Does granting minority shareholders direct control over corporate decisions increase shareholder value? A natural experiment from China*

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Abstract

Using a unique 2004 Chinese securities regulation that requires equity offering proposals to seek the separate approval of minority shareholders, we provide direct evidence that giving minority shareholders direct control over corporate decisions increases the quality of corporate decisions and shareholder value. The stock market reaction to the announcement of the regulation increases with mutual fund ownership. The regulation deters management from submitting value decreasing equity offering proposals, especially in firms with higher mutual fund ownership. Value reducing equity offering proposals submitted in the post-regulation period are more likely to be vetoed in firms with higher mutual fund ownership.

JEL: G32, G34, G38
Keywords: corporate governance, shareholder democracy, direct shareholder participation, financing policy
1. Introduction

The expropriation of minority shareholders by management/controlling shareholders (hereafter referred to as management for brevity) is the most challenging corporate governance problem around the world (Shleifer and Vishny 1997; La Porta et al. 1997, 1998; Djankov et al. 2008). Since minority shareholders in publicly traded firms usually delegate major corporate decisions to management, a common solution to managerial agency problems is to design control mechanisms (e.g., incentive compensation) to align the interests between management and minority shareholders. Another more drastic solution is to shift the control over corporate decisions back to minority shareholders by subjecting major corporate decisions to the approval of minority shareholders.

Due to the failure of many common monitoring mechanisms (e.g., incentive compensation, board of directors, and external auditors) to control for managerial agency problems in recent years, there is a growing interest among activist shareholders in shifting the corporate decision making power from management to minority shareholders (e.g., Vascellaro and Tibken 2008). Government regulators have also been busy introducing legislations to combat the managerial agency problem. In addition to enacting new laws to strengthen the effectiveness of existing monitoring mechanisms (e.g., the Sarbanes and Oxley Act in 2002), regulators are showing an increasing willingness to give minority shareholders direct control over corporate decisions (e.g., Scannell 2009; Ridley and Menon 2009).

However, whether minority shareholders should be granted direct control over corporate decisions is still hotly debated (see, e.g., Vascellaro and Tibken 2008; McCracken and Scannell
Proponents (see, e.g., Bebchuk 2005) argue that granting minority shareholders direct control over corporate decisions is necessary to combat widespread managerial agency problems and increase shareholder value.\(^1\) Opponents (see, e.g., Bainbridge 2006) counter that minority shareholders’ direct participation in corporate decisions reduces shareholder value because minority shareholders either lack the requisite knowledge and expertise to make effective decisions or have incentives to make value reducing decisions. For example, institutional investors, one major class of minority shareholders, are often accused of having a short term focus that induces management to make myopic decisions that hurt long term shareholder value (e.g., Porter 1992). There is also a possibility that increased minority shareholders’ control over corporate decisions may force management to resort to more costly actions to expropriate minority shareholders.\(^2\)

A priori it is difficult to quantify the costs and benefits of allowing minority shareholders direct control over corporate decisions. Hence, the debate on the consequences of granting minority shareholders direct control over corporate decisions will eventually have to be settled empirically. The objective of this study is to use a unique 2004 securities regulation issued by the China Securities Regulatory Commission (CSRC) to examine the effect of giving minority shareholders direct control over corporate decisions on the quality of targeted corporate decisions and shareholder value. The new regulation requires minority shareholders to separately approve

\(^1\) In this paper shareholder value refers to the value of minority shareholders rather than the value of management, consistent with the existing governance literature (see, e.g., Shleifer and Vishny 1997).

\(^2\) Harris and Raviv (2008a) offer an excellent analytic discussion on the costs and benefits of granting minority shareholders direct control over corporate decisions. See also Harris and Raviv (2005; 2008b) for related discussions.
several types of major corporate decisions, the most common of which is equity offering proposals. As detailed in Section 2, our unique setting allows us to overcome several common methodological challenges the extant literature faces in establishing the causal effect of changing minority shareholders’ control over corporate decisions on shareholder value.

We conduct three types of complementary empirical analyses. Our first analysis uses the event study methodology to assess the initial stock market reaction to the announcement of the 2004 CSRC regulation. Our second analysis uses the equity offering proposals over the period 1/1/2004-6/30/2005 as a specific setting to directly test whether the CSRC regulation has a deterrence effect by discouraging management from submitting value decreasing proposals. We use the stock market reaction to the announcement of an equity offering proposal (CAR) as a proxy for proposal quality. Despite the deterrence effect of the CSRC regulation, management may continue to submit value decreasing equity offering proposals in the post-regulation period. Hence, our third analysis examines whether proposal quality is negatively associated with minority shareholders’ veto in the post-regulation period.

The effect of the 2004 CSRC regulation on shareholder value should depend on the effectiveness with which minority shareholders exercise their newly granted control power. Hence, we also examine the influence of minority shareholder composition in each of the three empirical analyses. As small minority shareholders have a weaker incentive than large minority shareholders to exercise their voting rights, we focus on the top 10 minority shareholders. We decompose the top 10 minority shareholders into institutional investors and individual investors.
because the former are often regarded as more sophisticated and better informed. We further decompose institutional investors into mutual funds and other miscellaneous institutions because mutual funds are more independent and thus should have a greater incentive to monitor firm management (Brickley et al. 1988; Chen et al. 2007).

Our primary regression results can be summarized as follows. There is no evidence of a significant stock market reaction to the announcement of the CSRC regulation for all publicly traded Chinese firms as a whole. However, the stock market reaction to the CSRC regulation increases with a firm’s mutual fund ownership. We find no evidence that the stock market reaction to the CSRC regulation increases with other institutional investor ownership or individual investor ownership.

There is evidence that the 2004 CSRC regulation has a strong deterrence on value decreasing equity offerings proposals, especially in firms with higher mutual fund ownership. There is no evidence that the 2004 CSRC regulation has any significant effect on management’s likelihood of submitting value increasing equity offering proposals. Consistent with the 2004 regulation deterring value decreasing equity offering proposals, we find that the characteristics of the firms who submit equity offering proposals are more consistent with shareholder value maximization in the post-regulation period than in the pre-regulation period. In addition, the average CAR for the submitted proposals is significantly positive in the post-regulation period but significantly negative in the pre-regulation period. The difference in the average CAR over the two periods is significant.
In contrast to the strong deterrence effect of the 2004 regulation, we find no evidence of a significantly negative relation between proposal quality (CAR) and minority shareholders’ vetoing of submitted proposals on average in the post-regulation period. However, there is weak evidence that the relation is significantly more negative for firms with higher mutual fund ownership but not for firms with higher other institutional investor ownership or individual investor ownership.

Our study provides relevant and timely information to regulators who are debating about the costs and benefits of granting minority shareholders direct control over corporate decisions. The evidence from our study suggests that giving minority shareholders a direct say on corporate decisions could increase shareholder value, especially in firms with large and independent minority shareholders. Our results are also relevant to a growing U.S. literature on the proxy voting decisions of mutual funds (see, e.g., Davis and Kim 2007; Cremers and Romano 2007). The results from this literature are mixed, raising questions about the governance role of mutual funds. The evidence from our study suggests that a narrow focus on mutual funds’ voting behavior alone would miss the deterrence effect of mutual fund ownership and thus would significantly understate the governance role of mutual funds. Our study also contributes to understanding the governance role of institutional investors in emerging markets with weak country-level investor protections. Despite the potential institutional frictions that may hinder mutual funds’ participation in corporate governance, our results suggest that mutual funds play a positive role in strengthening the corporate governance of publicly traded firms in countries with weak investor protections.
The rest of the paper is organized as follows. Section 2 discusses the institutional background and related research. Section 3 presents the analysis of the stock market reaction to the announcement of the 2004 CSRC regulation. Section 4 discusses the effect of the CSRC regulation on management’s proposal submission decision. Section 5 analyzes the relation between proposal quality and minority shareholders’ voting behavior. Section 6 concludes.

2. **Institutional background and related research**

2.1. **Institutional background**

Prior to China’s split share structure reform beginning in 2005 that makes all shares tradable, domestically listed Chinese firms (often referred to as A share firms) had two types of common stocks: non-tradable shares, which are largely owned by the controlling shareholders (typically a local government, the central government, or an SOE), and tradable shares, which are listed on one of the two domestic stock exchanges and owned by Chinese citizens, domestic institutions and qualified foreign institutional investors. We refer to the tradable shareholders as minority shareholders in this paper. Except for the difference in tradability, the non-tradable shares and tradable shares enjoy equal rights.

Due to weak investor protections on mainland China (see Allen et al. 2005) and the illiquidity of the non-tradable shares (see Chen and Yuan 2006), the controlling shareholders of publicly listed Chinese firms have a strong incentive to use their control power to tunnel the resources of A share firms to themselves through various mechanisms such as related party...
transactions, low-interest corporate loans or loan guarantees (e.g., Jian and Wong 2008; Berkman et al. 2009; Fan et al. 2007). Prior to 2004 the controlling shareholders of A share firms often issued new equity and then tunneled the proceeds of the equity offerings to themselves through various means including related party transactions and related party loans (CSRC 2004; Jiang et al. 2008). This phenomenon of malicious fund-raising was so widespread that it was dubbed “Quanqian” in Chinese.

To curb such egregious expropriation behavior, the CSRC issued a regulation in 2002 that required A share firms to seek the separate approval of tradable shareholders for any new share issuance that exceeds 20% of the firm’s total common shares outstanding. Unfortunately this regulation turned out to be ineffective because most firms circumvented the regulation by simply issuing new equity less than the 20% threshold. In 2004 the CSRC issued a tougher regulation that subjected several major corporate decisions (e.g., equity offering, major corporate restructuring, and overseas listing of subsidiaries) to the separate approval of tradable shareholders (often referred to as segmented voting). Equity offering is the most common proposal subject to this regulation. The 2004 CSRC regulation expired automatically upon the completion of the split share structure reform, which ended by the end of 2007 for most A share firms (see Li et al. 2008 for a discussion of the split share structure reform).

2.2. Related research

Minority shareholders in publicly traded firms typically delegate the control over corporate decisions to firm management but monitor the management’s behavior through
shareholder representatives, the board of directors. Therefore, the extant corporate governance literature primarily focuses on the design of effective control mechanisms (e.g., incentive compensation, board structure, etc.) to monitor firm management who makes specific corporate decisions. Much less is known from the extant literature on the economic effects of granting minority shareholders direct control over corporate decisions.

One stream of research relevant to us is the literature on shareholder activism. The common corporate issues targeted by activist shareholders include executive compensation, board structure, shareholder voting rights, and anti-takeover provisions in corporate charters (see, e.g., Johnson et al. 1997; Gordon and Pound 1993). Overall, this literature finds no conclusive evidence that shareholder activism has a significant impact on firm operations, earnings or stock returns (see Gillian and Starks 2007). As we discuss below, one reason for the mixed evidence is the methodological challenges researchers face in establishing the causal effect of changing minority shareholders’ control over corporate decisions on shareholder value (Gillian and Starks 2007).

Another stream of research relevant to us is the literature on the effect of U.S. state anti-takeover legislations in the 1980s on shareholder value (see, e.g., Bertrand and Mullainathan 2003; Garvey and Hanka 1999; Kim and Purnanandam 2009). As the state anti-takeover legislations increase minority shareholders’ costs of intervening in firm management through the takeover threat, they could be viewed as a decrease in minority shareholders’ control over
corporate decisions. The evidence from this literature suggests that the state anti-takeover legislations increase managerial entrenchment and reduce shareholder value.

In response to the recent corporate scandals (e.g., Enron) and financial crisis, many governments have proposed regulatory rules that would grant minority shareholders an increased say on many important corporate issues such as executive compensation and director nomination. On April 20, 2007, the U.S. House of Representatives passed a Say-on-Pay Bill, which allows shareholders to have an annual advisory vote on executive compensation. Cai and Walkling (2009) find that the market reaction to the passage of the Say-on-Pay Bill was significantly positive for firms with high abnormal CEO compensation, with low pay-for-performance sensitivity, and responsive to shareholder pressure. Their evidence suggests that legislations that give shareholders a vote on executive compensation increase shareholder value for firms with inefficient compensation design and weak corporate governance.

Following La Porta et al. (1997, 1998), there is also a large international corporate governance literature that examines the cross-sectional association between country-level investor protections (defined as the sum of overall creditor rights and shareholder rights as specified in company and bankruptcy/reorganization laws, rule of law, and government corruption) and shareholder value and financial market development. The evidence from this literature suggests that strong country-level investor protections are associated with improved capital allocation (Wurgler 2000), higher shareholder value and faster financial market development (see, e.g., La Porta et al. 1997, 1998, 2002; La Porta et al. 2006; Djankov et al.)
2008). Since a country’s level of investor protections is endogenously determined, it remains an open question whether increasing a country’s degree of investor protections alone would result in an increase in shareholder value (see La Porta et al. 2008). More importantly, this literature generally does not distinguish investor protection provisions that facilitate minority shareholders’ monitoring of management who controls the corporate decisions from investor protection provisions that shift the balance of control over corporate decisions from management to minority shareholders. Therefore, it is difficult to draw a direct link between this literature and the research question in this study.

With respect to publicly traded Chinese firms, Berkman et al. (2009) examine the abnormal stock returns to the announcements of three Chinese securities regulations within a two-month period in 2000. The first regulation allows shareholders with more than 5% voting rights to propose motions for discussion at the shareholders’ annual meeting and prohibits shareholders involved in a related party transaction from voting on the transaction. The second regulation prohibits listed firms from issuing loan guarantees to their shareholders, shareholders’ controlled or affiliated companies, or any individual. The third regulation requires the board to perform a rigorous due diligence on any material asset acquisition or disposal. Berkman et al. find that firms with weaker governance experienced significantly larger abnormal returns around the announcements of the three regulations than did firms with stronger governance. While their results suggest that the three regulations help increase the degree of investor protections, it is difficult to determine whether the three regulations result in a significant increase in minority shareholders’ direct control over corporate decisions.
There are several common methodological challenges the extant literature faces in establishing a direct link between minority shareholders’ control over corporate decisions and the quality of the targeted corporate decisions and therefore shareholder value. First, minority shareholders’ control over corporate decisions changes slowly. Therefore, a researcher may find it difficult to reliably measure a small change in minority shareholders’ control or detect the effect of such a small change on shareholder value. Second, most changes in minority shareholders’ control over corporate decisions deal with general corporate governance issues (e.g., board structure or voting procedures) rather than specific corporate decisions. Hence, it is difficult to directly attribute any observed change in managerial behavior (e.g., change in corporate investment) to a change in minority shareholders’ control. Third, even if a change in minority shareholders’ control deals with a specific corporate decision, a researcher generally cannot observe the outcome of the specific decision made by minority shareholders and thus has to infer the impact of the change in minority shareholders’ control from aggregate performance outcomes such as stock prices or accounting earnings. As stock prices and accounting earnings reflect the effects of multiple economic forces, any association between changes in minority shareholders’ control and changes in stock prices or earnings could be subject to alternative explanations (see Gillan and Starks 2007).

The experiment setting of our study can overcome all of these methodological challenges. In particular, the 2004 regulation deals with specific corporate decisions controlled by minority shareholders (i.e., equity offering proposals) and we can observe the outcomes of the specific corporate decisions. Therefore, it is relatively straightforward to draw the link between the
increase in minority shareholders’ control over corporate decisions and the quality of the targeted corporate decisions in our setting.

3. The stock market reaction to the announcement of the 2004 CSRC regulation

3.1. Event dates

As all A share firms were affected by the 2004 CSRC regulation, our event study includes all the listed A share firms on the two Chinese stock exchanges (1,357 unique firms). After searching for all relevant news articles about the 2004 CSRC regulation in Factiva, which covers financial news from several major Chinese financial media (such as Xinhua Financial News Network, Shanghai Securities News, Securities Times, and China Daily), the Dow Jones, Financial Times, and Reuters, we identified two relevant events (denoted events 1 and 2, respectively). Event 1 is the public release of the exposure draft of the CSRC regulation on September 27, 2004 and event 2 is the approval of the final regulation on December 7, 2004. We use a 5-trading day window centered on the two event dates (i.e., [-2, +2]) to measure the market reaction to both events, though inferences are similar if we use a longer return holding period [-2, +10] around an event (the same holding period as the proposal quality proxy CAR in Section 4) to account for the potential delay in the market reaction to the event (untabulated).³

To ensure that the event study results are attributed to the 2004 CSRC regulation rather than other regulations issued in the two 5-day event windows, we identified all the other

³ We find no evidence of price run-ups over the [-7, -3] trading days prior to the two events.
securities regulations issued by the CSRC, the two Chinese stock exchanges, and the State Council. There are 10 announced government regulations during the first event window and 7 announced government regulations during the 2nd event window. After a careful reading of the regulations we conclude that they largely deal with procedural and administrative issues and thus should not create a material confounding effect for our event study.\footnote{The list of the 17 government regulations is available upon request.}

In addition to the segmented voting provision, the 2004 CSRC regulation also contains the following investor protection provisions: a) strengthening the role of independent directors by requiring material related party transactions and the hiring and dismissal of the company auditor subject to the approval of at least one half of the independent directors; b) improving investor relations by encouraging management to improve the quality of corporate disclosures and investor communications; c) encouraging listed firms to adopt a regular dividend policy and prohibiting listed firms that have not distributed cash dividends in the past three years from issuing new equity; d) holding controlling shareholders and company executives to the standard of fiduciary duty for minority shareholders and increasing the administrative penalties for violation of such fiduciary duty.

Since the 2004 regulation was issued in response to the widespread managerial abuses of using equity offerings to expropriate minority shareholders (see Section 2.1), the segmented voting provision is the most important provision of the regulation. In addition, the other provisions do not impose a direct constraint on management’s ability to propose new equity offerings. Furthermore, unlike the segmented voting provision, the other provisions of the 2004
CSRC regulation are difficult to enforce by minority shareholders. Considering the fact that legal enforcement is notoriously lax on mainland China, we do not believe that any significant stock market reactions to the 2004 regulation is due to the other provisions of the 2004 regulation.

3.2. Methodology

We use the following time series regression model to assess the overall stock market reaction to the CSRC regulation announcement over a 250-trading day period ending on December 10, 2004 (i.e., the last trading day of event 2):

\[ R_{mt} = a + \sum_{i=1}^{i+1} (b_i \cdot R_{nkm,t+i}) + c \cdot EVENT1_t + d \cdot EVENT2_t + \epsilon_t \]  

(1)

\( R_{mt} \) is the equally weighted dividend inclusive market return of all A share firms on trading day \( t \). \( R_{nkm,t} \) is the equally weighted dividend inclusive market return of all H share firms and Red Chip share firms that are not listed on the two domestic stock exchanges. H shares are defined as mainland Chinese investor controlled firms that are incorporated in mainland but listed in Hong Kong and Red Chip firms are mainland Chinese investor controlled firms that are incorporated outside China and traded in Hong Kong. \( R_{nkm,t} \) is set to zero if the Hong Kong Stock Exchange is closed on trading day \( t \). \( R_{nkm,t} \) controls for the market return unrelated to the 2004 CSRC regulation. The H shares and Red Chip shares included in \( R_{nkm,t} \) are not subject to the 2004 CSRC regulation. In addition, as noted in Ke et al. (2009), most H shares and Red Chip shares are similar if we use value weighted market returns.
shares operate their main businesses in mainland China and thus should be subject to the same economic forces as domestically listed A share firms. Thus, $R_{hkm,t}$ should be a reasonable control for the confounding effects unrelated to the CSRC regulation. However, we also conduct a sensitivity check in Section 3.4 by retaining only the A share firms that are most comparable to the H/Red Chip firms included in the computation of $R_{hkm,t}$.

The coefficients on $EVENT1$ and $EVENT2$ measure the stock market’s perceived net benefit (if positive) or net cost (if negative) of the CSRC regulation on events 1 and 2, respectively. $EVENT1$ is a dummy variable that is equal to 0.2 for a trading day that falls within the $[-2, +2]$ event window centered on event 1, and zero otherwise. $EVENT2$ is a dummy variable that is equal to 0.2 for a trading day that falls within the $[-2, +2]$ event window centered on event 2, and zero otherwise. Because of the way we define $EVENT1$ and $EVENT2$, the coefficients on $EVENT1$ and $EVENT2$ represent the cumulative abnormal return over the 5 trading days centered on event 1 and event 2, respectively.

The efficacy of the 2004 CSRC regulation hinges on whether and how minority shareholders vote on submitted managerial proposals. Hence, we also examine how the stock market reactions to the events 1 and 2 vary with a firm’s ownership structure of minority shareholders by using the Sefcik and Thompson (1986) methodology, which controls for the cross-sectional dependence and heteroscedasticity in contemporaneous stock returns.\(^6\) While the

\(^6\) We also analyzed but failed to find evidence that the stock market reaction varies with proxies for the severity of managerial agency problems (e.g., past related party transactions, past equity offerings, or state ownership). Because all A share firms suffer from significant managerial agency problems, the lack of results could be partially due to the
coefficients on EVENT1 and EVENT2 could be contaminated by unknown confounding macroeconomic events that affect all A share firms, the difference in the abnormal returns to the two events for firms with different characteristics should be relatively immune from such confounding macroeconomic events.

Economic theory suggests that the incentive to participate in shareholder voting should increase with a shareholder’s stock ownership. Thus, we focus on the ownership of the top 10 minority shareholders, which is required to be disclosed quarterly since the end of 2003. In addition, due to their economy of scale, information advantage, and high level of sophistication, institutional investors should be more likely to participate in the voting and make more informed decisions than individual investors.

Institutional investors in China include mutual funds (open ended or close ended), securities firms, national social security trust funds, insurance companies, foreign institutions, etc. Relative to other institutional investors who may have existing or potential business relations with the listed firms (e.g., insurance companies) or who may have non-value maximizing social objectives (e.g., national social security trust funds), Brickley et al. (1988) and Chen et al. (2007) argue that mutual funds are more independent and thus should be more likely to monitor firm management. In addition, mutual funds should face a greater pressure from retail investors to increase the return on their invested capital. Hence, we expect mutual funds have a stronger low cross-sectional variation in the severity of managerial agency problems.
incentive to exercise their granted control power to deter or veto value decreasing managerial proposals.\textsuperscript{7}

Due to weak investor protections and institutional constraints that may limit mutual funds’ ability to perform the governance role, we believe it is still an open question whether Chinese mutual funds would effectively monitor listed firms. There is only limited research on the governance role of Chinese institutional investors. Yuan et al. (2008) find evidence that equity ownership by mutual funds has a positive effect on firm performance. Using the recent split share structure reform that required non-tradable shareholders to compensate tradable shareholders in order to make their shares tradable, both Firth et al. (2009) and Li et al. (2008) find a negative association between institutional ownership (including mutual fund ownership) and the compensation paid to tradable shareholders. Firth et al. (2009) interpret the negative association as evidence that the Chinese government exerted political pressure on the Chinese institutional investors by forcing them to accept a lower compensation. However, Li et al. (2008) show analytically a negative relation between firm quality and the compensation paid to tradable shareholders and therefore they argue that the negative coefficient on institutional ownership merely reflects institutions’ ability to invest in good quality firms.

\textsuperscript{7} We do not further decompose each top 10 minority shareholder type (e.g., mutual funds) by investment horizon for two reasons. First, value decreasing equity offering proposals, if approved, would result in an immediate decline in stock prices; therefore, both long-horizon and short-horizon independent top 10 minority shareholders would have an incentive to veto such proposals. Second, the level of aggregate stock ownership by each top 10 minority shareholder type is very stable over time (the AR(1) correlation is always greater than 70%), even though the investment horizons of individual shareholders within each top 10 minority shareholder type could vary.
Based on the above discussion, we consider the following minority shareholder ownership variables in the Sefcik and Thompson (1986) regression. \textit{MUTUAL\_OWN} is the total stock ownership (as a percentage of the total outstanding tradable shares) of all the open ended and close ended mutual funds ranked among the top 10 minority shareholders at the end of the quarter immediately before an event (i.e., event 1 or 2). \textit{OTHERINST\_OWN} is the total stock ownership (as a percentage of the total outstanding tradable shares) of all the other institutional investors ranked among the top 10 minority shareholders at the end of the quarter immediately before an event (i.e., event 1 or 2). \textit{INDIVIDUAL\_OWN} is the total stock ownership (as a percentage of the total outstanding tradable shares) of all the individual investors ranked among the top 10 minority shareholders at the end of the quarter immediately before an event (i.e., event 1 or 2).

To control for the common firm size and book-to-market effects, we also include \(\ln(MV)\) and \(\ln(BM)\) as control variables. \(MV\) is defined as the product of stock price and total common shares outstanding, measured at the end of the quarter immediately before an event. \(BM\) is defined as the book value of common equity divided by \(MV\), both measured at the end of the quarter immediately before an event. Following Fama and French (1992), we take the natural logarithm of \(MV\) and \(BM\) to reduce the skewness of both variables.

3.3. Results

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8 We do not break out foreign shareholder ownership because there were very few foreign investors during our sample period, which predated the launch of China’s Qualified Foreign Institutional Investor Program.

9 Since non-tradable shares are often sold at a huge discount relative to tradable shares, we also define \(MV\) as the sum of the book value of non-tradable shares and the market value of tradable shares and obtain similar inferences.
Panel A of Table I shows the regression result of model (1). The coefficients on $R_{hkm,t-1}$ and $R_{hkm,t+1}$ are insignificant, but the coefficient on $R_{hkm,t}$ is significantly positive, suggesting that common contemporaneous economic forces affect the returns of both A share firms and H/Red Chip shares. The coefficients on EVENT1 and EVENT2 are insignificant. Thus, there is no evidence that investors expect the CSRC regulation to have a significant impact on shareholder value for the overall A share stock market.

Panel B of Table I shows the coefficients on the interaction terms between the two event dummies and the three top 10 minority shareholder ownership characteristics. The coefficient on EVENT1*INDIVIDUAL_OWN is insignificant, suggesting that individual investor ownership does not have a significant impact on the stock market’s reaction to the CSRC regulation. The coefficients on EVENT1*MUTUAL_OWN and EVENT1*OTHERINST_OWN are both significantly positive but we will show in Panel C of Table I that the significant coefficient on EVENT1*OTHERINST_OWN is not robust. In addition, the coefficient on EVENT1*MUTUAL_OWN is larger than the coefficient on EVENT1*OTHERINST_OWN (two-tailed p<0.001). None of the coefficients between EVENT2 and the ownership variables is significant. Overall, these results suggest that the stock market perceives the effect of the CSRC regulation to be more value increasing for firms with higher mutual fund ownership. This evidence is consistent with the argument that mutual funds are more independent than other institutions and thus would have a greater incentive to exercise the newly granted power by the CSRC regulation to prevent management from taking value reducing decisions.
3.4. Robustness Checks

We perform two sensitivity checks for the regression results reported in Panel B of Table I. First, we redefine the ownership characteristics by requiring each top 10 minority shareholder to own at least 0.5% of a firm’s total tradable common shares outstanding. This restriction ensures that the top 10 minority shareholders included in the ownership characteristics are indeed relatively large minority shareholders. The inferences in Panel B of Table I are qualitatively similar (untabulated).

Second, we do a better match between A share firms and H/Red Chip firms. Ke et al. (2009) find that A share firms are typically much smaller than H/Red Chip firms, which are usually large monopolies in certain industries. Hence, $R_{hk,m}$ may not be an adequate control for the market return unrelated to the 2004 CSRC regulation for smaller A share firms that operate in different industries. To reduce this concern, we redo the regression results in Table I for only the A share firms that are in the same industry (Datastream INDC2) as the H/Red Chip firms and whose total assets at the end of fiscal year 2003 fall between 80% and 120% of the median total assets of the H/Red Chip firms in the same industry. Results are similar if we choose tighter cutoffs of 90% and 110%. These sample restrictions result in a final sample of 187 A share firms. As shown in Panel C of Table I, the coefficient on EVENT1*MUTUAL_OWN continues to be significantly positive. Moreover, the coefficient on EVENT2*MUTUAL_OWN becomes significantly positive, too. However, the coefficients on EVENT1*OTHERINST_OWN and EVENT1*INDIVIDUAL_OWN are not significant at the 10% significance level. Overall, we
conclude from Panel C that the stock market reaction to the CSRC regulation is more positive for firms with higher mutual fund ownership, but not for firms with other types of top 10 minority shareholder ownership.

4. The effect of the 2004 CSRC regulation on management’s equity offering proposal submission decision

This section analyzes whether the 2004 regulation helps deter management from submitting value decreasing equity offering proposals. In theory rational minority shareholders should not veto value increasing equity offering proposals. Therefore, we do not expect the 2004 regulation to have a deterrence effect on value increasing equity offering proposals.

Although the 2004 CSRC regulation requires several types of managerial proposals (e.g., equity offering, major corporate restructuring, and overseas listing of subsidiaries) to be separately approved by tradable shareholders, we only use the equity offering proposals (including general offerings, rights offerings, and convertible bond offerings) for the following reasons. First, as noted in Section 2.1, equity offerings were one of the most common methods management employed to expropriate minority shareholders prior to 2004. Second, the frequency of equity offering proposals is considerably higher than that of any of the other managerial proposals. During our sample period the number of equity offering proposals is more than 200 but the number of the other types of managerial proposals such as the overseas listing of a subsidiary is less than a dozen and thus cannot be used to conduct a meaningful study. Third, for certain types of corporate proposals (e.g., major corporate restructuring), management can
easily avoid the approval of tradable shareholders by manipulating the terms of the proposals. Hence, the sample of such proposals is severely biased. Finally, mixing different types of managerial proposals could create difficulty in identifying suitable control variables in our research design and the interpretation of our empirical results.

4.1. The sample

We limit our empirical analysis to the period 1/1/2004-6/30/2005. Our sample starts on 1/1/2004 because data on the detailed top 10 minority shareholder ownership are not available before 2004. Our sample ends on 6/30/2005 because the CSRC ceased to approve new equity offering applications after the start of the split share structure reform in mid 2005.\(^{10}\) In fact very few firms submitted equity offering proposals for shareholder approval after June 2005, likely reflecting management’s anticipation that the CSRC would not process equity offerings proposals due to the split share structure reform.

We follow various CSRC regulations to identify all the A share firms that are eligible to propose equity offerings (general offerings, rights offerings, or convertible bond offerings) in a year (see Appendix A for the details of the identification method). There are 7,218 firm quarters during our sample period and 3,999 firm quarters (55%) are deemed eligible to propose equity offerings. The inferences in Table III are qualitatively similar if we include all of the 7,218 firm-quarter observations. We hand collected all the relevant information on the equity offering proposals.

\(^{10}\) All equity offering proposals are required to be separately submitted to shareholders for approval and then the shareholder approved proposals have to be submitted to the CSRC for final approval.
proposals submitted in our sample period, such as the announcement date, voting date, and the voting outcomes.

4.2. Methodology

For all the A share firms eligible to propose equity offering proposals in a quarter, we use the following multinomial logit model to test the effect of the CSRC regulation on management’s decision to submit value increasing or value decreasing equity offering proposals:

$$SUBMISSION_i = a + b \cdot AFTER + c \cdot CONTROL_i + \varepsilon_i$$

(2)

$i$ and $t$ are firm and quarter indicators, respectively. $SUBMISSION_i$ is 0 if firm $i$ does not submit a proposal in quarter $t$, 1 if firm $i$ submits a value increasing (i.e., $\text{CAR}>0$) proposal in quarter $t$, and 2 if a firm $i$ submits a value decreasing (i.e., $\text{CAR}\leq0$) proposal in quarter $t$. $\text{CAR}$ is the market adjusted cumulative abnormal return over the [-2, +10] trading days around the proposal announcement date. The difference between the proposal announcement date and the proposal voting date is at least 20 trading days for all but one proposal. For this one proposal, the holding period of $\text{CAR}$ is 9 trading days only that end in the day before the voting date. $^{11}$ $\text{AFTER}$ is a dummy variable that is equal to one for the quarters in the post-CSRC regulation period (i.e., on or after December 7, 2004), and zero for the quarters in the pre-CSRC regulation period. $\text{AFTER}$ is coded zero for the proposals submitted prior to December 7 in the 4th calendar quarter of 2004. The proposals submitted on or after December 7 in the 4th quarter of 2004 are treated as

$^{11}$ We also remove from $\text{CAR}$ the effect of two material confounding events (i.e., earnings and dividend news) that occurred during the CAR measurement window and find similar inferences (untabulated).
proposals submitted in the 1st quarter of 2005. As the number of months for calendar quarter 4 of 2004 is approximately 2 while the number of months for calendar quarter 1 of 2005 is approximately 4, we include the number of months in each quarter as a control.\textsuperscript{12} \textit{CONTROL} is a list of common determinants of equity offerings discussed below.

We estimate the model using quarterly data because A share firms are allowed to submit equity offering proposals every quarter. In addition, the post-regulation period covers only two quarters and thus it is less appropriate to estimate the model using annual data.

We extend the stock market reaction to the equity offering proposal announcement (CAR) to 10 trading days after the proposal announcement in order to fully capture the market’s assessment of the proposal quality. Equity offering is a complex business decision and thus minority shareholders may need more time to digest the information included in the proposal and search for private information to evaluate the merits of the proposal. This is especially important in China because management usually does not provide detailed information on the equity offering proposals. In addition, the Chinese stock market is dominated by small retail investors and there are not enough sophisticated institutional investors such as financial analysts or institutional investors who can help quickly impound into stock prices the value implications of an equity offering proposal. Consistent with this argument, Ma (2004) finds a significant drift in the Chinese stock market’s reactions to announcements of many major corporate decisions, including equity offering proposals. Hence, we believe that an abnormal return measured over a

\textsuperscript{12} Upon the release of the exposure draft of the regulation on September 27, 2004, some firms might have attempted to avoid the final regulation by accelerating future equity offering proposals to the period 9/27/2004-12/7/2004. As a robustness check, we also define \textit{AFTER} using September 27, 2004 as a cutoff and find similar inferences.
longer period should better capture proposal quality. Nevertheless, inferences on our key variables of interest in Tables III, IV, and V are robust to using a shorter [-2, +2] event window, but the mean interaction effect of DCAR*MUTUAL_OWN in Table VI becomes insignificant (untabulated).

To make sure that the coefficient on AFTER is not due to systematic differences in the characteristics of the sample firms across the two time periods, we follow existing corporate finance research (see, e.g., Jung et al. 1996; Berger et al. 1997; Myers 2003; Leary and Roberts 2009) by including the following common equity financing determinants. $Q$ is a proxy for investment opportunities and is defined as the natural logarithm of Tobin’s $Q$ at the beginning of quarter $t$. Tobin’s $Q$ is the market value (defined as stock price times total shares outstanding) minus the book value of shareholders’ equity plus total assets divided by total assets. We expect higher $Q$ firms to be more likely to raise equity capital. $CASH$ is a proxy for the availability of internal funds and is defined as cash and marketable securities divided by total assets at the beginning of quarter $t$. Firms with higher $CASH$ are expected to be less likely to raise equity capital. $CFO$ is a proxy for the availability of internal funds and is defined as cash flows from operations over quarters $t-4$ to $t-1$ divided by the average total assets at the beginning of quarter $t$. We expect firms with higher $CFO$ to be less likely to raise equity capital. $LEV$ is a proxy for debt capacity and financial distress and is defined as total debts divided by total assets.

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13 Prior China related event studies also use relatively long periods to measure abnormal returns (see, e.g., Fan et al. 2008; Berkman et al. 2009).
14 The results are similar if we assume the market value of non-tradable shares is equal to their book value in the $Q$ definition.
at the beginning of quarter t. We expect higher LEV firms to be more likely to raise equity capital. VOLATILITY is a proxy for the financial distress risk and is defined as the standard deviation of daily stock returns over a one year period that ends in the beginning of quarter t. We expect firms with higher VOLATILITY to be more likely to raise equity rather than debt. AR12 is a proxy for the inverse of information asymmetry or stock price overvaluation and is defined as the buy and hold equally weighted market adjusted abnormal return over a one-year period that ends in the beginning of quarter t. We expect firms with higher AR12 to be more likely to issue equity capital. ASSETS is the natural logarithm of total assets at the beginning of quarter t. ASSETS is a proxy for the inverse of information asymmetry and also controls for potential size effects.

To assess whether top 10 minority shareholder composition affects the effect of the CSRC regulation on management’s proposal submission decision, we interact AFTER with MUTUAL_OWN, OTHERINST_OWN and INDIVIDUAL_OWN. The three ownership variables are measured at the end of the fiscal quarter immediately prior to the proposal announcement date. Although we are not aware of any other relevant regulations issued during our sample period 1/1/2004-6/30/2005 that may affect management’s incentive to submit equity offering proposals, the interaction effects are useful to further rule out alternative explanations for the coefficient on AFTER.

4.3. Results

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15 We also used the 12-month raw return or both AR12 and the 12-month market return and found similar inferences (untabulated).
Table II shows the descriptive statistics for the variables included in model (2). Approximately 2.60% of the firm quarters proposed value increasing equity offerings while 2.98% of the firm quarters proposed value decreasing equity offerings. The median size of the equity offerings (defined as the proposed dollar value of an offering scaled by the average market value of the tradable shares during the 20 calendar days before the equity offering announcement) is not significantly different over the pre- and post- regulation periods (untabulated). For example, during the pre-regulation period, the median offering size is 0.784 for new share issues, 0.233 for rights offerings, and 0.067 for convertible debt offerings.

Among the top 10 minority shareholders, the mean mutual fund ownership is 4.57% of the total outstanding tradable shares while the mean stock ownership of all the other institutional shareholders is 6.26% of the total outstanding tradable shares. These percentages are economically meaningful, but they are still much lower than the mean total institutional ownership in many listed U.S. firms. The mean individual shareholder ownership (INDIVIDUAL_OWN) is 2.01% of the total outstanding tradable shares, much smaller than that of MUTUAL_OWN or OTHERINST_OWN. This finding suggests that most individual investors are not large shareholders even though they dominate the Chinese stock market in terms of numbers.16

The small aggregate ownership of the top 10 institutional investors raises an interesting question on the effectiveness of these institutional investors as monitors. We believe this is not a

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16 Results are similar if we require each top 10 minority shareholder’s ownership to be at least 0.5% of the total outstanding tradable shares.
concern in our setting because the equity offering proposals must be separately approved by the minority shareholders who participate in the voting under the 2004 regulation. We find in untabulated analysis that in the post-regulation period non-top 10 minority shareholders rarely participated in the voting of equity offering proposals while the majority of the top 10 institutional investors did actively participate in the voting. Hence, the small aggregate ownership of the top 10 institutional investors could still have a substantial impact on the voting outcomes of the equity offering proposals under the 2004 regulation.

Panel A of Table III shows the regression results of the multinomial logit regression model (2) for the value increasing equity offering proposals in column (1) and value decreasing equity offering proposals in column (2). Note that the reference group in both columns is always the firms that do not have any equity offering proposals in a quarter. The coefficients on the control variables are generally consistent with our predictions though not always significant. The only exception is the coefficients on CFO and VOLATILITY in column (2).

For the firms that announced value increasing proposals in column (1), the insignificant coefficient on AFTER suggests that there is no evidence that increased minority shareholders’ control over corporate decisions affects management’s likelihood of submitting value increasing equity offering proposals. For the firms that announced value decreasing proposals in column (2), the coefficient on AFTER is significantly negative, suggesting that management is less likely to submit value decreasing equity offering proposals in the post-regulation period. Overall, these results suggest that the 2004 CSRC regulation significantly improves the quality of the equity
offering proposals by deterring management from submitting value decreasing equity offering proposals.

Panel B of Table III shows the results of model (2) that allows the coefficient on AFTER to vary with the top 10 minority shareholder ownership characteristics. As regression model (2) is nonlinear, the interpretation of the interaction terms is complicated. As illustrated by Ai and Norton (2003) and Norton et al. (2004) for the case of logit and probit models with one interaction term, the interaction effect of two independent variables in nonlinear models cannot be evaluated by simply looking at the sign, magnitude and significance of the coefficient on the interaction term. Following Ai and Norton (2003), we derive the correct interaction effect for the multinomial logit model in Appendix B. One key insight from this derivation is that the sign, magnitude and significance of an interaction variable in the multinomial logit model could vary across observations and does not simply depend on the sign of the coefficient on the interaction variable. For example, the interaction effect could be significantly different from zero even if the coefficient on the interaction variable is zero. Following Norton et al. (2004), we graph the distribution of the correct marginal effects and associated z-statistics of an interaction variable over the entire range of predicted probabilities for all observations in Figure 1. In addition, we report the mean marginal effect and mean z-statistic of an interaction variable in Panel C of Table III.

There is little evidence that institutional ownership affects management’s likelihood of submitting value increasing proposals in the post-regulation period relative to the pre-regulation
period. As shown in Panel A of Figure 1, for value increasing equity offering proposals, the interaction effects for AFTER*MUTUAL_OWN and AFTER*OTHERINST_OWN are never significant at the 10% two-tailed significance level. However, there is weak evidence that management of firms with higher individual minority shareholder ownership is less likely to submit value increasing proposals in the post-regulation period relative to the pre-regulation period. The mean interaction effect for AFTER*INDIVIDUAL_OWN is -0.4917 and close to be significant at the 10% level (mean z-statistic=-1.415). Though surprising, this latter finding is consistent with the allegation that increased individual minority shareholder participation in corporate decisions does not necessarily increase shareholder value.

For the firms that announced value decreasing proposals, the results in Panel C of Table III and Panel B of Figure 1 show that management of firms with higher mutual fund ownership (but not management of firms with higher other institutional investor ownership) is less likely to submit value decreasing equity offering proposals in the post-regulation period relative to the pre-regulation period. Specifically, as shown in Panel B of Figure 1, the marginal effect of AFTER*MUTUAL_OWN is significantly negative for many observations. The mean marginal effect of AFTER*MUTUAL_OWN is negative and significant at the 10% two-tailed level (mean z-statistic=-1.833).\(^1\) The marginal effect of AFTER*OTHERINST_OWN is insignificant at the 10% level for all observations.

\(^1\) It is unlikely that the significant interaction effect for AFTER*MUTUAL_OWN can be explained by mutual funds’ stock picking ability. If this were the case, the coefficient on MUTUAL_OWN should be significantly negative rather than insignificant in the pre-regulation period in column (2) of Table III, Panel B.
With regard to top 10 individual minority shareholder ownership, the marginal effect of \( \text{AFTER} \times \text{INDIVIDUAL\_OWN} \) for value decreasing proposals is significantly negative for many observations. The mean marginal effect of \( \text{AFTER} \times \text{INDIVIDUAL\_OWN} \) is negative and significant at the 10% two-tailed level (mean \( z \)-statistic= -1.905). These results suggest that management of firms with higher individual minority shareholder ownership is less likely to submit value decreasing proposals in the post-regulation period relative to the pre-regulation period. However, since management of firms with higher individual shareholder ownership is also less likely to submit value increasing equity offering proposals, the net effect of the CSRC regulation on shareholder value is mixed for firms with higher individual minority shareholder ownership. Overall, the Table III’s results are broadly consistent with those in Table I.

The CSRC stopped processing equity offering proposals after the start of the split share structure reform in 2005. The CSRC announced the first pilot batch of four companies for the reform in early May 2005 but the reform was expanded to all listed firms by August 2005 (Li et al. 2008). Could the results in Table III be caused by the decline of equity offering proposal announcements in 2005 in anticipation of the split share structure reform? We believe this is unlikely for two reasons. First, the coefficient on \( \text{AFTER} \) in Panel A of Table III is different for value increasing and value decreasing proposals. There is also a significant interaction effect between \( \text{AFTER} \) and \( \text{MUTUAL\_OWN} \) for value decreasing proposals but not for value increasing proposals. While the anticipation of the reform may result in a decline in the announcements of all equity offering proposals, it cannot predict the differential results for value increasing and value decreasing proposals shown in Table III. Second, we rerun Table III’s
regressions by deleting the firm quarters after 3/31/2005 and find similar inferences (untabulated).

4.4. Quality of submitted proposals before and after the CSRC regulation

To the extent that the CSRC regulation helps deter value decreasing equity offering proposals as shown in Table III, we should also expect the average quality of the submitted equity offering proposals to be higher in the post-regulation period than in the pre-regulation period. We test this prediction in two alternative ways. First, we examine whether the characteristics of the firms that submitted equity offering proposals are more consistent with the shareholder value maximizing determinants of equity offerings in the post-regulation period than in the pre-regulation period. Existing finance theories (see, e.g., Jung et al. 1996) suggest that growth firms who face lower information asymmetry or have insufficient internally generated cash and low debt capacity should be more likely to propose equity offerings in order to increase shareholder value. Following the analysis in Section 4.2, we use Q as a growth proxy, CASH and CFO as proxies for the availability of internal funds, LEV and VOLATILITY as proxies for debt capacity, and AR12 and ASSETS as proxies for information asymmetry. We expect Q, LEV, VOLATILITY, AR12, and ASSETS to be higher in the post period while CASH and CFO to be lower in the post period. Second, we compare the stock market reaction to the announcement of the equity offering proposals (CAR) across the two time periods and expect the average CAR to be more positive in the post-regulation period.
Panel A of Table IV reports the descriptive statistics of the firm characteristics for the equity offering proposals submitted over the pre- and post-regulation periods. Consistent with our predictions, LEV and VOLATILITY are higher while CASH is lower in the post period. AR12 and ASSETS are indifferent between the two periods. Contrary to our prediction, Q is higher in the pre-regulation period. As the overall Chinese stock market is prone to the cycle of booms and busts, we also compute an adjusted Q by subtracting the mean Q for the whole market from a firm’s raw Q. The adjusted Q is not significantly different for the two periods (untabulated). Overall, there is weak evidence that the firm characteristics of the equity offering firms are more consistent with value maximizing firms in the post-regulation period than in the pre-regulation period.

Panel B of Table IV shows the results of CAR for the pre- and post-regulation periods. The results suggest that the proposal quality is higher in the post-regulation period. The mean and median CAR are both negative in the pre-CSRC regulation period while they are both positive in the post-CSRC regulation period. In addition, the mean and median CAR are significantly different for the two time periods.

Panel C of Table IV provides further evidence on the impact of the top 10 minority shareholder composition on proposal quality across the two time periods. Since management had absolute control over equity offering decisions in the pre-regulation period, it may not be surprising to observe that none of the coefficients on MUTUAL_OWN, OTHERINST_OWN, and INDIVIDUAL_OWN is significant. The coefficient on AFTER*MUTUAL_OWN is
significantly positive, suggesting that mutual fund shareholders play a more effective governance role in the post-regulation period by improving the quality of submitted proposals. There is no evidence of an improvement in proposal quality over the two time periods in firms with higher other institutional or individual shareholder ownership. Overall, Table IV’s results are consistent with Table III’s results.\textsuperscript{18}

5. Proposal quality and minority shareholders’ voting behavior in the post-CSRC regulation period

Conditional on management submitting an equity offering proposal for shareholder approval, we use the following logit model to examine whether minority shareholders are more likely to veto (pass) management’s value decreasing (increasing) equity offerings proposals in the post-regulation period:

\begin{equation}
VETO_{it} = a + b \times CAR_{it} + \varepsilon_{it}
\end{equation}

i and t are proposal and date indicators, respectively. \textit{VETO} is a dummy variable that equals 1 if a proposal is vetoed by minority shareholders, and zero if it is passed by minority shareholders. \textit{CAR} is the abnormal return to the announcement of an equity offering proposal measured over the [-2, +10] window around the proposal announcement date.

\textsuperscript{18} For both Panels B and C of Table IV, we do not control for the firm characteristics in Panel A because any improvement in \textit{CAR} in the post-regulation period is due to the change in the types of firms that propose equity offerings. That is, \textit{CAR} and the firm characteristics are two alternative tests for the same idea, even though it is likely the firm characteristics would not be as comprehensive as \textit{CAR} in capturing the improvement in proposal quality. However, the results in Panels B and C are robust to controlling for the firm characteristics in Panel A (untabulated).
The unit of observation for regression model (3) is a proposal that is voted on by minority shareholders in the post-regulation period. Regression model (3) is different from regression model (2) in that we do not compare the regression coefficients across the pre- and post-regulation periods. As management had an absolute say on the equity offering decision in the pre-regulation period, any proposals submitted by management would be passed without exception. Therefore, it is not meaningful to run regression model (3) in the pre-regulation period (i.e., the coefficient on CAR should be always zero).

The coefficient on CAR is difficult to predict. Anticipating minority shareholders’ vetoing of value reducing proposals, in theory rational managers should not submit value reducing equity offering proposals any more in the post-regulation period. Therefore, we should expect the coefficient on CAR to be insignificant. However, if some managers continue to submit value decreasing proposals for unknown reasons, we should expect rational minority shareholders to veto such proposals and therefore the coefficient on CAR should be significantly negative.

We also examine whether a firm’s top 10 minority shareholder composition affects the effect of CAR on VETO. Specifically, we allow the coefficient on CAR to vary with MUTUAL_OWN, OTHERINST_OWN and INDIVIDUAL_OWN, all of which are measured at the fiscal quarter end immediately before the proposal voting date. Top 10 minority shareholders

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19 However, it is important to note that an insignificant coefficient on CAR does not imply that the 2004 regulation is ineffective because the regulation has a significant deterrence effect on value decreasing proposals as shown in Tables III and IV.
can affect a proposal’s voting outcome directly by casting their own votes in a certain way or indirectly by influencing other shareholders’ voting behavior.

Model 1 in Panel A of Table V shows the regression result of model (3). There are 82 equity offering proposals that were voted on by minority shareholders in the post-regulation period. We exclude 3 proposals withdrawn prior to the minority shareholder voting date in the post-regulation period. Results are similar if we treat the withdrawn proposals as vetoed proposals. Three of the 82 proposals were initially proposed in the pre-regulation period. Results are similar if the three proposals announced in the pre-regulation period are deleted. Though the mean and median CAR for the 82 proposals is significantly positive, CAR is negative for 35 out of the 82 proposals. 10 out of the 82 proposals were vetoed by minority shareholders (untabulated), suggesting that minority shareholders did exercise the new control power granted by the CSRC regulation. The coefficient on CAR in Panel A of Table V is negative but insignificant. Thus, conditional on the proposals submitted by management, on average there is no evidence that value decreasing (value increasing) proposals are more likely to be vetoed (passed) by voting minority shareholders.

Model 2 in Panel A of Table V reports the logit regression coefficients of model (3) that allows the coefficient on CAR to vary with MUTUAL_OWN, OTHERINST_OWN, and INDIVIDUAL_OWN. As this is a logit model, we also report the correct mean interaction effects and associated mean z-statistics for the three interaction variables in Panel B of Table V.

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20 Interestingly, two proposals vetoed by minority shareholders were also vetoed by the non-tradable shareholders. Inferences are robust to excluding these two observations.
and graph the distribution of the correct marginal effects and associated z-statistics of the three interaction variables over the entire range of predicted probabilities for all observations in Figure 2. Appendix B shows the formula for an interaction effect in a logit model with multiple interaction variables. As shown in Figure 2, the interaction effects of CAR*MUTUAL_OWN and CAR*INDIVIDUAL_OWN are significantly negative for a small number of observations. However, the mean interaction effects are all insignificant at the 10% two-tailed level for CAR*MUTUAL_OWN, CAR*OTHERINST_OWN, and CAR*INDIVIDUAL_OWN. Overall, there is little evidence in Table V that minority shareholders’ voting is systematically related to proposal quality CAR.

One explanation for the insignificant results in Table V is that minority shareholders will accept (veto) all value increasing (value decreasing) proposals but they do not further distinguish the quality among the value increasing or value decreasing proposals. Therefore, we also re-estimate Table V’s regressions using a dichotomous variable DCAR that is one for value increasing (i.e., CAR>0) proposals and zero for value decreasing (i.e., CAR≤0) proposals.

Another explanation for the insignificant results in Table V is that CAR is endogenous resulting from the stock price’s anticipation of minority shareholders’ voting outcomes in the post-regulation period. Brickley et al. (1988) argue that DCAR can be used as an exogenous instrument for the endogenous CAR. While the magnitude of CAR could be affected by the stock market’s anticipation of the likelihood of minority shareholders’ voting outcome, it is likely that CAR is still negative (positive) for value decreasing (increasing) proposals considering the fact
that there is still some uncertainty on the eventual voting outcome by minority shareholders. Thus, DCAR should have the ability to separate value increasing (CAR>0) proposals from value decreasing (CAR<0) proposals and thus could serve as a valid (though may not be a perfect) exogenous instrument for proposal quality.

Table VI shows the voting regression results using DCAR. The coefficient on DCAR in Model 1 in Panel A is still insignificant. However, as shown in Panel B, the mean interaction effect of DCAR*MUTUAL_OWN becomes significantly negative at the 10% two-tailed level but the mean interaction effects of DCAR*OTHERINST_OWN and DCAR*INDIVIDUAL_OWN remain insignificant. Overall, the results in Table VI suggest that DCAR is a better proposal quality proxy for the veto regression and minority shareholders are more likely to veto value decreasing proposals in firms with higher mutual fund ownership.

6. Conclusion

An important issue hotly debated among investors and regulators around the world is the allocation of control over corporate decisions between management/controlling shareholders (referred to as management for brevity) and minority shareholders. We use a unique Chinese securities regulation to directly test the effect of increasing minority shareholders’ control over corporate decisions on shareholder value. In December 2004, the Chinese securities regulator, China Securities Regulatory Commission (CSRC), issued a new regulation that requires several types of major corporate decisions to seek the separate approval of tradable shareholders.
(referred to as minority shareholders). Equity offering is the most frequent proposal subject to the regulation.

Our primary findings can be summarized as follows. First, the overall stock market reaction to the announcement of the 2004 CSRC regulation is insignificant, but the stock market reaction is more positive for firms with higher mutual fund ownership. Second, the regulation helps deter management from submitting value decreasing equity offering proposals, especially for firms with higher mutual fund ownership. In addition, the stock market reaction to the announcement of equity offering proposals is less negative in the post-regulation period, especially for firms with higher mutual fund ownership. Third, there is weak evidence that value reducing equity offering proposals submitted in the post-regulation period are more likely to be vetoed by minority shareholders in firms with higher mutual fund ownership. Overall, our results suggest that the 2004 regulation increases shareholder value, especially in firms with higher mutual fund ownership.

Our study provides valuable information to the debate on the costs and benefits of granting minority shareholders direct control over corporate decisions. Our results are directly relevant to the Chinese securities regulator (CSRC) who faces a daunting task of protecting minority shareholders’ interests and developing the country’s domestic financial market. We provide direct evidence on the overall effect of a regulation that strengthens minority shareholders’ direct control over corporate decisions on shareholder value. In addition, we identify the roles of minority shareholder composition (especially the role of mutual funds) in
determining the effectiveness of such regulations. While it is always difficult to extrapolate the findings from one country to another country, the results from this study suggest the possibility that regulators in countries with weak investor protections can help improve corporate resource allocations and shareholder value by simply enacting laws granting minority shareholders more direct control over corporate decisions.
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Appendix A. The procedures used to identify the firms eligible to propose equity offerings

We rely on the following regulations issued by the Chinese Securities Regulatory Commission (CSRC) to identify the firms that are eligible to propose an equity offering (a general offering, a rights offering, or a convertible bond offering): a) Measures for the Administration of New Share Issuance by Listed Companies (Order No. 1 [2001] of the CSRC); b) Notice on the Administration of New Share Issuance by Listed Companies (Order No. 43 [2001] of the CSRC); c) Implementation Measures for Listed Companies’ Issuing Convertible Corporate Bonds (Order No. 2 [2001] of the CSRC); d) The Interim Measures for the Administration of Convertible Corporate Bonds (Order No. 16 [1997] of the Securities Committee of the State Council; e) Notice on the Administration of Convertible Corporate Bond Issuance by Listed Companies (Order No. 115 [2001] of the CSRC); f) Notice on the Conditions for the Additional Issuance of Securities by Listed Companies (Order No. 2 [2002] of the CSRC); and g) Notice of the China Securities Regulatory Commission on Several Issues Concerning Major Purchases, Sales and Exchanges of Assets by Listed Companies (Order No. 105 [2001] of the CSRC). Under these regulations firms that wish to propose an equity offering are required to meet several qualitative and quantitative requirements. Though the quantitative requirements are generally straightforward, most qualitative requirements are subjective and difficult to measure using publicly available data. Hence, we rely on the quantitative requirements to determine a firm’s equity offering eligibility. Specifically, a firm is deemed eligible to propose a rights offering if it satisfies the following two conditions: a) the average return on equity (ROE) over the past three years is no less than 6%; and b) the firm has not issued any rights offering in the previous year. A firm is deemed eligible to propose a general offering if it satisfies the following two conditions: a) the average ROE (based on an unknown formula specified by the CSRC) over the past three years is no less than 10%; and b) the ROE in the previous year is no less than 10%. However, under the CSRC regulations a firm is also deemed eligible to propose a general offering if it experiences a “significant” restructuring in any of the previous three years. A restructuring is deemed significant if the restructuring’s deal value is no less than 50% of the firm’s gross total assets. A firm is deemed eligible to propose a convertible bond offering if it satisfies the following two conditions: a) the average ROE over the past three years is no less than 10%.\footnote{As we do not have access to the CSRC’s ROE formula, we define ROE as annual net income divided by the average shareholder’s equity.}
than 10% or the average ROE based on net income excluding non-recurring items over the past three years is no less than 6%; and b) the firm does not report a loss in any of the previous three years. Again, under the CSRC regulations a firm is also deemed eligible to propose a convertible bond offering if it experiences a “significant” restructuring in any of the previous three years.

A firm year is excluded from our sample of eligible firms if it does not satisfy the eligibility requirements for a general offering, a rights offering, or a convertible bond offering. If we literally follow the above eligibility requirements, a significant number of firm years that did propose equity offerings would be excluded. As a result, we relax the quantitative thresholds by reducing the 10% threshold to 9%, the 6% threshold to 5%, and the 50% threshold to 40%. With those relaxed thresholds, all but one equity offering proposals are retained in our final sample.
Appendix B. The correct interaction effects of the nonlinear regressions

A. The interaction effect for the multinomial logit model in Table III

The multinomial logit model in Panel B of Table III is as follows:

$$
\Phi_j \equiv \Pr[Y = J] = \frac{e^{Z_j}}{1 + \sum_{j=1}^{2} e^{Z_j}} \tag{A}
$$

where J=1 for value increasing proposals and 2 for value decreasing proposals, and

$$
Z_j = a_j + b_{j,1} \text{MUTUAL\_OWN} + b_{j,2} \text{OTHERINST\_OWN} + b_{j,3} \text{INDIVIDUAL\_OWN} + \\
c_j \text{AFTER} + \\
d_{j,1} \text{AFTER*MUTUAL\_OWN} + d_{j,2} \text{AFTER*OTHERINST\_OWN} + \\
d_{j,3} \text{AFTER*INDIVIDUAL\_OWN} + \gamma_j \text{CONTROL} + e_j
$$

Denote $\Phi_j[0] = \Phi_j[AFTER = 0]$ and $\Phi_j[1] = \Phi_j[AFTER = 1]$

The three interaction effects of AFTER*MUTUAL\_OWN, AFTER*OTHERINST\_OWN, and AFTER*INDIVIDUAL\_OWN in the multinomial logit model are defined as follows:

$$
\frac{\partial [\Phi_j[1] - \Phi_j[0]]}{\partial \text{MUTUAL\_OWN}} = \Phi_j [1] \left( b_{j,1} + d_{j,1} \right) - \sum_{j'=1}^{2} \Phi_{j'[1]} \left( b_{j',1} + d_{j',1} \right) - \Phi_j [0] \left[ b_{j,1} - \sum_{j'=1}^{2} \Phi_{j'[0]} b_{j',1} \right]
$$

(A1)

$$
\frac{\partial [\Phi_j[1] - \Phi_j[0]]}{\partial \text{OTHERINST\_OWN}} = \Phi_j [1] \left( b_{j,2} + d_{j,2} \right) - \sum_{j'=1}^{2} \Phi_{j'[1]} \left( b_{j',2} + d_{j',2} \right) - \Phi_j [0] \left[ b_{j,2} - \sum_{j'=1}^{2} \Phi_{j'[0]} b_{j',2} \right]
$$

(A2)

$$
\frac{\partial [\Phi_j[1] - \Phi_j[0]]}{\partial \text{INDIVIDUAL\_OWN}} = \Phi_j [1] \left( b_{j,3} + d_{j,3} \right) - \sum_{j'=1}^{2} \Phi_{j'[1]} \left( b_{j',3} + d_{j',3} \right) - \Phi_j [0] \left[ b_{j,3} - \sum_{j'=1}^{2} \Phi_{j'[0]} b_{j',3} \right]
$$

(A3)
B. The interaction effect for the logit model in Table V

The logit model in Panel B of Table V is as follows:

\[
\Phi = \Pr[VETOED] = \frac{e^Z}{1 + e^Z} \tag{B}
\]

Where

\[
Z = a + b_1MUTUAL\_OWN + b_2OTHERINST\_OWN + b_3INDIVIDUAL\_OWN + c \cdot CAR +
\]

\[
d_1CAR \ast MUTUAL\_OWN + d_2CAR \ast OTHERINST\_OWN + d_3CAR \ast INDIVIDUAL\_OWN + e
\]

The three interaction effects of \( CAR \ast MUTUAL\_OWN \), \( CAR \ast OTHERINST\_OWN \), and \( CAR \ast INDIVIDUAL\_OWN \) in the logit model are defined as follows:

\[
\frac{\partial^2 \Phi}{\partial CAR \cdot \partial MUTUAL\_OWN} = \Phi'[b_1 + d_1CAR] [c + \Sigma] - \Phi' \cdot d_1 \tag{B1}
\]

\[
\frac{\partial^2 \Phi}{\partial CAR \cdot \partial OTHERINST\_OWN} = \Phi'[b_2 + d_2CAR] [c + \Sigma] - \Phi' \cdot d_2 \tag{B2}
\]

\[
\frac{\partial^2 \Phi}{\partial \partial INDIVIDUAL\_OWN} = \Phi'[b_3 + d_3CAR] [c + \Sigma] - \Phi' \cdot d_3 \tag{B3}
\]

where \( \Sigma = d_1MUTUAL\_OWN + d_2OTHERINST\_OWN + d_3INDIVIDUAL\_OWN \)

C. The interaction effect for the logit model in Table VI

The logit model in Panel B of Table VI is as follows

\[
\Phi = \Pr[VETOED] = \frac{e^Z}{1 + e^Z} \tag{C}
\]

where

\[
Z = a + b_1MUTUAL\_OWN + b_2OTHERINST\_OWN + b_3INDIVIDUAL\_OWN + c \cdot DCAR +
\]

\[
d_1DCAR \ast MUTUAL\_OWN + d_2DCAR \ast OTHERINST\_OWN +
\]

\[
d_3DCAR \ast INDIVIDUAL\_OWN + e
\]
Denote $\Phi[0] = \Phi[DCAR = 0]$ and $\Phi[1] = \Phi[CAR = 1]$.

The three interaction effects of $DCAR*MUTUAL\_OWN$, $DCAR*OTHERINST\_OWN$, and $DCAR*INDIVIDUAL\_OWN$ in the logit model are defined as follows:

\[
\frac{\partial [\Phi[1] - \Phi[0]]}{\partial MUTUAL\_OWN} = \Phi'[1] \cdot [b_1 + d_1] - \Phi'[0] \cdot b_1
\]  
(C1)

\[
\frac{\partial [\Phi[1] - \Phi[0]]}{\partial OTHERINST\_OWN} = \Phi'[1] \cdot [b_2 + d_2] - \Phi'[0] \cdot b_2
\]  
(C2)

\[
\frac{\partial [\Phi[1] - \Phi[0]]}{\partial INDIVIDUAL\_OWN} = \Phi'[1] \cdot [b_3 + d_3] - \Phi'[0] \cdot b_3
\]  
(C3)
Table I. The stock market reaction to the announcement of the 2004 CSRC regulation

Panel A shows the results of a time-series regression of $R_{mt}$ on EVENT1, EVENT2, $R_{hkm,t-1}$, $R_{hkm,t}$, and $R_{hkm,t+1}$ over a 250-trading day period that ends on December 10, 2004 (i.e., the last trading day of event 2). $R_{mt}$ is the equally weighted dividend inclusive market return of all A share firms on trading day t. $R_{hkm,t}$ is the equally weighted dividends inclusive market return of all H share and Red Chip share firms that are not listed on the two domestic stock exchanges on trading day t. EVENT1 is a dummy variable equals to 0.2 for a trading day that falls within the [-2, +2] event window centered on event 1, and zero otherwise. EVENT2 is a dummy variable equals to 0.2 for a trading day that falls within the [-2, +2] event window centered on event 2, and zero otherwise. The coefficients in Panels B and C are obtained from a cross-sectional time series regression of individual firm's stock market reaction to EVENT1 and EVENT2 per Sefcik and Thompson (1986). The sample in Panel B includes all A share firms while the sample in Panel C includes only 187 A share firms that are in the same industry (Datastream INDC2) as the H/Red Chip firms and whose total assets at the end of fiscal year 2003 fall between 80% and 120% of the median total assets of the H/Red Chip firms in the same industry. MUTUAL_OWN is the total stock ownership (as a percentage of the total outstanding tradable shares) of all the open ended and close ended mutual funds ranked among the top 10 minority shareholders at the end of the quarter immediately before an event (i.e., event 1 or 2). OTHERINST_OWN is the total stock ownership (as a percentage of the total outstanding tradable shares) of all the other institutional investors ranked among the top 10 minority shareholders at the end of the quarter immediately before an event (i.e., event 1 or 2). INDIVIDUAL_OWN is the total stock ownership (as a percentage of the total outstanding tradable shares) of all the individual investors ranked among the top 10 minority shareholders at the end of the quarter immediately before an event (i.e., event 1 or 2). MV is market value of common shares outstanding, computed as stock price times total shares outstanding at the end of the quarter immediately before an event (i.e., event 1 or event 2). BM is book-to-market ratio, measured as the book value equity divided by MV.

### Panel A. Overall market reaction (N=250 trading days)

<table>
<thead>
<tr>
<th></th>
<th>Intercept</th>
<th>$R_{hkm,t-1}$</th>
<th>$R_{hkm,t}$</th>
<th>$R_{hkm,t+1}$</th>
<th>Event1</th>
<th>Event2</th>
<th>Adjusted R-square</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>-0.0002</td>
<td>0.0022</td>
<td>0.1774</td>
<td>0.0654</td>
<td>0.0152</td>
<td>0.0269</td>
<td>0.036</td>
</tr>
<tr>
<td></td>
<td>(0.863)</td>
<td>(0.964)</td>
<td>(0.001)</td>
<td>(0.288)</td>
<td>(0.716)</td>
<td>(0.365)</td>
<td></td>
</tr>
</tbody>
</table>

### Panel B. Cross-sectional variation in the market reaction

<table>
<thead>
<tr>
<th></th>
<th>MUTUAL_OWN</th>
<th>OTHERINST_OWN</th>
<th>INDIVIDUAL_OWN</th>
<th>Ln(MV)</th>
<th>Ln(BM)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Event1</td>
<td>0.1978</td>
<td>0.0183</td>
<td>-0.2517</td>
<td>0.0082</td>
<td>0.0067</td>
</tr>
<tr>
<td></td>
<td>(0.000)</td>
<td>(0.051)</td>
<td>(0.114)</td>
<td>(0.087)</td>
<td>(0.254)</td>
</tr>
<tr>
<td>Event2</td>
<td>0.0887</td>
<td>0.0007</td>
<td>0.0472</td>
<td>0.0107</td>
<td>-0.0049</td>
</tr>
<tr>
<td></td>
<td>(0.236)</td>
<td>(0.947)</td>
<td>(0.556)</td>
<td>(0.127)</td>
<td>(0.554)</td>
</tr>
</tbody>
</table>

### Panel C. A share firms matched with H/Red chip firms by firm size and industry

<table>
<thead>
<tr>
<th></th>
<th>MUTUAL_OWN</th>
<th>OTHERINST_OWN</th>
<th>INDIVIDUAL_OWN</th>
<th>Ln(MV)</th>
<th>Ln(BM)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Event1</td>
<td>0.1818</td>
<td>0.0236</td>
<td>-0.0284</td>
<td>0.0086</td>
<td>0.0037</td>
</tr>
<tr>
<td></td>
<td>(0.017)</td>
<td>(0.163)</td>
<td>(0.768)</td>
<td>(0.049)</td>
<td>(0.471)</td>
</tr>
<tr>
<td>Event2</td>
<td>0.1431</td>
<td>0.0058</td>
<td>0.4897</td>
<td>0.0116</td>
<td>0.0026</td>
</tr>
<tr>
<td></td>
<td>(0.002)</td>
<td>(0.751)</td>
<td>(0.171)</td>
<td>(0.122)</td>
<td>(0.699)</td>
</tr>
</tbody>
</table>
Table II. Descriptive Statistics (N=3,999 firm-quarter observations)

CAR is the market adjusted cumulative abnormal return over the [-2, +10] trading days around the proposal announcement date. SUBMISSION = 0 if a firm does not submit a proposal in quarter t, 1 if a firm submits a value increasing (i.e., CAR>0) proposal in quarter t, and 2 if a firm submits a value decreasing (i.e., CAR<0) proposal in quarter t. MUTUAL_OWN is the total stock ownership (as a percentage of the total outstanding tradable shares) of all the open ended and close ended mutual funds ranked among the top 10 minority shareholders at the end of the quarter immediately before the proposal date. OTHERINST_OWN is the total stock ownership (as a percentage of the total outstanding tradable shares) of all the other institutional investors ranked among the top 10 minority shareholders at the end of the quarter immediately before the proposal date. INDIVIDUAL_OWN is the total stock ownership (as a percentage of the total outstanding tradable shares) of all the individual investors ranked among the top 10 minority shareholders at the end of the quarter immediately before the proposal date. LEV is total debts divided by total assets at the beginning of quarter t. Q is the natural logarithm of a firm’s Tobin’s Q at the beginning of quarter t, which is defined as the market value minus the book value of shareholders’ equity plus total assets divided by total assets. CFO is cash flows from operations over quarters t-4 to t-1 divided by the average total assets at the beginning of quarter t. VOLATILITY is the standard deviation of daily stock returns over a one year period that ends in the beginning of quarter t. AR12 is the buy and hold equally weighted market adjusted abnormal return over a one-year period that ends. CASH is cash and marketable securities divided by total assets at the beginning of quarter t. ASSETS is the natural logarithm of total assets at the beginning of quarter t.

<table>
<thead>
<tr>
<th>Variable name</th>
<th>Mean</th>
<th>Std</th>
<th>Min</th>
<th>Q1</th>
<th>Median</th>
<th>Q3</th>
<th>Max</th>
</tr>
</thead>
<tbody>
<tr>
<td>SUBMISSION=1</td>
<td>0.026</td>
<td>0.159</td>
<td>0.000</td>
<td>0.000</td>
<td>0.000</td>
<td>0.000</td>
<td>1.000</td>
</tr>
<tr>
<td>SUBMISSION=2</td>
<td>0.030</td>
<td>0.170</td>
<td>0.000</td>
<td>0.000</td>
<td>0.000</td>
<td>0.000</td>
<td>1.000</td>
</tr>
<tr>
<td>MUTUAL_OWN</td>
<td>0.046</td>
<td>0.081</td>
<td>0.000</td>
<td>0.000</td>
<td>0.004</td>
<td>0.055</td>
<td>0.851</td>
</tr>
<tr>
<td>OTHERINST_OWN</td>
<td>0.063</td>
<td>0.134</td>
<td>0.000</td>
<td>0.003</td>
<td>0.018</td>
<td>0.063</td>
<td>0.996</td>
</tr>
<tr>
<td>INDIVIDUAL_OWN</td>
<td>0.020</td>
<td>0.020</td>
<td>0.000</td>
<td>0.004</td>
<td>0.017</td>
<td>0.030</td>
<td>0.179</td>
</tr>
<tr>
<td>LEV</td>
<td>0.465</td>
<td>0.188</td>
<td>0.056</td>
<td>0.339</td>
<td>0.466</td>
<td>0.588</td>
<td>2.685</td>
</tr>
<tr>
<td>Q</td>
<td>0.576</td>
<td>0.359</td>
<td>-0.135</td>
<td>0.329</td>
<td>0.514</td>
<td>0.762</td>
<td>6.435</td>
</tr>
<tr>
<td>CFO</td>
<td>0.071</td>
<td>0.107</td>
<td>-0.354</td>
<td>0.017</td>
<td>0.072</td>
<td>0.127</td>
<td>0.426</td>
</tr>
<tr>
<td>VOLATILITY</td>
<td>0.023</td>
<td>0.011</td>
<td>0.011</td>
<td>0.018</td>
<td>0.021</td>
<td>0.024</td>
<td>0.111</td>
</tr>
<tr>
<td>AR12</td>
<td>0.061</td>
<td>0.284</td>
<td>-0.573</td>
<td>-0.124</td>
<td>-0.003</td>
<td>0.190</td>
<td>1.212</td>
</tr>
<tr>
<td>CASH</td>
<td>0.172</td>
<td>0.119</td>
<td>0.002</td>
<td>0.084</td>
<td>0.143</td>
<td>0.229</td>
<td>0.584</td>
</tr>
</tbody>
</table>
Table III. The effect of the 2004 CSRC regulation on management’s incentive to submit value increasing and value decreasing equity offering proposals (N=3,999 firm quarter observations)

AFTER is a dummy variable that is equal to one for the quarters in the post-CSRC regulation period (i.e., after December 7, 2004), and zero for the quarters in the pre-CSRC regulation period. AFTER is coded zero for the proposals submitted prior to December 7 in the 4th calendar quarter of 2004. The proposals submitted on or after December 7 in the 4th quarter of 2004 are treated as proposals submitted in the 1st quarter of 2005. As the number of months for calendar quarter 4 of 2004 is 2 while the number of months for calendar quarter 1 of 2005 is 4, we include the number of months in each calendar quarter as a control in estimating model (2). See Table II for other variable definitions. Two-tailed robust p values clustered at the firm level are reported in parentheses for Panels A and B. The mean interaction effects and z-statistics are computed using the formulas in Appendix B.

Panel A. Main effects model

<table>
<thead>
<tr>
<th>Variable</th>
<th>SUBMISSION=1 (value increasing)</th>
<th>SUBMISSION=2 (value decreasing)</th>
</tr>
</thead>
<tbody>
<tr>
<td>AFTER</td>
<td>-0.1923 (0.526)</td>
<td>-1.1233 (0.000)</td>
</tr>
<tr>
<td>LEV</td>
<td>1.3979 (0.001)</td>
<td>0.7993 (0.059)</td>
</tr>
<tr>
<td>Q</td>
<td>-0.8163 (0.060)</td>
<td>-0.4207 (0.238)</td>
</tr>
<tr>
<td>CFO</td>
<td>0.8927 (0.373)</td>
<td>1.9722 (0.052)</td>
</tr>
<tr>
<td>VOLATILITY</td>
<td>-14.7321 (0.281)</td>
<td>-26.9777 (0.007)</td>
</tr>
<tr>
<td>AR12</td>
<td>1.4978 (0.000)</td>
<td>0.7135 (0.020)</td>
</tr>
<tr>
<td>CASH</td>
<td>-2.8388 (0.006)</td>
<td>-3.9386 (0.000)</td>
</tr>
<tr>
<td>ASSETS</td>
<td>-0.1647 (0.268)</td>
<td>-0.2149 (0.047)</td>
</tr>
<tr>
<td>MONTHS</td>
<td>0.8543 (0.001)</td>
<td>1.1525 (0.000)</td>
</tr>
<tr>
<td>CONSTANT</td>
<td>-2.3436 (0.477)</td>
<td>-1.2180 (0.630)</td>
</tr>
</tbody>
</table>

Pseudo R-square 0.0517
Panel B. Interaction effects model

<table>
<thead>
<tr>
<th></th>
<th>SUBMISSION=1 (value increasing)</th>
<th>SUBMISSION=2 (value decreasing)</th>
</tr>
</thead>
<tbody>
<tr>
<td>MUTUAL_OWN</td>
<td>0.8968</td>
<td>1.9890</td>
</tr>
<tr>
<td></td>
<td>(0.642)</td>
<td>(0.197)</td>
</tr>
<tr>
<td>OTHERINST_OWN</td>
<td>0.2950</td>
<td>-0.2725</td>
</tr>
<tr>
<td></td>
<td>(0.785)</td>
<td>(0.759)</td>
</tr>
<tr>
<td>INDIVIDUAL_OWN</td>
<td>6.4982</td>
<td>9.6482</td>
</tr>
<tr>
<td></td>
<td>(0.324)</td>
<td>(0.094)</td>
</tr>
<tr>
<td>AFTER</td>
<td>0.1108</td>
<td>0.1657</td>
</tr>
<tr>
<td></td>
<td>(0.805)</td>
<td>(0.771)</td>
</tr>
<tr>
<td>AFTER*MUTUAL_OWN</td>
<td>1.0212</td>
<td>-9.3129</td>
</tr>
<tr>
<td></td>
<td>(0.658)</td>
<td>(0.007)</td>
</tr>
<tr>
<td>AFTER*OTHERINST_OWN</td>
<td>-1.1001</td>
<td>-1.7289</td>
</tr>
<tr>
<td></td>
<td>(0.512)</td>
<td>(0.436)</td>
</tr>
<tr>
<td>AFTER*INDIVIDUAL_OWN</td>
<td>-22.9151</td>
<td>-40.2507</td>
</tr>
<tr>
<td></td>
<td>(0.075)</td>
<td>(0.031)</td>
</tr>
<tr>
<td>LEV</td>
<td>1.5063</td>
<td>0.7913</td>
</tr>
<tr>
<td></td>
<td>(0.001)</td>
<td>(0.089)</td>
</tr>
<tr>
<td>Q</td>
<td>-0.9547</td>
<td>-0.4181</td>
</tr>
<tr>
<td></td>
<td>(0.039)</td>
<td>(0.239)</td>
</tr>
<tr>
<td>CFO</td>
<td>0.7090</td>
<td>2.1188</td>
</tr>
<tr>
<td></td>
<td>(0.476)</td>
<td>(0.037)</td>
</tr>
<tr>
<td>VOLATILITY</td>
<td>-12.5339</td>
<td>-26.4886</td>
</tr>
<tr>
<td></td>
<td>(0.343)</td>
<td>(0.010)</td>
</tr>
<tr>
<td>AR12</td>
<td>1.3752</td>
<td>0.8103</td>
</tr>
<tr>
<td></td>
<td>(0.000)</td>
<td>(0.025)</td>
</tr>
<tr>
<td>CASH</td>
<td>-2.7946</td>
<td>-3.8674</td>
</tr>
<tr>
<td></td>
<td>(0.009)</td>
<td>(0.000)</td>
</tr>
<tr>
<td>ASSETS</td>
<td>-0.2183</td>
<td>-0.1979</td>
</tr>
<tr>
<td></td>
<td>(0.233)</td>
<td>(0.135)</td>
</tr>
<tr>
<td>MONTHS</td>
<td>0.8647</td>
<td>1.1705</td>
</tr>
<tr>
<td></td>
<td>(0.001)</td>
<td>(0.000)</td>
</tr>
<tr>
<td>CONSTANT</td>
<td>-1.3989</td>
<td>-1.9484</td>
</tr>
<tr>
<td></td>
<td>(0.729)</td>
<td>(0.528)</td>
</tr>
<tr>
<td>Pseudo R-square</td>
<td>0.0616</td>
<td></td>
</tr>
</tbody>
</table>

Panel C. Mean interaction effect (mean Z-statistic)

<table>
<thead>
<tr>
<th></th>
<th>SUBMISSION=1 (value increasing)</th>
<th>SUBMISSION=2 (value decreasing)</th>
</tr>
</thead>
<tbody>
<tr>
<td>mean interaction effect of AFTER*MUTUAL_OWN</td>
<td>0.0261</td>
<td>-0.2016</td>
</tr>
<tr>
<td></td>
<td>(0.337)</td>
<td>(-1.833)</td>
</tr>
<tr>
<td>mean interaction effect of AFTER*OTHERINST_OWN</td>
<td>-0.0247</td>
<td>-0.0196</td>
</tr>
<tr>
<td></td>
<td>(-0.589)</td>
<td>(-0.339)</td>
</tr>
<tr>
<td>mean interaction effect of AFTER*INDIVIDUAL_OWN</td>
<td>-0.4917</td>
<td>-0.8796</td>
</tr>
<tr>
<td></td>
<td>(-1.415)</td>
<td>(-1.905)</td>
</tr>
</tbody>
</table>
Table IV. The effect of the 2004 CSRC regulation on equity offering proposal quality

See Tables II and III for variable definitions. Two-tailed robust p values clustered at the firm level are reported in parentheses.

Panel A. Differences in firm characteristics for the submitted equity offering proposals in the pre- and post-regulation periods

<table>
<thead>
<tr>
<th>Variable</th>
<th>Pre-regulation</th>
<th>Post-regulation</th>
<th>p-value on the test of difference</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>N</td>
<td>Mean</td>
<td>Median</td>
</tr>
<tr>
<td>Q</td>
<td>147</td>
<td>0.593</td>
<td>0.535</td>
</tr>
<tr>
<td>CASH</td>
<td>147</td>
<td>0.144</td>
<td>0.131</td>
</tr>
<tr>
<td>LEV</td>
<td>147</td>
<td>0.503</td>
<td>0.501</td>
</tr>
<tr>
<td>CFO</td>
<td>144</td>
<td>0.080</td>
<td>0.081</td>
</tr>
<tr>
<td>VOLATILITY</td>
<td>147</td>
<td>0.020</td>
<td>0.019</td>
</tr>
<tr>
<td>AR120</td>
<td>147</td>
<td>0.115</td>
<td>0.041</td>
</tr>
<tr>
<td>ASSETS</td>
<td>147</td>
<td>21.626</td>
<td>21.370</td>
</tr>
</tbody>
</table>

Panel B. The market reactions to announcements of equity offering proposals in the pre- and post-regulation periods

<table>
<thead>
<tr>
<th></th>
<th>Mean</th>
<th>Std.</th>
<th>Min</th>
<th>Q1</th>
<th>Median</th>
<th>Q3</th>
<th>Max</th>
</tr>
</thead>
<tbody>
<tr>
<td>CAR in the pre-CSRC regulation period (N=147)</td>
<td>-0.014</td>
<td>0.068</td>
<td>-0.246</td>
<td>-0.060</td>
<td>-0.018</td>
<td>0.028</td>
<td>0.229</td>
</tr>
<tr>
<td>CAR in the post-CSRC regulation period (N=81)</td>
<td>0.014</td>
<td>0.066</td>
<td>-0.112</td>
<td>-0.040</td>
<td>0.018</td>
<td>0.061</td>
<td>0.158</td>
</tr>
</tbody>
</table>

Test of the difference in CAR between the two periods

<table>
<thead>
<tr>
<th></th>
<th>p-value of t-test</th>
<th>p-value of rank-sum test</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(0.003)</td>
<td>(0.004)</td>
</tr>
</tbody>
</table>

Panel C OLS regression results of CAR: interaction effects model (N=228)

<table>
<thead>
<tr>
<th></th>
<th>Adjusted R-square</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>0.071</td>
</tr>
</tbody>
</table>

CONSTANT -0.0147
(0.121)

MUTUAL_OWN -0.0261
(0.758)

OTHERINST_OWN 0.0099
(0.760)

INDIVIDUAL_OWN 0.0475
(0.796)

AFTER -0.0063
(0.719)

AFTER*MUTUAL_OWN 0.3749
(0.002)

AFTER*OTHERINST_OWN 0.0044
(0.938)

AFTER*INDIVIDUAL_OWN 0.4714
(0.443)
Table V. Proposal quality and the likelihood of minority shareholders’ vetoing in the post-regulation period (N=82 proposals)

The dependent variable is VETO, a dummy variable that is 1 if a proposal is vetoed by minority shareholders, and zero if it is passed by minority shareholders. MUTUAL_OWN, OTHERINST_OWN and INDIVIDUAL_OWN are as defined in Table I except that all of them are measured at the end of the fiscal quarter immediately prior to the proposal voting date. CAR is the market adjusted cumulative abnormal return over the [-2, +10] trading days around the proposal announcement date. Two-tailed robust p values clustered at the firm level are reported in parentheses for Panels A and B. The mean interaction effects and z-statistics in Panel C are computed using the formulas in Appendix B.

Panel A. Logit regression results

<table>
<thead>
<tr>
<th></th>
<th>Model 1 (main effects model)</th>
<th>Model 2 (interaction effects model)</th>
</tr>
</thead>
<tbody>
<tr>
<td>CONSTANT</td>
<td>-1.9542 (0.000)</td>
<td>-0.1669 (0.854)</td>
</tr>
<tr>
<td>CAR</td>
<td>-5.5116 (0.256)</td>
<td>39.3797 (0.020)</td>
</tr>
<tr>
<td>MUTUAL_OWN</td>
<td></td>
<td>-0.1264 (0.094)</td>
</tr>
<tr>
<td>OTHERINST_OWN</td>
<td></td>
<td>-0.0858 (0.074)</td>
</tr>
<tr>
<td>INDIVIDUAL_OWN</td>
<td></td>
<td>-0.5569 (0.077)</td>
</tr>
<tr>
<td>CAR*MUTUAL_OWN</td>
<td>-4.1931 (0.003)</td>
<td></td>
</tr>
<tr>
<td>CAR*OTHERINST_OWN</td>
<td>-1.4783 (0.073)</td>
<td></td>
</tr>
<tr>
<td>CAR*INDIVIDUAL_OWN</td>
<td>-10.5009 (0.037)</td>
<td></td>
</tr>
<tr>
<td>Pseudo R-square</td>
<td>0.0179</td>
<td>0.2266</td>
</tr>
</tbody>
</table>

Panel B. Mean interaction effect (mean Z-statistic)

<table>
<thead>
<tr>
<th>Mean interaction effect</th>
<th>Model 1 (main effects model)</th>
<th>Model 2 (interaction effects model)</th>
</tr>
</thead>
<tbody>
<tr>
<td>CAR*MUTUAL_OWN</td>
<td>-0.3349 (0.693)</td>
<td></td>
</tr>
<tr>
<td>CAR*OTHERINST_OWN</td>
<td>-0.1241 (-0.550)</td>
<td></td>
</tr>
<tr>
<td>CAR*INDIVIDUAL_OWN</td>
<td>-0.8738 (-0.630)</td>
<td></td>
</tr>
</tbody>
</table>
Table VI. Proposal quality and the likelihood of minority shareholders’ vetoing in the post-regulation period: using the sign of CAR (DCAR) as a proposal quality proxy (N=82 proposals)

The dependent variable is VETO. DCAR is a dummy variable equals to one if CAR>0 and zero otherwise. See Table V for other variable definitions. Two-tailed robust p values clustered at the firm level are reported in parentheses in panel A. The mean interaction effects and z-statistics in the parentheses are computed using the formulas in Appendix B.

Panel A. Logit regression results

<table>
<thead>
<tr>
<th></th>
<th>Model 1 (main effects model)</th>
<th>Model 2 (interaction effects model)</th>
</tr>
</thead>
<tbody>
<tr>
<td>CONSTANT</td>
<td>-1.5755</td>
<td>-1.7586</td>
</tr>
<tr>
<td></td>
<td>(0.000)</td>
<td>(0.077)</td>
</tr>
<tr>
<td>DCAR</td>
<td>-0.7994</td>
<td>4.3134</td>
</tr>
<tr>
<td></td>
<td>(0.255)</td>
<td>(0.129)</td>
</tr>
<tr>
<td>MUTUAL_OWN</td>
<td></td>
<td>0.1160</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(0.084)</td>
</tr>
<tr>
<td>OTHERINST_OWN</td>
<td></td>
<td>-0.0262</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(0.389)</td>
</tr>
<tr>
<td>INDIVIDUAL_OWN</td>
<td></td>
<td>-0.1779</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(0.544)</td>
</tr>
<tr>
<td>DCAR*MUTUAL_OWN</td>
<td>-0.6338</td>
<td>-0.1720</td>
</tr>
<tr>
<td></td>
<td>(0.035)</td>
<td>(0.107)</td>
</tr>
<tr>
<td>DCAR*OTHERINST_OWN</td>
<td></td>
<td>-1.0369</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(0.313)</td>
</tr>
<tr>
<td>DCAR*INDIVIDUAL_OWN</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pseudo R-square</td>
<td>0.0227</td>
<td>0.2536</td>
</tr>
</tbody>
</table>

Panel B. Mean interaction effect (mean Z-statistics)

| mean interaction effect of DCAR*MUTUAL_OWN | -0.0634 |
|                                           | (-1.785) |
| mean interaction effect of DCAR*OTHERINST_OWN | -0.0145 |
|                                           | (-0.444) |
| mean interaction effect of DCAR*INDIVIDUAL_OWN | -0.0864 |
|                                           | (-0.425) |
Figure 1. The effect of the 2004 CSRC regulation on management’s incentive to submit value increasing and value decreasing equity offering proposals by the top 10 minority shareholder ownership.

The following graphs display the interaction effects and corresponding z-statistics on the interaction variables between AFTER and the top 10 minority shareholder ownership characteristics (MUTUAL_OWN, OTHERINST_OWN, and INDIVIDUAL_OWN) reported in Panel B of Table III, estimated using the formulas shown in Appendix B. Panel A plots the graphs for the value increasing proposals and Panel B the graphs for the value decreasing proposals. The lines above and below 0 on the figures located on the right side represent the 10% two-tailed significance levels (±1.65).

Panel A. Interaction effects for value increasing proposals (i.e., SUBMISSION=1)

Panel B. Interaction effects for value decreasing proposals (i.e., SUBMISSION=0)
Panel B. Interaction effects for value decreasing proposals (i.e., SUBMISSION=2)
Figure 2. The effect of proposal quality on minority shareholders’ voting decision by the top 10 minority shareholder ownership

The following graphs display the interaction effects and corresponding \( z \)-statistics on the interaction variables between CAR and the top 10 minority shareholder ownership characteristics (MUTUAL_OWN, OTHERINST_OWN, and INDIVIDUAL_OWN) reported in Panel B of Table V, estimated using the formulas shown in Appendix B. The lines above and below 0 on the figures located on the right side represent the 10% two-tailed significance levels (±1.65).