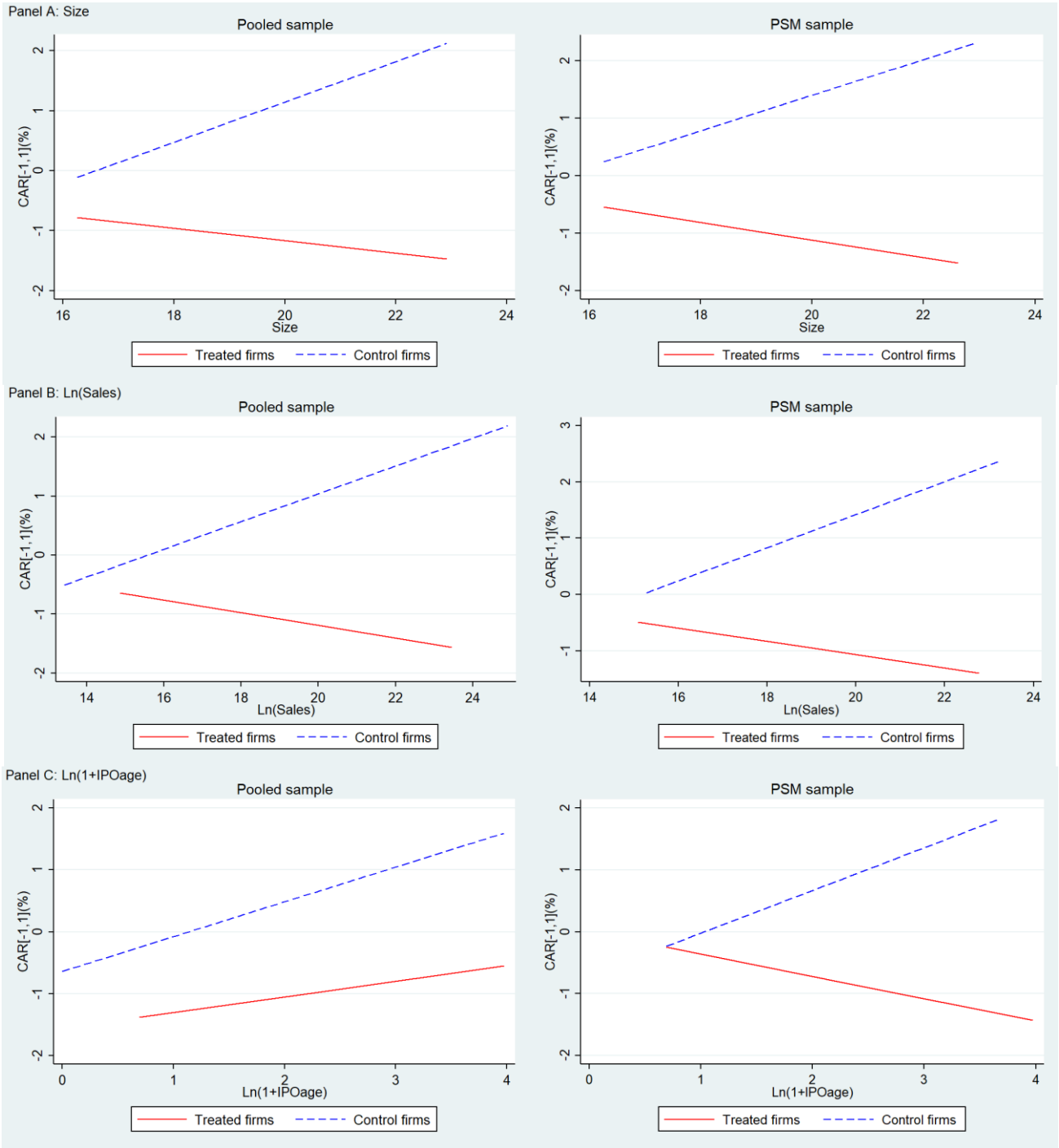
Table 18. Possible channel for the value-enhancing hypothesis: informational complexity

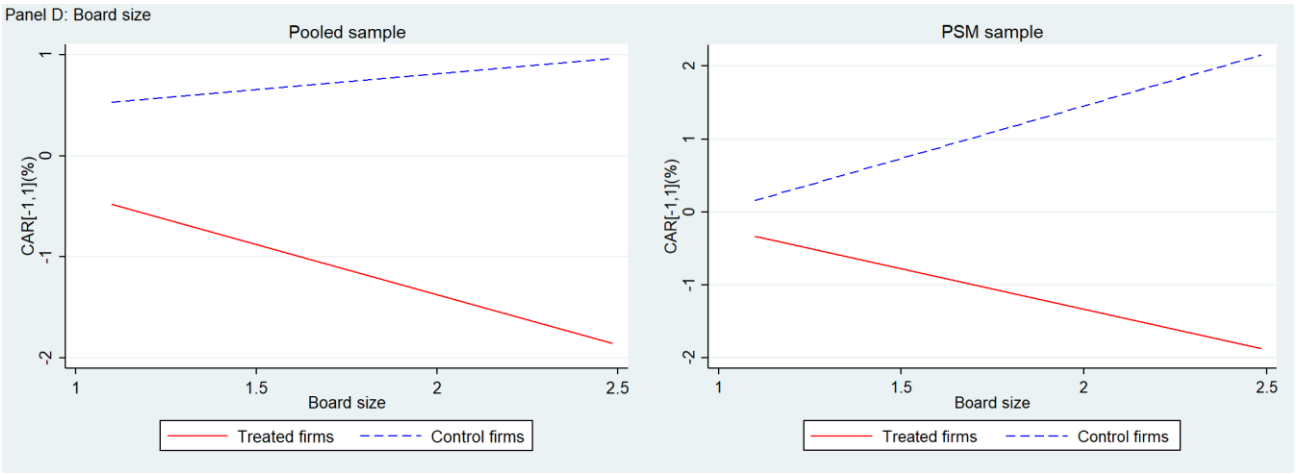
This table presents the results from the cross-sectional OLS regressions where the dependent variables are the CARs around the two court rulings. We include the interacted variables as follows: *Size* in columns (1) and (2), *Ln(Sales)* in columns (3) and (4), *Ln(1+IPOage)* in columns (5) and (6), and *Board size* in columns (7) and (8). *Ln(Sales)* is the natural logarithm of total revenue (thousands of KRW) in the fiscal year prior to the announcement. *Ln(1+IPOage)* is the natural logarithm of one plus the fiscal year prior to the announcement minus the listed year of the firm. Control variables indicate all variables in Table 6 as follows: *Age, Size, Cash, Leverage, M-to-B, OCF, ROA, Investment, Stock volatility, Stock run-up, Board size, Board independence,* and *Majority ownership*, except columns (3) and (4) (we exclude *Size* as a control variable in columns (3) and (4) to avoid multicollinearity concern). A detailed explanation of the variables is in Appendix A. PSM denotes the sample matched in Panel A of Table 7. Industry fixed effect is based on the 2-digit KSIC dummies. Robust standard errors adjusted for heteroscedasticity and clustered by firm level are reported in parentheses. ***, **, and * denote significance at the 1%, 5%, and 10% levels, respectively.

Dependent variable = CAR[-1,+1] (%)								
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Sample	Pooled	PSM	Pooled	PSM	Pooled	PSM	Pooled	PSM
Treated	7.7448	14.9272*	6.0011	10.3278	-0.4984	2.6126	1.1691	3.5784
	(4.966)	(8.688)	(4.102)	(7.960)	(1.206)	(2.074)	(1.934)	(3.110)
Treated × Size	-0.5099*	-0.9200*						
	(0.267)	(0.470)						
Treated × Ln(Sales)			-0.4192*	-0.6726				
			(0.222)	(0.431)				
Treated × Ln(1+IPOage)					-0.4455	-1.9185**		
					(0.491)	(0.838)		
Treated × Board size							-1.6824	-3.4543*
							(1.158)	(1.873)
Size	0.2470*	0.7025						
	(0.130)	(0.509)						
Ln(Sales)			0.0935	0.3910				
			(0.114)	(0.483)				
Ln(1+IPOage)					0.2755	0.5759		
					(0.262)	(0.847)		
Board size							-0.1562	1.2680
							(0.398)	(1.669)
Event2	-0.0397	-0.3358	-0.0269	-0.3121	-0.0369	-0.2678	-0.0343	-0.3832
	(0.217)	(0.694)	(0.217)	(0.695)	(0.216)	(0.697)	(0.217)	(0.699)
Control variables	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Industry Fixed Effect	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
N	2,060	280	2,060	280	2,060	280	2,060	280
Adj. R-squared	3.07%	3.36%	2.95%	2.87%	2.97%	3.43%	3.06%	3.52%

Figure 1. The effect of information complexity for the treated and control firms

This figure presents the linear relationship between the announcement return for the two court rulings and information complexity as measured by total assets, total revenues, IPO age and board size. Panels A–D reports the unconditional linear relation of information complexity measures (*Size*, *Ln(Sales)*, *Ln(1+IPOage)* and *Board size*, respectively) and CAR[–1,+1] for the treated firms as the red solid line, and control firms as the blue dotted line. *Ln(Sales)* is the natural logarithm of total revenue (thousands of KRW) in the fiscal year prior to the announcement. *Ln(1+IPOage)* is the natural logarithm of one plus the fiscal year prior to the announcement minus the listed year of the firm.




Panel D: Board size
Pooled sample
PSM sample
CAR[-1,1](%)
Board size
Treated firms
Control firms

Appendix A. Definition of the variables

Variable name	Definition / Measurements	Data source
CAR[–1,+1] (%)	The cumulative abnormal return (CAR) as percentages measured over the window [–1, +1] relative to the two court ruling announcement dates, calculated using the market model estimated over the past 180 trading days; The first court ruling date was April 13, 2007 and the second one was June 2, 2008.	FN Dataguide
Supermajority	1 if the firm has the supermajority rule (to approve the merger, change directors, and change charter provisions) in its charter, or if the firm requires minimum attendance requirement for the shareholders meeting; 0 otherwise.	DART
Staggered Board (SB)	1 if the firm has a staggered board structure in its charter; 0 otherwise.	DART
Golden Parachute (GP)	1 if the firm has a golden parachute rule in its charter; 0 otherwise.	DART
Miscellaneous provisions (Miscell)	1 if the firm has a miscellaneous anti-takeover provision (e.g., only people who have been in the company for more than three years can be appointed as directors) in its charter; 0 otherwise.	DART
Other-provision	1 if the firm has at least one of a staggered board structure, a golden parachute rule, and a miscellaneous provision in its charter. i.e., Other-provision = 1 if SB = 1 or GP = 1 or Miscell = 1; 0 otherwise.	DART
Total anti-takeover provisions	The number of anti-takeover provisions among the supermajority rule, staggered board structure, golden parachute rule, and miscellaneous provision in its charter. i.e., Total anti-takeover provisions = Supermajority + SB + GP + Miscell.	DART
Treated	1 if the firm has the supermajority rule as the only anti-takeover provision in its charter (*Treated firm*); 0 if the firm has no anti-takeover provision (*Control firm*). i.e., Treated = 1 if Supermajority = 1 and Other-provision = 0; Treated = 0 if Total anti-takeover provision = 0.	DART
Event2	1 for the sample of the second court ruling; 0 for the sample of the first court ruling.	FN Dataguide
Industry dummies (Industry Fixed Effect)	2-digit (3-digit) KSIC is the first two (three)-digit number of the Korean Standard Industrial Classification (KSIC) code, where KSIC is defined by Statistics Korea, a central organization for statistics under the Ministry of Strategy and Finance.	FN Dataguide
Market dummy (Market Fixed Effect)	1 if the firm is listed on the KOSPI market; 0 if the firm is listed on the KOSDAQ market.	FN Dataguide
Age	Fiscal year minus the year of corporate foundation plus one	FN Dataguide
Size	Natural logarithm of total assets (thousands of KRW) in the fiscal year prior to the announcement.	FN Dataguide
Cash	Cash and cash equivalents divided by total assets in the fiscal year prior to the announcement.	FN Dataguide
Leverage	The book value of liabilities divided by total assets in the fiscal year prior to the announcement.	FN Dataguide
M-to-B	Market-to-book value; total market capitalization divided by the book value of equity in the fiscal year prior to the announcement.	FN Dataguide
OCF	Operating cash flows divided by total assets in the fiscal year prior to the announcement.	FN Dataguide
ROA	Net income divided by total assets in the fiscal year prior to the	FN Dataguide

	announcement.	
Investment	The total expenses of research and development and capital expenditure divided by total assets in the fiscal year prior to the announcement. i.e., Investment = R&D + CAPEX	FN Dataguide
R&D	Research and development expenses divided by total assets in the fiscal year prior to the announcement.	FN Dataguide
CAPEX	Capital expenditure divided by total assets in the fiscal year prior to the announcement.	FN Dataguide
Stock volatility	Cumulative standard deviation of stock prices for a month (about 20-trading days) at the date two weeks before the court ruling announcements.	FN Dataguide
Stock run-up	Cumulative stock return for a month (about 20-trading days) at the date two weeks before the court ruling announcements.	FN Dataguide
Board size	Natural logarithm of the number of directors.	TS2000
Board independence	Ratio of the number of outside directors to the number of the directors.	TS2000
Majority ownership	Share proportion owned by the majority shareholder of the firm in the fiscal year prior to the announcement.	FN Dataguide
Control-to-Treated	1 if the firm was a *Control firm* at the first court ruling but a *Treated firm* at the second court ruling, or a *Treated firm* at the second court ruling but no observation for the first court ruling, or a *Control firm* at the first court ruling but no observation for the second court ruling; 0 if the firm was a *Treated firm* at the first court ruling but a *Control firm* at the second court ruling, or *Control firm* at the second court ruling but no observation for the first court ruling, or *Treated firm* at the first court ruling but no observation for the second court ruling.	DART
Placebo (only SB)	1 if the firm has a staggered board as the only anti-takeover provision in its charter; 0 if the firm has no anti-takeover provision (*Control firm*). i.e., Placebo (only SB) = 1 if SB = 1 and Total anti-takeover provision = 1; Placebo (only SB) = 0 if Total anti-takeover provision = 0.	DART
Placebo2 (only GP)	1 if the firm has a golden parachute as the only anti-takeover provision in its charter; 0 if the firm has no anti-takeover provision (*Control firm*). i.e., Placebo2 (only GP) = 1 if GP = 1 and Total anti-takeover provision = 1; Placebo2 (only GP) = 0 if Total anti-takeover provision = 0.	DART
Placebo3 (SB or GP)	1 if the firm has a staggered board or a golden parachute as the anti-takeover provision in its charter; 0 if the firm has no anti-takeover provision (*Control firm*). i.e., Placebo3 (SB or GP) = 1 if {SB = 1 and Total anti-takeover provision = 1} or {GP = 1 and Total anti-takeover provision = 1}; Placebo3 (SB or GP) = 0 if Total anti-takeover provision = 0.	DART
Ln(Sales)	Natural logarithm of total revenues (thousands of KRW) in the fiscal year prior to the announcement.	FN Dataguide
Ln(1+IPOage)	Natural logarithm of one plus the fiscal year prior to the announcement minus the listed year of the firm.	FN Dataguide
Chaebol	1 if the firm is in the group that has total assets of more than 2 trillion KRW; 0 otherwise.	KFTC
Gov-score	KEJI score or KCGS score, in which higher score indicates a firm with better quality corporate governance. KEJI score is the normalized score (maximum value of one and minimum value of zero) of the score of the raw KEJI index, which consists of seven sub-categories: corporate	KEJI and KCGS

	integrity (20pts), corporate fairness (11pts), contribution to society (7pts), customer satisfaction (7pts), environment (10pts), employee satisfaction (10pts), and contribution to national economy (10pts). KCGS score is the normalized score (maximum value of one and minimum value of zero) of the score of the raw KCGS index, which consists of five sub-categories: shareholder rights (90pts), board (90pts), disclosure (60pts), audit organization (50pts), and payout (50pts).	
Missing Gov-score	1 if the firm's Gov-score is missing (and such firms' Gov-scores are replaced to zeros); 0 otherwise.	KEJI and KCGS

Appendix B.1. DID regression: restricted sample

This table presents the results from DID regressions where the dependent variables are the CARs around the two court rulings for the restricted samples in which the anti-takeover provisions in a firm's charter changed between the first and second court rulings and have CARs of the both court rulings. We account a few control variables (*Size*, *Leverage*, *M-to-B*, and *ROA*) except column (3) due to the limited sample size. Other control variables indicate all the variables in Table 6 except *Size*, *Leverage*, *M-to-B*, and *ROA*. A detailed explanation of the variables is in Appendix A. Robust standard errors adjusted for heteroscedasticity and clustered by firm level are reported in parentheses. ***, **, and * denote significance at the 1%, 5%, and 10% levels, respectively.

Dependent variable = CAR[-1,+1] (%)					
	No FE	No FE	No FE	Firm FE	Firm FE
	(1)	(2)	(3)	(4)	(5)
Control-to-Treated × Event2	-10.9937***	-16.6008**	-10.4811***	-10.9937***	-8.9616**
	(2.102)	(5.751)	(3.071)	(2.046)	(3.658)
Control-to-Treated	8.4223**	13.0656***	6.8681***		
	(2.721)	(3.172)	(1.838)		
Event2	9.1872***	14.8745**	6.7350**	9.1872***	6.9675*
	(0.871)	(5.181)	(2.754)	(0.848)	(3.173)
Size		-3.9903**	0.1259		-2.1678
		(1.618)	(2.039)		(7.173)
Leverage		6.1309	-19.4168		-3.5581
		(6.485)	(16.370)		(12.983)
M-to-B		-1.7559*	0.3019		-1.0343
		(0.812)	(0.853)		(1.209)
ROA		47.9329***	-31.9812		-11.6244
		(7.292)	(23.009)		(17.261)
Other control variables	No	No	Yes	No	No
Fixed Effect	No	No	No	Firm-level	Firm-level
N	22	21	21	22	21
Adj. R-squared	2.55%	49.60%	65.40%	40.20%	57.20%

Appendix B.2. Baseline regression results: Treated2

This table presents the results from the OLS regressions where the dependent variables are the CARs around the two court rulings. *Treated2* is an indicator which is one for firms have a supermajority rule as the only anti-takeover provision in its charter (*Treated firms*), and zero for firms have at least one anti-takeover provision except a supermajority rule. A detailed explanation of the variables is in Appendix A. Robust standard errors adjusted for heteroscedasticity and clustered by firm level are reported in parentheses. ***, **, and * denote significance at the 1%, 5%, and 10% levels, respectively.

Dependent variable = CAR[-1,+1] (%)						
	(1)	(2)	(3)	(4)	(5)	(6)
Treated2	-1.7530***	-1.7781***	-1.7550**	-1.7812**	-1.6512**	-1.7626**
	(0.588)	(0.590)	(0.694)	(0.821)	(0.705)	(0.847)
Event2		-0.6779	-0.8376	-0.9384	-0.8164	-0.9319
		(0.621)	(0.655)	(0.694)	(0.656)	(0.694)
Market dummy					0.5975	0.1052
					(0.718)	(0.837)
Constant	0.7026	1.0915*				
	(0.459)	(0.616)				
Industry Fixed Effect	No	No	2-digit KSIC	3-digit KSIC	2-digit KSIC	3-digit KSIC
N	360	360	360	360	360	360
Adj. R-squared	2.07%	2.15%	4.71%	0.31%	4.59%	-0.04%

Appendix B.3. Selection bias-adjusted differences in the market reactions around the court rulings: Treated2

This table presents the difference in the CARs around the two court rulings between matched treated firms (*Treated2* = 1) and firms with at least one anti-takeover provision except a supermajority rule (*Treated2* = 0). *Treated2* is an indicator which is one for firms have a supermajority rule as the only anti-takeover provision in its charter (*Treated firms*), and zero for firms have at least one anti-takeover provision except a supermajority rule. Due to the limited sample size, we use the propensity scores by the probit estimation (same model of Column (1) of Table 6) where the dependent variable is *Treated2*, and matched within the same event in Panel A. We only use the propensity scores for matching in Panel B. A detailed explanation of the variables is in Appendix A. Bootstrapped standard errors are reported in parentheses based on 50 replications. Bias-adjusted 95% confidence intervals are reported in brackets. ***, **, and * denote significance at the 1%, 5%, and 10% levels, respectively.

	Nearest neighborhood (one-to-one)	Gaussian kernel	Local linear regression
Panel A: Matched by firm characteristics; same event			
CAR[–1,+1] (%)	-2.032***	-2.203***	-2.091**
	(0.761)	(0.722)	(0.9604)
	[-3.524, -0.540]	[-3.619, -0.787]	[-3.973, -0.208]
Panel B: Matched by firm characteristics			
CAR[–1,+1] (%)	-2.236***	-1.997***	-2.002**
	(0.838)	(0.602)	(0.909)
	[-3.879, -0.593]	[-3.177, -0.817]	[-3.785, -0.220]

Appendix B.4. Multivariate regression results: Treated2

This table presents the results from the cross-sectional OLS regressions where the dependent variables are the CARs around the two court rulings. *Treated2* is an indicator which is one for firms have a supermajority rule as the only anti-takeover provision in its charter (*Treated firms*), and zero for firms have at least one anti-takeover provision except a supermajority rule. A detailed explanation of the variables is in Appendix A. PSM denotes the sample matched in Panel A of Appendix B.3. Industry fixed effect is based on the 2-digit KSIC dummies. Robust standard errors adjusted for heteroscedasticity and clustered by firm level are reported in parentheses. ***, **, and * denote significance at the 1%, 5%, and 10% levels, respectively.

Dependent variable = CAR[-1,+1] (%)				
	(1)	(2)	(3)	(4)
Sample	Pooled	Pooled	PSM	PSM
Treated2	-1.6978**	-1.8966**	-2.0368**	-1.9458**
	(0.708)	(0.769)	(0.929)	(0.885)
Age		-0.0105		0.0216
		(0.025)		(0.037)
Size		-0.1641		-0.3708
		(0.322)		(0.528)
Cash		9.3843		17.5879**
		(5.717)		(7.807)
Leverage		1.9085		4.9741*
		(2.053)		(2.626)
M-to-B		0.0269		-0.5681**
		(0.230)		(0.273)
OCF		0.1765		-3.4487
		(3.514)		(5.517)
ROA		-7.4232*		-7.8118
		(4.294)		(6.650)
Investment		2.5236		9.3893
		(4.714)		(7.381)
Stock volatility		-57.4867***		-70.3724**
		(20.238)		(29.320)
Stock run-up		6.4114**		5.1826
		(3.164)		(3.944)
Board size		-0.0273		3.5537
		(2.684)		(3.984)
Board independence		-2.0082**		-2.3589*
		(0.976)		(1.415)
Majority ownership		0.7744		-1.8408
		(2.143)		(2.856)
Event2	-0.9582	-0.6722	-1.0410	-0.7792
	(0.661)	(0.691)	(0.973)	(1.011)
Industry Fixed Effect	Yes	Yes	Yes	Yes
N	353	353	203	203
Adj. R-squared	4.94%	7.75%	3.28%	11.30%

Appendix B.5. DID regression: Treated2

This table presents the results from DID regressions where the dependent variables are the CARs around the two court rulings for the samples in which the anti-takeover provisions in a firm's charter changed between the first and second court rulings. *Treated2* is an indicator which is one for firms have a supermajority rule as the only anti-takeover provision in its charter (*Treated firms*), and zero for firms have at least one anti-takeover provision except a supermajority rule. *Control-to-Treated2* is an indicator which is one if the firm had at least one anti-takeover provision except a supermajority rule (i.e., *Treated2* = 0) at the first court ruling but the firm was a *Treated firm* (i.e., *Treated2* = 1) at the second court ruling, and zero if vice-versa. Control variables indicate all the variables in Table 6 as follows: *Age, Size, Cash, Leverage, M-to-B, OCF, ROA, Investment, Stock volatility, Stock run-up, Board size, Board independence,* and *Majority ownership*. A detailed explanation of the variables is in Appendix A. Robust standard errors adjusted for heteroscedasticity and clustered by firm level are reported in parentheses. ***, **, and * denote significance at the 1%, 5%, and 10% levels, respectively.

Dependent variable = CAR[-1,+1] (%)						
	(1)	(2)	(3)	(4)	(5)	(6)
Control-to-Treated2 × Event2	-6.6179***	-8.5393***	-7.6633***	-9.7575***	-9.2550***	-12.5017***
	(2.113)	(2.173)	(2.706)	(2.921)	(3.494)	(3.434)
Control-to-Treated2	4.0552**	5.4261***	4.3992*	6.1723**	5.4803*	8.2233***
	(1.760)	(1.772)	(2.400)	(2.540)	(3.126)	(3.090)
Event2	3.8569***	4.7491***	4.5810***	6.5289***	4.1515*	6.0581**
	(1.318)	(1.438)	(1.727)	(1.973)	(2.289)	(2.666)
Control variables	No	Yes	No	Yes	No	Yes
Industry Fixed Effect	No	No	2-digit KSIC	2-digit KSIC	3-digit KSIC	3-digit KSIC
N	143	142	143	142	143	142
Adj. R-squared	4.66%	9.72%	7.10%	10.10%	-0.73%	2.27%

Appendix B.6. Alternative explanation: large group-affiliation (chaebol) effect

This table presents the results from the cross-sectional OLS regressions where the dependent variables are the CARs around the two court rulings. Columns (1) and (2) include the chaebol dummy for the pooled and PSM samples, respectively. Columns (3) and (4) include the chaebol dummy and its interaction term with *Treated* for the pooled and PSM samples, respectively. Columns (5)–(7) consider the pooled sample that consists of all anti-takeover provision types. Column (5) includes the chaebol dummy. Columns (6) and (7) include the chaebol dummy and its interaction terms with *Supermajority* and *Other-provision*. Control variables indicate all the variables in Table 6 as follows: *Age, Size, Cash, Leverage, M-to-B, OCF, ROA, Investment, Stock volatility, Stock run-up, Board size, Board independence,* and *Majority ownership*. A detailed explanation of the variables is in Appendix A. PSM denotes the sample matched in Panel A of Table 7. Industry fixed effect is based on the 2-digit KSIC dummies. Robust standard errors adjusted for heteroscedasticity and clustered by firm level are reported in parentheses. ***, **, and * denote significance at the 1%, 5%, and 10% levels, respectively.

Dependent variable = CAR[-1,+1] (%)							
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Sample	Pooled	PSM	Pooled	PSM	Pooled	Pooled	Pooled
Treated	-1.5227***	-1.7993***	-1.5664***	-1.8437***			
	(0.408)	(0.616)	(0.416)	(0.626)			
Supermajority					-0.9052**	-1.0185**	-1.5552***
					(0.386)	(0.400)	(0.412)
Other-provision					0.6772	0.9871	-0.4941
					(0.538)	(0.614)	(0.894)
Supermajority × Other-provision							2.8717**
							(1.136)
Chaebol	-0.1597	5.2438*	-0.1901	4.6768	-0.2522	-0.1314	-0.1504
	(0.395)	(2.934)	(0.396)	(3.549)	(0.387)	(0.394)	(0.393)
Treated × Chaebol			2.1691***	1.7614			
			(0.738)	(2.589)			
Supermajority × Chaebol						1.8280	1.9786**
						(1.315)	(0.777)
Other-provision × Chaebol						-2.0456*	-0.6226
						(1.083)	(1.312)
Supermajority × Other-provision × Chaebol							-2.0704
							(2.583)
Event2	-0.0414	-0.1872	-0.0413	-0.1871	-0.0426	-0.0498	-0.0665
	(0.217)	(0.697)	(0.217)	(0.699)	(0.215)	(0.215)	(0.214)

Control variables	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Industry Fixed Effect	Yes	Yes	Yes	Yes	Yes	Yes	Yes
N	2,060	280	2,060	280	2,239	2,239	2,239
Adj. R-squared	2.95%	3.66%	2.93%	3.34%	2.93%	2.98%	3.31%

Appendix B.7. Alternative explanation: overall governance score

This table presents the results from the cross-sectional OLS regressions where the dependent variables are the CARs around the two court rulings. We use the KEJI score and KCGS score as the overall governance measurement (*Gov-score*) in columns (1)–(3) and (4)–(6), respectively. We include *Gov-score* and the interaction terms of *Treated*, *Gov-score*, and an indicator for a missing *Gov-score* sample (*Missing Gov-score*). Control variables indicate all the variables in Table 6 as follows: *Age, Size, Cash, Leverage, M-to-B, OCF, ROA, Investment, Stock volatility, Stock run-up, Board size, Board independence,* and *Majority ownership*. A detailed explanation of the variables is in Appendix A. Industry fixed effect is based on the 2-digit KSIC dummies. Robust standard errors adjusted for heteroscedasticity and clustered by firm level are reported in parentheses. ***, **, and * denote significance at the 1%, 5%, and 10% levels, respectively.

Dependent variable = CAR[-1,+1] (%)						
	Gov-score = KEJI score			Gov-score = KCGS score		
	(1)	(2)	(3)	(4)	(5)	(6)
Treated	-2.8457***	-2.8557***	-3.6559***	-2.3766***	-2.6260***	-3.4810*
	(0.991)	(0.990)	(1.245)	(0.595)	(0.614)	(1.844)
Chaebol	-0.2467	-0.2782	-0.2751	-0.4079	-0.4729	-0.4573
	(0.402)	(0.404)	(0.404)	(0.414)	(0.416)	(0.418)
Gov-score	0.7256	0.7357	0.6459	0.2513	0.3749	0.2784
	(0.858)	(0.858)	(0.863)	(1.367)	(1.371)	(1.399)
Missing Gov-score	-0.0867	-0.0953	-0.1226	-0.9582*	-0.9366*	-0.9660*
	(0.442)	(0.442)	(0.444)	(0.507)	(0.507)	(0.515)
Treated × Chaebol		2.1887***	2.1905***		3.3454***	3.3775***
		(0.763)	(0.763)		(0.915)	(1.015)
Treated × Gov-score			5.0590			2.2540
			(4.991)			(4.061)
Treated × Missing Gov-score	1.4407	1.4044	2.2037*	1.2704	1.5146*	2.3692
	(1.085)	(1.086)	(1.315)	(0.777)	(0.789)	(1.909)
Event2	-0.0222	-0.0217	-0.0243	-0.0163	-0.0172	-0.0174
	(0.219)	(0.219)	(0.220)	(0.217)	(0.217)	(0.217)
Control variables	Yes	Yes	Yes	Yes	Yes	Yes
Industry Fixed Effect	Yes	Yes	Yes	Yes	Yes	Yes
N	2,060	2,060	2,060	2,060	2,060	2,060
Adj. R-squared	2.89%	2.86%	2.83%	3.37%	3.38%	3.34%

Appendix B.8. Robustness test: alternative benchmark of the market model

This table presents the results from the cross-sectional OLS regressions where the dependent variables are the CARs by using the alternative benchmark around the two court rulings to show the robustness of our analysis. We recalculate abnormal returns using KRX100 (KOSPI200) as the benchmark for the market return parameter in the market model in Columns (1)–(4) (Columns (5)–(8)), rather than the KOSPI and KOSDAQ index for the firms listed on KOSPI and KOSDAQ, respectively. Control variables indicate all the variables in Table 6 as follows: *Age, Size, Cash, Leverage, M-to-B, OCF, ROA, Investment, Stock volatility, Stock run-up, Board size, Board independence,* and *Majority ownership*. A detailed explanation of the variables is in Appendix A. PSM denotes the sample matched in Panel A of Table 7. Industry fixed effect is based on the 2-digit KSIC dummies. Robust standard errors adjusted for heteroscedasticity and clustered by firm level are reported in parentheses. ***, **, and * denote significance at the 1%, 5%, and 10% levels, respectively.

Dependent variable = CAR[-1,+1] (%)								
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Benchmark	KRX100	KRX100	KRX100	KRX100	KOSPI200	KOSPI200	KOSPI200	KOSPI200
Sample	Pooled	PSM	Pooled	DID	Pooled	PSM	Pooled	DID
Treated	-1.4313***	-1.9122***			-1.4232***	-1.8985***		
	(0.405)	(0.627)			(0.405)	(0.627)		
Supermajority			-1.4460***				-1.4385***	
			(0.401)				(0.401)	
Other-provision			-0.7251				-0.7206	
			(0.687)				(0.688)	
Supermajority × Other-provision			2.4660***				2.4619***	
			(0.951)				(0.954)	
Control-to-Treated × Event2				-4.8576***				-4.8178***
				(1.522)				(1.523)
Control-to-Treated				2.0524*				2.0179*
				(1.139)				(1.142)
Event2	-1.2103***	-1.8831***	-1.2340***	1.9452*	-0.9254***	-1.5871**	-0.9475***	2.2044*
	(0.216)	(0.683)	(0.213)	(1.134)	(0.216)	(0.684)	(0.213)	(1.137)
Control variables	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Industry Fixed Effect	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
N	2,059	280	2,238	472	2,059	280	2,238	472
Adj. R-squared	3.75%	6.03%	4.54%	-0.26%	3.06%	4.86%	3.86%	-0.35%

Appendix B.9. Robustness test: long-term windows for the market reaction

This table presents the results from the cross-sectional OLS regressions where the dependent variables are the CARs around the two court rulings. We use relative longer windows for the announcement returns to show the robustness of our analysis. Control variables indicate all the variables in Table 6 as follows: *Age, Size, Cash, Leverage, M-to-B, OCF, ROA, Investment, Stock volatility, Stock run-up, Board size, Board independence,* and *Majority ownership*. A detailed explanation of the variables is in Appendix A. PSM denotes the sample matched in Panel A of Table 7. Industry fixed effect is based on the 2-digit KSIC dummies. Robust standard errors adjusted for heteroscedasticity and clustered by firm level are reported in parentheses. ***, **, and * denote significance at the 1%, 5%, and 10% levels, respectively.

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Dependent variable	CAR[-3,+3]	CAR[-3,+3]	CAR[-3,+3]	CAR[-3,+3]	CAR[-5,+5]	CAR[-5,+5]	CAR[-5,+5]	CAR[-5,+5]
Sample	Pooled	PSM	Pooled	DID	Pooled	PSM	Pooled	DID
Treated	-2.6097***	-3.2506***			-1.5842*	-1.4022		
	(0.516)	(0.814)			(0.846)	(1.255)		
Supermajority			-2.5056***				-1.5059*	
			(0.514)				(0.841)	
Other-provision			-1.1817				-0.1621	
			(0.932)				(1.424)	
Supermajority × Other-provision			5.1753***				3.1052	
			(1.289)				(1.891)	
Control-to-Treated × Event2				-5.5378**				-5.7902**
				(2.217)				(2.827)
Control-to-Treated				2.9919*				4.2461**
				(1.696)				(1.905)
Event2	0.6020*	1.2290	0.6228**	4.5660***	-0.9031**	-1.2202	-0.9637**	6.0512***
	(0.317)	(0.915)	(0.309)	(1.666)	(0.415)	(1.375)	(0.405)	(1.890)
Control variables	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Industry Fixed Effect	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
N	2,032	276	2,208	463	2,031	273	2,206	463
Adj. R-squared	5.29%	11.00%	4.94%	9.65%	5.51%	4.68%	5.19%	7.02%