Shareholder Rights and Tunneling:
Evidence from a Quasi-Natural Experiment[†]

Jun "QJ" Qian
Carroll School of Management
Boston College & CAFR
qianju@bc.edu

Shan Zhao
School of Economics
Shanghai Univ. of Finance & Economics
zhao.shan@mail.shufe.edu.cn

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Abstract

Using a non-uniform governance mandate on cumulative voting in China as a plausibly exogenous shock, we examine the effects of strengthening shareholder rights on tunneling. Our difference-in-differences estimations show that firms adopting cumulative voting experience a significant decrease in tunneling activities by controlling shareholders relative to firms that do not follow this voting mechanism. However, this result goes away when we introduce an instrument variable that is free from any manipulations to the difference-in-differences estimations. Therefore, our results imply that a 'self selection' by firms committed to improve governance, rather than the governance mandate, can explain the drop in tunneling activities in estimations without the instrument variable. Overall, our paper suggests that in emerging markets characterized by entrenched controlling shareholders and weak institutions, laws and regulations aimed at improving a specific aspect of governance are not likely to be effective.

I. INTRODUCTION

Over the past decade, corporate governance has been a central topic of debate and discussions among researchers, practitioners and regulators worldwide. However, what kind of governance system is most effective for different types of firms operating in different environments remains an open question. In emerging markets characterized by weak institutions, a key obstacle for strengthening governance is how to restrain powerful and entrenched controlling shareholders, who can 'tunnel' resources through various channels. An important solution, pioneered by La Porta, Lopez-de-Silanes, Shleifer, and Vishny (1997, 1998, LLSV hereinafter), is to strengthen the protection of minority shareholder rights, so that they are more willing to participate in the decision process of firms including actively monitoring firms' management.[1]

In this paper, we examine the effects of a shareholder rights reform on tunneling activities by controlling shareholders in China—a country with impressive economic performance but its financial markets remain underdeveloped and corporate governance for listed firms weak (e.g., Allen, Qian and Qian, 2005, 2008). We identify a non-uniform governance mandate on cumulative voting as a plausibly exogenous shock to listed firms. Our simple difference-in-differences estimations show that firms adopting cumulative voting experience a significant decrease in tunneling activities by controlling shareholders relative to firms that do not follow this voting mechanism. However, this result disappears when we introduce an instrument variable that is free from any manipulations to the difference-in-differences estimations. Therefore, our results imply that a 'self selection' by firms committed to improve governance, rather than the governance mandate, can explain the drop in tunneling activities in estimations without the instrument variable. Overall, our paper extends the literature by showing that in emerging markets characterized by

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[1] Prior studies document that stronger country-level shareholder rights or investor protection are associated with higher firm valuation (LLSV 2002), efficient capital allocation (Wurgler 2000), lower private benefits of control (Nenova 2003), and higher dividend payouts (LLSV 2000).

entrenched controlling shareholders and weak institutions, laws and regulations aimed at improving a specific aspect of governance are likely to be ineffective.

An extensive strand of literature studies different aspects and mechanisms of corporate governance, and the consensus is that the voting mechanism to elect members of the Board of Directors is a central part of measuring the strength of governance. An important element of the voting mechanism is whether to allow *cumulative voting* (CV hereafter)—a multiple-winner voting system intended to promote more proportional representations than winner-take-all outcomes, in the director elections. Specifically, CV allows a shareholder to allocate her total votes in any manner desired, and the maximum number of votes she can cast for any one candidate is the product of the number of her shares owned and the number of board seats up for election. By allowing minority shareholders to concentrate all of their votes (multiple times) on the same candidate, CV helps these shareholders to elect directors who would represent and work for their interests.[2]

One of the challenges for the corporate governance literature is to establish robust, causal conclusions on the effects of governance mechanisms on firm performance (see, e.g., Bebchuk and Weisbach, 2010, for a recent survey). For example, adopting certain shareholder rights into the corporate charter is not a random event but an endogenous choice made by firms. Thus, firms with stronger and weaker shareholder rights probably also differ on other, unobservable aspects. So observed differences on firm performance between firms with different strength in shareholder rights may be caused by differences in these unobservable factors. Another related issue is the (firm-level) implementation of shareholder rights. Some firms may adopt certain shareholder rights into their corporate charters or bylaws, but they do not embrace these rights in practice (e.g., in the actual voting process), in part because they are not concerned about being 'caught' by regulators

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[2] For example, Black and Kraakman (1996) review the literature and conclude that "A critical feature of (a) self-enforcing (corporate law) model is a cumulative voting rule for election of directors." The Antidirector Index proposed by LLSV (1997, 1998) treats cumulative voting as one of six provisions of enhancing investor protection and shareholder rights. Gompers Ishi, and Metrick (2003) also consider cumulative voting as one of two corporate provisions that increase shareholder rights in their G index.

and other monitors in an environment with weak institutions. This kind of implementation problem is especially relevant for emerging markets where formal institutions are generally underdeveloped.

We try to deal with both the endogeneity and firm-level implementation problems by using a *non-uniform* mandate on the adoption of CV in China and hand-collected data on the actual use of CV in *director elections*. In January 2002, the *Code of Corporate Governance for Listed Companies* was announced, and Section 31 required the mandatory use of CV in director election in companies with their controlling shareholder's ownership stake above 30%. The announcement of the 30% cutoff indeed generates significant variations in the adoption of CV around the 30% threshold—firms just above the 30% cutoff are almost three times more likely to adopt the CV rule than those just below the cutoff. In order to serve as a valid instrument variable, the 30% cutoff in ownership stake must be exogenous. But ownership structure can be subject to both ex ante and ex post selection biases. The ex ante selection problem means that firms with different pre-regulation ownership structures may be systematically different in other unobservable dimensions. The ex post selection problem refers to the fact that firms can change their ownership structure to avoid the regulation. A special feature of Chinese ownership structure mitigates these two kinds of selection problems. There are two types of shares among most listed firms in China: tradable shares, held by institutional and retail investors, and non-tradable shares held exclusively by the government and its agencies. The non-tradable shares consist of 57% of total shares in our sample before the enactment of the "full float" share-structure reform in 2005. Most of the controlling shareholders in our sample only hold non-tradable shares. Transactions of non-tradable shares, including transferring and sales, are very costly so the controlling shareholder' ownership stakes are very stable during our sample period. We also show that the announcement of the 30% cutoff was a surprise to firms, in that we only observe very few controlling shareholders changing their ownership stakes before the new governance regulation was announced. Therefore, we use the 30% cutoff in the controlling

shareholder's ownership stake as our instrument variable.[3]

Our empirical analysis focuses on a sample of 381 listed companies whose controlling shareholders' ownership stake is around the 30% threshold just before the announcement of the regulation. This regression-discontinuity like design further mitigates endogeneity problems of the controlling shareholder's ownership stake.[4] We first use simple difference-in-differences (DD hereafter) approach to compare the changes in tunneling activities of firms adopting the CV rule vs. those that do not. Following prior literature, we measure the degree of tunneling by "other accounts receivables," where many of the transactions between the controlling shareholder and the listed firm are recorded (e.g., Jiang, Lee, and Yue, 2010), and the aggregate amount of all related-party transactions (e.g., Berkman, Cole, and Fu, 2010). We find a significant decrease in both of these variables proxy for expropriation activities among CV-adopted firms relative to non-CV firms, after controlling for unobservable firm-level factors that do not change over time (firm fixed effects, e.g., Himmelberg, Hubbard, and Palia, 1999) and time-varying control variables. However, when we add the 30% threshold as the instrument variable, the difference-in-differences and instrument variable models (through a two-stage least square, or 2SLS, regression model) show no significant difference in the extent of tunneling activities between CV and non-CV firms.

The sharp contrast between DD and DD-IV estimation results suggest a strong selection effect—firms that commit to improve corporate governance *do* improve governance, and, as a result, tunneling activities are reduced; these results also indicate that the CV mandate *per se* has no effect on tunneling or improving corporate governance. Our results and implications are consistent with those of Price, Roman and Rountree (2011). They find that despite the efforts of regulators to push

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[3] Other studies exploring exogenous variation due to non-uniform regulations are Bertand and Mullainathan (2003), Chhaochharia and Grinstein (2009) and Choi, Park, and Yoo (2007), among others.

[4] Similar ideas are used in many economics studies. Imbens and Wooldridge (2008) give such an example as follow. Suppose a state implements a change in health care policy aimed at the elderly, say people 65 and older. One can use data on people in the state with the policy change, both before and after the change, with the control group being people under 65 (or, say, 55 to 64), and the treatment group being people 65 and older.

for the best practice of corporate governance in Mexico, including extensive disclosure of different aspects of governance (e.g., structure of the board, internal control and executive compensation) similar to that of the Sarbanes-Oxley Act in the US, there is no evidence that the overall disclosure quality or the operating performance has improved as a result of the governance reform. They conclude that this is because the broad institutional environment in Mexico remains weak, so that the effect of any legal reform is limited. In the case of China, one of the central goals for developing the stock market in the early 1990s was to partially privatize state-owned enterprises (SOEs). Hence, large and inefficient SOEs have had much easier access to the markets than the most efficient privately owned firms. In addition, the government plays the dual roles of regulator and large shareholder of most of the listed firms—through holdings of large amounts of nontradable shares. These led to bad incentives and many loopholes, as well as ineffective regulations (e.g., Allen, Qian, Zhang and Zhao, 2010). These defects in the institutions and financial system significantly weaken the effects of governance reforms, as documented in our paper.

Our paper contributes to and extends the literature on law, governance and finance. Unlike the work of Price et al. (2011) and much prior research on corporate governance, we identify an exogenous shock and an instrument variable so that we can draw causal conclusions on the effects of governance reform on tunneling. Our methodologies and results imply that a self selection by firms committed to improve governance, rather than the governance mandate itself, explains the drop in tunneling activities among firms adopting CV in estimations *without* the instrument variable. Our paper suggests that in emerging markets characterized by entrenched controlling shareholders and weak institutions, laws and regulations aimed at improving a specific aspect of governance are not likely to be effective; other related laws and regulations must also be improved in order to fundamentally change behaviors of controlling shareholders and firms.

The paper proceeds as follows. Section II introduces the institutional background and

cumulative voting regulation. Section III describes data, sample construction and summary statistics. Section IV presents empirical methodology and results and provides discussions on the implications. Finally, Section V concludes. The Appendix contains explanations of all the variables used in the paper.

II. OVERVIEW OF INSTITUTIONAL BACKGROUND AND CORPORATE GOVERNANCE REGULATIONS

China's stock market was first introduced in the early 1990s, and grew very fast since its inception. At the end of 2009, there were 1,718 listed companies on the two (domestic) stock exchanges, the Shanghai Stock Exchange (SHSE) and the Shenzhen Stock Exchange (SZSE). The total market capitalization reached RMB 24.27 trillion (roughly US$3.57 trillion), ranked as the second largest (in terms of market cap) in the world after the U. S. financial markets. An important reason for the creation of the stock market is to partially privatize state-owned enterprises (SOEs) and raise funds for these companies; as a result, most of listed companies were carve-outs from existing SOEs. A special feature for listed firms in China (until 2005) is that the shares of each listed company are divided into two categories: nontradable shares held by the government and its agencies and legal persons (e.g., SOEs), and tradable shares held by institutional and retail investors. Starting in 2005, a system-wide full-floating reform converted the nontradable shares to tradable shares except for listed firms in 'strategically important' industries such as large banks and natural resource companies.

At the end of 2001, the average (median) amount of shares owned by the controlling shareholders was 44.2% (43.7%) for 1,129 listed firms. On average, total shares held by the second to tenth largest shareholders are about 20%. The ultimate controlling shareholder of most Chinese firms (69.6%) are either the central government, local government, or an SOE. Moreover, the majority of listed firms in China have a parent company which typically has multiple subsidiaries.

Group affiliation complicates a listed firm's ownership structure and reduces its transparency in operations and corporate governance. Concentrated ownership structures and group affiliations among Chinese listed firms implies that the conflict between controlling shareholders and minority shareholders and other stakeholders can be potentially severe, which is common in developing countries including many Asian economies (Claessens et al., 2002). In a speech delivered in 2001, Mr. Xiaochuan Zhou, the chairman of Chinese Securities Regulatory Commission (CSRC), the regulatory authority of China's stock market, said that "the expropriation of minority shareholders of listed firms is widespread…"

To improve corporate governance, in January 2002, the Ministry of Commerce and CSRC jointly issued the *Code of Corporate Governance for Listed Companies* (the *Code* hereinafter). The *Code*, which largely followed the *OECD Principle of Corporate Governance 1999* (but there is no mentioning of CV), addressed broad issues of corporate governance, including investor protection, shareholder activism, board structure, basic guiding principles and moral standards for directors, supervisors, and managers of listed companies. It is the key measuring standard of evaluating whether a company has strong and effective corporate governance. If major problems exist with the corporate governance structure of a listed company, the regulation authorities can instruct the company to make corrections in accordance with the *Code*. In addition, there are several specific rules in the *Code* that were not mentioned before, and in particular, its section 31 states,

"A cumulative voting system shall be earnestly advanced in shareholders' meetings for the election of directors. Listed companies with 30% or more outstanding shares owned by their controlling shareholder shall adopt a cumulative voting system."[5]

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[5] For more details see http://www.ecgi.org/codes/documents/code_en.pdf. Note that, there was no clear definition of controlling shareholders in China's corporate law until the new *Corporate Law 2005* was announced and enacted. According to the 2005 law, controlling shareholders are shareholders with 50% or greater ownership stakes or shareholders whose voting power has an important influence in the shareholder meeting voting.

There are several important facts about the 2002 regulation on CV in China. First, there was no previous regulation before 2002. In fact, through manually collected data on director elections, we find only 5 out of about 400 firms used CV before 2002. Second, according to Chinese legal scholars, the requirement of CV adoption in the *Code* for companies with the controlling shareholders' ownership above 30% is mandatory (e.g., Tan and Liu, 2008). There is also evidence that the Chinese court system shares the same view. In the legal case of *Xindu Hotel* (ticker: 000033) in 2003, the court argued that the adoption of CV for companies with the controlling shareholders ownership above 30% was mandatory according to the 2002 *Code*.

Further, it is important to point out that the 30% cutoff is unexpected. Like many other rules and regulations in China, a *preliminary* version of the *Code* was announcement in September 2001, four months before the formal announcement of the final version. However, the preliminary version did not mention the 30% cutoff and it did not require mandatory adoption of CV in director elections. Instead, the preliminary version stated that "cumulative voting *can* be used in director election…" We also search the Genius database (a Chinese news database similar to *Factiva*) and Google News and find no article mentioning the 30% cutoff related to the CV adoption prior to January 2002; in fact, our search finds *no* article containing both "30%" (or "thirty percent") *and* "cumulative voting" before 2002. In addition, we also do not find any firm that started to use CV in director elections in 2001.

Finally, the effective date of the *Code* is the day of enactment; that is, firms should actually use CV in their first director election beginning in 2002. However, as in almost all the regulations, there are potential loopholes in the *Code*. For example, it does not specify any punishment for a violation. This could explain the less than 100% compliance among firms whose controlling shareholder has a 30% or greater ownership stake, which we will discuss below. We will also show that the new regulation on CV adoption generated strong exogenous variations in the adoption of

CV by firms, which we will use as the main instrument variable throughout the paper.

III. DATA

We obtain accounting, financial, ownership, and corporate governance data from the China

Stock Market & Accounting Research (CSMAR) database. The sample selection procedure begins

with all Chinese A-share companies listed in SHSE and SZSE. Consistent with prior literature, we

drop firms that only issue B-shares (tradable shares for non residents of China). We focus on a

discontinuity sample of companies whose controlling shareholders' ownership stake was between

20% and 40% at the end of 2001. We choose year-end 2001 because the *Code* was announced and

enacted in January 2002 and the unexpected nature of the 30% cutoff discussed above.[6] There are

419 firms that meet this requirement. We drop one financial firm and 32 firms that do not have

complete financial information during the 2000 to 2003 period.[7] This sample construction

procedure follows prior literature (e.g. Yermack 1996); that is, we build an unbalanced panel during

the 1999-2008 period but we require that firm data be available for the 2000-2003 period. We

balance two sampling issues: mitigating survivorship bias and facilitating the use of panel data

techniques. In addition, five firms are dropped from the sample because they adopted CV before

2002. We are left with 381 firms.

The information on CV adoption is hand-collected from the *Tianxiang* database.[8] We search

the database for corporate announcements and filings containing the keyword "cumulative voting."

We read all of the documents for our sample firms, and find that there are three main types of

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[6] Different from U.S. companies, the fiscal year of Chinese listed companies coincides with the calendar year. Firms must report their year-end ownership structure (i.e., the ten largest shareholders' name and ownership stakes) in their annual reports. Our results are robust to the use of year-end 2000 ownership as an instrument variable.

[7] Specifically, we drop 21 firms that went IPO (initial public offering) in 2000 and 11 delisted firms; including these firms in regressions does not change our main results.

[8] *Tianxiang* is a subscription-based database with comprehensive corporate announcements and filings. Visit its website (http://www.txsec.com) for more information.

corporate filings containing information related to CV adoption: director election announcements in which firms disclose the actual voting mechanisms that they used, corporate bylaws in which firms declare that CV should be used in director elections, and annual reports in which some firms discuss the adoption of CV.[9] In our main analyses, we focus on the actual use of CV in director elections, for two reasons. First, the use of CV in director elections is more likely to bring real changes to board composition than a declaration of CV adoption in the company charter, bylaws and/or annual reports. Second, we find that thirteen firms that had stated the adoption of CV on paper actually failed to use this mechanism in their subsequent director elections.

Because director election is held once every three years for almost all Chinese listed companies and the *Code* required the use of CV starting 2002, we classify a firm as a CV user if it used CV in director election in 2002, 2003 or 2004.[10] According to our definition, there are 88 CV users among the 381 sample firms. The timing of CV use is presented in Figure 1. In 2002, 27 firms used CV in director election; the numbers are 29 and 32 for 2003 and 2003, respectively. In robustness tests (see Section IV.2 below) we also consider a weaker definition of CV adoption. We define a firm as a CV adopter if it used the mechanism in a director election or made the statement that CV should be used in their annual reports or bylaws in 2002, 2003 or 2004.

III.1 Variable Definitions

Strengthening a firm's minority shareholder rights can have an important impact on many aspects of firm behaviors and performance. By enhancing the likelihood of selecting one or more

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[9] To address the concern that some firms may not fully disclose details about their voting mechanisms including the adoption of CV, we also use information from the Corporate Governance Self-Evaluation Report (*Gongsi zhili zicha baogao*), which is a large scale mandatory survey conducted by CSRC on all listed firms in 2007. In the report, each and every listed firm is required to answer a number of corporate governance related questions including the question "Has cumulative voting been used in director election?"

[10] China's *Corporate Law,* approved by the government in 1999, ruled that the term for members of the Board of Directors cannot exceed three years. Chinese firms report the term of their current board members in annual reports. We find that all but two firms' term for directors is three years.

directors favored by (dissenting) minority shareholders, a direct and first-order impact of the use of CV would be to reduce both the possibility and the degree of damages on the controlling shareholders' expropriation of minority shareholders and other stakeholders. Such expropriation represents a typical obstacle in the development of stock markets and financial systems in emerging economies with concentrated ownership and weak institutions (e.g., La Portal, et al., 1998, 1999). Following prior literature, we select two commonly used measures on tunneling. First, similar to Berkman, Cole, and Fu (2010) and in the same spirit of the self-dealing measures used in Djankov, La Porta, Lopez-de-Silanes, and Shleifer (DLLS, 2008), we use the annual aggregate value of *related-party transactions* (RPT) for each firm divided by the firm's year-end total assets (RPTA).

The concept and disclosure of RPTs is not standardized until the late 1990s. In 1997, China's Ministry of Finance issued "Accounting Criteria of Corporations—Related Parties and Related Party Transactions Disclosure," widely regarded as a milestone for RPT disclosure in China and comparable to the International Accounting Standards 24, "related party disclosure." It defines "related parties" as individuals or entities capable of benefiting from significant influence or control rights over a listed firm's financial and operational activities. Related parties of a public company may include its parent company or subsidiaries, other companies that share its parent, its large and influential investors, its joint ventures or joint operating partners, the principal individual investors or key management personnel and their family members, and other companies controlled or heavily influenced by its principal individual investor or family members. The 1997 *Accounting Criteria* also lists eleven examples of RPTs and requires RPT disclosure. The disclosure of related party transaction began to become common practice for listed firms since 1999 (Yuan, 2001), especially after 2001. In December 2001, CSRC issued "No. 15 of Disclosure Guideline for Public Listed Companies: Financial Statement," and Section 31 required that companies should have a "Related Party Relationships and Transactions" section in the footnote to disclosure RPTs.

Our data on related-party transactions is from CSMAR, which collects information on RPTs based on the above disclosure requirements. There are two types of RPTs. Following Cheung et al. (2006, 2009), we classify transactions as potentially *beneficial* for the listed company if it received cash, loans or guarantees from the related party. Harmful related-party transactions are total related-party transactions subtracted by potentially beneficial related-party transactions. Our results are not sensitive to the inclusion of potentially beneficial related-party transactions.

Our second proxy for expropriation by controlling shareholders is the ratio of "other accounts receivable" over total book assets (ORECA). Jiang, Lee, and Yue (2010) and Li, Lu and Qian (2011) show that this ratio is closely associated with the extent of controlling shareholders' tunneling activities. According to disclosure requirements and accounting rules, all transactions between the controlling shareholder and a listed firm must be recorded in the journal entry books and the effects of the transaction must be reflected in the balance sheet of the firm immediately. Many transactions involving cash and assets transfers from the listed firms to their controlling shareholders and listed firms are recorded in "other accounts receivables." Jiang et al. (2010) also find that firms with large ORECA balances experience worse future operating performance and are much more likely to be delisted.

We also follow recent literature on tunneling when selecting our control variables (e.g., Atanasov et al. 2010; Jiang et al. 2010). In addition, we include board independence—the fraction of independent directors on boards—to control for the introduction of the independent directors system in 2001. Further, to control for the potential effect of the "full-float" share structure reform started in 2005 (e.g., Firth, Lin, and Zou, 2010), we introduce REFORM, an indicator variable, that equals one for an observation (firm-year) if the firm has introduced the reform by the end of the same year and zero otherwise. Finally, we include several variables that have important impact on corporate behaviors and performance documented by prior literature on China's stock market and

listed firms (e.g., Allen et al. 2005; Wei, Xie, and Zhang 2005; Gul, Kim, and Qiu, 2009). The first variable is an indicator variable *STATE*, which indicates the ownership stake of the government; we also have an identity indicator of the controlling shareholder, which equals 1 if the firm's controlling shareholder is government-related, and 0 otherwise (TOPGOV). Another variable is *FOREIGN*, which denotes the percentage of all outstanding (A, B and H) shares held by the foreign investors (B-share and/or H-share holders).

III.2 Summary Statistics

Panel A of Table 1 presents some descriptive statistics for our sample. In total, we have 381 firms and 3,680 firm-year observations during the period of 1999-2008. As discussed earlier, listed Chinese firms all have December as their fiscal year-end. Panel A reports that the average controlling shareholder's ownership of our sample is 29.6%. The state or state agency holds 22.6% of shares of the average companies; for 67.1 % of firm-year observations, the controlling shareholders are state or state owned entities. The ownership by foreign investors is small, at 3.0% for the average firm. The mean (median) ORECA, or other accounts receivables deflated by year-end total book assets, is 11.3% (61.3%), which is higher than that in the Jiang et al. (2010) sample. The mean (median) RPTA, or the aggregate value of harmful related-party transactions divided by the firm's year-end total assets is 14.7% (5.1%) and the inter-quartile range for this variable is between 0.3% and 19.7% so there are significant variations. The average market-to-book (MTB) ratio is 1.479 and the inter-quartile range for this variable is between 1.063 and 1.700. The mean and median return-on-assets (ROA) is 1.1% and 3.0%, which is lower than that of the universe of listed Chinese firms (2.8% and 3.6%, respectively). This indicates that our sample firms have relatively poor performance. The average size of total book assets (ASSETS) is RMB1.78 billion (approximately US$215 million, using the prevailing exchange rate of US$1 = RMB 8.27 during our sample period). We winsorize all the variables at the 1% and 99% levels for each year.

IV. EMPIRICAL METHODOLOGIES AND RESULTS

In this section we first introduce our empirical methodologies with the goal of examining the impact of the 2002 *Code* on the non-uniform adoption of CV on the extent of tunneling activities among listed firms. We then present two sets of results from our empirical tests with and without the instrument variable, and discuss the implications of the results based on the comparisons between the two sets of results.

IV.1 Difference-in-Differences Methodologies and Instruments

Our main strategy is the difference-in-differences (DD) approach, a commonly used treatment effect model, applied to a large and growing amount of recent research (e.g., Jayarante and Strahan 1996; Bertrand and Mullainathan 2003). Applying the terminologies of treatment effect models to our setting, the treatment group is the listed firms that adopted and used CV in director relations (during and after 2002) and the control group is the firms that did not use CV. The key insight of the DD approach is to compare the changes in the outcome variables of the treatment group (before and after the implementation of the treatment) with those of the control group to obtain treatment effects. In our setting, DD compares changes in firm performance metrics of the treatment group, before and after the enactment of the 2002 *Code*, with those of control group. The underlying assumption is the 'parallel trend assumption'—that the treatment group should behave the same way as the control group if there were no treatment. Following Bertrand, Duflo and Mullainathan (2004), the DD estimation equation is given by,

$$y_{it} = \alpha_i + \alpha_t + \beta_1 * CV\_AFT_{it} + \gamma_1 * X_{it} + \epsilon_{1it} \tag{1}$$

where i indexes firms and t indexes time; y_{it} is the outcome variable; CV_AFT_{it} is an indicator variable that equals one if firm i has used CV in director election by year t, and zero otherwise; X_{it} is a vector of control variables, including firm size, age, and ownership structure; α_i and α_t represent firm and year fixed effects respectively; and ϵ_{1it} is the error term. The main coefficient of interest,

β_1, measures the effect of CV use on the outcome variables. We estimate Equation (1) using OLS.

It is worth mentioning that firm fixed effects are not indispensable for DD models—'group' fixed effects are sometimes sufficient. However, we choose this more restrictive specification to better control for the potentially omitted variable biases problem, which is an important concern in corporate governance research (e.g., Himmelberg, Hubbard, and Palia, 1999). The use of year fixed effects accounts for aggregate fluctuations. Following standard approach in panel data sets, we cluster standard errors by firms (e.g., Petersen, 2005).

The DD approach is valid only if there is no serious selection bias in the treatment group; otherwise the parallel trend assumption is likely to be violated. In our setting, this requires that the use of CV is not driven by unobservable firm characteristics that also affect outcome variables. This is a strong assumption. Despite the mandate from the 2002 *Code*, the decision to use CV in director elections is made by firms—recall that the enforcement of laws and regulations by CSRC is not always effective—and this is likely to depend on firm characteristics.[11] For example, it is possible that firms with serious agency problems may not use CV, as controlling shareholders do not want to relinquish total control of the firm and allow outside directors elected by minority shareholders to monitor the firm.

Accordingly, we use difference-in-differences-instrument variable (DD-IV) methodology to address the potential endogeneity problem. As discussed earlier, our main instrument is whether a firm's controlling shareholder has an ownership stake greater or smaller than the 30% threshold indicated in the *Code*. Specifically, we define two indicator variables: the first indicator, Thirty, takes on the value of one if a firm's controlling shareholder's ownership stake is above 30% as of end-of-year 2001, and zero otherwise; the second indicator, *AFTEL*, equals one if a firm's first post-2002 director election took place in year *t* and zero otherwise. We then instrument our main

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[11] In a family succession study, Bennedsen et al. (2007) encounter a similar problem, and they also use instrument variables approach to address the endogeneity issue.

explanatory variable, the interaction term *CV_AFT,* with the interaction term *Thirty*AFTEL*. We use two-stage least square (2SLS) estimation. The corresponding first stage equation is:

$$CV\_AFT_{it} = \alpha_i + \alpha_t + \beta_2 * Thirty_i * AFT\_EL_{it} + \gamma_2 * X_{it} + \epsilon_{2it} \qquad (2)$$

A good instrument must satisfy two conditions: relevance and exclusion restriction. First, in our setting a relevant instrument variable should significantly affect the probability of using CV. Our data shows that there is a considerable difference in the use of CV between firms with their controlling shareholder's ownership stake just below and above 30%. For firms with controlling shareholder's ownership below 30%, 10.5% of these firms used CV while for firms with controlling shareholder's ownership above 30%, 40.1% of them used CV. Figure 2 plots the frequency of CV use by the end-of-year 2001 controlling shareholders' ownership stakes. We can see a clear jump in CV adoption at the 30% compliance threshold: For firms with their controlling shareholders' ownership between 27.5% and 30%, 13.2% of them adopted CV while for firms with controlling shareholders' ownership between 30% and 32.5%, 51.5% of them adopted CV. That is, the firms just above the cutoff are almost three times more likely to adopt CV than those just below the cutoff.

If adopting CV is costly for controlling shareholders then they may (force the firm to) manipulate their ownership stake to avoid the use of CV, if they anticipated the CV clause in the *Code*. However, as discussed above, one special feature of China's stock market and listed sector makes such a manipulation very unlikely. As our summary statistics (in Table 1) show, most of the controlling shareholders hold only nontradable shares. In fact, in our sample of 381 firms, only 4 firms' controlling shareholders hold some tradable shares. Transactions of nontradable shares of any firm are costly because they need the approval of the government and CSRC. For nontradable shares held by government agencies, which comprise half of all nontradable shares, permission from both the Ministry of Finance and CSRC is required before 2004. A regulation issued by CSRC in October 2001 ("Standardizing transactions of nontradable shares," No.119, 2001, CSRC)

made such transactions even more difficult. These regulations prohibited public auction of nontradable shares and partially suspend the transaction of non-tradable shares. We obtain additional information from corporate announcements and media coverage, suggesting that the 30% compliance threshold is indeed an important determinant of CV adoption by firms.[12]

Having established the relevance of our instrument variable, we now discuss the second condition, the exclusive restriction. A good instrument variable must not be correlated with the error term. As one of the most important corporate governance variables, the controlling shareholder's ownership stake certainly has a significant impact on firm behaviors and performance. Nevertheless, this is not a major concern in our setting. We focus on a discontinuity sample of firms with their controlling shareholder's ownership stake around the 30% cutoff. Because their controlling shareholder's ownership stake is close to each other (20% to 40%), we would expect that it does not have an important impact on the outcome variables in our sample. Put it differently, if our IV estimation finds significant variations in outcomes variables, the variations are much more likely to be driven by the use of CV, rather than the (small) difference in the controlling shareholder's ownership stake. This regression-discontinuity like approach, which is also used by other studies (e.g. Huang, 2008), has the advantage of mitigating endogeneity problems.

To get a sense of the observable differences between firms above and below the 30% threshold, Panel B of Table 1 compares two groups of firms' characteristics using end-of-year 2001 data. We can see that the average RPTA and ORECA, our two proxies for tunneling activities, are quite similar between two groups just before the announcement of the 2002 *Code*. This increases our confidence that the exclusion restriction is not a main concern in our setting. Further, Panel B shows that the return on assets and leverage for the two groups are also close. Only a few

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[12] For example, a number of companies stated that they would adopt CV if their controlling shareholders' ownership is above 30%, and several companies argued that they did not use CV precisely because their controlling shareholders' ownership stake is below 30%. Further, several firms were accused by the CSRC because they did not use CV even though their controlling shareholders' ownership stake is above 30%.

differences at the conventional levels of statistical significance emerge. The below 30% group has higher MTB ratio and are smaller in size. In our regressions we control for these observable differences to sweep out their impact on the tunneling activities.

IV.2 Empirical Results

Difference-in-Differences Models without Instruments

We examine the effect of CV the controlling shareholder's expropriation in Table 2. The estimated coefficient of interest is the one on CV_AFT, an indicator equal to one if the firm has used CV in director election by year t and zero otherwise. All the regression models reported in the table include year and firm fixed effects. Also, we allow for clustering of the observations at the firm level to account for the presence of serial correlations in the data. Columns 1 and 2 present the results with the aggregate value of harmful related party transactions over total assets (RPTA) as the dependent variable. In Column 1, we find that the CV_AFT dummy has a statistically significant coefficient of .089, indicating that, relative to the control group, the treatment group experiences a decrease in RPTA of 8.9% following the use of CV. In Column 2, we add other ownership structure variables (state and foreign ownership), board independence, and the share reform indicators. The magnitude and statistical significance of the CV_AFT coefficient have barely changed compared to those in Column 1; the magnitude of the coefficient—9%—represents an economically significant decrease in RPTA, as compared to the mean RPTA of .204 in our sample.

Columns 3 and 4 present the results with other accounts receivable over total assets (ORECA) as the dependent variable. In Column 3, we find that the CV_AFT dummy has a statistically significant coefficient of .023, indicating a decrease in ORECA of 2.3% following the use of CV. In Column 4, we add the same set of additional controls, and once again, both the magnitude and statistical significance of the CV_AFT coefficient have remained more or less the same. The magnitude of the coefficient—.023—again represents an economically drop in ORECA

relative to the mean ORECA of .096 in our sample. Finally, the results on other control variables are intuitive and similar to those obtained in prior research. For example, consistent with Jiang, Lee, and Yue (2010), firm size has a negative impact on the measures of expropriation; board independence is negatively related to the dependent variables, but only statistically significant for RPTA; leverage has a positive and significant effect on tunneling.

Difference-in-Differences-Instrument Variable Models

The results from simple DD regressions seem to suggest that the adoption of CV had a significant impact on tunneling activities. However, as discussed the adoption of CV is endogenous (despite the mandate on the adoption for firms over the 30% cutoff), so we now turn to estimate the effect using instrumental variable approach (2SLS). Table 3 presents the first stage regression results. The key independent variable is the instrument Thirty*AFTEL, the interaction of two indicators: Thirty, a dummy equal to one if a firm's end-of-2001 controlling shareholder's ownership is above 30% and zero otherwise, and AFTEL, that equals one if a firm's *first* post-2002 director election occurred by year t and zero otherwise.

In Column 1, we include only Thirty*AFTEL, and consistent with Figure 2, the 30% ownership cutoff is strongly positively correlated with the use of CV. Firms with controlling shareholder's ownership above 30% are 28 percentage points more likely to use CV relative to those that with their controlling shareholder's ownership below 30%, similar to the magnitude of difference shown in Figure 2 (almost 30%). Moreover, the difference is statistically significant at the .1% level; further, the F-statistics on the excluded instruments of 44 to 48 suggests that the instrument is unlikely to be a weak instrument. When we add more control variables in Columns 2-4, the coefficient on remains almost the same and so is the statistical significance.

Having examined the strong impact of the 30% cutoff on the likelihood of CV use, we now turn to analyzing its effect on tunneling. Table 4 presents the second stage regression results.

Columns 1 and 2 present the results with aggregate value of harmful related party transactions over total assets (RPTA) as the dependent variable. In contrast to Table 2, we find that the coefficient on the CV_AFT dummy is not statistically significant in Columns 1 and 2. In comparison with Table 2, we can also see that the magnitude of the coefficient in Column 1, .062, is smaller compared to that in Table 2. Similar results are observed when we introduce into the regression other ownership structure variables, board independence, and reform variables in Column 2. Column 3 and 4 present the results with other receivable deflated by total assets (ORECA) as the dependent variable. Once again, and in contrast to Table 2, we find that the coefficient on CV_AFT is statistically insignificant in Column 3 or 4. The magnitude of the coefficient also becomes much smaller as compared to those in Table 2. Among our control variables, firm size and age have a negative impact on the dependent variables. Finally, perhaps not surprisingly, the R-square of DD-IV regression is much lower than the DD regression, which is also found in other IV estimations (e.g., Bennedsen et al., 2007). The goal of the IV approach is for consistent parameter estimation, rather than an optimal fit of the dependent variable.

We now explore cross-sectional variations in the impact of CV use across firms. Our earlier discussion suggests that the impact of CV tends to be less effective when the enforcement institutions are weaker. To test this hypothesis, we introduce two variables that measure the effectiveness of legal enforcement institutions. The first measure is the provincial level legal environment index (Legal), first used in in Fan and Wang (2003), and in the same spirit of the cross-country judicial system measures developed by DLLS (2003). It has the following components: (1) the number of lawyers as a percentage of the provincial population; (2) the efficiency of local courts (percentage of lawsuits pursued by the courts); and (3) protection of property rights. These three institutional indexes are obtained from the National Economic Research Institute (NERI) Index of Marketization of China's provinces in 2002 to measure the quality of

market-supporting institutions at the provincial level.[13] The second measure is the fraction of state

ownership of a listed firm. Due to political connections, state-owned firms are often less likely to

be punished (for committing the same type of fraud or business crime; see, e.g., Ji 2004). Thus

legal enforcement is a greater challenge for firms with a greater state ownership stake.

Table 5 presents the results using these two measures. The specification of Column (1) is

similar to that of Table 4, except that we now include an interaction term between CV_AFT and the

legal environment index (Legal). Because we have two endogenous variables, we use two

instrument variables, Thirty*AFTEL and an interaction term between Thirty*AFTEL and Legal.

From Column 1, consistent with our prediction, we can see that the interaction term

Thirty*AFTEL*Legal has a negative coefficient, indicating that CV use has a stronger effect on

tunneling for firms located in provinces with better legal enforcement, but the statistical

significance is at the 10% level. We run a similar test in Column 2 with ORECA as the dependent

variable, and the interaction between Legal and CV_AFT is statistically insignificant. In Column 3,

we can see that the interaction between State (state ownership) and CV_AFT is positive, indicating

that the effect of CV use is more pronounced in firms with lower state ownership. We run a similar

test in Column 4 but with ORECA as dependent variable, and, once again, the interaction between

Legal and CV_AFT loses statistical significance. Overall, we conclude that there is weak evidence

supporting the hypothesis that the adoption of CV has a stronger effect on tunneling when legal

enforcement is more effective.

Additional Tests and Robustness Checks

We have used two measures of tunneling as our dependent variable. Some recent studies

(e.g., Deng, Gan, and He, 2009) use other measures for the degree of tunneling. To ensure that our

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[13] The NERI Index project was sponsored by the National Economic Research Institute and the China Reform Foundation and conducted by Fan and Wang (2003). The NERI indices capture the progress of the institutional transition in China's 30 provinces (excluding Tibet, due to lack of data).

main results are robust to alternative measures, we use four different variables on related-party

transaction-based tunneling: asset purchases from related parties over total assets, asset sales to

related parties over total assets, sales of final products to related parties over total sales, and

purchases of raw materials from related parties over cost of goods sold. We re-examine the effect

of CV on these measures with the same empirical specifications as those in Table 4 (DD-IV

approach using 2SLS). We continue to find that the adoption of CV has no significant impact on all

four measures of tunneling; we do not report these results to save space.

We have shown with the DD-IV approach that CV has no significant effect on tunneling.

We also examine the impact of CV use on firm performance. We use four common measures of

firm performance, MTB ratio, return on assets (ROA), return on sale (ROS), and return on equity

(ROE). MTB, an approximation of Tobin's Q, is computed as the market value of common equity

plus the book values of debt divided by the book value of assets; ROA and ROS are defined as

operating income divided by total assets and total sale respectively; ROE is computed as net income

over book equity. Table 6 presents the DD-IV regression results on firm performance. The

empirical specifications are the same as those in Table 4. In Column 1, the dependent variable is

MTB; the coefficient of CV_AFT is positive, but not economically or statistically significant: The

coefficient of .007 represents a .5% increase in the average MTB following the use of CV (the mean

MTB is 1.479 in our sample). We observe similar results for the rest of the columns.

In our analyses we have used a strict definition of CV adoption—firms actually used CV in

director elections. We now use a weaker definition and define a firm as a CV adopter if it used

cumulative voting in director election or stated the use of CV in their annual reports or bylaws in

2002, 2003 or 2004. In Equations (1) and (2), CV_AFT_{it} is now defined as a dummy variable that

equals one if firm i has been a cumulative voting adopter by year t and equals to zero otherwise.

The instrument variable is defined as a dummy variable that equals one if firm i's controlling

shareholder's ownership is above 30% and *t >2002*, and equals to zero otherwise. We then conduct

DD and DD-IV analyses using the new definition. We find similar results as those using the strict

definition of CV use. We do not report these results due to space constraints.

Another concern, common in DD treatment effect models, is that the results are driven by

shocks that are contemporaneous with CV use but affect firms differently (e.g., these shocks affect

larger and older firms differently as they affect smaller and younger firms). Allowing the

coefficients on firm characteristics such as size to vary with time should address such concerns. If

these effects corrupted our results, we would expect the estimated treatment effect to diminish when

we allow the effects of the covariates to change over time. In alternative specifications, we run both

DD and DD-IV regressions allowing the interaction of size (total assets), firm age, and book

leverage, with year dummies. Our estimates of the effects of CV use are not sensitive to these

interactions. Finally, in the sample construction, we drop 21 firms which IPOed in 2001. Including

them into our sample generates quantitatively similar results. As a common robustness check, we

also allow a one-year lag in the control variables. We still get quantitatively similar results.

IV.3 Discussions of Results

We have obtained very different results regarding the impact of CV adoption on tunneling

using DD models with and without the instrument variable—whether a firm's controlling

shareholder's ownership stake is above the 30% cutoff (that came as a surprise to firms). We have

ruled out the possibility that firms anticipated the 30% cutoff and manipulated their largest

shareholder's ownership stake to avoid CV use, and we have established the validity of our

instrument variable. Therefore, the sharp contrast between DD and DD-IV estimation results

suggest a strong selection effect—firms that commit to improve corporate governance *do* improve

governance, and, as a result, tunneling activities are reduced; these results also indicate that the CV mandate *per se* has no effect on tunneling or improving corporate governance.

Our findings that CV use does not causally decrease tunneling should not come as a surprise. In fact, since the enactment of the *Code* (including the mandate on CV) in 2002, there have been fierce debates among Chinese legal scholars about the effectiveness of these new regulations. Many scholars had a pessimistic view about the effectiveness of CV in reducing tunneling. They argue that, without the reform of other aspects of corporate governance, mandatory adoption of CV alone is to discipline controlling shareholders or significantly change their behaviors. First, the director *nomination* process is largely controlled by insiders, especially controlling shareholders. For example, according to a corporate governance survey conducted by SHSE in 2004, minority shareholders are rarely involved in the process. Second, even with CV the existence of a powerful minority blockholder is perhaps necessary to make CV effective. However, the ownership structure of Chinese firms is highly concentrated. Specifically, among our sample firms with the controlling shareholder's ownership stake above 30%, the mean (median) ownership of the *second* largest shareholder is only 11.5% (7.9%) in 2001, making it difficult for them to contest the decisions of the largest shareholder. Further, controlling shareholders and management (under their control) can develop ways to circumvent the effects of CV by, for example, decreasing the size of the board.

Our results and implications are consistent with those of Price, Roman and Rountree (2011). They find that despite the efforts of regulators to push for the best practice of corporate governance in Mexico, including extensive disclosure of different aspects of governance (e.g., structure of the board, internal control and executive compensation) similar to that of the Sarbanes-Oxley Act in the US, there is no evidence that the overall disclosure quality or the operating performance has improved as a result of the governance reform. They conclude that this is because the broad institutional environment in Mexico remains weak, so that the effect of any legal reform is limited.

In the case of China, as discussed earlier, one of the central goals for developing the stock market in the early 1990s was to partially privatize state-owned enterprises (SOEs). Hence, large and inefficient SOEs have had much easier access to the markets than the most efficient privately owned firms. In addition, the government plays the dual roles of regulator and large shareholder of most of the listed firms—through holdings of large amounts of nontradable shares. These led to bad incentives and many loopholes, as well as ineffective regulations (e.g., Allen, Qian, Zhang and Zhao, 2010). These defects in the institutions and financial system significantly weaken the effects of governance reforms, as documented in our paper.

V. CONCLUSIONS

In this paper, we examine the effects of a shareholder rights reform on tunneling activities by controlling shareholders among publicly listed firms in China. A country with impressive economic performance but underdeveloped financial markets and formal institutions, China provides an intriguing case for studying the impact of corporate governance reforms. We identify a non-uniform governance mandate on cumulative voting, a multiple-winner voting system intended to promote more proportional representations than winner-take-all outcomes in director elections, as a plausibly exogenous shock to listed firms. In January 2002, the *Code of Corporate Governance for Listed Companies* was announced, and Section 31 required the mandatory use of cumulative voting in director election in companies with their controlling shareholder's ownership stake above 30%. The announcement of the 30% cutoff indeed generates significant variations in the adoption of CV around the 30% threshold—firms just above the 30% cutoff are almost three times more likely to adopt the CV rule than those just below the cutoff. We also show that the announcement of the 30% cutoff was a surprise to listed firms.

Our simple difference-in-differences estimations show that firms adopting cumulative voting experience a significant decrease in tunneling activities by controlling shareholders relative to firms that do not follow this voting mechanism. However, this result disappears when we introduce an instrument variable—whether the controlling shareholder's ownership stake is greater or smaller than the 30% threshold—to the difference-in-differences estimations. Therefore, our results imply that a 'self selection' by firms committed to improve governance, rather than the governance mandate, can explain the drop in tunneling activities in estimations without the instrument variable. Overall, our paper extends the literature by showing that in emerging markets characterized by entrenched controlling shareholders and weak institutions, laws and regulations aimed at improving a specific aspect of governance are likely to be ineffective.

References:

1. Allen, F., J. Qian, M. Qian. 2005. Law, finance and economic growth in China. Journal of Financial Economics 77 (1): 57-116.

2. Allen, F. J. Qian, and M. Qian, 2008, "China's Financial System: Past, Present, and Future," Ch. 14 of China's Great Economic Transformation, L. Brandt and T. Rawski, eds., Cambridge University Press.

3. Angrist, J and S Pischke, (2008) Mostly Harmless Econometrics: An Empiricists' Companion - Princeton University Press, Princeton, NJ

4. Atanasov, V., B. Black, C. Ciccotell, S. Gyoshev, 2010 How Does Law Affect Finance? An Examination of Equity Tunneling in Bulgaria, Journal of Financial Economics, forthcoming

5. Bai, C., Q. Liu, J. Lu, F. Song, and J. Zhang, 2004. Corporategovernance and market valuation in China. Journal of Comparative Economics 32(4), 519–616.

6. Barber, Brad M., and John D. Lyon, 1996, Detecting long-run abnormal operating performance: The empirical power and specification of test statistics, Journal of Financial Economics 41, 359-399.

7. Bebchuk, L. A. and A. Hamdani 2009 The Elusive Quest for Global Governance Standards Discussion Paper No. 633 Harvard Law School

8. Bebchuk, L.A., Cohen, A., 2005. The costs of entrenched boards. Journal of Financial Economics 78, 409–433.

9. Bennedsen, M., K. Nielsen, F. Perez-Gonzalez, and D. Wolfenzon (2007), "Inside the family firm: the role of families in succession decisions and performance," Quarterly Journal of Economics 122: 647-691.

10. Berkman, H., Cole, R., Fu, J. 2010. Political connections and minority-shareholder protection: evidence from securities-market regulation in China. Journal of Financial and Quantitative Analysis, forthcoming.

11. Bertrand, M., E. Duflo, and S. Mullainathan. 2004. "How Much Should We Trust Differences-in-Differences Estimates?," Quarterly Journal of Economics 119, 249-275.

12. Bertrand, M., P. Mehta, and S. Mullainathan, 2002. Ferreting out tunneling: An applica-tion to Indian business groups. Quarterly Journal of Economics 117, 121–148.

13. Bertrand, M. and S. Mullainathan. 2003. "Enjoying the Quiet Life? Corporate Governance and Managerial Preferences," Journal of Political Economy 111, 1043-1075.

14. Bhagat, S., Brickley, J., 1984. Cumulative voting: The value of minority shareholder voting rights. Journal of Law and Economics 27, 339–365.

15. Black, B. and R. Gilson, 1998, Venture capital and the structure of capital markets: Banks versus stock markets, Journal of Financial Economics 47, 243-77.

16. Black, Bernard, and Reinier Kraakman, 1996, A self-enforcing model of corporate law, Harvard Law Review 109, 1911–1981.

17. Cai, Jie, Jacqueline Garner, and Ralph Walkling 2010 Electing Directors, Journal of Finance, forthcoming

18. Calomiris, C., R. Fisman, Y. Wang, 2010. Pro…ting from government stakes in a command economy: Evidence from Chinese asset sales. Journal of Financial Economics 96, 399-412.

19. Claessens, S., Djankov, S., Fan, J., Lang, L., 2002. Disentangling the incentive and entrenchment effects of large shareholdings. Journal of Finance 57, 2741–2771

20. Chen, S., Z Sun, S Tang 2010 Government intervention and investment efficiency: Evidence from China - Journal of Corporate Finance, 2010

21. Cheung, Y., L. Jing, R. Tong, R. Rau, A. Stouraitis, 2009. Tunneling and propping up: An analysis of related party transactions by Chinese listed companies. Pacific-Basin Finance Journal 17, 372-93.

22. Cheung, Y., Rau, R., Stouraitis, A., 2006. Tunneling, propping, and expropriation: evidence from connected party transactions in Hong Kong. Journal of Financial Economics 82, 343-386.

23. Chhaochharia, Vidhi, and Yaniv Grinstein, 2009, "CEO Compensation and Board Structure", Journal of Finance.

24. Choi, Jongmoo Jay, Sae Won Park, and Sean Sehyun Yoo (2007), "The Value of Outside Directors: Evidence from Corporate Governance Reform from Korea," Journal of Financial and Quantitative Analysis, Vol., 42, No. 4, December 2007, pp. 941-962

25. Core, John E., Wayne R. Guay, and Tjomme Rusticus, 2006, Does Weak Governance Cause Weak Stock Returns? An Examination of Firm Operating Performance and Investors' Expectations, Journal of Finance 61, 655-687.

26. Chung, K.H., Pruitt, S.W., 1994. A simple approximation of Tobin's q. Financial Management 23, 70–74.

27. Deng, J., Gan, J., He, J., 2008. The dark side of concentrated ownership in privatization: Evidence from China. Unpublished working paper. Hong Kong University of Science and Technology.

28. Djankov, S., R. La Porta, F. Lopez-de-Silanes, A. Shleifer, 2008. The law and economics of self-dealing, Journal of Financial Economics 88, 430–433.

29. Firth, Michael, Chen Lin, and Hong Zou. 2010. Friend or foe? The role of state and mutual fund ownership in the split share structure reform in China. Journal of Financial and Quantitative Analysis 45:685-706.

30. Gompers, P., J. Ishii and A. Metrick, 2003, Corporate governance and equity prices, Quarterly Journal of Economics, 118, 107-155.

31. Gordon, J. 1994 Institutions as Relational Investors: A New Look at Cumulative Voting, Columbia Law Review 124, 165-180

32. Gul, F. A., J. B. Kim and A. Qiu, 2009, Ownership concentration, foreign shareholding, audit quality and firm-specific return variation: Evidence from China, Journal of Financial Economics, forthcoming.

33. Himmelberg, C., Hubbard, R., Palia, D., 1999. Understanding the determinants of managerial ownership and the link between ownership and performance. Journal of Financial Economics 53, 353–384.

34. Huang, Rocco R., 2008. "Evaluating the real effect of bank branching deregulation: Comparing contiguous counties across US state borders," Journal of Financial Economics 87, 678-705

35. Imbens, G. and J. M. Wooldridge 2008 Lecture Notes for Applied Microeconometrics Workshop http://www.irp.wisc.edu/newsevents/workshops/appliedmicroeconometrics/schedule1.htm).

36. Kaplan, Steven N., and Luigi Zingales, 2000, Investment-cash flow sensitivities are not a valid measure of financing constraints, Quarterly Journal of Economics 115, 707-712.

37. Jayaratne, Jith and Philip E. Strahan (1996). The Finance-Growth Nexus: Evidence from Bank Branch Deregulation, Quarterly Journal of Economics, 111(3), 639-70.

38. Ji, Weidong, 2004, Space of choice and judicial discretion in China: A perspective of comparative legal culture, CDAMS Discussion Paper, Kobe University

39. Jian, Ming, and T.J. Wong. 2010. "Propping and Tunneling through Related Party Transactions". Review of Accounting Studies, forthcoming.

40. Jiang, Guohua, Charles M. C. Lee, Heng Yue 2010 Tunneling through Inter-corporate Loans: The China Experience, Journal of Financial Economics forthcoming

41. Johnson, S., P. Boone, A. Breach, and E. Friedman. 2000. Corporate governance in the Asian financial crisis. Journal of Financial Economics 58:141-186.

42. Klapper, Leora F., and Inessa Love, 2004, Corporate governance, investor protection, and performance in emerging markets, Journal of Corporate Finance 195, 1–26.

43. La Porta, R., F. Lopez-de-Silanes, A. Shleifer, and R. W. Vishny. 1997. Legal Determinants of External Finance. Journal of Finance 52:1131-1150.

44. —. 1998. Law and Finance. Journal of Political Economy 106:1113-1155.

45. —. 2000. Agency Problems and Dividend Policies around the World. Journal of Finance 55:1-33.

46. —. 2002. Investor Protection and Corporate Valuation. Journal of Finance 57:1147-1170.

47. Li, K., L. Lu and J. Qian, 2011. Enforceability and the Effectiveness of Laws and Regulations, working paper, Boston College.

48. Nenova, T. 2003. The Value of Corporate Voting Rights and Control: A Cross-Country Analysis. Journal of Financial Economics 68:325-351.

49. Spamann, Holger 2009 `Law and finance' revisited, Review of Financial Studies

50. Thomas, R.S., Cotter, J.F., 2007. Shareholder proposals in the new millennium: Shareholder support, board response, and market reaction. Journal of Corporate Finance 13, 368-391

51. Tan, Raoxi, Liu Wei 2008 "On Cumulative Voting" Modern Business Trade Industry (in Chinese).

52. Scharfstein, D.S., 1998. The dark side of internal capital markets II: evidence from diversified conglomerates. National Bureau of Economic Research Working Paper Series), Available at

http://www.nber.org/papers/w6352.pdf.

53. Shin, Hyun Han and René Stulz, 1998, Are internal capital markets e¢ cient?, Quarterly Journal of Economics 113, 531-552.

54. Wei, Z., Xie, F., Zhang, S., 2005. Ownership structure and firm value in China's privatized firms: 1991--2001. Journal of Financial and Quantitative Analysis 40 (1), 87--108.

55. Wurgler, J. 2000. Financial markets and the allocation of capital. Journal of Financial Economics 58:187-214.

Appendix A
Variable definitions

CSO	=	The controlling shareholder' ownership at the year-end;
STATE	=	The percentage of shares held by state owner(s) at the year-end
TOPGOV	=	An indicator variable the nature of the controlling shareholder. It equals 1 if the firm's controlling shareholder is government-related, and 0 otherwise;
FOREIGN	=	The percentage of shares held by the foreign investors (B-share and/or H-share holders);
RPTA	=	aggregate value of harmful related-party transactions divided by the firm's year-end total assets
ORECA	=	other receivable deflated by year-end total assets
ASSETS	=	Total assets at the end of fiscal year;
Log_AT	=	Natural logarithm of total assets
MV	=	Market value of common equity, the price of non-tradable share is the equity per share;
LEV	=	Leverage computed as total liabilities divided by total assets;
ROA	=	Operating income divided by total assets
MTB	=	Market-to-book ratio, calculated as the market value of equity plus book value of debt divided by total assets
AGE	=	Firm age
CFO	=	Net operating cash flow
CAPEX	=	Capital expenditure divided by total assets
BOARD_IND	=	The fraction of independent directors on boards
BOARD_SIZE	=	The total number of directors on boards
CV_AFT	=	a dummy variable that equals one if firm *i* used cumulative voting in director election by year *t* and equals to zero otherwise.
Thirty*AFTEL	=	is the interaction of two variables: Thirty and AFTEL. Thirty is a dummy, equal to one if a firm's 2001 controlling shareholder's ownership is above 30% and zero otherwise. The second dummy variable, AFTEL, equals one if a firm's first post-2002 director election occurred by year t and zero otherwise.
REFORM	=	A dummy, equal to one if a firm introduced the full-flotation reform by year t and equals to zero otherwise.

Table 1 Descriptive Statistics

Panel A report the sample consists of 3,680 annual observations for 381 listed companies between 1999 and 2008. Panel B compares of firms with controlling shareholder's ownership (CSO) below and above 30% using end-of-year 2001 data.

Panel A: All firms from 1999 to 2008
The table presents the mean, standard deviation, first quartile, median, and third quartile for each variable. All variables are as defined in Appendix A.

VARIABLES	mean	s.d.	p25	Median	p75
CSO	0.296	0.0725	0.250	0.291	0.340
STATE	0.226	0.189	0	0.256	0.368
TOPGOV	0.671	0.470	0	1	1
FOREIGN	0.0298	0.0998	0	0	0
CAPEX	0.208	0.365	0.0290	0.115	0.262
MTB	1.479	0.619	1.063	1.287	1.700
ROA	0.0107	0.123	0.00147	0.0297	0.0560
ORECA	0.096	0.177	0.0238	0.0613	0.135
RPTA	0.204	0.215	0.00283	0.0508	0.197
ASSETS	1,772	2,289	656.3	1,121	2,022
MV	2,225	2,476	986.2	1,559	2,578
LEV	0.548	0.366	0.375	0.510	0.637
MTB	1.479	0.619	1.063	1.287	1.700
AGE	6.619	3.229	4	7	9
BOARD_SIZE	9.570	2.253	9	9	11
BOARD_IND	0.213	0.160	0	0.286	0.333

Panel B: Comparison of firms with controlling shareholder's ownership (CSO) below and above 30% using 2001 data

	CSO<=30%		CSO>30%		t-statistic for difference
	mean	sd	mean	sd	
ORECA	0.0946	0.0973	0.0881	0.0853	1.523
RPTA	0.0952	0.170	0.110	0.179	-0.912
ROA	0.0204	0.0710	0.0209	0.0593	-0.032
Q	1.796	0.628	1.636	0.510	2.512
ASSETS	1,325	1,196	1,690	1,643	-2.471
LEV	0.481	0.180	0.466	0.171	1.522
CAPEX	0.275	0.382	0.269	0.343	0.325

Table 2 Cumulative voting use and tunneling: difference-in-differences results

All variables are as defined in Appendix A. The dependent variable is RPTA in column (1) and (2) and ORECA in column (3) and (4). The p-values, based on standard errors corrected for clustering at the firm level, are given in the parentheses. *, **, and *** denote significance at the 10%, 5%, and 1% level, respectively. All models include firm and year fixed effects.

VARIABLES	(1) RPTA	(2) RPTA	(3) ORECA	(4) ORECA
CV_AFT	-0.089**	-0.090**	-0.023**	-0.027**
	[0.047]	[0.049]	[0.048]	[0.029]
STATE		0.030		-0.028
		[0.785]		[0.324]
FOREIGN		-0.166		0.003
		[0.505]		[0.959]
BOARD_IND		-0.326**		-0.064
		[0.024]		[0.191]
MTB	-0.021	-0.032	0.002	0.001
	[0.542]	[0.322]	[0.823]	[0.889]
LEV	0.235***	0.230***	0.213***	0.217***
	[0.002]	[0.003]	[0.000]	[0.000]
Ln(Assets)	-0.062*	-0.060*	-0.027***	-0.041***
	[0.058]	[0.081]	[0.003]	[0.001]
AGE	0.041***	0.067***	-0.009***	-0.013***
	[0.000]	[0.000]	[0.000]	[0.000]
REFORM		-0.140*		0.073***
		[0.064]		[0.000]
Year FE	Yes	Yes	Yes	Yes
Firm FE	Yes	Yes	Yes	Yes
Observations	3680	3680	3680	3680
R-squared	0.302	0.303	0.591	0.626

Table 3 Cumulative voting use and 30% cutoff (First Stage)

All variables are as defined in Appendix A. The dependent variable is CV_AFT; Thirty*AFTEL is the interaction of two variables: Thirty and AFTEL. Thirty is a dummy, equal to one if a firm's 2001 controlling shareholder's ownership is above 30% and zero otherwise. The second dummy variable, AFTEL, equals one if a firm's first post-2002 director election occurred by year t and zero otherwise. The p values, based on standard errors corrected for clustering at the firm level, are given in the parentheses. *, **, and *** denote significance at the 10%, 5%, and 1% level, respectively. All models include firm and year fixed effects.

VARIABLES	(1) CV_AFT	(2) CV_AFT	(3) CV_AFT	(4) CV_AFT
Thirty*AFTEL	0.277***	0.276***	0.276***	0.278***
	[0.000]	[0.000]	[0.000]	[0.000]
STATE				0.187***
				[0.005]
FOREIGN				0.193
				[0.664]
BOARD_IND				-0.059
				[0.471]
MTB			0.025*	0.027*
			[0.099]	[0.084]
Ln(Assets)		0.030*	0.044**	0.045**
		[0.088]	[0.045]	[0.034]
LEV			0.020	0.024
			[0.341]	[0.243]
AGE		0.008**	0.008*	0.012**
		[0.047]	[0.058]	[0.032]
REFORM		-0.011	-0.015	-0.009
		[0.750]	[0.679]	[0.801]
Year FE	Yes	Yes	Yes	Yes
Firm FE	Yes	Yes	Yes	Yes
F-statistic	44.22	45.23	46.31	48.08
Observations	3680	3680	3680	3680
R-squared	0.590	0.592	0.593	0.597

Table 4 Cumulative voting use and tunneling: difference-in-differences-instrument variable results

All variables are as defined in Appendix A. The dependent variable is RPTA in column (1) and (2) and ORECA in column (3) and (4). The p-values, based on standard errors corrected for clustering at the firm level, are given in the parentheses. *, **, and *** denote significance at the 10%, 5%, and 1% level, respectively. All models include firm and year fixed effects.

VARIABLES	(1) RPTA	(2) RPTA	(3) ORECA	(4) ORECA
CV_AFT	-0.062	-0.060	-0.000	-0.017
	[0.212]	[0.224]	[0.997]	[0.668]
STATE		0.045		-0.025
		[0.702]		[0.353]
FOREIGN		-0.156		-0.018
		[0.508]		[0.769]
BOARD_IND		-0.336**		-0.089*
		[0.017]		[0.064]
MTB	-0.019	-0.029	0.002	0.001
	[0.555]	[0.330]	[0.854]	[0.942]
LEV	0.235***	0.230***	0.214***	0.217***
	[0.001]	[0.002]	[0.000]	[0.000]
Ln(Assets)	-0.059*	-0.057*	-0.02***	-0.03***
	[0.062]	[0.087]	[0.001]	[0.000]
AGE	0.043***	0.069***	-0.01***	-0.01***
	[0.000]	[0.000]	[0.000]	[0.000]
REFORM		-0.139**		0.066***
		[0.050]		[0.000]
Year FE	Yes	Yes	Yes	Yes
Firm FE	Yes	Yes	Yes	Yes
Observations	3680	3680	3680	3680
R-squared	0.070	0.072	0.274	0.289

Table 5 Cumulative voting use and tunneling: the role of enforcement

All variables are as defined in Appendix A. Legal is the legal environment index from Fan and Wang (2003). The p-values, based on standard errors corrected for clustering at the firm level, are given in the parentheses. *, **, and *** denote significance at the 10%, 5%, and 1% level, respectively. All models include firm and year fixed effects.

VARIABLES	(1) RPTA	(2) ORECA	(3) RPTA	(4) ORECA
CV_AFT	-0.071	-0.006	-0.112	-0.018
	[0.772]	[0.926]	[0.613]	[0.762]
CV_AFT_Legal	-0.019*	-0.002		
	[0.08]	[0.805]		
Legal	-0.258	0.147**		
	[0.399]	[0.02]		
STATE_CV_AFT			0.245*	0.004
			[0.09]	[0.973]
STATE	0.045	-0.025	0.075	-0.027
	[0.708]	[0.350]	[0.529]	[0.333]
FOREIGN	-0.128	-0.015	-0.160	-0.018
	[0.600]	[0.810]	[0.501]	[0.771]
BOARD_IND	-0.339**	-0.089*	-0.333**	-0.089*
	[0.015]	[0.063]	[0.018]	[0.065]
MTB	-0.030	0.001	-0.030	0.001
	[0.312]	[0.953]	[0.320]	[0.943]
LEV	0.227***	0.217***	0.229***	0.217***
	[0.002]	[0.000]	[0.002]	[0.000]
Ln(Assets)	-0.059*	-0.034***	-0.057*	-0.034***
	[0.085]	[0.000]	[0.088]	[0.000]
AGE	0.069***	-0.012***	0.069***	-0.012***
	[0.000]	[0.000]	[0.000]	[0.000]
REFORM	-0.135*	0.066***	-0.141**	0.066***
	[0.055]	[0.000]	[0.046]	[0.000]
Year FE	Yes	Yes	Yes	Yes
Firm FE	Yes	Yes	Yes	Yes
Observations	3680	3680	3680	3680
R-squared	0.072	0.288	0.071	0.289

Table 6 Cumulative voting use and firm performance: difference-in-differences-instrument variable results

All variables are as defined in Appendix A. The dependent variable is MTB in column (1), ROA in column (2), ROS in column (3), and ROE in column (4). The p-values, based on standard errors corrected for clustering at the firm level, are given in the parentheses. *, **, and *** denote significance at the 10%, 5%, and 1% level, respectively. All models include firm and year fixed effects.

VARIABLES	(1) MTB	(2) ROA	(3) ROS	(4) ROE
CV_AFT	0.007	0.007	0.033	-0.017
	[0.209]	[0.768]	[0.594]	[0.828]
STATE	0.004	-0.002	-0.016	0.043
	[0.277]	[0.874]	[0.699]	[0.495]
FOREIGN	-0.005	-0.069	0.058	-0.482***
	[0.449]	[0.442]	[0.617]	[0.001]
BOARD_IND	-0.000	0.052	0.105	0.034
	[0.877]	[0.147]	[0.262]	[0.760]
MTB	1.010***	0.004	0.040***	0.078***
	[0.000]	[0.391]	[0.007]	[0.000]
LEV	-0.000	-0.185***	-0.344***	0.052
	[0.874]	[0.000]	[0.000]	[0.113]
Ln(Assets)	0.001	0.043***	0.092***	0.005
	[0.727]	[0.001]	[0.000]	[0.819]
AGE	0.001**	0.000	-0.010	0.011
	[0.043]	[0.874]	[0.101]	[0.147]
REFORM	-0.003	-0.052***	-0.056**	-0.136***
	[0.250]	[0.000]	[0.030]	[0.002]
Year FE	Yes	Yes	Yes	Yes
Firm FE	Yes	Yes	Yes	Yes
Observations	3680	3680	3583	3680
R-squared	0.999	0.334	0.221	0.028

Figure 1: Timeline of events related to CV regulations

Sep 2001
Preliminary version of the Code is announced

Jan 2002
The final version of the Code is announced

2002
27 firms used CV in director election

2003
29 firms used CV in director election

2004
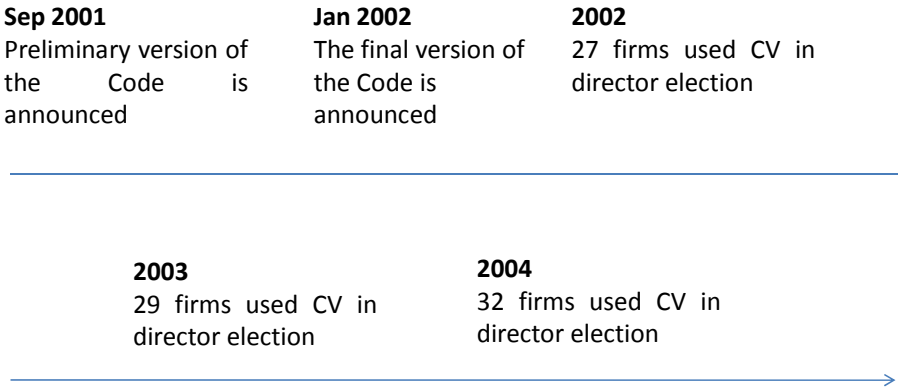32 firms used CV in director election

Figure 2. The frequency of CV use by the ownership of the controlling shareholders.

The sample is 381 firms with the controlling shareholders' ownership between 20% and 40% in 2001. The vertical axis is the frequency of CV use. The horizontal axis is the controlling shareholders' ownership (in percentage) in 2001.