Hello, Is Anybody There?
Corporate Accessibility for Outside Shareholders as a Signal of Agency Problems*

Michael Firth, Chen Lin, Sonia Man-lai Wong, Xiaofeng Zhao

Current Version: December 2017

Abstract

In this paper, we develop a corporate accessibility measure for listed firms based on their responses to our attempts to communicate with them (via telephone, e-mail, and online discussion forum), and examine whether the provision of corporate accessibility is a signal for the incidence of agency problems. We find robust evidence that non-accessible firms are associated with more agency problems, manifested in greater tunneling of corporate resources through inter-corporate loans and related-party transactions, greater consumption of slack, more earnings management, and higher probability of committing corporate fraud. Furthermore, we find that non-accessible firms are more likely to conduct value-destroying acquisitions and have a lower marginal value for holding cash than accessible firms. We also find that non-accessible firms underperform accessible firms in both firm valuation and operating performance. Overall, our results suggest that corporate accessibility is a value-relevant signal for informing investors of the severity of agency problems among publicly listed firms.

JEL Classification: G30, L15

Keywords: Corporate Accessibility, Agency Problems, Corporate Communications, Signaling

* Firth is from Lingnan University, Hong Kong, mafirth@ln.edu.hk; Lin is from the University of Hong Kong, chenlin1@hku.hk; Wong is from Lingnan University, Hong Kong, soniawong@ln.edu.hk; Zhao is from Lingnan University, Hong Kong, x4zhao@ln.edu.hk. We appreciate the helpful comments from Yuanyuan Zhang, Jingyuan Li, and Jin Gao and the seminar participants at Zhongnan University of Economics and Law and the Seventh China Finance and Investment Forum. We also thank Zhengjia Guo for her excellent research assistance. Firth thanks the Government of the HKSAR for funding (GRF LU390113).

Hello, Is Anybody There?
Corporate Accessibility for Outside Shareholders as a Signal of Agency Problems

Abstract

In this paper, we develop a corporate accessibility measure for listed firms based on their responses to our attempts to communicate with them (via telephone, e-mail, and online discussion forum), and examine whether the provision of corporate accessibility is a signal for the incidence of agency problems. We find robust evidence that non-accessible firms are associated with more agency problems, manifested in greater tunneling of corporate resources through inter-corporate loans and related-party transactions, greater consumption of slack, more earnings management, and higher probability of committing corporate fraud. Furthermore, we find that non-accessible firms are more likely to conduct value-destroying acquisitions and have a lower marginal value for holding cash than accessible firms. We also find that non-accessible firms underperform accessible firms in both firm valuation and operating performance. Overall, our results suggest that corporate accessibility is a value-relevant signal for informing investors of the severity of agency problems among publicly listed firms.

JEL Classification: G30, L15

Keywords: Corporate Accessibility, Agency Problems, Corporate Communications, Signaling

1. Introduction

The accounting literature on voluntary corporate disclosure decisions emphasizes that corporate insiders tradeoff their costs and benefits when they make those decisions (Dye 2001; Healy & Palepu 2001; Verrecchia 2001; Leuz & Wysocki 2008; Beyer *et al.* 2010). As a result, corporate voluntary disclosure decisions can contain information that allows inferences to be made about insiders' underlying incentives and motivations (Dye 2001; Verrecchia 2001). In this study, we examine whether investors and other market participants can infer the hard-to-observe agency problems in publicly listed firms by focusing on the firms' observable corporate disclosure and communication practices. In particular, we examine whether corporate insiders' decision to provide corporate accessibility to outsiders (defined as the ease with which outsiders are able to contact and communicate with the corporate insiders by telephone, e-mail, and online discussion forum) is informative of the agency problems in publicly listed firms in China. Agency problems seriously plague the functioning of publicly listed firms, but they are hard to detect. If agency problems can be identified, then minority investors can protect their interests by avoiding investing in firms with high agency costs (or they can "price protect" themselves). Furthermore, regulators can better utilize their supervisory resources and target high-risk firms.

Our hypothesized signaling effect of corporate accessibility builds on the premise that information asymmetry is a necessary condition for corporate insiders to engage in self-dealing activities (Jensen & Meckling 1976; Durnev & Kim 2005; Leuz & Wysocki 2008). As an increase in firm-specific information not only enhances the effectiveness of monitoring by board directors and shareholders (Bushman & Smith 2001; Armstrong *et al.* 2010; Huang & Zhang 2012) but also increases the possibility for outsiders (such as media, analysts, and regulators) to detect insiders' self-dealing activities (Dyck *et al.* 2010; Chen *et al.* 2014), firms plagued by a high level of agency problems (hereafter "lemon" firms) have a strong incentive to withhold firm-specific information and reduce corporate transparency (Hope & Thomas 2008; Leuz & Wysocki 2008). Information disclosure by lemon firms involves substantial costs associated with the exposure of their self-

dealing activities, including legal penalties, corporate and personal reputation damage, and business losses (Karpoff *et al.* 2009; Kothari *et al.* 2009; Murphy *et al.* 2009).

The firms plagued by less serious agency problems (hereafter "cherry" firms) do not need to disguise their self-dealing activities. As a result, they face a lower cost of information disclosure than the lemon firms. The lower cost may induce the cherry firms to provide more firm-specific information to various market participants for two reasons: first, because they can use the enhanced corporate transparency as a signal to demonstrate that they are actually good firms with nothing to hide and thus overcome the undervaluation problem associated with the uncertainty about firm quality (Healy & Palepu 2001; Durnev & Kim 2005), and second, because the enhanced corporate transparency can bring about various benefits such as reducing cost of capital and improving firm value (Bushman & Smith 2001; Dhaliwal *et al.* 2011). Cherry firms' lower information disclosure cost means that they are in a better position to reap those benefits (Bushman & Smith 2001; Dhaliwal *et al.* 2011). We expect to observe a separating equilibrium because the lemon firms' high information disclosure costs tend to prevent these firms from imitating the cherry firms' signaling strategies and reaping the benefits associated with enhanced corporate transparency.

The different motivations of lemon and cherry firms with respect to information provision suggest that corporate information disclosure and communication decisions, especially those voluntary decisions, are likely to contain useful indicative information for distinguishing between these two types of firms. Thus, we focus on the voluntary decision to provide effective corporate accessibility to outsiders and examine whether corporate accessibility is a signal for isolating lemon firms from cherry firms.

The provision of corporate accessibility allows outsiders to actively contact a listed firm to directly seek information from corporate insiders. Corporate accessibility can therefore facilitate outsiders to initiate private communications with insiders. We believe that corporate accessibility is a device that possesses high diagnostic power for detecting the severity of agency problems. As we explain in greater detail when we develop our hypotheses, private communication activities allow outsiders to actively ask questions and interact personally with corporate insiders. They may

also have a chance to directly observe a firm's operations. During the communication process, outsiders not only passively receive the information explicitly conveyed by insiders, but also actively gather private information through their own observation of a firm's operations and the tone or body language of the insiders (Hobson *et al.* 2011; Mayew & Venkatachalam 2012; Bushee *et al.* 2016; Cheng *et al.* 2016). Research on private communication activities has shown that these activities allow outsiders to gain useful private information about a firm's operations and management, which in turn may increase the risk of uncovering the firm's self-dealing activities and other misconducts. Consistent with this conjecture, Dyck *et al.* (2010) find that outsiders' access to private information is a major determinant of corporate fraud detection in the U.S.. Hobson et al. (2011) and Mayew and Venkatachalam (2012) further find that outsiders can infer the incidence of financial misreporting by focusing on the vocal cues in managers' speech. The high risks faced by lemon firms involving in private communications suggest that they are particularly reluctant to offer corporate accessibility to outsiders in order to maintain their firms' informational opaqueness.

However, the high cost involved in lemon firms' provision of corporate accessibility makes corporate accessibility a more credible device for signaling the cherry firms' better quality (Spencer 1973). Furthermore, research on publicly listed firms' investor relation (IR) programs demonstrates that IR activities are effective in mitigating the information asymmetry problems and enhancing firms' corporate transparency (Bushee & Miller 2012; Kirk & Vincent 2014). Thus, we expect that cherry firms are more likely than lemon firms to be motivated to provide corporate accessibility to outsiders.

To test whether the decision on the provision of corporate accessibility can detect agency problems, we used a similar approach to that of Chong *et al.* (2014) to construct the measures of corporate accessibility[1]. Specifically, we contacted firms listed in China in 2010 through three

[1] Chong et al. (2014) examine government efficiency across countries by mailing letters to non-existent business addresses and measuring whether they come back to a return address. They find that the number of days before the letters are returned is associated with a set of variables that measure government efficiency, and they argue that a simple and universal post office service could be used as a signal for detecting the quality of government.

communication channels provided on their websites: online discussion forums, e-mail, and telephone communications. For forum communication, we tried to identify whether there were interactive postings between the company and investors. For e-mail and telephone communications, we directly contacted the listed firms to obtain a measure of real accessibility[2]. This is particularly important because only real accessibility may reflect corporate insiders' virtual incentive to communicate with outside shareholders.

China provides us with a unique environment to test our hypothesis. First, China's stock market is the largest emerging market in the world and one where the listed firms are plagued by serious agency problems (e.g. Jiang et al. 2010; Jian & Wong 2010). Similar to other emerging markets, the prevalence of agency problems is caused mainly by the country's weak legal framework (Blecher *et al.* 2003) and the weak enforcement of accounting rules and disclosure standards (Piotroski & Wong 2012). Furthermore, the amount and quality of publicly available firm-specific information in China are relatively low. Thus, the market participants face great difficulty in obtaining accurate information from publicly available sources and have incentives to seek additional information directly from companies through private communications with corporate insiders[3].

In early 2000s, China has recognized the importance of communications between listed company and market participants in enhancing corporate transparency. The China Securities Regulatory Commission (CSRC) issued "The Provisions on Strengthening the Protection of the Rights and Interests of the General Public Shareholders" (No. 118 [2004] of the CSRC) in 2004 to facilitate direct communications between investors and firms. However, the CSRC has not set up an effective mechanism to ensure the enforcement of the regulation. The voluntary compliance

[2] Our measures could underestimate the real accessibility due to methodological reasons such as personal carelessness in the survey, including misdialing telephone numbers and inputting incorrect e-mail addresses. However, we took great care to avoid such measurement errors. We believe that any measurement errors occurred randomly and did not bias our estimations.

[3] Most of the individual shareholders in China are inexperienced investors who have very little professional knowledge (Ng & Wu 2006). Based on a survey of individual investors conducted by the Shenzhen Stock Exchange in 2010, most investors think that there is too much terminology in listed firms' annual/interim reports and the readability is weak. In addition, they do not perceive the reliability and relevancy of the contents as high.

with this regulation results in variations in accessibility across firms, which enhances our testing power.

Our final sample contains 1581 distinctive firms listed on China's two stock exchanges in 2010. We find that 27% of them are accessible by telephone, e-mail, or online discussion forum. The low overall level of accessibility is consistent with the lack of effective enforcement mechanisms and the generally held view that firms in China have substantial agency problems (Jiang *et al.* 2010; Liao *et al.* 2014) [4].

To shed light on Chinese listed firms' decisions on the provision of corporate accessibility, we first examine how corporate accessibility is related to ex-ante corporate governance and firm characteristics. We find that the firms are more likely to be accessible when they have an ownership structure that more tightly aligns controlling shareholders' interest with that of public shareholders, have less entrenched CEOs, and face more external discipline. The results are consistent with our argument that firm insiders with a high propensity to engage in self-dealing activities are less likely to provide corporate accessibility to outsiders. In addition, we find that firms with high dependence on external finance are more likely to be accessible, which is consistent with the argument that firms with a greater need to reduce information asymmetry in financial markets are more likely to provide corporate accessibility.

We then come to our main hypothesis and examine whether corporate accessibility is associated with the severity of agency problems in the following years. To do this, we relate corporate accessibility with self-dealing activities and corporate misconduct in the subsequent three years (from 2011 to 2013). This allows us to explore whether corporate accessibility can effectively signal the incidence of self-dealing and rent-seeking activities on a forward-looking basis. We find that accessible firms are associated with a lower level of corporate resource tunneling and related-party transactions by controlling shareholders, less excessive consumption

[4] According to a survey conducted by ICR, a leading strategic communications firm in the United States, in 2013, 98% of the publicly listed companies in the Russell 3000 index had made their contact information available on their corporate homepage. When ICR sent an enquiry using the e-mail address provided on their respective IR websites, about two thirds (63.2%) of the companies responded and more than one third (35.8%) did not.

of perks by insiders, a lower level of discretionary accruals, and a lower probability of committing corporate fraud. Moreover, we find that non-accessible firms are more likely to take value-destroying acquisitions and have a lower marginal value of holding cash than accessible firms. The results suggest that the lack of accessibility is symptomatic of agency problems.

As agency problems detract from firm performance (Gompers *et al.* 2003), we further confirm the detecting power of corporate accessibility by examining firm performance. Consistent with the value-reducing nature of agency problems, we find that non-accessible firms perform significantly worse than accessible firms in terms of firm valuation and operating performance.

Our sample contains accessible firms (i.e., real accessible firms) and non-accessible firms. Non-accessible firms include (1) firms that provide communication channels but are not actually accessible (fake accessible firms) and (2) firms that provide no communication channels at all (dark firms). We find that real accessible firms are associated with significantly less serious agency problems than the other two types of firms, but there is no significant difference between the fake accessible and dark firms. Thus, the provision of real accessibility rather than nominal accessibility is a signal of cherry firms.

Lastly, we offer evidence for the proposed mechanism underlying the signaling effects of corporate accessibility. We attribute the signaling effects to the different motivations of cherry firms and lemon firms to engage in private communications with outsiders and to enhance corporate transparency. We first make use of the valuable data on corporate site visits conducted by various market participants (which is a major type of private communication between insiders and outsiders) to examine whether accessible firms have indeed experienced more private communication events than the non-accessible firms. We find that accessible firms experience more site visits from outsiders such as individual investors, financial analysts, and media than the non-accessible firms. Second, we examine the timeliness and accuracy of earnings forecasts made by financial analysts. We find that the earnings news via analyst forecasts in accessible firms is revealed in a timelier manner than in non-accessible firms, especially for bad earnings news. Moreover, the analysts' earnings forecasts in accessible firms are more accurate than the forecasts

in non-accessible firms. The results are consistent with our conjecture that non-accessible firms tend to be lemon firms that have a greater incentive to withhold unfavorable firm-specific information from outsiders.

Our study contributes to the literature on corporate disclosure and communication decisions, particularly the literature that emphasizes how these decisions contain useful information about insiders' unobservable motivations and future performance (e.g., Dye 2001; Leuz & Wysocki 2008; Li 2008; Mayew *et al.* 2013). We introduce a novel measure of corporate accessibility to capture the willingness of corporate insiders to engage in private communications initiated by outsiders, and demonstrate that the measure is an effective indicator of the severity of hard-to-observe agency problems in publicly listed firms.

In addition, our study is related to the nascent but important literature that examines the determinants and consequences of IR programs in publicly listed firms (Bushee & Miller 2012; Kirk & Vincent 2014). Studies have demonstrated that the introduction of IR programs can attract greater analyst coverage, higher news media attention, and more institutional investors, which help to enhance corporate transparency; our study adds to this literature by providing evidence of its predictive power on agency problems. Furthermore, our analysis of the difference between real and fake accessible firms highlights the importance of conducting further research on IR programs to distinguish between the nominal setup of an IR program and the measurement of its effective functioning.

Our study also contributes to the literature on the identification and measurement of agency problems in emerging markets. Studies of agency problems seek to measure or detect agency problems by focusing on ownership structure and the effectiveness of internal and external governance mechanisms (Shleifer & Vishny 1997; e.g., La Porta *et al.* 1999; Claessens *et al.* 2000). Our study shows that corporate accessibility, which depends on the self-motivated decisions of corporate decision makers, has additional explanatory power beyond the traditional ownership and corporate governance variables.

2. Institutional Background and Hypothesis Development

2.1. Institutional Background

The Chinese economy has witnessed tremendous growth in the past decades. By the end of 2010, China's GDP had reached US$5.9 trillion, making it the second largest economy in the world. Meanwhile, the Chinese stock market has seen rapid growth and development. By the last trading day in 2010, the total market capitalization had reached US$4.76 trillion (the world's second largest by total capitalization)[5] with 2063 companies (2041 A shares and 108 B shares) listed on two stock exchanges—the Shanghai Stock Exchange and Shenzhen Stock Exchange. However, the Chinese stock market remains relatively underdeveloped by international standards. Chinese listed firms are plagued by serious agency problems and are often accused of corporate misconduct such as financial misrepresentation (Firth et al. 2011; Chen and Yuan 2004), corporate fraud (Chen et al. 2006), excessive related-party transactions (Jian & Wong 2010), and controlling shareholder tunneling (Jiang et al. 2010). These agency problems and corporate misconduct have seriously hurt the interests of minority shareholders.

Several factors have led to the agency problems in China. First, China has an underdeveloped legal system with weak enforcement and a capricious judiciary (Allen *et al.* 2005). Specifically, in China's unique legal tradition, the courts are not independent of the state administrative system and the law is an instrument used by the ruling elite to serve administrative interests (Chen 2003; Jones 2003). As most of the listed firms were carved out from large state-owned enterprises (SOEs), the courts that hear disputes between listed enterprises and minority individual investors tend to be more inclined to favor the interests of enterprises rather than those of individual shareholders

[5] The other three countries in the top four by capitalization at the end of 2010 were the U.S. ($17.13 trillion), Japan ($4.10 trillion), and the U.K. ($3.11 trillion) (Source: Wind Information).

(Chen 2003). Furthermore, most of the individual shareholders in China are inexperienced individual investors who do not possess the resources and capacity to organize themselves to seek redress from the court when their interests are hurt (Ng & Wu 2007)[6].

Second, the concentrated ownership structure of Chinese listed firms intensifies the conflicts between corporate insiders and minority shareholders. As most listed firms are spinoffs from existing SOEs, controlling shareholders such as the government and state entities often use the carved-out listed firms as a vehicle to raise funds from the stock market and tunnel resources to the parent SOEs (Aharony *et al.* 2005). Moreover, as there is high divergence between the control rights and cash-flow rights of controlling shareholders (Jiang *et al.* 2010), corporate insiders enjoy the control rights to dictate corporate decision making and do not need to bear the financial consequences corresponding to those activities (Lin *et al.* 2011a; López de Silanes et al. 2000). As a result, firm insiders possess not only the capacity but also the incentive to engage in "tunneling" and other self-dealing activities.

Third, the internal governance systems of Chinese listed firms exist in principal but operate ineffectively in practice. China has adopted a modern corporate governance structure similar to that in Western countries. For example, the independent director system, which was implemented in 2001, requires the boards of directors of all publicly listed companies to include at least two independent directors and at least one third of the board must consist of independent directors[7]. However, the appointment criteria are different from those in mature markets such as the U.S. For example, controlling shareholders dominate the nomination of director candidates. As a result, it

[6] Retail investors have dominated the Chinese stock markets in terms of both number of investor accounts and trading volumes. For example, Ng and We (2007) show that 99.5% of investor accounts are individual accounts and 0.5% are institutional accounts, and individual investors account for about over 80% of the total trade value.
[7] In many Chinese firms, the percentage of independent directors is about 30%, which is much lower than the average of 70% in the U.S. This is consistent with the ineffectiveness of directors in China (Lin *et al.* 2012).

is very difficult to find independent directors who are truly independent from the controlling shareholders and to prevent the controlling shareholders from expropriating minority shareholders (Chang & Wong 2004; Fan *et al.* 2007; Hu *et al.* 2010).

Fourth, listed firms in China face a weak information environment. Many listed firms are young and most of them are SOEs that have a low incentive to increase corporate transparency (Bushman *et al.* 2004; Piotroski & Wong 2012). The financial intermediaries including financial analysts and independent auditing services are also underdeveloped (Ang & Ma 1999; Wang *et al.* 2008). The high information asymmetry enables insiders to abuse their control rights and hurt outside investors' value.

The Chinese government recognizes the possible dysfunctional effects of agency problems on the functioning of the country's stock market and has introduced significant changes and reforms to the legal framework and corporate governance in the past decade. For example, China's Company Law and Securities Law were amended in 2005 with the objective of increasing shareholder protection. It is now more likely for minority shareholders to take legal action against listed firms and corporate insiders. Indeed, an increasing number of lawsuits have been filed against listed firms nationwide in recent years (Zou *et al.* 2008). The enhanced legal risk increases the expected costs of information disclosure and creates a greater incentive for lemon firms to conceal their self-dealing activities. Furthermore, the Chinese government has made substantial regulatory efforts to encourage the development of institutional investors since 2000. As institutional investors tend to have a greater incentive and the capacity to monitor corporate insiders (Aggarwal *et al.* 2011), the emergence of institutional investors in China is expected to improve the corporate governance of Chinese listed firms. However, the ownership held by institutional investors in Chinese listed firms is still low. For example, Firth *et al.* (2016) show that

the mean (median) level of institutional ownership in a sample from 2003 to 2011 is only around 7% (2.7%).

2.2. Hypothesis Development

Information disclosure is particularly costly for the insiders of the lemon firms. Investors, board members, and regulators with access to more firm-specific information can enhance their capability to exercise more effective control over insiders, which would reduce the room available for insiders to engage in self-dealing activities (Bushman & Smith 2001; Healy & Palepu 2001; Armstrong *et al.* 2010). Furthermore, increasing the supply of information also increases the chance of outsiders uncovering a lemon firm's self-dealing activities and misconduct, which would bring about significant legal, reputational, business, and career-related penalties (Karpoff *et al.* 2009; Murphy *et al.* 2009).

Due to the high information disclosure costs, the insiders of lemon firms have a strong incentive to reduce the quantity and quality of the information disclosed to outsiders. For example, Hope and Thomas (2008) find that lemon firms are more likely than cherry firms to stop the disclosure of information on geographic earnings, when such disclosure is no longer mandatory. Similarly, Leuz and Wysocki (2008) find that lemon firms are more likely than cherry firms to deregister and exit from the SEC reporting system to keep their extraction of private benefits opaque. In addition to reducing the quantity of information disclosed to outsiders, lemon firms also have an incentive to lower the quality of information in mandatory disclosures. For example, Li (2008) shows that firms with poor firm performance opportunistically lower the readability of their annual reports to hide unfavorable information from outsiders.

The provision of corporate accessibility tends to increase corporate transparency because it encourages outsiders to actively communicate with corporate insiders to seek information. Some outsiders may contact a firm to seek clarification of ambiguities in the firm's public disclosures (Mayew *et al.* 2013; Bushee *et al.* 2016), while others (such as media and financial analysts) may contact the firm to gather more information to obtain a deeper understanding of the firm's operation (Cheng *et al.* 2016). Sometimes, outsiders (such as media and short-sellers) may contact a firm to conduct a private investigation on some suspicions issues. A salient characteristic of these private communication activities is that they allow outsiders to actively ask questions, interact personally with outsiders and even directly observe a firm's operation. As demonstrated by previous research, these communication activities allow outsiders to obtain information that is not easily available from public sources, which in turn improves their understanding of a firm's actual situation (Green *et al.* 2014; Soltes 2014; Ng & Troianovski 2015; Solomon & Soltes 2015; Bushee *et al.* 2016; Cheng *et al.* 2016; Kirk & Markov 2016). For example, Cheng *et al.* (2016) find that financial analysts can provide more accurate earnings forecasts by directly observing the operations of firms.

The opportunity for outsiders to obtain insider information through personal interactions with insiders and direct observation of a firm's operations increases the risk of exposing lemon firms' self-dealing activities. Although outsiders may originally contact a firm with the simple intention of gaining a deeper understanding of the firm rather than investigating its self-dealing activities, some outsiders may unintentionally discover some informational cues that lead to the detection of agency problems. For example, outsiders may be alerted to the problem of excessive consumption of perks when they see extravagant offices occupied by insiders. They may also obtain cues about the possibility of accounting misreporting and earnings managements when they discover

inconsistency between the numbers reported in financial statements and the operational conditions of a firm (such as the number of employees and the utilization of machines and equipment). Dyck *et al.* (2010) confirm such unintentional detection of corporate fraud by outsiders, with the finding that most whistleblowers on corporate fraud are not financial market regulators and shareholders. Rather, misconduct is usually detected by employees and media and financial analysts during their normal work, which allows them to gain insider information about a firm's operations. As insiders can exercise limited control over the information that outsiders obtain from private communications, especially information obtained through outsiders' observations and sense making, we expect that lemon firms are very reluctant to provide corporate accessibility in order to minimize their engagement in private communications with outsiders.

Cherry firms have a stronger incentive to voluntarily provide more firm-specific information to outsiders than lemon firms. The lemon problem articulated by Akerlof (1970) suggests that cherry firms suffer an undervaluation problem if they cannot effectively distinguish themselves from lemon firms. Cherry firms therefore have an incentive to separate themselves from lemon firms by providing corporate accessibility to enhance corporate transparency (Healy & Palepu 2001). The provision of corporate accessibility is a credible signal because it is costly for lemon firms to offer such accessibility. Furthermore, it is an efficacious signal because the high information disclosure costs of lemon firms will deter them from imitating it (Spence 1973; Smith & Bliege Bird 2005).

In addition, prior studies suggest that IR functions allows firms to reduce information asymmetry by increasing media and analyst coverage and expanding their investor base (Bushee & Miller 2012; Kirk & Vincent 2014). By providing accessibility to outsiders, cherry firms can obtain significant benefits from the improvement in corporate transparency, such as enhancing

corporate governance and firm value (Bushman & Smith 2001), reducing the cost of capital (Botosan & Plumlee 2002; Dhaliwal *et al.* 2011), and increasing liquidity (Diamond & Verrecchia 1991; Welker 1995; Heflin *et al.* 2005). Due to the high costs associated with exposing self-dealing activities, lemon firms are unlikely to be motivated to provide corporate transparency to reap these benefits.

Based on our above theoretical analysis on the benefits and costs associated with the provision of corporate accessibility for cherry and lemon firms, we propose the following hypothesis for empirical testing.

Hypothesis: Accessible firms are associated with lower levels of agency problems than non-accessibility firms.

3. Corporate Accessibility Measurement and Sample Construction

3.1. IR Survey and Measures of Corporate Accessibility

We conduct a survey to collect data on the corporate accessibility of China's listed firms following a set of well-designed and disciplined procedures. The details of the survey are provided in Appendix B. We briefly discuss our key procedures here.

First, we obtain the website addresses of all firms listed on China's two stock exchanges from the China Securities Market and Accounting Research (CSMAR) database. If the address is missing or incorrect, we search for the company's main page on Baidu.com (Chinese Google). After entering the website, we check whether it includes an investor relations section (IR section or IR subpage). If yes, we proceed to that section and check for the following information. 1) Whether there is an online discussion forum with records of communications between investors and the firm. If yes, then *FORUM* is set to equal 1 (accessible), and 0 (non-accessible) otherwise. 2) Whether the IR section offers an e-mail contact. If yes, we then contact the listed firm to confirm its accessibility. We send an e-mail to the firm asking a general question—what are the major

locations of the firm's business operations? We carefully select this question because it is meaningful, but does not involve sensitive information that may lead to the problem of selective disclosure. If the firm replies with an answer, then *EMAIL* is set to 1 (accessible), and 0 (non-accessible) otherwise. 3) Whether the IR section offers telephone contact information. If yes, we contact the firm to confirm its accessibility by telephone. We call the firm directly using the telephone number provided and enquire whether shareholders can pay a visit to the firm[8]. This question is selected because the 2004 regulation issued by the CSRC recommends that listed firms provide minority shareholders with the opportunity to visit their firms. If we are able to talk effectively with the company on this issue[9], we set *TEL* to 1 (accessible), and 0 otherwise (non-accessible). It should be noted that this measure of accessibility does not depend on whether a firm visit is allowed by the respondent. The question regarding a firm visit is needed to continue the conversation after the phone is picked up rather than determining accessibility. In addition, we create another dummy variable, *IRACS*, which is set to 1 if at least one of the above three communication channels (telephone, e-mail, and forum) is accessible, and 0 if none of them is accessible[10]. We also create an IR index score, *IRSCORE*, which is the sum of the number of communication channels that are accessible (the maximum score is 3). This data-collection process took us 3 months from July to September 2010, covering all firms listed on the two Chinese stock exchanges as at the end of June 2010.

3.2. Sample Description

[8] We use two questions in the e-mail and telephone survey to mitigate the potential biases in firms' responses caused by the questions themselves (i.e., firms may be more inclined to answer certain types of question by e-mail and other types of question by telephone). We intentionally use a question that relates to an established firm policy and that is capable of a simple answer (e.g., Yes or No) in the telephone survey. We do this because some firms may refuse to talk just because the answer to an inquiry may be considered too complex and difficult to communicate over the phone, rather than reflecting their unwillingness to communicate with outside shareholders.

[9] A talk is considered effective if the company either accepts our request or rejects our request for some acceptable reason. For details, see Appendix B. Our objective is to gauge the ease with which outside shareholders are able to communicate with corporate insiders to obtain information. As a result, we consider effective communication rather than the actual answers provided by a firm as an indicator of accessibility.

[10] The four accessibility measures (*IRACS*, *TEL*, *EMAIL*, and *FORUM*) take the value of 0 (non-accessible) if there is no IR section on the firm's website. In a robustness test, we restrict our sample to those firms with an IR section, and the results are similar to those reported in this paper.

We include all non-financial firms listed on China's two stock exchanges as at the end of June 2010. Table 1 reports our sample filtering process. We start with 1798 non-financial listed firms. We exclude firms with websites that were established within the past year[11] and firms with missing financial information. Eventually, we obtain a sample of 1581 distinctive firms.

[Table 1 about here]

Among the 1581 firms that we investigate, 1231 of them have an IR section that can be identified on their website. In firms with an IR section, 888 (670, 295) of them provide telephone, e-mail, or forum communication channels in the web of IR section. Among these, about 20% (15%, 85%) are accessible. Taken together (see the last column), about 73% of the firms in our sample provide at least one communication channel. Of these, 37% (or 27% of the total sample) are accessible either by online discussion forum, e-mail, or telephone.

Table 2 reports the summary statistics for some of the key financial and governance variables of the firms in our sample. The detailed definitions and sources of the variables can be found in Appendix A.

[Table 2 about here]

4. Determinants of Corporate Accessibility

To gain insight into a firm's decision to provide corporate accessibility, we run a logit model that relates the incidence of corporate accessibility (measured in 2010) with ex ante corporate governance firm characteristics (measured at the end of 2009). The model is specified as follows:

$$ACS_{i,2010} = \alpha + X_{i,2009} + \sum IND_i + \varepsilon_i \quad (1)$$

The dependent variable *ACS* is one of our corporate accessibility measures (*IRSCORE*, *IRACS*, *TEL*, *EMAIL,* and *FORUM*). *X* is a vector of governance and firm characteristics that have been shown by previous studies to be related to the extent of agency problems. First of all, firms are

[11] Newly launched websites generally need a testing period, during which the information provided may be incorrect and thus create bias in identifying corporate accessibility.

more likely to have serious agency problems when the incentive of insiders is not aligned with shareholders' objective of maximizing firm value. We use state ownership (*SOE*s), the controlling shareholder's cash flow rights (*Cash flow ownership*), and the divergence between controlling shareholder's control rights and cash flow rights (*C/O divergence*) to measure the degree of interest alignment between insiders and outside shareholders. *SOE* is used because SOEs tend to be used by governments to pursue political or social goals rather than to maximize firm profitability and shareholder value (Sun & Tong 2003; Wei *et al.* 2005; Gul *et al.* 2010). *Cash flow ownership* is included because insiders tend to have lower incentives to maximize shareholder value when their cash flow ownership is low (Durnev & Kim 2005). Finally, *C/O divergence* captures the degree of the conflict of interest between firm insiders and outsider investors when insiders' control rights are significantly in excess of their cash flow rights (Porta *et al.* 1999; Claessens *et al.* 2000; Sun & Tong 2003; Wei *et al.* 2005).

In addition to ownership consideration, firms are more likely to engage in self-dealing activities when they are subject to weaker internal and external governance. We use three variables to measure the effectiveness of internal governance, which includes whether the posts of CEO and chairman of the board of directors are taken by the same person (*CEO duality*), the number of directors on the board (*Board size*), and the fraction of independent directors (*Independent directors*). Studies have documented that CEO duality, a sloppy board, and a lack of independent directors are associated with weak internal governance (Baliga *et al.* 1996; Yermack 1996; Nguyen & Nielsen 2010). We also use three measures to capture the strength of external governance. The measures include the ownership by institutional investors (*Institutional ownership*), the employment of big four auditors (*Big4 auditors),* and whether a firm operates in a competitive industry in a region (*Market competition*).

We also include variables to capture a firm's incentive to invest in corporate transparency to reduce the cost of capital. They include the firm growth opportunities (*Assets growth)*, the amount of desired investment that cannot be financed through internal cash flows (*External finance dependence)*, and the dependence on long-term financing (*Leverage*). We expect that firms with

better growth opportunities and more dependence on external finance have a higher incentive to communicate with outsiders (Hyytinen & Pajarinen 2005; Francis *et al.* 2009). In addition, we control for the level of management education (*Managerial education*) and the management expertise in information technology (*IT skills*). Our corporate accessibility measures focus on the tele-communication channels. If the management is better educated and equipped with better IT knowledge it may be more inclined to set up tele-communications. In addition, we control for firm market capitalization (*Firm size*), as the information environment in large and small firms is very different (Collins *et al.* 1987). As different industries may face different proprietary costs in information disclosure, which can also influence firms' motivation to communicate with outsiders, we also include industry fixed effects $\sum IND_i$ in the model.

The summary statistics for all variables used in the logistic analysis are presented in Panel A of Table 2[12]. The estimated results are reported in Table 3.

[Table 3 about here]

In column 1, we report the result of an ordered logit model where the dependent variable. *IRSCORE* takes an ordinal value of 0, 1, 2, or 3, depending on the number of accessible communication channel(s). It takes the value of 0(3) if all of the communication channels are non-accessible (accessible). We find that the coefficient on *SOEs* is negative and significant at the 1% level. This suggests that SOEs are less accessible than private enterprises. The coefficient on *C/O divergence* is also significantly negative, suggesting that firms are less accessible when the wedge between controlling shareholders' control rights and cash flow rights increases. In addition, we find that firms with higher cash flow ownership by controlling shareholders are more accessible. The results are consistent with the argument that firms are more likely to be accessible when there is a greater alignment of interest between insiders and outside investors.

Regarding the effects of internal and external governance, we find that the coefficient on the *CEO duality* variable is negative and marginally significant, suggesting that entrenched CEOs are

[12] The number of observations is 1415, which is smaller than the number of unique firms in our full sample (1581) as some firms have missing financial information in 2009.

less willing to communicate with outsiders. Moreover, lower levels of institutional ownership and market competition are associated with a lower probability of being accessible. This means that firms are more likely to be non-accessible when external monitoring is weak. However, we find no significant results for board size and independent directors, consistent with the limited effectiveness of independent directors in China (Lin *et al.* 2012). We also find no significant results for the employment of big 4 auditors, perhaps due to the dominance of local auditors and the lack of independence of foreign auditors (DeFond *et al.* 1999).

In addition, we find that the coefficients on *External finance dependence* are significantly positive, indicating that firms with a high level of dependence on external finance are more likely to be accessible. Lastly, we find that firms with better educated managers and a smaller size are more likely to be accessible.

In column 2, the dependent variable is the dummy variable *IRACS*. The coefficients are estimated using a logit model. We find that the results are very similar to those in the first column. We also estimate the logit model separately for the three componential measures—*TEL*, *EMAIL*, and *FORUM*. We find similar results, although the significance levels for variables such as *C/O divergence* and *CEO duality* are lower than those reported in columns 1 and 2. As a robustness check, we alternatively use a probit model and re-estimate the results as reported in columns 2-5. We find that the results are highly consistent.

5. Corporate Accessibility and Agency Problems

In this section, we test our hypothesis and examine whether the lack of corporate accessibility is associated with the occurrence of self-dealing activities and other corporate malpractices in subsequent years.

5.1. Tunneling of Funds, Related-Party Transactions, and Managerial Slack

We first look at whether corporate accessibility is related to controlling shareholders'

tunneling of corporate resources, which is the most distinctive type of agency problem in China. Jiang *et al.* (2010) show that the controlling shareholders in China's listed firms often siphon off funds from the firm through the use of inter-corporate loans (typically reported as "other receivables"). Following Jiang *et al.* (2010), we measure tunneling of corporate funds using *ORECA*, which is defined as other account receivables scaled by total assets.

It has been suggested that this form of resource tunneling has been mitigated by the central government's intensified regulatory scrutiny and control[13]. Therefore, we also use the amount of abnormal related-party transactions as an additional measure of controlling shareholders' tunneling activities. Following Jian and Wong (2010), we run a regression model to remove the normal components of RPTs that are associated with firm characteristics, including the logarithm of total assets, total debt/total assets, market to book ratio (M/B), and industry effects. We then use the residual resulting from this model as our estimate of abnormal related-party transactions, *ARPT*.

In addition to tunneling of corporate resources, prior studies of China's listed firms find that corporate insiders also hurt the interest of shareholders by excessively consuming organizational slack (Luo *et al.* 2011; Du 2013). Ang *et al.* (2000) suggest that the expense ratio captures excessive expenses on perks and other nonessentials and therefore could be a good proxy of managerial agency problems. Du (2013) also uses this measure to capture the extent of agency problems in China. We thus follow these studies to use the expense ratio (*EXPR*), defined as operating expense (total expenses less cost of goods sold, interest expense, and managerial compensation) scaled by annual sales, to measure insiders' consumption of organizational slack.

Before we examine whether corporate accessibility is systematically related to *ORECA*, *ARPT*, and *EXPR,* we first check the validity of our three agency cost measures. Specifically, we regress *ORECA*, *ARPT*, and *EXPR* on firms' operating performance (return on assets) in the next year

[13] Jiang et al. (2010) suggest that the tendency of Chinese firms to use inter-corporate loans to tunnel funds has been mitigated since 2006 due to the government's intensified efforts to control this kind of tunneling activity. However, we expect that the government efforts may not be able to totally eliminate this kind of tunneling activity and *ORECA* is still a good measure of the cross-sectional variation of the agency costs among the listed firms. To verify this conjecture, we follow Jiang et al. (2010) and repeat all of their cross-sectional analyses using our sample. We obtain similar cross-sectional patterns to those obtained by Jiang et al. (2010).

while controlling for firm and governance characteristics. The results are reported in Appendix C. We find that these three measures are significantly and negatively related to firms' return on assets in subsequent years, consistent with the performance-detracting nature of agency problems.

To examine whether corporate accessibility can signal these three types of agency problems, we relate the corporate accessibility variables (measured in 2010) to *ORECA*, *ARPT*, and *EXPR* measured in the subsequent three years (from 2011 to 2013). The model is specified as follows:

$$Y_{i,2011-2013} = \beta_0 + \beta_1 ACS_{i,2010} + X_{i,2011-2013} + \sum IND_i + \sum Year_i + \sum Province_i + \varepsilon_i \quad (2)$$

The dependent variable *Y* is one of the three agency cost measures. The key explanatory variable is *ACS*, which is one of our corporate accessibility measures (*IRSCORE*, *IRACS*, *TEL*, *EMAIL,* and *FORUM*). *X* is a set of firm and governance variables that we use when we estimate the determinants of corporate accessibility. The control variables are also measured from 2011 to 2013 in accordance with the respective dependent variables. In addition, we control for industry, year, and province fixed effects. The summary statistics of the key variables are reported in Panel B of Table 2. The model is estimated by clustering at the firm level and the results are presented in Table 4.

[Table 4 about here]

In Panel A, we report the result when the dependent variable is *ORECA*. As expected, we find that the coefficients on all five accessibility measures are negative and significant at normal statistical levels. As shown in the first column, firms with one communication channel accessible are associated with a 15% (i.e., 0.268/1.74) reduction in *ORECA* relative to the non-accessible firms with a mean level of *ORECA* (1.74%). The coefficient on *IRACS* is -0.390, which implies that the level of *ORECA* in accessible firms is 22% (i.e., 0.39/1.74) lower than that in non-accessible firms (assuming that non-accessible firms have a mean level of *ORECA*).

In Panel B, we report the result when the dependent variable is *ARPT*. We also find negative and statistically significant coefficients on all accessibility measures, suggesting that accessible firms have lower levels of abnormal related-party transactions than non-accessible firms. For

example, the coefficient on *IRACS* is −0.107, which implies that *ARPT* in accessible firms is 1.5 times (i.e., 0.107/0.07) lower than that in the non-accessible firms with a mean level of *ARPT* (-0.07).

In Panel C, we report the estimated results when the dependent variable is *EXPR*. We also find a significant negative relation between *EXPR* and all of our accessibility measures, indicating that the consumption of organizational slack is lower in accessible firms than non-accessible firms. The coefficient on *IRACS* is −0.011, implying that accessible firms are associated with a reduction of 11% (i.e., 0.011/0.1) in *EXPR* relative to non-accessible firms with a mean level of *EXPR* (0.1).

5.2. Earnings Management

Firms plagued by agency problems tend to engage more extensively in earnings management to facilitate or cover up their extraction of private benefits (Aharony *et al.* 2000; Chen & Yuan 2004; Bushman & Piotroski 2006; Liu & Lu 2007; Firth *et al.* 2011). As a result, we examine whether corporate accessibility can signal the incidence of earnings management.

We use three discretionary accruals measures to capture a firm's earnings management. The first measure is discretionary accruals based on the model of Kothari *et al.* (2005). It is the absolute value of the residuals from a regression model that estimates a firm's total discretionary accruals (*DTACC*). The second measure captures the amount of discretionary revenues following McNichols and Stubben (2008) and Stubben (2010). It is the absolute value of the residuals from a regression model that estimates a firm's change in accounts receivable (*DAR*). Lastly, we follow Peni and Vähämaa (2010) and create a measure using the modified Dechow-Dichew model. It is the absolute value of the residuals from the regression model that estimates a firm's working capital discretionary accruals (*DWCR*). The detailed definitions of these three variables are provided in Appendix A. We re-estimate Equation 2 using these three discretionary accrual measures as the dependent variables. The estimated results are reported in Panels A, B, and C of Table 5.

[Table 5 about here]

As the table shows, the coefficients on all of our accessibility measures are negative and statistically significant. The results suggest that accessible firms tend to have a lower level of earnings management than non-accessible firms. For example, in Panel A, the coefficient on *IRACS* is -0.043, significant at the 1% level. This suggests that the accessible firms have a level of total discretionary accruals that is 24% (i.e., 0.043/0.18) lower than that in non-accessible firms, assuming the non-accessible firms have a mean level of *DTACC* (0.18).

5.3. Corporate Fraud

Insiders' attempts to cover their self-dealing activities and other agency problems may break the laws and regulations and trigger costly sanctions by regulatory bodies. In this section, we examine whether corporate accessibility can detect the incidence of regulatory sanctions for corporate fraud.

To conduct the test, we collect data on regulatory sanctions for securities fraud in Chinese listed firms from 2011 to 2013 from the CSMAR Enforcement Actions Research Database. The database covers fraud cases in which the listed firms' behavior or actions offend the laws and regulations of the exchanges, the CSRC, and the Ministry of Finance. Instances of fraud include manipulating earnings or assets, misreporting, delaying or omitting disclosure, tunneling funds, expropriation, insider trading, manipulating stock prices, and other fraudulent financial reporting. The database provides the specific year in which the frauds are sanctioned by regulators. We create a variable *Fraud*, which is equal to 1 if a firm is sanctioned by the regulator in a year, and 0 otherwise. We then use *Fraud* as the dependent variable and re-estimate Equation 2 by running a logit regression. The estimated results are presented in Panel D of Table 5. As expected, we find that except for *FORUM*, the coefficients on all accessible measures are significantly negative, suggesting that accessible firms are less likely to commit corporate fraud than non-accessible firms.

5.4. Merger and Acquisitions

Huang and Zhang (2012) show that enhanced corporate disclosure is associated with lower agency costs, as evidenced by more value-enhancing mergers and acquisitions (M&A). Following their study, we also examine the relationship between corporate accessibility and market reactions to the M&A announcements. If accessible (non-accessible) firms are less (more) likely to engage in value-destroying M&A, the average announcement return for M&A conducted by accessible firms would be higher than the return by non-accessible firms.

We obtain the M&A data from 2011 to 2013 from the CSMAR database. We focus on M&A deals that are eventually completed. After merging with our data on corporate accessibility, we have 1641 M&A deals in total. To estimate the cumulative abnormal returns (CARs), we follow Wang and Xie (2009) in using the value-weighted return as the market return and estimate the market model parameters over the period from event day -210 to event day -11, where event day 0 is the M&A acquisition announcement date. We compute 3-day cumulative abnormal returns over the event window (*MACAR(-1, 1)*)[14]. We use the *MACAR(-1, 1)* as the dependent variable and re-estimate Equation 2. The estimated results are presented in Table 6.

[Table 6 about here]

In Panel A, we find that the coefficients on all five accessibility measures are positive and significant at normal statistical levels. For instance, the coefficient on *IRACS* is 1.05, significant at the 1% level. This suggests that, on average, the 3-day cumulative abnormal return on M&A deals made by accessible firms is 1.05% higher than the return on the deals made by non-accessible firms. The return gain is 0.8%, 1.3%, and 1.0% if a firm is accessible in terms of telephone, e-mail, and forum, respectively.

The results in Panel A tell us that accessible acquirers perform better than non-accessible acquirers. However, we are still unsure whether non-accessible acquirers are indeed more likely to make value-destroying deals than accessible acquirers. To answer this question, we create a dummy variable, *Value-destroying M&A deals*, that takes 1 if *MACAR(-1, 1)* is negative and 0

[14] We alternatively compute the cumulative abnormal returns over 5- and 11-day windows and find similar results.

otherwise. We re-estimate the abnormal return model using *Value-destroying M&A deals* as the dependent variable. The results using the logistic estimate are reported in Panel B. As expected, we find that the coefficients on our accessibility measures are negative, suggesting that the probability of making a value-destroying M&A deal is higher in non-accessible than in accessible firms.

5.5. Marginal Value of Cash Holdings

Firms have an incentive to hold an amount of free cash to avoid the adverse consequences associated with shocks to earnings or investment opportunities. However, free cash is vulnerable to being diverted to wasteful uses by insiders (Jensen 1986). In this section, we examine whether corporate accessibility is associated with the free cash flow agency problem using the model of the marginal value of cash holdings developed by Faulkender and Wang (2006). If corporate accessibility is inversely related to the severity of agency problems, the value of holding an additional $1 of cash will be lower in non-accessible than in accessible firms.

We augment Faulkender and Wang's (2006) model by introducing our corporate accessibility measure ($ACS_{i,t}$) and its interaction term with the change of cash ($\Delta C_{i,t}$). This approach is similar to that used by Dittmar and Mahrt-Smith (2007) to study the effect of corporate governance on the marginal value of cash holdings. Our model is specified as follows:

$$\begin{aligned} r_{i,t} - R_{i,t}^{B} = {} & \varphi_0 + \varphi_1 \frac{\Delta C_{i,t}}{M_{i,t-1}} \times ACS_{i,t} + \varphi_2 ACS_{i,t} + \varphi_3 \frac{\Delta C_{i,t}}{M_{i,t-1}} + \varphi_4 \frac{\Delta E_{i,t}}{M_{i,t-1}} + \varphi_5 \frac{\Delta NA_{i,t}}{M_{i,t-1}} \\ & + \varphi_6 \frac{\Delta RD_{i,t}}{M_{i,t-1}} + \varphi_7 \frac{\Delta I_{i,t}}{M_{i,t-1}} + \varphi_8 \frac{\Delta D_{i,t}}{M_{i,t-1}} + \varphi_9 \frac{C_{i,t-1}}{M_{i,t-1}} + \varphi_{10} L_{i,t} + \varphi_{11} \frac{NF_{i,t}}{M_{i,t-1}} \\ & + \varphi_{12} \frac{C_{i,t-1}}{M_{i,t-1}} \times \frac{\Delta C_{i,t}}{M_{i,t-1}} + \varphi_{13} L_{i,t} \times \frac{\Delta C_{i,t}}{M_{i,t-1}} + \epsilon_{i,t} \end{aligned} \quad (3)$$

The dependent variable is the excess stock return $r_{i,t} - R_{i,t}^{B}$ for firm *i* in year t, and is defined as the difference between a firm's annual stock return and its corresponding Fama and French

(1993) 25 size and book-to-market portfolio return. $ACS_{i,t}$ is our corporate accessibility measure (*IRSCORE*, *IRACS*, *TEL*, *EMAIL*, and *FORUM*). $\Delta C_{i,t}$ is the change in cash holding from year *t-1* to year *t*. We standardize the change of cash by the one-year lag of market capitalization $M_{i,t-1}$, which allows us to interpret φ_1 as the change in shareholder wealth in dollars. We use exactly the same set of control variables as in Faulkender and Wang (2006): (1) changes in earnings before extraordinary items ($\Delta E_{i,t}$); (2) changes in net assets ($\Delta NA_{i,t}$); (3) changes in R&D ($\Delta RD_{i,t}$); (4) changes in interest expense ($\Delta I_{i,t}$); (5) changes in dividend payout ($\Delta D_{i,t}$); and (6) net financing ($NF_{i,t}$), which is defined as the sum of new equity issues and net new debt issues. All of these variables are standardized by the lag of market capitalization. We also include firm leverage ($L_{i,t}$), the interaction term between $\Delta C_{i,t}$ and one-year lag cash holdings ($C_{i,t-1}$), and the interaction term between $\Delta C_{i,t}$ and firm leverage ($L_{i,t}$).

We obtain data from CSMAR for the 2011-2013 period to estimate the equation. After matching with our accessibility variables, we have 4602 firm-year observations. The results are reported in Table 7. In column (1), we show the baseline results. The absorbed results are consistent with those in Faulkender and Wang (2006). From columns (2) to (6), we add the interaction term between $\Delta C_{i,t}$ and each of the five corporate accessibility measures. The results show that the coefficients on the interaction terms are positive and significant, implying that the marginal value of cash holdings is higher in accessible than non-accessible firms. In particular, as shown in column (2), when a firm has a one-unit-score increase in accessibility in one of the three communication channels (phone, e-mail, and forum), the value of holding an additional \$1 increases by \$0.369. This implies that the value of holding an additional \$1 could increase by as much as \$1.107 if all three communication channels are accessible. The coefficient on $\Delta C \times IRACS$ is 0.444, indicating that an additional \$1 cash holding is worth 0.312 in non-accessible firms compared with 0.756 in accessible firms. The marginal value of cash holding for accessible firms is about 0.444 (or an improvement of 142% = 0.444/0.312) more than the value for non-accessible firms. This marginal effect in dollar amount is substantial given that the average cash holding for Chinese listed firms by the end of 2010 was about US\$200 million.

[Table 7 about here]

5.6. Firm Performance

Agency costs tend to detract from firm value and reduce operating performance (Core *et al.* 1999; Brown & Caylor 2009; Cuñat *et al.* 2012). In this section, we offer additional evidence to support our hypothesis by examining whether there corporate accessibility is indeed negatively associated with firm valuation and operating performance. We use Tobin's Q (*Q*) to measure a firm's valuation and use return on assets (*ROA*) to measure its operating performance. We re-estimate Equation 2 by substituting the dependent variables by *Q* and *ROA*. The results are presented in Table 8.

[Table 8 about here]

In Panel A, the dependent variable is Tobin's Q (*Q*). The coefficient on *IRSCORE* is 0.116, significant at the 1% level. Thus, relative to non-accessible firms with *Q* at the mean level (the mean of *Q* is 1.46), a one-point increase in the index in accessible firms is associated with a valuation improvement of about 8% (i.e., 0.116/1.46). The coefficient on *IRACS* is 0.164 and is also significant at the 1% level. The firm value in accessible firms is about 11% higher than that in non-accessible firms, assuming that non-accessible firms are valued at the mean. We also find significantly positive coefficients on the other three accessibility variables.

Panel B presents the regression results for the association between corporate accessibility and *ROA*. The coefficients on the accessibility measures are statistically significant and positive. The coefficient on *IRSCORE* is 0.764, which means that a one-point increase in accessible communication is associated with a 0.8% increase in *ROA*. On average, *ROA* in accessible firms (based on *IRACS*) is 1.01% higher than in non-accessible firms. It is economically significant when compared with the mean *ROA* of 5.87% (i.e., the relative improvement is 17% = 1.01%/5.87%). The coefficients on other accessibility measures are positive and highly significant. Overall, we find that accessible firms have better performance than non-accessible firms, which confirms our previous results.

5.7. Additional Tests and Robustness

5.7.1. Real vs. fake accessible firms

We define a firm to be an accessible firm if outsiders can effectively communicate with the firm's insiders by telephone, e-mail, or posting questions on its Web forum. We consider this type of firm as having real accessibility (*IRACS*=1). Firms that are non-accessible (*IRACS*=0) include (1) those that provide communication channels but are virtually inaccessible, which we refer to as fake accessible firms, denoted by *FAKEACS*, and (2) firms that do not provide any communication channels at all, which we refer to as dark firms. In this section, we examine whether there is a significant difference between the fake accessible firms and dark firms and whether firms with real accessibility are distinctively different from fake accessible and dark firms. To do this, we simultaneously include *IRACS* and *FAKEACS* in Equation 2 and re-estimate the models. The results are reported in Table 9.

[Table 9 about here]

Panel A of Table 9 reports the results on the analysis of corporate resources tunneling and consumption of organizational slack. We find that only the coefficients on *IRACS* are statistically significant and the coefficients on *FAKEACS* are insignificant, suggesting that real accessible firms have significantly lower levels of resource tunneling and perk consumption than the dark firms, but there is no significant difference between fake accessible and dark firms. At the bottom of the panel, we report the P-values of the joint test of *IRACS* – *FAKEACS*=0 (that is, there is no difference between firms with real accessibility and firms with fake accessibility). We find that the P-values are lower than the 10% level; thus, the null hypothesis is rejected.

In Panel B, we report the results for earnings management and corporate fraud sanctions. For earnings management, the results show that only the coefficient on *IRACS* is significantly negative while that on *FAKEACS* is insignificant. For corporate fraud sanctions, we find that the coefficient on *FAKEACS* is significantly positive but that on *IRACS* is negative but statistically insignificant.

This implies that fake accessible firms are more likely to be sanctioned by regulators for corporate misconduct than dark firms. The results suggest that firms that provide fake accessibility have a stronger tendency to commit fraud than dark firms. Although our main results indicate that accessible firms generally have a lower possibility of being sanctioned by regulators than non-accessible firms, the relation is driven by the difference between accessible firms and fake accessible firms rather than accessible firms and dark firms.

We also repeat the analyses for M&A (Panel C), the marginal value of cash holding (Panel D), and firm performance (Panel E). We obtain consistent findings that suggest that real accessible firms are different from both fake accessible and dark firms, but there is no significant difference between fake accessible and dark firms. Thus, only real corporate accessibility, rather than the nominal provision of corporate accessibility, serves as a signal of cherry firms.

5.7.2. Insider information and accessibility

We have demonstrated that accessible firms are associated with better future performance. However, this relation may be driven by insiders who choose to be accessible (non-accessible) when they anticipate good (poor) performance. To address this concern, we examine whether corporate accessibility is systematically related to corporate insiders' trading of their company stocks. Previous studies show that corporate insiders have incentives to take advantage of their insider information regarding future firm performance to engage in insider trading (Jaffe 1974; Seyhun 1986; Piotroski & Roulstone 2005). If corporate insiders anticipate better future performance and then choose to be accessible, we would expect insiders of the accessible firms to be more likely to have net purchases of their company stocks. To examine whether this is the case, we collect data on executives and directors' buying and selling of their own firms' stocks from 2009 to 2013. We define insider trading as the total amount of net purchase (number of stocks bought minus number of stocks sold) by a firm's managers and directors, scaled by total shares outstanding in a year. To save space, we report the results in Appendix D. We find no significant

difference in the net purchase of stocks by accessible and non-accessible firms during our observation period. Therefore, the argument that corporate insiders anticipate future performance is not supported.

5.7.3. Quality of accessibility

We alternatively measure the quality of corporate accessibility using the following continuous variables for the sample of accessible firms and examine whether the variations in accessibility quality can explain firm performance. 1) *Telephone interviewee attitude*, our telephone interviewer's rating (0, 1, 2, 3, 4, or 5) of the attitude and sincerity of the person who answered the phone call, with 0 being the worst and 5 being the best. 2) *No. of days to receive an e-mail reply*, the logarithm of the number of days it took to receive the firm's response e-mail. This variable measures the timeliness of firms in responding to investors. 3) *Length of the response e-mail*, the logarithm of the number of characters in the e-mail text. This variable measures the effort made by a firm in responding to investors, with a high value indicating a better quality of accessibility. 4) *No. of postings on the online forum*, the logarithm of the number of postings on the online discussion forum. This variable measures the frequency of interactions between firms and investors. We repeat the firm performance analysis using the accessibility quality measures for a sample of accessible firms with valid information on the quality of access. The estimated results are reported in Appendix E.

In Panel A, the dependent variable is *Q*. The results show firms with a higher value for *Telephone interviewee attitude*, a lower value for *No. of days to receive an e-mail reply*, a higher value in *Length of the response e-mail*, and a higher value for *No. of postings on the online forum* are associated with higher levels of firm value. In Panel B, the outcome variable is *ROA* and we find a similar pattern. All coefficients are significant and have the expected sign. Overall, the results suggest that firms with higher levels of accessibility quality tend to perform better.

5.7.4. Other robustness checks

We conducted the analysis during the 2011-2013 period while using accessibility measures constructed in 2010. We repeat our analysis using an overlapping sample (2009-2011 period) and find consistent and highly significant results. In addition, we conduct the analysis by year from 2009 to 2013 and the subsample results are largely the same as those reported in the paper.

We also estimate lagged and median regressions. In the lagged regressions, the dependent variables at time t are matched with the independent variables at time t-1. To avoid extreme observations that distort the results, we also run the regressions using the median values of the variables. Although the results become less significant, they are still robust at the normal significance levels and their signs are consistent with our previous analyses.

In addition, we run regressions with alternative variable definitions. In particular, we use the book to market ratio (book value of total assets/(market value of equity + net debts)) to measure a firm's relative value, and use return on equity and net operating margin to measure a firm's operating performance. The results from these alternative specifications are similar to the results reported earlier.

Lastly, accessible firms may tend to have lower agency costs and better performance because they are located in regions that have better-developed law enforcement and/or higher market development. To deal with these concerns, we control for province-level legal and market development using an index compiled by Fan *et al.* (2011). We re-estimate Equations 2-4, and the results remain broadly the same.

6. Information Environment of Accessible and Non-Accessible Firms

The mechanism underlying our hypothesized signaling effect of corporate accessibility is that lemon firms have a strong preference to minimize private communication with outsiders to reduce corporate transparency (being non-accessible), while cherry firms have an incentive to facilitate private communication with outsiders to enhance corporate transparency (being accessible). In this

section, we provide more evidence to support this proposed mechanism.

6.1. Site visits by outsiders

To explore whether non-accessible firms are less willing than accessible firms to engage in private communication with outsiders, we focus on the frequency of corporate site visits by various market participants and examine whether there is a difference between accessible and non-accessible firms in terms of site visit frequency.

The Shenzhen Stock Exchange issued a disclosure regulation in 2006 (Regulation of Fair Disclosure), which requires firms listed on the exchange to disclose information on corporate site visits made by various market participants such as financial analysts, media, individuals, mutual funds, banks and insurance companies, asset management and consultancy companies, and foreign institutions. We collect the site visit information for the firms listed on the Shenzhen Stock Exchange during our sample period and test whether there is a difference in frequency between accessible and non-accessible firms. The results are presented in Panel A of Table 10. We find that accessible firms experience a higher frequency of site visits than non-accessible firms[15]. In particular, accessible firms have more site visits by financial analysts, median, individual investors, mutual funds, and asset management and consultancy companies than do non-accessible firms. However, there is no significant difference in the number of site visits made by bank and insurance companies and foreign investors. The results are reasonable because banks and insurance companies and foreign investors are likely to have private or alternative communication channels with publicly listed firms and rely less on the public accessibility channels as captured by our accessibility measures to arrange corporate site visits.

[Table 10 about here]

[15] To ensure our accessibility measures are not a simply proxy of corporate site visits, we add the frequency of site visits in our baseline model (Equation 2) and repeat our analysis. We find that the coefficients on accessibility are still significant and have the expected signs, suggesting that our measures of accessibility capture information that differs from the information conveyed by investors' site visits.

6.2. Timeliness of earnings news and forecast accuracy of financial analysts

If corporate accessibility is related to insiders' motivation to provide information to outsiders, accessible firms will have a more transparent information environment than non-accessible firms. Furthermore, if non-accessible firms' reluctance to communicate is related to their incentive to keep their self-dealing activities hidden, outsiders will be less informed about bad news relating to non-accessible firms than to accessible firms. In this section, we provide evidence to support our conjecture.

Prior studies suggest that private communication with corporate insiders is an important information source for financial analysts (Green *et al.* 2014; Soltes 2014; Kirk & Markov 2016). We therefore first focus on the information environment faced by financial analysts. We capture analysts' information environment by the timeliness and accuracy of their earnings forecasts. Specifically, we follow Donelson *et al.* (2012) in measuring the timeliness of analyst forecasts (*Timelines*), which is defined as the average proportion of total news revealed before a given day in the annual revelation window. We also follow their study in separating earnings forecasts into good and bad news and construct timeliness variables for these two types of forecasts (*Timeliness_bad* and *Timeliness_good*). To save space, the detailed definition of the timeliness variables is provided in Appendix A. In addition, we follow Dhaliwal *et al.* (2012) in using analyst forecast error to measure forecast accuracy. Analyst forecast error is defined as the average of the absolute errors of all forecasts for target earnings made during the year (i.e., EPS), scaled by the stock price at the beginning of the year. *Error_0* is the analyst forecast error for the current year. *Error_1* is the analyst forecast error for one year ahead. The data on annual earnings forecasts comes from the China Stock Market Financial Database–Analyst Forecast. Consistent with previous tests, we examine the timeliness of earnings news and earnings forecast accuracy from 2011 to 2013. The results are reported in Panels B and C of Table 10.

In Panel B of Table 10, we find that the mean of *Timeliness* is 0.461 in accessible firms and 0.431 in non-accessible firms. The difference is significant at the 1% level. In addition, accessible

firms reveal both bad and good earnings news in a timelier manner than non-accessible firms. However, the difference is statistically significant only for the revelation of bad earnings news. The results are consistent with the notion that non-accessible firms have a stronger incentive than accessible firms to withhold bad news.

In Panel C, we find that the forecast error of non-accessible firms' current year earnings (*Errors_0*) is significantly higher than the corresponding error of accessible firms. The difference is -0.008 and highly significant. The difference becomes larger when the errors are measured one year ahead. Overall, we find that financial analysts' earnings forecasts for accessible firms are timelier and more accurate than their forecasts for non-accessible firms.

7. Conclusion

Based on the different motivations of cherry and lemon firms to provide firm-specific information to outsiders, this study examines whether the corporate decision to provide corporate accessibility can inform the severity of agency problems of publicly listed firms in China. We measure corporate accessibility by surveying listed firms' responses to communications (via telephone, e-mail, and online discussion forum) initiated by outsiders. We find that firms are less likely to be accessible when they are disciplined by weaker internal and external governance mechanisms and when their interests are less misaligned with the interest of outside investors.

We then test the signaling effect of corporate accessibility by relating our accessibility measures with the incidence of self-dealing activities and corporate misconduct in subsequent years. We find that non-accessible firms are associated with more serious agency problems, as reflected by higher levels of fund tunneling and abnormal related transactions, and higher consumption of organizational slack. We also find that non-accessible firms tend to engage in more earnings management and are more likely to commit corporate fraud. In addition, non-accessible firms are more likely to conduct value-destroying M&A and have a lower marginal value of cash holdings than accessible firms. Finally, we find that non-accessible firms tend to perform worse

than accessible firms in terms of both firm valuation and operating performance. Overall, our results suggest that corporate accessibility is a signal that can systematically detect agency problems.

We interpret our results and frame our conclusions in terms of corporate accessibility signaling agency problems within firms. Alternative explanations for a lack of accessibility are 1) the firm's investor relations personnel and oversight managers are lazy and 2) the firm's top management has a lack of true concern for stockholders (indicating arrogance) and treat investor relations as, at best, a perfunctory task. Both stories explain poor corporate accessibility. However, our tests allow us to distinguish between an agency argument and the alternative arguments. For example, we find statistical associations between accessibility and a host of self-dealing activities and corporate misconducts. Furthermore, we show that corporate accessibility is systematically related to the level of corporate transparency of the accessible and non-accessible firms, which is consistent with the different motivations of cherry and lemon firms to provide firm-specific information to outsiders. The alternative arguments provide no predictions on the effects on agency problems and/or corporate transparency. Our results thus point conclusively to accessibility being a signal of the severity of agency problems.

References

Aggarwal, R., Erel, I., Ferreira, M., Matos, P., 2011. Does governance travel around the world? Evidence from institutional investors. Journal of Financial Economics 100, 154-181

Aharony, J., Lee, C.-W.J., Wong, T.J., 2000. Financial packaging of IPO firms in China. Journal of Accounting Research, 103-126

Akerlof, G.A., 1970. The market for "lemons": Quality uncertainty and the market mechanism. The Quarterly Journal of Economics 84, 488-500

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

Ang, J.S., Cole, R.A., Lin, J.W., 2000. Agency costs and ownership structure. The Journal of Finance 55, 81-106

Ang, J.S., Ma, Y., 1999. Transparency in Chinese stocks: A study of earnings forecasts by professional analysts. Pacific-Basin Finance Journal 7, 129-155

Armstrong, C.S., Guay, W.R., Weber, J.P., 2010. The role of information and financial reporting in corporate governance and debt contracting. Journal of Accounting and Economics 50, 179-234

Baliga, B.R., Moyer, R.C., Rao, R.S., 1996. CEO duality and firm performance: What's the fuss? Strategic Management Journal, 41-53

Beyer, A., Cohen, D.A., Lys, T.Z., Walther, B.R., 2010. The financial reporting environment: Review of the recent literature. Journal of Accounting and Economics 50, 296-343

Blecher, M., Burns, J.P., Jie, D., Fewsmith, J., Jakobson, L., Keane, M., Ostergaard, C.S., Sanzhu, Z., Jing, Z., 2003. Governance in China. Rowman & Littlefield Publishers.

Botosan, C.A., Plumlee, M.A., 2002. A re-examination of disclosure level and the expected cost of equity capital. Journal of Accounting Research 40, 21-40

Brown, L.D., Caylor, M.L., 2009. Corporate governance and firm operating performance. Review of Quantitative Finance and Accounting 32, 129-144

Bushee, B.J., Jung, M.J., Miller, G.S., 2016. Do investors benefit from selective access to management? Available at SSRN: https://ssrn.com/abstract=1880149

Bushee, B.J., Miller, G.S., 2012. Investor relations, firm visibility, and investor following. The Accounting Review 87, 867-897

Bushman, R.M., Piotroski, J.D., 2006. Financial reporting incentives for conservative accounting: The influence of legal and political institutions. Journal of Accounting and Economics 42, 107-148

Bushman, R.M., Piotroski, J.D., Smith, A.J., 2004. What determines corporate transparency? Journal of Accounting Research 42, 207-252

Bushman, R.M., Smith, A.J., 2001. Financial accounting information and corporate governance. Journal of Accounting and Economics 32, 237-333

Chang, E.C., Wong, S.M., 2004. Political control and performance in China's listed firms. Journal of Comparative Economics 32, 617-636

Chen, J., Cumming, D., Hou, W., Lee, E., 2014. Does the external monitoring effect of financial analysts deter corporate fraud in China? Journal of Business Ethics 134, 727-742

Chen, K.C., Yuan, H., 2004. Earnings management and capital resource allocation: Evidence from China's accounting-based regulation of rights issues. The Accounting Review 79, 645-665

Chen, Z., 2003. Capital markets and legal development: The China case. China Economic Review 14, 451-472

Cheng, Q., Du, F., Wang, X., Wang, Y., 2016. Seeing is believing: Analysts' corporate site visits. Review of Accounting Studies 21, 1245-1286
Chong, A., La Porta, R., Lopez-de-Silanes, F., Shleifer, A., 2014. Letter grading government efficiency. Journal of the European Economic Association 12, 277-299
Claessens, S., Djankov, S., Lang, L.H.P., 2000. The separation of ownership and control in East Asian corporations. Journal of Financial Economics 58, 81-112
Collins, D.W., Kothari, S.P., Rayburn, J.D., 1987. Firm size and the information content of prices with respect to earnings. Journal of Accounting and Economics 9, 111-138
Core, J.E., Holthausen, R.W., Larcker, D.F., 1999. Corporate governance, chief executive officer compensation, and firm performance. Journal of Financial Economics 51, 371-406
Cuñat, V., Gine, M., Guadalupe, M., 2012. The vote is cast: The effect of corporate governance on shareholder value. The Journal of Finance 67, 1943-1977
DeFond, M.L., Wong, T.-J., Li, S., 1999. The impact of improved auditor independence on audit market concentration in China. Journal of Accounting and Economics 28, 269-305
Dhaliwal, D.S., Li, O.Z., Tsang, A., Yang, Y.G., 2011. Voluntary nonfinancial disclosure and the cost of equity capital: The initiation of corporate social responsibility reporting. The Accounting Review 86, 59-100
Dhaliwal, D.S., Radhakrishnan, S., Tsang, A., Yang, Y.G., 2012. Nonfinancial disclosure and analyst forecast accuracy: International evidence on corporate social responsibility disclosure. The Accounting Review 87, 723-759
Diamond, D.W., Verrecchia, R.E., 1991. Disclosure, liquidity, and the cost of capital. The Journal of Finance 46, 1325-1359
Dittmar, A., Mahrt-Smith, J., 2007. Corporate governance and the value of cash holdings. Journal of Financial Economics 83, 599-634
Donelson, D.C., McInnis, J.M., Mergenthaler, R.D., Yu, Y., 2012. The timeliness of bad earnings news and litigation risk. The Accounting Review 87, 1967-1991
Du, X., 2013. Does religion matter to owner-manager agency costs? Evidence from China. Journal of Business Ethics 118, 319-347
Durnev, A., Kim, E., 2005. To steal or not to steal: Firm attributes, legal environment, and valuation. The Journal of Finance 60, 1461-1493
Dyck, A., Morse, A., Zingales, L., 2010. Who blows the whistle on corporate fraud? The Journal of Finance 65, 2213-2253
Dye, R.A., 2001. An evaluation of "essays on disclosure" and the disclosure literature in accounting. Journal of Accounting and Economics 32, 181-235
Fama, E.F., French, K.R., 1993. Common risk factors in the returns on stocks and bonds. Journal of Financial Economics 33, 3-56
Fan, G., Wang, X., Zhu, H., 2011. NERI index of marketization of China's provinces: 2011 report (in Chinese). Economic Science Press, Beijing
Fan, J.P.H., Wong, T.J., Zhang, T., 2007. Politically connected CEOs, corporate governance, and post-IPO performance of China's newly partially privatized firms. Journal of Financial Economics 84, 330-357
Faulkender, M., Wang, R., 2006. Corporate financial policy and the value of cash. The Journal of Finance 61, 1957-1990
Firth, M., Gao, J., Shen, J., Zhang, Y., 2016. Institutional stock ownership and firms' cash dividend policies: Evidence from China. Journal of Banking & Finance 65, 91-107
Firth, M., Rui, O.M., Wu, W., 2011. Cooking the books: Recipes and costs of falsified financial

statements in China. Journal of Corporate Finance 17, 371-390
Francis, J.R., Huang, S., Khurana, I.K., Pereira, R., 2009. Does corporate transparency contribute to efficient resource allocation? Journal of Accounting Research 47, 943-989
Gompers, P., Ishii, J., Metrick, A., 2003. Corporate governance and equity prices. The Quarterly Journal of Economics 118, 107-155
Green, T.C., Jame, R., Markov, S., Subasi, M., 2014. Access to management and the informativeness of analyst research. Journal of Financial Economics 114, 239-255
Gul, F.A., Kim, J.-B., Qiu, A.A., 2010. Ownership concentration, foreign shareholding, audit quality, and stock price synchronicity: Evidence from China. Journal of Financial Economics 95, 425-442
Healy, P.M., Palepu, K., 2001. Information asymmetry, corporate disclosure and the capital Markets: A review of the empirical disclosure literature. Journal of Accounting and Economics 31, 405-440
Heflin, F.L., Shaw, K.W., Wild, J.J., 2005. Disclosure policy and market liquidity: Impact of depth quotes and order sizes. Contemporary Accounting Research 22, 829-865
Hobson, J.L., Mayew, W.J., Venkatachalam, M., 2011. Analyzing speech to detect financial misreporting. Journal of Accounting Research 50, 349-392
Hope, O.-K., Thomas, W.B., 2008. Managerial empire building and firm disclosure. Journal of Accounting Research 46, 591-626
Hu, H.W., Tam, O.K., Tan, M.G.-S., 2010. Internal governance mechanisms and firm performance in China. Asia Pacific Journal of Management 27, 727-749
Huang, P., Zhang, Y., 2012. Does enhanced disclosure really reduce agency costs? Evidence from the diversion of corporate resources. The Accounting Review 87, 199-229
Hyytinen, A., Pajarinen, M., 2005. External finance, firm growth and the benefits of information disclosure: Evidence from Finland. European Journal of Law and Economics 19, 69-93
Jaffe, J.F., 1974. The effect of regulation changes on insider trading. The Bell Journal of Economics and Management Science, 93-121
Jensen, M., 1986. Agency cost of free cash flow, corporate finance, and takeovers. American Economic Review 76, 323-329
Jensen, M.C., Meckling, W.H., 1976. Theory of the firm: Managerial behavior, agency costs and ownership structure. Journal of Financial Economics 3, 305-360
Jian, M., Wong, T.J., 2010. Propping through related party transactions. Review of Accounting Studies 15, 70-105
Jiang, G., Lee, C.M.C., Yue, H., 2010. Tunneling through intercorporate loans: The China experience. Journal of Financial Economics 98, 1-20
Karpoff, J.M., Lee, D.S., Martin, G.S., 2009. The cost to firms of cooking the books. Journal of Financial and Quantitative Analysis 43, 581
Kirk, M.P., Markov, S., 2016. Come on over: Analyst/investor days as a disclosure medium. The Accounting Review 91, 1725-1750
Kirk, M.P., Vincent, J.D., 2014. Professional investor relations within the firm. The Accounting Review 89, 1421-1452
Kothari, S.P., Leone, A.J., Wasley, C.E., 2005. Performance matched discretionary accrual measures. Journal of Accounting and Economics 39, 163-197
Kothari, S.P., Shu, S., Wysocki, P.D., 2009. Do managers withhold bad news? Journal of Accounting Research 47, 241-276
La Porta, R., Shleifer, A., López de Silanes, F., 1999. Corporate ownership around the world.

Journal of Finance 54, 471-517
Leuz, C., Wysocki, P.D., 2008. Economic consequences of financial reporting and disclosure regulation: A review and suggestions for future research. Working paper, University of Chicago
Li, F., 2008. Annual report readability, current earnings, and earnings persistence. Journal of Accounting and Economics 45, 221-247
Liao, L., Liu, B., Wang, H., 2014. China"s secondary privatization: Perspectives from the Split-Share Structure Reform. Journal of Financial Economics 113, 500-518
Lin, K., Piotroski, J., Yang, Y.G., Tan, J., 2012. Voice or exit? Independent director decisions in an emerging economy. Working Paper
Liu, Q., Lu, Z., 2007. Corporate governance and earnings management in the Chinese listed companies: A tunneling perspective. Journal of Corporate Finance 13, 881-906
Luo, W., Zhang, Y., Zhu, N., 2011. Bank ownership and executive perquisites: New evidence from an emerging market. Journal of Corporate Finance 17, 352-370
Mayew, W.J., Sharp, N.Y., Venkatachalam, M., 2013. Using earnings conference calls to identify analysts with superior private information. Review of Accounting Studies 18, 386-413
Mayew, W.J., Venkatachalam, M., 2012. The power of voice: Managerial affective states and future firm performance. The Journal of Finance 67, 1-44
McNichols, M.F., Stubben, S.R., 2008. Does earnings management affect firms' investment decisions? The Accounting Review 83, 1571-1603
Murphy, D.L., Shrieves, R.E., Tibbs, S.L., 2009. Understanding the penalties associated with corporate misconduct: An empirical examination of earnings and risk. Journal of Financial and Quantitative Analysis 44, 55
Ng, L., Wu, F., 2006. Revealed stock preferences of individual investors: Evidence from Chinese equity markets. Pacific-Basin Finance Journal 14, 175-192
Ng, L., Wu, F., 2007. The trading behavior of institutions and individuals in Chinese equity markets. Journal of Banking & Finance 31, 2695-2710
Ng, S., Troianovski, A., 2015. How some investors get special access to companies: In meetings with top executives, facts and body language flow from public companies to handpicked recipients. In: Wall Street Journal, Sept 27, 2015.
Nguyen, B.D., Nielsen, K.M., 2010. The value of independent directors: Evidence from sudden deaths. Journal of Financial Economics 98, 550-567
Peni, E., Vähämaa, S., 2010. Female executives and earnings management. Managerial Finance 36, 629-645
Piotroski, J.D., Roulstone, D.T., 2005. Do insider trades reflect both contrarian beliefs and superior knowledge about future cash flow realizations? Journal of Accounting and Economics 39, 55-81
Piotroski, J.D., Wong, T.J., 2012. Institutions and information environment of Chinese listed firms. In: Capitalizing China. University of Chicago Press, pp. 201-242.
Porta, R., Lopez-de-Silanes, F., Shleifer, A., 1999. Corporate ownership around the world. The Journal of Finance 54, 471-517
Seyhun, H.N., 1986. Insiders' profits, costs of trading, and market efficiency. Journal of Financial Economics 16, 189-212
Shleifer, A., Vishny, R.W., 1997. A survey of corporate governance. The Journal of Finance 52, 737-783
Smith, E.A., Bliege Bird, R., 2005. Costly signaling and cooperative behavior. *Moral sentiments*

and material interests: The foundations of cooperation in economic life, 115-148
Solomon, D., Soltes, E., 2015. What are we meeting for? The consequences of private meetings with investors. The Journal of Law and Economics 58, 325-355
Soltes, E., 2014. Private interaction between firm management and sell-side analysts. Journal of Accounting Research 52, 245-272
Spence, M., 1973. Job market signaling. The Quarterly Journal of Economics 87, 355-374
Stubben, S.R., 2010. Discretionary revenues as a measure of earnings management. The Accounting Review 85, 695-717
Sun, Q., Tong, W.H.S., 2003. China share issue privatization: The extent of its success. Journal of Financial Economics 70, 183-222
Verrecchia, R.E., 2001. Essays on disclosure. Journal of Accounting and Economics 32, 97-180
Wang, C., Xie, F., 2009. Corporate governance transfer and synergistic gains from mergers and acquisitions. Review of Financial Studies 22, 829-858
Wang, Q., Wong, T.J., Xia, L., 2008. State ownership, the institutional environment, and auditor choice: Evidence from China. Journal of Accounting and Economics 46, 112-134
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, 87-108
Welker, M., 1995. Disclosure policy, information asymmetry, and liquidity in equity markets. Contemporary Accounting Research 11, 801-827
Yermack, D., 1996. Higher market valuation of companies with a small board of directors. Journal of Financial Economics 40, 185-211
Zou, H., Wong, S., Shum, C., Xiong, J., Yan, J., 2008. Controlling-minority shareholder incentive conflicts and directors' and officers' liability insurance: Evidence from China. Journal of Banking & Finance 32, 2636-2645

Table 1
Sample and Corporate Accessibility Measures

i. All non-financial firms listed on the two Chinese stock exchanges as of the end of June 2010.			1798	
ii. Number of firms after excluding firms with a) invalid websites and b) missing financial data.			1581	
iii. Number of firms with investor relation subpages (IR section)			1231	
%, (**iii**/**ii**)			78%	
Communication channels	Telephone (*TEL*)	E-mail (*EMAIL*)	Forum (*FORUM*)	Overall (*IRACS*)
iv. Number of firms offering the channels	888	670	295	1161
%, (**iv**/**ii**)	56.2%	42.4%	18.7%	73.4%
%, (**iv**/**iii**)	72.1%	54.4%	24.0%	94.3%
v. Number of firms offering the channels and that are accessible	173	99	252	432
%, (**v**/**ii**)	10.9%	6.3%	15.9%	27.3%
%, (**v**/**iii**)	14.1%	8.0%	20.5%	35.1%
%, (**v**/**iv**)	19.5%	14.8%	85.4%	37.2%

Table 2
Variable Summary Statistics

Panel A: Summary statistics for the analysis of the determinants of corporate accessibility

Variables	N	Mean	Std.	P25	Median	P75
IRSCORE	1,415	0.31	0.57	0.00	0.00	1.00
IRACS	1,415	0.26	0.44	0.00	0.00	1.00
TEL	1,415	0.09	0.29	0.00	0.00	0.00
EMAIL	1,415	0.05	0.22	0.00	0.00	0.00
FORUM	1,415	0.16	0.37	0.00	0.00	0.00
SOEs	1,415	0.48	0.50	0.00	0.00	1.00
C/O divergence	1,415	1.40	1.48	1.00	1.00	1.43
Cash-flow ownership	1,415	0.32	0.18	0.18	0.30	0.45
CEO Duality	1,415	0.21	0.40	0.00	0.00	0.00
Board size	1,415	2.28	0.27	2.20	2.30	2.30
Independent directors	1,415	0.36	0.06	0.33	0.33	0.38
Institutional ownership	1,415	0.05	0.07	0.00	0.01	0.07
Big4 auditors	1,415	0.05	0.21	0.00	0.00	0.00
Market competition	1,415	0.49	0.50	0.00	0.00	1.00
External finance dependence	1,415	-5.40	23.74	-2.45	-0.04	0.21
Managerial education	1,415	0.64	0.48	0.00	1.00	1.00
IT skills	1,415	0.07	0.25	0.00	0.00	0.00
Firm size	1,415	22.36	0.93	21.70	22.19	22.80
Leverage	1,415	0.07	0.11	0.00	0.02	0.11
Assets growth	1,415	0.28	0.72	0.02	0.12	0.29

Panel B: Summary statistics for the analysis of agency costs and corporate misconduct

Variables	N	Mean	Std.	P25	Median	P75
IRSCORE	4,657	0.33	0.60	0.00	0.00	1.00
IRACS	4,657	0.27	0.44	0.00	0.00	1.00
TEL	4,657	0.11	0.31	0.00	0.00	0.00
EMAIL	4,657	0.06	0.24	0.00	0.00	0.00
FORUM	4,657	0.16	0.37	0.00	0.00	0.00
FAKEACS	4,657	0.51	0.50	0.00	1.00	1.00
SOEs	4,657	0.43	0.50	0.00	0.00	1.00
C/O divergence	4,657	1.32	0.82	1.00	1.00	1.33
Cash-flow ownership	4,657	0.28	0.20	0.12	0.26	0.42
CEO Duality	4,657	0.22	0.41	0.00	0.00	0.00
Board size	4,657	2.28	0.21	2.20	2.30	2.30
Independent directors	4,657	0.37	0.06	0.33	0.33	0.40
Institutional ownership	4,657	0.04	0.07	0.00	0.01	0.05
Big4 auditors	4,657	0.04	0.21	0.00	0.00	0.00
Market competition	4,657	0.50	0.50	0.00	0.00	1.00
External finance dependence	4,657	-8.10	36.55	-3.96	-0.65	0.32
Managerial education	4,657	0.56	0.50	0.00	1.00	1.00
IT skills	4,657	0.06	0.24	0.00	0.00	0.00
Firm size	4,657	22.15	0.92	21.48	21.98	22.65
Leverage	4,657	0.08	0.11	0.00	0.03	0.13
Assets growth	4,657	0.15	0.30	0.02	0.10	0.21
Inter-corporate loan tunneling (%), *ORECA*	4,657	1.74	2.67	0.37	0.85	1.91
Abnormal related-party transactions, *ARPT*	4,657	-0.07	0.80	-0.46	-0.09	0.02
Managerial excess, *EXPR*	4,657	0.10	0.12	0.04	0.07	0.11
Discretionary total accruals, *DTACC*	4,657	0.18	0.48	0.04	0.10	0.18
Discretionary revenues, *DAR*	4,657	0.04	0.07	0.01	0.02	0.05
Discretionary working capital accruals, *DWCR*	4,657	0.13	0.27	0.03	0.06	0.14
Fraud	4,657	0.07	0.25	0.00	0.00	0.00
MACAR (-1, 1), %	1,641	0.64	5.25	-1.79	0.06	2.20
Value-destroying M&A deals	1,641	0.49	0.50	0.00	0.00	1.00
Firm value, *Q*	4,657	1.45	1.11	0.65	1.15	1.91
Return on assets (%), *ROA*	4,657	5.87	6.76	2.98	5.33	8.39

Table 3
Determinants of Corporate Accessibility

Logistic regressions explaining corporate accessibility. The dependent variables are the measures of corporate accessibility, including a score index (*IRSCORE*) and four dummy variables (*IRACS*, *TEL*, *EMAIL*, and *FORUM*), which are constructed based on information for 2010. All explanatory variables are measured in 2009. All variables are defined in Appendix A. Industry fixed effects are included. The t statistics are reported in parentheses. Significance at the 10%, 5%, and 1% level is indicated by *, **, and ***, respectively.

Explained Variables	*IRSCORE*	*IRACS*	*TEL*	*EMAIL*	*FORUM*
	(1)	(2)	(3)	(4)	(5)
SOEs	-0.662***	-0.679***	-0.461**	-0.570**	-0.630***
	(-4.70)	(-4.74)	(-2.18)	(-2.02)	(-3.70)
C/O divergence	-0.343***	-0.356***	-0.315*	-0.291	-0.263*
	(-2.79)	(-2.85)	(-1.66)	(-1.15)	(-1.79)
Cash-flow ownership	0.866**	0.839**	0.364	0.578	1.144**
	(2.06)	(1.97)	(0.59)	(0.74)	(2.29)
CEO Duality	-0.254	-0.304*	-0.270	-0.158	-0.067
	(-1.58)	(-1.86)	(-1.13)	(-0.51)	(-0.36)
Board size	-0.158	-0.156	-0.251	-0.568	0.144
	(-0.67)	(-0.65)	(-0.78)	(-1.58)	(0.44)
Independent directors	0.342	0.429	0.617	-0.009	0.250
	(0.30)	(0.36)	(0.36)	(-0.00)	(0.18)
Institutional ownership	2.052*	2.133**	2.861**	-1.082	1.379
	(1.96)	(2.01)	(1.96)	(-0.51)	(1.06)
Big4 auditors	0.018	0.048	0.584	-0.603	-0.137
	(0.06)	(0.15)	(1.48)	(-0.80)	(-0.34)
Market competition	0.601***	0.602***	0.526***	0.512*	0.515***
	(4.49)	(4.45)	(2.62)	(1.94)	(3.22)
External finance dependence	0.009*	0.009*	0.001	0.010	0.015*
	(1.71)	(1.74)	(0.27)	(0.79)	(1.79)
Leverage	-0.850	-0.844	-0.935	-1.891	-0.424
	(-1.17)	(-1.16)	(-0.82)	(-1.20)	(-0.49)
Assets growth	-0.012	-0.011	0.092	-0.113	-0.075
	(-0.14)	(-0.12)	(0.83)	(-0.60)	(-0.67)
Managerial education	0.390***	0.378***	0.305	0.708**	0.408**
	(2.82)	(2.70)	(1.46)	(2.38)	(2.42)
IT skills	-0.182	-0.204	-0.008	-0.282	-0.157
	(-0.69)	(-0.77)	(-0.02)	(-0.53)	(-0.50)
Firm size	-0.124	-0.124	-0.108	0.322**	-0.238**
	(-1.36)	(-1.34)	(-0.79)	(1.97)	(-2.10)
Industry fixed effects	Yes	Yes	Yes	Yes	Yes
Observations	1,415	1,415	1,415	1,415	1,415
Pseudo R-squared	0.064	0.079	0.048	0.067	0.067

Table 4
Tunneling and Managerial Slack

Regressions explaining corporate tunneling activities and managerial slack. Corporate tunneling is measured by inter-corporate loan tunneling *ORECA* (Panel A) and abnormal related-party transactions *ARPT* (Panel B). Managerial slack *EXPR* is defined as operating expense (total expenses less cost of goods sold, interest expense, and managerial compensation) scaled by annual sales. The key independent variable is one of our corporate accessibility measures, including a score index (*IRSCORE*) and four dummy variables (*IRACS*, *TEL*, *EMAIL*, and *FORUM*). We control for the explanatory variables that are included in model 1. Industry, province, and year fixed effects are also included. All variables are defined in Appendix A. The t statistics based on a robust standard error estimate clustered at the firm level are reported in parentheses. Significance at the 10%, 5%, and 1% level is indicated by *, **, and ***, respectively.

Panel A: Explained variable is inter-corporate loan tunneling, *ORECA*

	(1)	(2)	(3)	(4)	(5)
IRSCORE	-0.268***				
	(-3.41)				
IRACS		-0.390***			
		(-3.90)			
TEL			-0.363***		
			(-2.78)		
EMAIL				-0.321**	
				(-2.32)	
FORUM					-0.287**
					(-2.42)
Controls	Yes	Yes	Yes	Yes	Yes
Industry, province, and year fixed effects	Yes	Yes	Yes	Yes	Yes
Clustering by	Firm	Firm	Firm	Firm	Firm
Observations	4,657	4,657	4,657	4,657	4,657
R-squared	0.127	0.127	0.125	0.124	0.125

Panel B: Explained variable is abnormal related-party transactions, *ARPT*

	(1)	(2)	(3)	(4)	(5)
IRSCORE	-0.072***				
	(-3.73)				
IRACS		-0.107***			
		(-3.95)			
TEL			-0.084**		
			(-2.53)		
EMAIL				-0.085**	
				(-2.13)	
FORUM					-0.087***
					(-2.87)
Controls	Yes	Yes	Yes	Yes	Yes
Industry, province, and year fixed effects	Yes	Yes	Yes	Yes	Yes
Clustering by	Firm	Firm	Firm	Firm	Firm
Observations	4,657	4,657	4,657	4,657	4,657
R-squared	0.065	0.065	0.063	0.062	0.063

Panel C: Explained variable is managerial excess, *EXPR*

	(1)	(2)	(3)	(4)	(5)
IRSCORE	-0.007**				
	(-2.54)				
IRACS		-0.011***			
		(-2.86)			
TEL			-0.008*		
			(-1.75)		
EMAIL				-0.010*	
				(-1.85)	
FORUM					-0.007*
					(-1.79)
Controls	Yes	Yes	Yes	Yes	Yes

Industry, province, and year fixed effects	Yes	Yes	Yes	Yes	Yes
Clustering by	Firm	Firm	Firm	Firm	Firm
Observations	4,657	4,657	4,657	4,657	4,657
R-squared	0.148	0.148	0.147	0.147	0.147

Table 5
Earnings Management and Corporate Fraud

Regressions explaining corporate earnings management and fraud. Earnings management is measured by discretionary total accruals, *DTACC* (Panel A), discretionary revenues, *DAR* (Panel B), and discretionary working capital accruals, *DWCR* (Panel C). The incidence of corporate fraud is measured by *Fraud*, which is a dummy variable that takes the value of 1 if a firm commits financial fraud in a year and 0 otherwise (Panel D). The key independent variable is one of our corporate accessibility measures, including a score index (*IRSCORE*) and four dummy variables (*IRACS*, *TEL*, *EMAIL*, and *FORUM*). We control for the explanatory variables that are included in model 1. Industry, province, and year fixed effects are also included. All variables are defined in Appendix A. The t statistics based on a robust standard error estimate clustered at the firm level are reported in parentheses. Significance at the 10%, 5%, and 1% level is indicated by *, **, and ***, respectively.

Panel A: Explained variable is discretionary total accruals, *DTACC*

	(1)	(2)	(3)	(4)	(5)
IRSCORE	-0.033***				
	(-3.83)				
IRACS		-0.043***			
		(-3.39)			
TEL			-0.043***		
			(-3.16)		
EMAIL				-0.043***	
				(-2.65)	
FORUM					-0.035***
					(-2.71)
Controls	Yes	Yes	Yes	Yes	Yes
Industry, province, and year fixed effects	Yes	Yes	Yes	Yes	Yes
Clustering by	Firm	Firm	Firm	Firm	Firm
Observations	4,657	4,657	4,657	4,657	4,657
R-squared	0.128	0.128	0.128	0.127	0.127

Panel B: Explained variable is discretionary revenues, *DAR*

	(1)	(2)	(3)	(4)	(5)
IRSCORE	-0.003**				
	(-2.44)				
IRACS		-0.005**			
		(-2.33)			
TEL			-0.003		
			(-1.20)		
EMAIL				-0.006*	
				(-1.96)	
FORUM					-0.004*
					(-1.67)
Controls	Yes	Yes	Yes	Yes	Yes
Industry, province, and year fixed effects	Yes	Yes	Yes	Yes	Yes
Clustering by	Firm	Firm	Firm	Firm	Firm
Observations	4,657	4,657	4,657	4,657	4,657
R-squared	0.257	0.257	0.256	0.256	0.256

Panel C: Explained variable is discretionary working capital accruals, *DWCR*

	(1)	(2)	(3)	(4)	(5)
IRSCORE	-0.014**				
	(-2.28)				
IRACS		-0.019**			
		(-2.16)			
TEL			-0.008		
			(-0.81)		
EMAIL				-0.035***	
				(-3.59)	
FORUM					-0.015*
					(-1.74)
Controls	Yes	Yes	Yes	Yes	Yes

Industry, province, and year fixed effects	Yes	Yes	Yes	Yes	Yes
Clustering by	Firm	Firm	Firm	Firm	Firm
Observations	4,657	4,657	4,657	4,657	4,657
R-squared	0.127	0.127	0.126	0.127	0.126

Panel D: Explained variable is *Fraud*

	(1)	(2)	(3)	(4)	(5)
IRSCORE	-0.541***				
	(-4.32)				
IRACS		-0.458***			
		(-3.10)			
TEL			-1.269***		
			(-4.46)		
EMAIL				-0.899***	
				(-2.66)	
FORUM					-0.181
					(-1.07)
Controls	Yes	Yes	Yes	Yes	Yes
Industry, province, and year fixed effects	Yes	Yes	Yes	Yes	Yes
Observations	4,657	4,657	4,657	4,657	4,657
R-squared	0.114	0.109	0.116	0.108	0.105

Table 6
Market Reaction to M&A Announcement

Regressions explaining merger and acquisition announcement returns. In Panel A, OLS regression is used. The dependent variable is a 3-day abnormal return around the M&A deal announcement (*MACAR (-1, 1)*). In Panel B, Logit regression is used. The dependent variable is an indicator of value-destroying M&A deals. The indicator is equal to 1 if the 3-day abnormal return is negative and zero otherwise. The key independent variable is one of our corporate accessibility measures, including a score index (*IRSCORE*) and four dummy variables (*IRACS*, *TEL*, *EMAIL*, and *FORUM*). We control for the explanatory variables that are included in model 1. Industry and year fixed effects are also included. All variables are defined in Appendix A. The t statistics are reported in parentheses. Significance at the 10%, 5%, and 1% level is indicated by *, **, and ***, respectively.

Panel A: Explained variable is 3-day abnormal returns, *MACAR(-1, 1)*

	(1)	(2)	(3)	(4)	(5)
IRSCORE	0.809***				
	(3.45)				
IRACS		1.050***			
		(3.61)			
TEL			0.784*		
			(1.87)		
EMAIL				1.296**	
				(2.52)	
FORUM					0.968***
					(2.80)
Controls	Yes	Yes	Yes	Yes	Yes
Industry and year fixed effects	Yes	Yes	Yes	Yes	Yes
Clustering by	Firm	Firm	Firm	Firm	Firm
Observations	1,641	1,641	1,641	1,641	1,641
R-squared	0.072	0.071	0.066	0.068	0.068

Panel B: Explained variable is the indicator of value-destroying M&A deals (1 if *MACAR(-1, 1)*<0)

	(1)	(2)	(3)	(4)	(5)
IRSCORE	-0.205**				
	(-2.36)				
IRACS		-0.310***			
		(-2.62)			
TEL			-0.331*		
			(-1.89)		
EMAIL				-0.251	
				(-1.25)	
FORUM					-0.198
					(-1.42)
Controls	Yes	Yes	Yes	Yes	Yes
Industry and year fixed effects	Yes	Yes	Yes	Yes	Yes
Observations	1,641	1,641	1,641	1,641	1,641
Pseudo R-squared	0.023	0.024	0.023	0.022	0.022

Table 7
Marginal Value of Cash Holdings

Regressions examining the impact of corporate accessibility on the marginal value of cash holdings. The dependent variable is the abnormal stock return, which is the difference between a firm's annual stock return and the Fama and French (1993) 25 size and book-to-market portfolio returns. Our key independent variables are the measures of corporate accessibility, including a score index (*IRSCORE*) and four dummy variables (*IRACS*, *TEL*, *EMAIL*, and *FORUM*). We include the same set of control variables as used in Faulkender and Wang (2006). Industry, province, and year fixed effects are also included. All variables are defined in Appendix A. The t statistics based on a robust standard error estimate clustered at the firm level are reported in parentheses. Significance at the 10%, 5%, and 1% level is indicated by *, **, and ***, respectively.

Explained Variable	Size, BM/ME adjusted returns					
	(1)	(2)	(3)	(4)	(5)	(6)
IRSCORE		-0.005				
		(-0.73)				
*IRSCORE * ΔCash/ME*		0.369***				
		(3.52)				
IRACS			-0.009			
			(-0.98)			
*IRACS * ΔCash/ME*			0.444***			
			(3.62)			
TEL				-0.002		
				(-0.13)		
*TEL * ΔCash/ME*				0.586***		
				(5.37)		
EMAIL					0.015	
					(0.91)	
*EMAIL * ΔCash/ME*					0.425*	
					(1.76)	
FORUM						-0.018
						(-1.62)
*FORUM * ΔCash/ME*						0.253
						(1.57)
ΔCash/ME	0.416**	0.312*	0.317*	0.376**	0.371**	0.391**
	(2.41)	(1.75)	(1.78)	(2.18)	(2.14)	(2.22)
Controls	Yes	Yes	Yes	Yes	Yes	Yes
Industry, province, and year fixed effects	Yes	Yes	Yes	Yes	Yes	Yes
Clustering by	Firm	Firm	Firm	Firm	Firm	Firm
Observations	4,602	4,602	4,602	4,602	4,602	4,602
R-squared	0.125	0.130	0.130	0.130	0.126	0.126

Table 8
Firm Performance

Regressions explaining firm performance. Firm performance is measured by firm value, *Q* (Panel A), and return on assets, *ROA* (Panel B). The key independent variable is one of our corporate accessibility measures, including a score index (*IRSCORE*) and four dummy variables (*IRACS*, *TEL*, *EMAIL*, and *FORUM*). We control for the explanatory variables that are included in model 1. Industry, province, and year fixed effects are also included. All variables are defined in Appendix A. The t statistics based on a robust standard error estimate clustered at the firm level are reported in parentheses. Significance at the 10%, 5%, and 1% level is indicated by *, **, and ***, respectively.

Panel A: Explained variable is firm value, *Q*

	(1)	(2)	(3)	(4)	(5)
IRSCORE	0.116***				
	(3.19)				
IRACS		0.164***			
		(3.36)			
TEL			0.179***		
			(2.89)		
EMAIL				0.171*	
				(1.66)	
FORUM					0.095*
					(1.65)
Controls	Yes	Yes	Yes	Yes	Yes
Industry, province, and year fixed effects	Yes	Yes	Yes	Yes	Yes
Clustering by	Firm	Firm	Firm	Firm	Firm
Observations	4,657	4,657	4,657	4,657	4,657
R-squared	0.337	0.338	0.336	0.335	0.335

Panel B: Explained variable is return on assets (%), *ROA*

	(1)	(2)	(3)	(4)	(5)
IRSCORE	0.764***				
	(4.20)				
IRACS		1.011***			
		(3.95)			
TEL			0.783**		
			(2.19)		
EMAIL				1.321***	
				(2.80)	
FORUM					0.821***
					(2.89)
Controls	Yes	Yes	Yes	Yes	Yes
Industry, province, and year fixed effects	Yes	Yes	Yes	Yes	Yes
Clustering by	Firm	Firm	Firm	Firm	Firm
Observations	4,657	4,657	4,657	4,657	4,657
R-squared	0.315	0.315	0.312	0.313	0.313

Table 9
Real vs. Fake Accessibility

Regressions explain corporate agency costs and misconduct in firms with real and fake accessibility. Firms with real accessibility are defined by *IRACS*, which equals 1 if at least one of the three communication channels (phone, e-mail, and forum) is accessible and 0 otherwise. Firms with fake accessibility are defined by *FAKEACS*, which equals 1 if at least one of the three communication channels (phone, e-mail, and forum) is provided but none is accessible and 0 otherwise. We include *IRACS* and *FAKEACS* at a time and repeat the analyses reported in Table 4 (the results are reported in Panel A of this table), in Table 5 (the results are reported in Panel B of this table), in Table 6 (the results are reported in Panel C of this table), in Table 7 (the results are reported in Panel D of this table), and in Table 8 (the results are reported in Panel E of this table). At the bottom of the column, the p-value of the joint test of *IRACS* and *FAKAC*S is reported. All variables are defined in Appendix A. The t statistics based on a robust standard error estimate clustered at the firm level are reported in parentheses. Significance at the 10%, 5%, and 1% level is indicated by *, **, and ***, respectively.

Panel A: Tunneling and managerial excess

	(1)	(2)	(3)
Explained Variable	Inter-corporate loan tunneling, *ORECA*	Abnormal related-party transactions, *ARPT*	Managerial excess, *EXPR*
IRACS	-0.298**	-0.082**	-0.016**
	(-2.14)	(-2.17)	(-2.55)
FAKEACS	0.134	0.036	-0.007
	(0.89)	(0.91)	(-1.02)
Controls	Yes	Yes	Yes
Industry, province, and year fixed effects	Yes	Yes	Yes
Clustering by	Firm	Firm	Firm
Observations	4,657	4,657	4,657
R-squared	0.128	0.065	0.149
P-value of joint test of *IRACS- FAKACS*=0	0.000	0.000	0.051

Panel B: Earnings management and corporate frauds

	(1)	(2)	(3)	(4)
Explained Variable	Discretionary total accruals, *DTACC*	Discretionary revenues, *DAR*	Discretionary working capital accruals, *DWCR*	Frauds
IRACS	-0.063***	-0.005*	-0.027***	-0.223
	(-2.74)	(-1.93)	(-2.70)	(-1.15)
FAKEACS	-0.028	-0.000	-0.012	0.318*
	(-1.17)	(-0.15)	(-1.22)	(1.89)
Controls	Yes	Yes	Yes	Yes
Industry, province, and year fixed effects	Yes	Yes	Yes	Yes
Clustering by	Firm	Firm	Firm	-
Observations	4,657	4,657	4,657	4,579
R-squared	0.129	0.257	0.127	0.110
P-value of joint test of *IRACS- FAKACS*=0	0.012	0.039	0.126	0.000

Panel C: M&A

	(1)	(2)
Explained Variable	MACAR (-1, 1)	Value-destroying M&A deals
IRACS	1.633***	-0.426***
	(4.57)	(-2.81)
FAKEACS	0.857**	-0.171
	(2.45)	(-1.23)
Controls	Yes	Yes
Industry and year fixed effects	Yes	Yes
Clustering by	Firm	-
Observations	1,641	1,641
R-squared	0.075	0.025

P-value of joint test of *IRACS- FAKACS*=0	0.016	0.043

Panel D: Marginal value of cash holding

	(1)
Explained Variable	Size, BM/ME adjusted returns
*IRACS * ΔCash/ME*	0.389**
	(2.47)
*FAKEACS * ΔCash/ME*	-0.078
	(-0.64)
Controls	Yes
Industry, province, and year fixed effects	Yes
Clustering by	Firm
Observations	4,602
R-squared	0.131
P-value of joint test of *IRACS * ΔCash/ME - FAKEACS * ΔCash/ME*=0	0.000

Panel E: Firm performance

	(1)	(2)
Explained Variable	Firm value, *Q*	Return on assets (%), *ROA*
IRACS	0.114*	1.245***
	(1.86)	(3.76)
FAKEACS	-0.073	0.339
	(-1.32)	(1.18)
Controls	Yes	Yes
Industry, province, and year fixed effects	Yes	Yes
Clustering by	Firm	Firm
Observations	4,657	4,657
R-squared	0.338	0.315
P-value of joint test of *IRACS- FAKACS*=0	0.000	0.001

Table 10
Information Environment in Accessible and non-Accessible Firms

This table presents the difference in the information environment between accessible and non-accessible firms. In Panel A, the outcome variable is the log of the number of site visits by outside market participants. In row 1, it is the total number of visits by all types of market participants. The numbers of visits by different types of participants are presented in the next rows. Types of participants include financial analysts, media, individuals, mutual funds, bank and insurance companies, asset management and consultant companies, and foreign institutions. In Panel B, the outcome variable is the earnings news timeliness of financial analysts, which is defined as the average proportion of total news that was revealed up to a given day in the annual revelation window. The annual revelation window is one week after the prior annual earnings announcement to the current year's earnings announcement. The difference between the beginning consensus forecast and the ultimate earnings revelation represents the total news. The difference between the beginning consensus forecast and the consensus forecast in a day during the revelation window scaled by the total news represents the proportion of total news that was revealed up to that day. Specifically, we follow the method described by Donelson et al. (2012) to measure the timeliness of earnings news. In row 1, all earnings news is included. In row 2, only bad earnings news is included (the ultimate earnings revelation is lower than the beginning consensus forecast). In row 3, only good earnings news is included (the ultimate earnings revelation is higher than the beginning consensus forecast). In Panel C, the outcome variable is analyst earnings forecast error, which is defined as the average of the absolute errors of all forecasts made in the year for target earnings, scaled by the stock price at the beginning of the year. Specifically, we follow the method offered by Dhaliwal et al. (2012) to measure the analyst forecast accuracy. In row 1, analyst forecast error is constructed based on target earnings and the forecast for the current year. In row 2, analyst forecast error is constructed based on target earnings and the forecast for one year ahead. The estimates and P-values of the tests of the difference between accessible and non-accessible firms are reported in column 3. Significance at the 10%, 5%, and 1% level is indicated by *, **, and ***, respectively.

Panel A: Corporate site visits

	(1)	(2)	(3)	
Outcome variables	Non-Accessible (*IRACS*=0)	Accessible (*IRACS*=1)	Difference, 1-0	
			Estimate	P-value
Total visits	1.651	1.903	0.253***	0.000
Financial analysts	1.053	1.198	0.145***	0.001
Media	0.011	0.024	0.014**	0.020
Individuals	0.189	0.275	0.086***	0.004
Mutual funds	0.716	0.846	0.130***	0.001
Bank and insurance	0.053	0.066	0.013	0.213
Assets Management and Consultant Ltd.	0.351	0.432	0.081***	0.009
Foreign institutions	0.020	0.028	0.008	0.366

Panel B: Earnings news timeliness

	(1)	(2)	(3)	
Outcome variables	Non-Accessible (*IRACS*=0)	Accessible (*IRACS*=1)	Difference, 1-0	
			Estimate	P-value
Earnings news (*Timeliness*)	0.431	0.461	0.030***	0.004
Bad earnings news (*Timeliness_bad*)	0.539	0.557	0.019**	0.039
Good earnings news (*Timeliness_good*)	0.263	0.294	0.031	0.108

Panel C: Analyst earnings forecast accuracy

	(1)	(2)	(3)	
Outcome variables	Non-Accessible (*IRACS*=0)	Accessible (*IRACS*=1)	Difference, 1-0	
			Estimate	P-value
Forecast error for current year (*Error_0*)	0.042	0.034	-0.008***	0.000
Forecast error for one-year head (*Error_1*)	0.060	0.049	-0.012***	0.000

Appendix A
Variable Definitions and Data Sources

Variables	Definitions	Sources
Accessibility variables:		
TEL	A dummy variable indicating firms that are accessible by telephone. It equals 1 if effective phone contact could be made with the firm and 0 otherwise.	Manually collected
EMAIL	A dummy variable indicating firms that are accessible by e-mail. It equals 1 if an e-mail reply was received from the firm and 0 otherwise.	Manually collected
FORUM	A dummy variable indicating firms that are accessible by online discussion forum. It equals 1 if there was an on-line discussion forum with records of communications between investors and the firm and 0 otherwise.	Manually collected
IRACS	A dummy variable indicating firms that are accessible. It equals 1 if at least one of the three communication channels (phone, e-mail, and forum) is accessible and 0 otherwise.	Manually collected
IRSCORE	An accessibility index that is the number of communication channels (phone, e-mail, and forum) that are accessible (maximum score = 3 and minimum score is 0).	Manually collected
FAKEACS	A dummy variable indicating firms that provide fake accessibility. It equals 1 if at least one of the three communication channels (phone, e-mail, and forum) is provided but none is accessible and 0 otherwise.	Manually collected
Telephone interviewee attitude (high is better)	A rating (0, 1, 2, 3, 4, 5) given by our telephone interviewers to the firms that answer the telephone to evaluate their attitude and service quality, with 0 the worse and 5 the best.	Manually collected
No. of days for receiving e-mail replying	The logarithm of the number of days from sending the e-mail to receiving the firm's reply. The last e-mail reply was received after 26 days.	Manually collected
Length of the replied e-mail	The logarithm of the number of characters in the response e-mail text.	Manually collected
No. of postings on the online forum	The logarithm of the number of postings on the online discussion forum.	Manually collected
Outcome variables:		
Inter-corporate loan tunneling (%), *ORECA*	Other account receivables scaled by total assets.	GTA_FS/CSMAR
Abnormal related-party transactions, *ARPT*	Abnormal related-party transactions as used in Jian and Wong (2010).	GTA_FS/CSMAR
Managerial excess, *EXPR*	The expense ratio, which is operating expense (total expenses less cost of goods sold, interest expense, and managerial compensation) scaled by annual sales.	GTA_FS/CSMAR
Discretionary total accruals, *DTACC*	Absolute value of discretionary accruals based on Kothari et al. (2005). Specifically, we run a regression for each industry-year where the dependent variable is total accruals (measured as (Δcurrent assets − Δcurrent liabilities − Δcash + Δdebt in current liabilities − depreciation)/lagged total assets), and the independent variables are 1/lagged total assets, Δrevenues/lagged total assets, PPE/lagged total assets, ROA (net income/total assets). Total discretionary accruals are the absolute values of the residual from the model.	GTA_FS/CSMAR
Discretionary revenues, *DAR*	Absolute value of discretionary accruals based on McNichols and Stubben (2008) and Stubben's (2010) model. Specifically, we run a regression for each industry−year where the dependent variable is the change in accounts receivable,	GTA_FS/CSMAR

	and the independent variable is the change in revenues. Discretionary revenues are the absolute values of the residual from the model.	
Discretionary working capital accruals, *DWCR*	Absolute value of discretionary accruals based on the modified Dechow-Dichew model. Specifically, we run a regression for each industry-year where the dependent variable is working capital accruals (measured as (Δcurrent assets − Δcurrent liabilities − Δcash + Δdebt in current liabilities)/lagged total assets), and the independent variables are operating cash flow (measured as (net income before extraordinary items − total accruals)/lagged total assets, total accruals is equal to Δcurrent assets − Δcurrent liabilities − Δcash + Δdebt in current liabilities − depreciation), lagged operating cash flow, lead operating cash flow, Δrevenues/lagged total assets, PPE/lagged total assets, the indicator of negative operating cash flow and its cross term with operating cash flow. Working capital discretionary accruals are the absolute values of the residual from the model.	GTA_FS/CSMAR
Frauds	1 if a firm commits financial frauds in a year and 0 otherwise	GTA_RE/CSMAR
MACAR(−1, 1)	3-day cumulative abnormal return around the M&A deal announcement. The market model parameters are estimated over the period (−210, −11).	GTA_MA/CSMAR, GTA_TRD/CSMAR
Value-destroying M&A deals	1 if the 3-day cumulative abnormal return around the M&A deal announcement is negative and 0 otherwise.	GTA_MA/CSMAR, GTA_TRD/CSMAR
Size, BM/ME adjusted returns	The annual stock return of a firm minus the benchmark return of the Fama and French (1993) 25 size and book-to-market portfolio to which the firm belongs.	GTA_FS/CSMAR, GTA_TRD/CSMAR
Firm value, *Q*	Market value of total equity/book value of total assets.	GTA_FS/CSMAR, GTA_TRD/CSMAR
Return on assets (%), *ROA*	Operating income before depreciation and amortization/total assets.	GTA_FS/CSMAR
Timeliness	The average proportion of total news that was revealed up to a given day in the annual revelation window. The annual revelation window is defined as one week after the prior annual earnings announcement to the current year's earnings announcement. The total news is defined as the difference between the consensus of earnings forecast by analysts at the beginning of the window and the actual earnings that are announced at the end of the window. The difference between the consensus of earnings forecast by analysts at the beginning of the window and the consensus forecast in a day during the window, scaled by the total news, represents the proportion of total news that was revealed up to that day.	GTA_AF/CSMAR
Timeliness_bad	Defined in the same way as *Timeliness* but only focusing on firms in which the ultimate earnings revelation is lower than the beginning consensus forecast.	GTA_AF/CSMAR
Timeliness_good	Defined in the same way as *Timeliness* but only focusing on firms in which the ultimate earnings revelation is higher than the beginning consensus forecast.	GTA_AF/CSMAR
Error_1	The average of the absolute errors of all forecasts made for target earnings (i.e., EPS), scaled by the stock price at the beginning of the year. Both target earnings and the forecast are for the current year.	GTA_AF/CSMAR

Error_2	The average of the absolute errors of all forecasts made for target earnings (i.e., EPS), scaled by the stock price at the beginning of the year. Both target earnings and the forecast are for one year ahead.	GTA_AF/CSMAR
Firm characteristics: SOEs	Indicator variable set to 1 if the firm is ultimately controlled by the state and to 0 otherwise, using a 30% "weakest link in the control chain" threshold as per CSMAR (China Stock Market and Accounting Research) and CSRC (China Securities Regulatory Commission) guidelines.	GTA_HLD/CSMAR
C/O divergence	The ratio of an ultimate controlling shareholder's voting rights over its cash-flow rights. The information of control and cash-flow rights is collected from the annual report. If the information is not disclosed, the control-ownership dispersion is calculated based on the equity chain. That is, cash-flow right is measured by the products of the cash-flow rights along the ownership chain until reaching the ultimate owner of the firms. Control rights are measured by the weakest link along the ownership chain.	GTA_HLD/CSMAR
Cash-flow ownership	The percentage of cash-flow rights of the ultimate controlling shareholder. The information on cash-flow rights is collected from the annual report. If the information is not disclosed, the cash-flow ownership is calculated based on the equity chain. That is, cash-flow right is measured by the product of the cash-flow rights along the ownership chain up to the ultimate owner of the firm.	GTA_HLD/CSMAR
CEO Duality	1 if the CEO and chairman of the board are the same person and 0 otherwise.	GTA_CG/CSMAR
Board size	The logarithm of the number of directors on the board.	GTA_CG/CSMAR
Independent directors	The number of independent directors over the total number of directors on the board.	GTA_CG/CSMAR
Institutional ownership	The number of shares owned by fund management companies over the total number of shares outstanding.	GTA_HLD/CSMAR
Big4 auditors	1 if a Big-four auditor is employed and 0 otherwise.	GTA_FIN_A/CSMAR
Market competition	1 if the Herfindahl index (HHI) (the sum of the squares of the market shares of the firms within the same industry and the same province) is below the median and 0 otherwise.	GTA_FS/CSMAR
External finance dependence	(Capital expenditures − cash flow from operations)/capital expenditures	GTA_FS/CSMAR
Managerial education	1 if the manager holds a master's degree or above and 0 otherwise.	GTA_CG/CSMAR
IT skills	1 if at least one person in the management team has professional qualifications in information and technology, and 0 otherwise.	GTA_CG/CSMAR
Firm size	The logarithm of total market capitalization.	GTA_FS/CSMAR
Leverage	The ratio of long-term debts over total assets.	GTA_FS/CSMAR
Assets growth	(Total assets in t – total assets in t-1)/total assets in t−1.	GTA_FS/CSMAR

Appendix B

Details of the Survey and Data Collection Procedure

The data collection involved two major processes. First, we manually collected data from company websites. Second, we directly contacted the listed companies by telephone and e-mail. The whole data collection process lasted from July 1 to September 30, 2010[16,17].

1. Data collection from the IR section

We first obtained the company website addresses of all firms listed on China's two stock exchange firms. We then started with a survey of the information provided via the IR section on a firm's website. The survey involved collecting three types of data, namely, telephone and e-mail contact information, online forum, and other characteristics of the IR section and the website. The data collection form is provided in Appendix B.1.

The procedures for collecting data from the IR section are specified as follows. First, we collected the website addresses of all listed firms provided in CSMAR. If the website address was missing or invalid, we searched for the company's home page on Baidu.com (Chinese google). We then went to the main web page and checked whether there was an IR section within the website. If yes, we went to the IR section and collected the telephone and e-mail contact information (if any). We then checked whether there was an online discussion forum. If yes, we examined whether there were postings by visitors and corresponding replies from the company. We also counted and recorded the number of postings by visitors and replies from the company.

[16] We also hired a research assistant to facilitate the work of calling the listed firms. Her role was to call the company and enter the information in the pre-designed forms.

[17] As our data collection procedure involved the use of human subjects, we obtained human ethics approval from our university. The committee confirmed that our data collection procedures did not expose participants to any physical, psychological, or criminal risks.

We treated the online forum as accessible if both "Posting by visitors exists?" and "Responses by the company exist?" were answered positively and give the firm a score of 1 and a score of 0 if the firm was non-accessible[18].

In addition, we collected information from the IR section or other pages relevant to the research, such as fax contact information, financial announcements, and other news announcements. The data collection from company websites took us one month from July 1 to July 31 2010.

2. **Contacting listed firms**

After we completed the data collection from companies' websites, we directly contacted the companies via telephone and e-mail in the capacity of a potential investor. To ensure the reliability of the collected data, we developed a set of clear protocols to govern the whole data collection process.

2.1. **Contact by telephone**

We made telephone calls to each listed company by enquiring whether a company visit could be arranged. Appendix C shows the telephone survey form that we prepared for making the calls to the listed companies. The instrument that we used to make the calls was Skype. All conversations were made in Chinese Putonghua and recorded using the Goldwave software. We made the recordings for quality control and all voice records were deleted after the information had been typed into the pre-designed form. All calls were made during general office hours (8:00 am-12:00 pm and 2:00 pm-6:00 pm) and the process lasted from August 1, 2010 to September 30, 2010, excluding holidays. Diagram 1 illustrates the call process.

[18] The terms in this sentence with double quotation marks come from the IR section survey form; see the survey forms attached in this Appendix.

We scheduled two rounds of calls (the gap between the two rounds was generally one week). In each round, we scheduled two calls—one in the morning, the other in the afternoon. For example, in one morning, we made the first call to a company, but with no answer. We then made the second call in the afternoon, again with no answer. We then tried a second round one week later and made the third and fourth trials in the morning and afternoon, respectively. No further calls were made and the company was recorded as non-accessible as we were unable to contact the company after four trials.

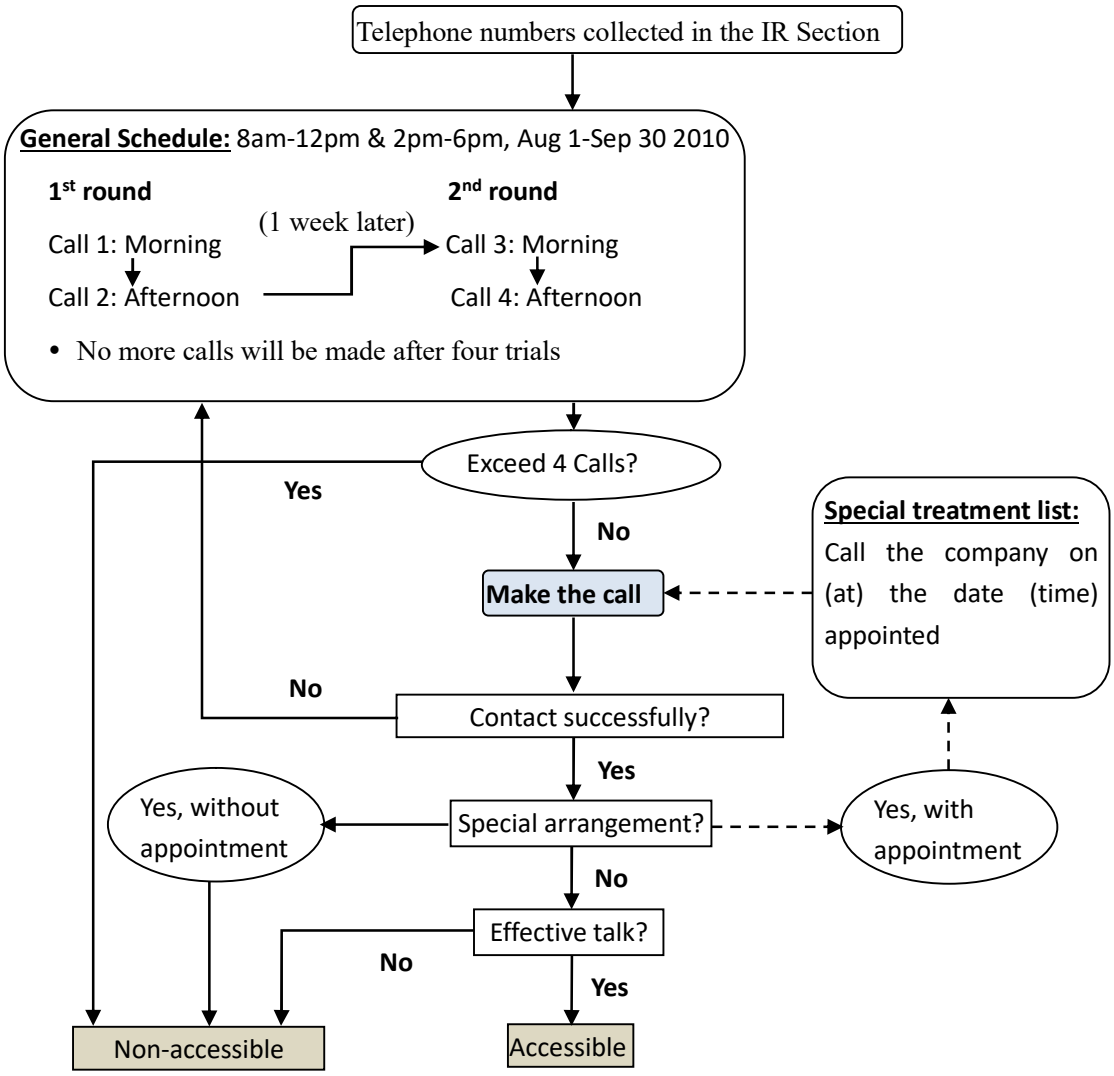

Diagram 1

Once we had made contact with a company, we tried to find the person in charge (e.g., the person in charge of the investor relations department). However, sometimes we did not find a responsible person at that moment. In some cases, the person had to seek advice from a boss or colleague who was absent. In this case, we needed to find another time to call back the company (a special arrangement was needed). We tried to make a next-call appointment with the company. If such an appointment was made, we would put the company in the special treatment list, and call back on (at) the date (time) appointed. If we needed a special arrangement but the company was unwilling to accommodate us, we were unable to go to the next step and would record the company as non-accessible.

Our aim was not to actually visit the firm but to ascertain how the company effectively responded to us. We considered the telephone communication channel as accessible if we were able to effectively discuss the issue of a company visit. An effective discussion could be either the case where the company affirmatively accepted our request or a case where it rejected our request for an acceptable reason. One instance in the case of "rejected our request for some acceptable reason" was that some companies replied, "*we do not accept visitors these days as the company is under financial auditing in preparation for the issue of the annual report. However, we will consider your request after this period.*" In cases where it was difficult to judge whether the respondents "rejected our request for some acceptable reason," we followed a conservative strategy and treated it as non-accessible (if it is difficult to judge, then accessibility is a problem).

Overall, the telephone channel was considered accessible if the answer to the "Allow a company visit?" was yes, or the answer was no but an acceptable reason could be found in the "If no, reasons." It was considered non-accessible if four call trials were made but there was no response to the "Who answers the phone?" question, or the answer to "Is a special arrangement

needed" was yes but the "Appointed date or time" was empty, or the answer to "Allow a company visit?" was no and the given reason/excuse was not justified in response to "If no, give reasons." Otherwise, the variable measuring telephone accessibility was a missing observation[19].

2.2. **Contact by e-mail**

Using the e-mail address collected from the IR section on firms' websites, we sent e-mails to the listed companies asking a general question about the major locations of the firms' business operations. Diagram 2 illustrates the e-mail sending process.

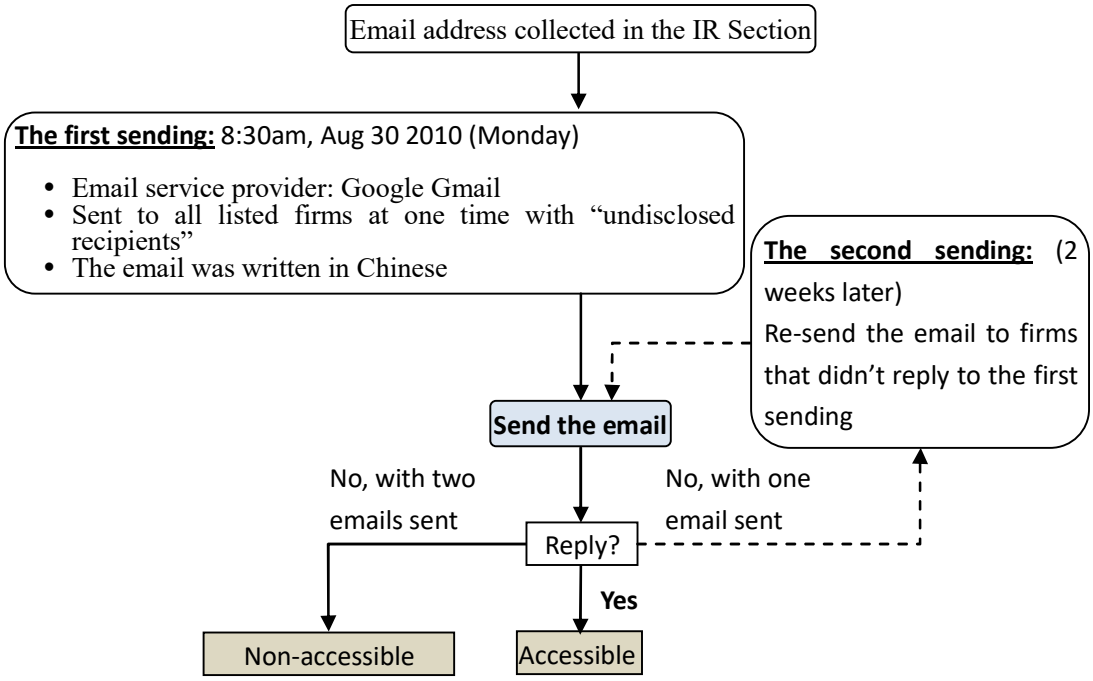

Diagram 2

The e-mail service provider we chose was Google Gmail because it is widely recognized and generally would not be dumped in the spam e-mail category. We sent the e-mails in Hong Kong. Google gave up the China market in 2010. However, this does not affect users in mainland China

[19] The terms in quotation marks are from the telephone survey form, see Appendix B.1

receiving Gmail from other regions like Hong Kong. The e-mail was written in Chinese and sent during general office hours (specifically, 8:30 am, Aug 30, 2010 (Monday)). As Gmail limits the maximum number of recipients, each time, we mailed 50 listed companies with the "undisclosed recipients" function. Some companies might not have received our e-mail due to some technical problems or some might have inadvertently deleted the e-mail. To minimize this risk, we re-sent the e-mail to the companies that did not reply to the first sending two weeks later.

In all of the responses we received, our questions were answered directly and the response time clustered at 3-4 days after the e-mail was sent with very few responses after 10 days. We recorded the firm's communication by e-mail as accessible if we received a reply that contained any information that was relevant to our question in either of the two e-mails, and counted it as non-accessible otherwise. In no reply cases, we had 78 e-mails bounced back because of "unknown e-mail address." We double checked e-mail addresses and found no mistakes in the process of transferring the address from the firm's website to Gmail.

Appendix B.1

Check Sheets for Coding Survey Data

IR Section Survey Form

Basic information (given)			Telephone and e-mail information in the IR section (yes: 1, no: 0)						
Website	Company	Web available?	IR section exists?	IR phone exists?	IR phone	IR e-mail exists?	IR e-mail		
On-line forum information in the IR section (yes: 1, no: 0)									
IR discussion forum exists?		Postings by visitors exist?		Responses by the company exist?		Number of postings by visitors		Number of responses by the company	
Other information in the IR in section (yes: 1, no: 0)						Information on general web pages (not in the IR section) (yes: 1, no: 0)			
IR hot-line exists?	IR hot-line	IR fax exists?	IR fax	Financial announcements exist?	Other announcements exist?	General phone exists?	General phone	Financial announcements exist?	Other announcements exist?

Guidelines for checking the IR section

1. Use Internet Explorer to open the company website. The website might not open due to some technical problems (e.g., the website is busy or out of service at the time). In this case, mark the company in a different color and try again later on. Treat it as a failure after enough trials have been made (at least three times on three different days).
2. Generally, an item named in "Investor Relations" can be found on the main menu of the website. Click it and go into the IR section where you can see various IR items. In case you cannot find the IR section at first glance, be careful to search around by jumping back and forth inside the page.
3. In the IR section, check whether it provides telephone and e-mail contact information. If yes, input 1 in the cell for "IR phone exists?" and "IR e-mail exists?", respectively, and input 0 otherwise. Also copy the contact information into the cells provided. Then check whether there is an online discussion forum. If yes, see whether there are postings by visitors and corresponding replies by the company. Input 1 if yes and 0 if no. Also count the number of postings by visitors and responses by the company and input them in the cells.
4. Similarly, collect other information in the IR section and on other pages of the website. Input 1 in the cell when the corresponding item on the website exists, and 0 when it does not exist. Specific information on the item, if any, is recorded in the next cell.

Telephone Survey Form

Basic information (given)			Step 1: Contact the company (mark with the date)				Step 2: Confirm with the company		
			1st Round		2nd Round			Special arrangement 1st chance	
Company	Industry	Telephone number	1st call	2nd call	3rd call	4th call	Who answers the phone?	Is a special arrangement needed? (yes:1, no:0)	Appointed date or time

Step 2: Confirm with the company (backup)			Step 3: Question and talk			Step 4: Evaluation		Minutes
	Special arrangement 2nd chance					1 to 5: 1 is the best, 5 is the worst		
Who answers the phone?	Is a special arrangement needed? (yes:1, no:0)	Appointed date or time	Allow a company visit? (yes:1, no:0)	If yes, any arrangements	If no, reasons	Attitude	Overall satisfaction	

Guideline for making calls to the listed companies

1. Install Skype, log in with the account provided. Install Goldwave and make voice recordings of the calls.
2. Calls should be made during general office hours (8:00 am-12:00 pm and 2:00 pm-6:00 pm) on weekdays.
3. Make the 1st call in the morning (first round). If unsuccessful, make the 2nd one in the afternoon; If unsuccessful again, mark down the date and try the second round one week later. The process in the second round is the same as in the first round. Whenever successfully connected, go to the next step.
4. In step 2, before the request, try to find the person in charge of the operation (e.g., person in charge of the investor relations department). Input yes in the cell for "Is special arrangement needed" in cases where the responsible person cannot be found at that moment. Try to make a next-call appointment with the department. If such an appointment was made, put it in the special treatment list and mark down the date or time, and call back the company on (at) the date (time) appointed.
5. On reaching the person in charge of company visits, begin the talk by asking whether it is possible to visit the facilities of the company, e.g., the factory. If yes, mark down any arrangements. If no, mark down any reasons for it. No more calls will be made to this company.
6. As the call finishes, evaluate the talk by giving a rating on the attitude of the person answering the call and on your overall satisfaction. 1: excellent; 2: good; 3: general; 4: bad; 5: very bad.
7. Minutes should be recorded as precisely as possible.

Appendix C

Agency Costs and Future Operating Performance

This table explores the relation of agency costs to subsequent firm operating performance. Firm operating performance is measured by return on assets, in year t+1. Measures of agency costs are Inter-corporate loan tunneling (%) *ORECA*, Abnormal related-party transactions *ARPT*, and Managerial excess *EXPR.* We control for the explanatory variables that are included in model 1. All independent variables are measured in year t. Industry, province, and year fixed effects are also included. All variables are defined in Appendix A. The t statistics based on a robust standard error estimate clustered at the firm level are reported in parentheses. Significance at the 10%, 5%, and 1% level is indicated by *, **, and ***, respectively.

Explained variable	Return on assets in year t+1		
	(1)	(2)	(3)
Inter-corporate loan tunneling (%), *ORECA*	-0.002***		
	(−4.85)		
Abnormal related-party transactions, *ARPT*		−0.002*	
		(−1.90)	
Managerial excess, *EXPR*			−0.027***
			(−3.62)
Controls	Yes	Yes	Yes
Industry, province, and year fixed effects	Yes	Yes	Yes
Clustering by	Firm	Firm	Firm
Observations	4,657	4,657	4,657
R-squared	0.171	0.167	0.169

Appendix D

Corporate Accessibility and Insider Trading

This table presents the corporate insiders' trading in accessible and non-accessible firms from 2009 to 2013. Insider trading is defined as the sum of firm managers and directors' net purchases (number of shares purchased (buy minus sell) scaled by total shares outstanding) in a year. We divide the sample into two groups based on four accessibility dummy variables (*IRACS*, *TEL*, *EMAI*L, and *FORUM*). One group is firms that are not accessible (indicated as group 0), and the other group is firms that are accessible (indicated as group 1). We then conduct a T-test on the mean difference of insider trading between the two groups (indicated as 1−0). Significance at the 10%, 5%, and 1% level is indicated by *, **, and ***, respectively.

	IRACS			*TEL*		
Net purchase by insiders by years	0	1	Dif (1−0)	0	1	Dif (1−0)
2009	−0.095	−0.212	−0.118	−0.126	−0.158	−0.032
2010	−0.174	−0.281	−0.107	−0.197	−0.301	−0.104
2011	−0.428	−0.627	−0.199	−0.508	−0.448	0.059
2012	−0.318	−0.310	0.008	−0.328	−0.227	0.101
2013	−0.803	−1.104	−0.300	−0.837	−1.362	−0.525
	EMAIL			*FORUM*		
Net purchase by insiders by years	0	1	Dif (1−0)	0	1	Dif (1−0)
2009	−0.122	−0.265	−0.142	−0.111	−0.212	−0.101
2010	−0.194	−0.426	−0.232	−0.215	−0.189	0.026
2011	−0.499	−0.516	−0.017	−0.440	−0.699	−0.259
2012	−0.352	0.069	0.421	−0.249	−0.549	−0.300*
2013	−0.928	−0.670	0.258	−0.863	−1.068	−0.205

Appendix E

Explore the Quality of Corporate Accessibility

Regressions examining the relation between the quality of corporate accessibility and firm performance. Firm performance is measured by firm value, *Q* (Panel A), and return on assets, *ROA* (Panel B). We use four continuous variables to measure the quality of corporate accessibility, including Telephone interviewee attitude (high is better), No. of days for receiving e-mail replying, Length of the replied e-mail, and No. of postings on the online forum. We control for the explanatory variables that are included in model 1. Industry, province, and year fixed effects are also included. All variables are defined in Appendix A. The t statistics based on a robust standard error estimate clustered at the firm level are reported in parentheses. Significance at the 10%, 5%, and 1% level is indicated by *, **, and ***, respectively.

Panel A: Explained variable is firm value, *Q*

	(1)	(2)	(3)	(4)
Telephone interviewee attitude (high is better)	0.033**			
	(2.12)			
No. of days to receive e-mail reply		−0.358*		
		(−1.83)		
Length of the response e-mail			0.605***	
			(3.17)	
No. of postings on the online forum				0.073***
				(3.84)
Controls	Yes	Yes	Yes	Yes
Industry, province, and year fixed effects	Yes	Yes	Yes	Yes
Clustering by	Firm	Firm	Firm	Firm
Observations	2,611	288	288	872
R-squared	0.392	0.622	0.634	0.491

Panel B: Explained variable is return on assets, *ROA*

	(1)	(2)	(3)	(4)
Telephone interviewee attitude (high is better)	0.245***			
	(2.87)			
No. of days to receive e-mail reply		−2.173***		
		(−2.70)		
Length of the replied e-mail			2.338**	
			(2.44)	
No. of postings on the online forum				0.405***
				(3.74)
Controls	Yes	Yes	Yes	Yes
Industry, province, and year fixed effects	Yes	Yes	Yes	Yes
Clustering by	Firm	Firm	Firm	Firm
Observations	2,611	288	288	872
R-squared	0.365	0.596	0.597	0.318