

**Local information advantages and the agency cost of delegated portfolio management:
Evidence from mutual funds investing in China**

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Abstract

When fund managers have close ties to the investees, this can facilitate efficient information sharing but also increase the possibility of inefficient favoritism. Using the investment choices of domestic and foreign mutual funds in China, we test whether funds with closer ties to investees (e.g., domestic funds) make more timely investment decisions – i.e., purchase (sell) prior to positive (negative) investee performance. Domestic funds show greater timeliness over foreign funds only when the former are closely monitored. Also, within domestic funds, we find that having close ties with an investee (via education networks) leads to more timely investments only when the funds are closely monitored. For weakly monitored funds, having close ties (domestic funds in general or having school ties with the investees) can lead to *less* investment timeliness, consistent with collusion and/or favoritism. We interpret this as agency conflicts from delegated portfolio management reducing the information-sharing role of close ties and promoting favoritism. This suggests that the local information advantages of domestic funds translate to more timely investment decisions only when the informed parties are free of agency conflicts.

Keywords: Portfolio Choice; Information Asymmetry; Delegated portfolio management; Qualified Foreign Institutional Investor; Education networks

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1. Introduction

Close ties can facilitate information transfers. Investors that have better access to information through close ties with investees can make more timely investment decisions before the information gets impounded into price. Those lacking superior information will face adverse selection problems and be reluctant to make investment decisions based on the market price at which others transact (Akerlof 1970). Thus, studies find that superior information access is an important reason why investors with stronger ties (e.g., local investors) are able to outperform others (e.g., foreign investors).

An important assumption underlying the premise that close ties will lead to better investment performance is that these connections will facilitate efficient information transfers. However, studies show that there are situations where investors with close ties fail to use their information advantages to generate higher returns (Davis and Kim 2007; Kuhnén 2009). This is because close ties, while being a conduit for the transfer of information, can also foster inefficient favoritism between the two parties (Granovetter 1985).

Investment funds are institutions that have their own agency conflicts arising from delegated portfolio management (Black 1992). Delegated portfolio management gives rise to the classic principal agent problem where the agent (i.e., the fund manager) may not be incentivized to act on behalf of the principal's (i.e., fund investors) best interest. The main insight of the paper is that agents who serve fund investors (e.g., fund managers) are very much connected through the ties they share with their investees. Strong ties may benefit fund investors by providing the means for efficient information transfer to the fund manager. However, it is also possible that the connections foster favoritism between the fund manager and the investees, often at the expense of the fund

investors. In this paper, we aim to document the extent to which such agency conflict exists, and examine the conditions under which inefficient favoritism can be mitigated.

We use domestic and foreign mutual funds investing in China as a setting for examining whether closer ties to investees lead to better fund performance. If close ties facilitate efficient information sharing, we predict that funds with close ties (e.g., local investors) will show a superior performance to those with weak ties (e.g., foreign investors). However, if inefficient favoritism dominates information sharing, funds with close ties may show weak performance. Following prior literature, we assume that domestic funds, due to their embeddedness in the local economy, will have closer ties to their investee than foreign funds. Admittedly, the domestic vs. foreign partition is a crude proxy for differentiating funds with close ties to investees. In our main analysis, we use more granular measures—shared education networks with the fund managers and the investees – to better identify a fund’s ties to investees.

The mutual fund industry in China is an effective setting for testing the dual role of close ties for several reasons. First, China’s information environment is characterized by high information asymmetry and a lack of quality public information (Piotroski and Wong 2012). Therefore, a large part of investors’ information advantage is based on private information channels, often obtained through the close relationships a fund manager has with a firm’s managers (or controlling owners). When information is obtained mainly through relationships, the funds will have greater incentives to reciprocate and to maintain close ties with its investees. Second, the mutual fund industry in China is still in its early stages and thereby lacks the governance structure to ensure strong legal protections for fund investors (Yuan et al. 2008).¹ The lack of a well-developed governance system to safeguard

¹ For example, independent board representation for fund investors, which the literature has established (Tufano and Sevick 1997; Del Guercio et al. 2003; Khorana et al. 2007) as a key governance feature for mutual funds, is non-existent because mutual funds are not considered a separate legal entity in China. Another example of this void is fund managers’ compensation contracts. The compensation structure of the mutual fund industry in China has very little performance

the fund investors' interests allows greater opportunities for funds to act against their fiduciary duty. Thus, in the absence of a rigorous governance system, it is likely that the fund managers face greater incentives to collude with their investees to the detriment of the fund investors.

Our main prediction is that the extent to which close ties lead to inefficient favoritism will increase with the fund's agency conflicts. Empirically, we predict that funds with close ties with investees will show a better fund performance when a fund is free of agency conflicts, measured using the extent to which the fund is closely monitored.² We also predict that close ties can even lead to worse performance when the fund is weakly monitored. We measure fund performance using the timeliness of the fund's investments, measured as the extent to which funds increase (reduce) ownership prior to positive (negative) investee performance. That is, if the *changes* in the ownership of local funds exhibit a greater predictive ability of future firm performance than foreign funds, we interpret the domestic funds as exhibiting more timeliness.

Our sample period is from 2003, the first year foreign mutual funds entered China, through 2009. We collect accounting data for all firms that trade A-shares on the Shanghai and Shenzhen stock exchanges from China Stock Market and Accounting Research (CSMAR). Our main specification is a firm-level regression of future firm (i.e., investee) performance on changes in the ownership of domestic and foreign funds. For future firm performance, we use both earnings and returns based measures (Gompers and Metrick 2001). This model is widely used in prior research, where a more positive coefficient on changes in ownership is interpreted as the ability to trade on private information (e.g., Yan and Zhang 2009; Baik et al. 2010). We interpret a more positive

based component and is largely based on asset size. Regulation in the mutual fund industry (CSRC fund regulation 2001 No. 43) was such that funds were prohibited from paying performance-based compensations in the early periods. Although this requirement was abolished on April 4, 2005, the industry practice remains to be such that majority of the fund managers are compensated based on AUM rather than fund returns.

² We consider three monitoring mechanisms including (i) institutional fund investors, (ii) a fund's auditor, and (iii) regional institutions in the fund management company's locale (see section 3.2 for details).

relation to indicate information transfers between the fund the investee. We measure the ownership of domestic and foreign funds based on the total percentage of the firm's float shares held by the funds.³ In subsequent analyses, we disaggregate the domestic funds' ownership into those held by closely monitored and weakly monitored funds and test how the domestic funds' predictive ability varies by its agency conflicts.

We first examine the differential timeliness in the ownership of domestic and foreign funds. We find no clear evidence that changes in the domestic funds' ownership show a greater predictive ability than those of the foreign funds. However, once we differentiate the domestic funds into closely vs. weakly monitored funds, we find significant differences. That is, for domestic funds that are closely monitored, we find strong evidence of greater predictive abilities in the domestic funds' ownership relative to that of the foreign funds. The domestic funds that are weakly monitored, on the other hand, show no clear evidence of greater predictive abilities, and often even underperform the foreign funds. This suggests that whether funds with closer ties (e.g., domestic funds) exhibit more timely investments relative to those with weak ties (e.g., foreign funds) largely depends on how well the fund is monitored. We interpret this as agency problems from delegated portfolio management reducing the information-sharing role of close ties and limiting domestic funds from profiting from their information advantage.

One assumption underlying our analysis thus far is that domestic funds have closer ties to investees relative to foreign funds. However, it is likely that not all domestic funds have close investee ties. Furthermore, domestic and foreign funds differ in many ways, in addition to the differing levels of ties they share with investees, which will affect their investment performance.⁴ In

³ In sensitivity analysis, we use the total number of funds investing in the firm and find qualitatively similar results. (See section 5.)

⁴ For example, Froot and Ramadorai (2008) show that foreign mutual funds tend to be more sophisticated funds with greater investment expertise.

our main test, we therefore use more direct proxies of ties between the fund managers and the investees (via education networks or geographic proximity). We differentiate the firm-level ownership into those that are held by connected funds vs. less connected funds. We then examine whether the connected funds exhibit more timely investments.

We consider funds to be more connected with an investee if the fund manager went to the same university as the investee's management team. We examine whether school ties lead to greater timeliness. We find that domestic funds show greater investment timeliness for holdings with closer ties, but only when the fund is strongly monitored. For weakly monitored funds, the investments with close ties show negative investment timeliness, suggesting that these funds are more likely to purchase (sell) prior to negative (positive) investee performance. Further analysis shows that the negative timeliness of connected funds is more pronounced when the investees are financially distressed. When an investee is under financial distress, the connected funds are more likely to hold (or even increase) their investment positions. In years when investees are performing well, we find that connected funds show more timely investments. We interpret this asymmetric response as evidence of close ties leading to inefficient favoritism when investees are in need. This suggests that close ties, when not properly monitored, can lead to inefficient favoritism/collusion between the fund manager and the investees.

We perform a battery of sensitivity tests to verify the validity of our inferences. First, we expand the forecasting window to a longer time horizon to mitigate the concern that our findings may be capturing different investment horizons (Bushee and Goodman 2007) for domestic and foreign funds. Also, we repeat our analysis using alternative measures of fund ownership. Finally,

we relax the restriction of the top 10 shareholders and repeat our analysis using shares held by all domestic funds.⁵ Our inferences remain unchanged.

Our paper contributes to a few streams in the literature. First, we contribute to the literature on the agency conflicts inherent in delegated portfolio management. Mutual funds are institutions that have their own agency conflicts from delegated portfolio management, which often cause them to make suboptimal investment decisions. Prior studies find that the agency costs of delegated portfolio management arise from multiple sources, e.g., fund managers' incentive fee structure (Goetzmann et al. 2003), career concerns (Khorana 2001), and business ties (Kuhnen 2009). Our study suggests that agency costs from delegated portfolio management may affect the extent to which local information advantages translate to more timely investments.

Second, we provide new insights into the literature on the investment behavior of domestic and foreign institutional investors. Prior studies find that foreign investors face higher information acquisition costs than local investors do (Leuz et al. 2010). We show that domestic funds, while less likely to suffer from such an information disadvantage, are vulnerable to a distinctly different problem. Due to their strong investee ties, domestic funds face greater incentives to act against their fiduciary duty, which may prevent them from using their information advantage. Such patterns are likely to be more severe in a developing economy like China's because the factors that heighten agency conflicts (e.g., close ties with investees) may also function as an important source of a fund's local information advantage (e.g., access to management).

The remainder of the paper is organized as follows. Section 2 provides the institutional background and develops our hypotheses. Section 3 describes the data and the empirical tests; section 4 presents our results. We present sensitivity analyses in section 5 and conclude in section 6.

⁵ For the QFIIs, we cannot conduct this analysis due to data limitations. While the complete holdings data is publicly available for all domestic funds on a semi-annual basis, QFIIs are not required to publicly disclose this information. QFIIs are only required to report their monthly holdings information to regulators.

2. Institutional Background and Hypothesis Development

2.1 Overview of domestic and foreign mutual funds in China

2.1.1 Domestic mutual funds

Since it was first established in 1993, shortly after the establishment of the Shenzhen and Shanghai stock exchanges, the mutual fund industry in China has achieved unprecedented growth in its asset size. In its early stages, the industry struggled to penetrate a market where the financial system was mostly dominated by banks. However, the government's commitment to develop an active base of institutional investors continued to drive the growth of the mutual fund industry. The CSRC viewed the development of securities investment funds as an effective way of stabilizing China's capital market, which was predominantly driven by retail investors. With the CSRC's support, the total assets managed by mutual funds grew from 1% of the equity market capitalization in the early 2000 to 25% in 2008. In 2011, there were more than 900 funds registered with the CSRC, having total net assets under management of more than RMB 2.19 trillion.

In contrast to the steadfast growth in its asset base, the actual returns the mutual funds offered its investors have been surprisingly low (Zhao 2000). The mediocre returns, which are sometimes lower than the fees that the funds charged, raise concerns about the value mutual funds bring to their clients as an asset group.⁶ Numerous factors, such as a lack of expertise and investment knowledge are cited as reasons for the lackluster performance of mutual funds in China. More recently, investors have voiced concerns about weak internal governance and the lack of monitoring mechanisms to protect the investor's interests (Zhao 2000).

⁶ Industry reports shows that in 2010, the total fees charges by the 60 major fund management companies (RMB 30.2 billion) exceeded the total profit it generated for investors (RMB 5.08 billion). Also, the average annual return of funds reported was 0.19% of total assets under management, underperforming the market index during the same time period (<http://business.sohu.com/20110411/n280224152.shtml>).

The regulatory framework governing the operations of the mutual fund industry is *China's Law on Funds for Investment in Securities*, first established in 2003. While the rules stipulate various governance mechanisms for domestic mutual funds, the level of investor protection is considered to be fairly poor. Under these rules, the board of directors of a fund management company is entrusted with monitoring on behalf of the fund's investors. However, at the fund level, the fund investors cannot set up a separate board of directors and elect its members. This is because in China, each fund is not structured as a separate legal entity and the fund investors are not considered shareholders. Rather, the relationship between fund investors and the fund management company is governed by a contract.

Although the directors of the fund management company are entrusted with the monitoring role of all the funds within the company, they are likely to represent the interests of the shareholders of the company that elected them, rather than those of the fund investors who are deprived of the voting rights. This leaves Chinese fund investors in a particularly vulnerable situation, as prior research finds that boards of directors of mutual funds, who are elected by fund investors to represent their interests, play a key role in reducing potential conflicts between fund management companies/ fund managers and fund investors (Tufano and Sevick 1997; Del Guercio et al. 2003; Khorana et al. 2007).

Finally, the CSRC plays a key role in regulating the fund industry, in, for example, approving the entry of new funds and enforcing the securities laws that governs fund management.⁷ Only the CSRC is allowed to punish the fund industry personnel, including directors and officers, for

⁷ In 2013, the CSRC revised the rules to reduce the entry barriers to the fund industry. Under the new rules, funds are allowed to raise capital only by registering with the CSRC without going through the approval process.

committing securities fraud. China relies heavily on the CSRC rather than the court to enforce these rules because its legal system is rather underdeveloped and there is no independent judiciary.⁸

Recently, an increasing number of securities frauds involving fund managers were charged by the CSRC. However, many critics believe that they only represent a small fraction of the industry's perpetrators.⁹ Also, the fund managers who were indicted received very light punishments.¹⁰ Some reasons for the paucity of prosecuted cases by the CSRC are a lack of manpower, good internal controls within funds, and external market monitoring, all of which are qualities that are lacking in China. Reflecting such weak investor protections, the mutual fund industry in China has witnessed a rise in cases of industry scandals where fund managers engage in fraudulent activities to maximize their own private benefit (see Appendix B).

2.1.2 Qualified Foreign Institutional Investors

On November 5, 2002, the CSRC introduced the Qualified Foreign Institutional Investor (QFII) program to allow foreign institutions easy access to China's equity market. The QFII system allowed a group of foreign institutions that have been pre-approved by the CSRC to directly invest in local financial instruments, including the RMB-dominated domestic A-shares, listed treasuries, and exchange traded corporate/convertible bonds. The objective of the QFII system was to promote stable capital inflows while limiting market volatility from speculative investors. The CSRC stated that it would give preference to high quality institutions with a good track record of sound investments in their home markets and to institutions that have shown a long-term commitment to

⁸ Such a reliance on administrative governance rather than legal governance is also found in the regulation of listed firms in China (Pistor and Xu 2005).

⁹ In China, insider trading using private information of fund managers is common enough to have acquired its own industry jargon, 'rat trading.'

¹⁰ For example, two fund managers, Tang Jian and Wang Limin, were caught engaging in rat trading in 2007 and 2008, respectively. Their punishments included confiscation of profits of RMB 1.52m for Tang and RMB 1.50m for Wang from the trading and their future involvement in the funds industry was prohibited. In both cases, the fines that the CSRC charged were merely RMB 500,000 (<http://www.ftchinese.com/story/001043009>).

investing in China (Jiang and Zeng 2005). Consequently, the barriers to an institution's gaining approval as a QFII are fairly high.¹¹

While subject to the CSRC's stringent reporting requirements and tight capital controls, the QFIIs' trading activities face only minimum regulatory restrictions as long as they trade within their approved quotas. All investment decisions are made by the foreign institutions themselves and the execution of trades is often carried out by domestic trustees/brokerage firms. The ability to make autonomous investment decisions, together with the high growth of the local equity market, fueled the growth of QFIIs.

However, the weak corporate governance and the lack of quality information common among Chinese companies remain major concerns for QFII investors. Notwithstanding such obstacles, the number of QFIIs continues to grow. As of 2012, the CSRC had approved quotas over USD 37 billion to 169 foreign institutions. Despite the steady growth, to date there is only limited research on the actual performance of QFIIs and how their performance compares to that of their local counterparts.

2.2 Hypothesis development and prior literature

The extant literature argues that better access to local information is an important reason why local investors outperform foreign investors (Hau 2001; Choe et al. 2005; Dvorak 2005).¹² Local investor's lower information acquisition cost of local investors allows them to make timely

¹¹ Institutions that applied for QFII status were required to be institutions with a long operating history and sizeable assets under management. Securities companies, for example, were required to have been operating in their line of business for at least 30 years, with paid-in capital of no less than \$1 billion USD. The institutions approved by the CSRC are largely asset management companies managing Chinese focused funds, mutual funds, or pension and insurance funds.

¹² Other studies show the opposite, i.e., that foreign investors outperform domestic investors. Froot and Ramadorai (2008) find that when it comes to aggregate capital flows, foreign capital shows greater predictive power; they interpret the findings to suggest that foreign investors have an advantage in predicting macroeconomic factors. Ferreira et al. (2009) find that in environments where high quality public information is readily available, foreign investors have a relative advantage over domestic investors. This is because foreign investors derive greater benefit from quality public information compared to their domestic counterparts, as the latter are likely to have access to alternative information sources (e.g., private information).

investments before their information gets impounded into the market price (Teo 2009). One way that local investors reduce information acquisition costs is through close ties via various networks. Connections from social and education networks function as a conduit of information transfer and provide access to private information at relatively low costs. Consistent with this advantage, studies show that network affiliations lead to positive outcomes in numerous contexts including retail investors (Hong et al. 2004), venture capital (Hochberg et al. 2007), and sell-side equity analysts (Cohen et al. 2010).

In this paper, we examine the role of close ties (e.g., between mutual fund managers and investees) in the mutual fund industry. Networks in the mutual fund industry have been shown to facilitate information transfer. For example, Hong et al. (2005) show how mutual fund managers tend to spread information to other fund managers residing in the same city. More closely related to our study, Cohen and Malloy (2008) examine the ties between the fund managers and investees through education networks. They find that when fund managers share educational backgrounds with their investees, the funds earn higher returns, suggesting that these ties can function as a channel for information transfer. Our study differs from those aforementioned by focusing not only on the efficient effect of close ties (e.g., information transfer) but also on possible inefficiencies such as collusion and/or favoritism.

A growing strand of the literature examines the role of social networks as a channel for inefficient favoritism. Hallock (1997) and Larcker et al. (2005) study the impact of corporate executives and directors' ties on decisions such as the setting of CEO pay; they find evidence of inefficient favoritism. Davis and Kim (2007) show that the business ties between mutual funds and their corporate clients created via the client's pension fund business prohibit the mutual funds from acting in their investors' best interests. Davis and Kim's finding highlights the agency conflicts inherent in mutual funds. Because mutual funds are institutions with their own agency conflicts, the

fund manager's fiduciary duty to execute trades in the best interest of their investors may be compromised. Thus, when fund managers have close ties with their investees, they may face greater incentives to act on the investees' behalf, rather than that of the fund investors.

We posit that the domestic funds' strong connections with the local economy can be a source of agency conflicts. While a fund manager's close ties may facilitate an efficient information transfer, this may not immediately imply that fund managers would trade on this information. This is because fund managers may enjoy more private benefits by providing favors to their investees at the expense of their own investors. We hypothesize that close ties with the investees, which, on the one hand, can be an important source of information advantages, can also be a channel of inefficient favoritism/collusion.

H1a: If close ties facilitate efficient information sharing, funds with closer ties to investees will show more timely investments.

H1b: If close ties facilitate inefficient favoritism, funds with closer ties with investees will show less timely investments.

As discussed earlier in section 2.1, mutual funds in China may be more prone to potential collusion due to a lack of sufficient governance mechanisms. Extant studies show that the trading behaviors of mutual funds in China are influenced by the fund manager's private rent seeking behavior. Wang (2011) shows that during market reforms, the investment pattern of Chinese mutual funds was largely correlated with side payments and the amount of entertainment expenses paid on the part of the investees (rather than the investee's future performance). Firth et al. (2013) show how mutual funds use their commission payments to pressure market intermediaries to issue biased information about the stocks in their portfolio. In this paper, we aim to document the extent to which close ties between the mutual funds and investees lead to suboptimal investment outcomes, and also examine the governance mechanisms that will mitigate the inefficient favoritism.

Fund governance has been shown to be important for protecting the interests of fund investors. Tufano and Sevick (1997) show that funds with independent boards have lower expense ratios. Also, Del Guercio et al. (2003) find that more independent boards are associated with more beneficial fund restructuring decisions in a sample of closed-end funds. However, the literature on the governance of mutual funds has not yet considered how better governance can mitigate the conflicts arising from social networks. Furthermore, as explained in section 2.1, mutual funds in China have no boards of directors that can represent the interests of the fund investors (Chen et al. 2008). In the face of this void, we argue that alternative monitoring mechanisms (such as the fund's auditors, institutional investors, and the local institutions of the region)¹³ can play a monitoring role to limit the potential collusion between the fund managers and investees:

Hypothesis 2: The extent to which close ties lead to inefficient favoritism will decrease in the presence of quality monitoring.

3. Sample Selection and Empirical Measures

3.1 Data

Our sample starts in 2003, the year the first QFII license was issued, and ends in 2009. We include all firms that issue A-shares traded on the Shanghai and Shenzhen Stock Exchanges from the China Stock Market and Accounting Research (CSMAR) database.¹⁴ After requiring firms to have the data needed to construct our control variables, our sample consists of 10,035 firm-years from 1,692 unique firms. We use the mutual fund research database, also provided by CSMAR, to

¹³ Prior research finds that auditors play a strong monitoring role in the capital market in China by strengthening their agents' internal controls (e.g., De Fond et al. 2000). Also, institutional investors are a class of investors that is equipped with high quality information and skills with which to monitor fund managers (Ayers et al. 2011). Finally, studies find that development in the fund's locale can facilitate monitoring by providing higher quality information and stronger investor protection as well as legal enforcement (Lin et al. 2012).

¹⁴ A-shares are shares traded in RMB and that are only available to domestic institutions, retail investors, and QFIIs. A small number of firms also issue B-shares, which are open to both foreign and domestic investors (post 2001). Prior studies show that the B-share market, however, tends to be illiquid and more volatile relative to A-shares.

construct our monitoring variables for the domestic funds. This database is composed of the regulatory filings of all domestic funds and it includes each fund's detailed stock ownership, as well as information on the fund holders, fund auditors, and the location of the fund management company.

We collect QFII ownership data from the WIND financial database, provided by WIND Information Co. Ltd., a private entity that specializes in collecting data on Chinese securities. Although widely used in prior studies (Poon and Chan 2008; Firth et al. 2013), the database has a limitation in that it only covers the ownership of the top 10 largest shareholders. Therefore, an assumption underlies our analysis that the investment behavior of funds will show no systematic difference by the size of its ownership.¹⁵ For the basic information of QFIIs, we hand collect fund-level information from the CSRC website¹⁶ and Foreign Exchange Control Bureau of China. We exclude domestic funds classified as index funds. Our sample consists of ownership from 56 unique QFIIs and 406 unique domestic funds.

In Table 1, Panel A, we show the time-series distribution of the QFIIs by their home country. The home country is based on where the QFII's fund management company is incorporated. Panel A indicates that the U.S. has the highest number of QFIIs (22 funds for a total quota of USD 4.5 billion), followed by Japan (10 funds, with a total quota of 1.65 billion). Many QFIIs are often from countries with a well-developed domestic mutual fund market (e.g., the U.S., Japan, and UK), as well as countries that have close ties to China (e.g., Hong Kong and Singapore). The number of QFIIs that have been granted investment quotas from the CSRC has increased steadily over time, from 12 fund management companies in 2003 to 93 in 2009.

¹⁵ In additional analysis, we show that our findings are robust to including fund holdings below the top 10 shareholders for the domestic fund sample (see section 5).

¹⁶ Source: http://www.csrc.gov.cn/pub/csrc_en/OpeningUp/RelatedLists/QFIIs/.

Panel B presents the distribution of the domestic funds by year and by fund-management-company location. The number of funds and the size of assets under management show a steady increase throughout the sample period, starting from 90 funds in 2003 to 290 funds in 2009. The size of the mutual fund industry varies largely by region. Shanghai and Guangdong are among those provinces that experienced early growth and the cities where the majority of the funds are located. The growth of mutual funds in other areas such as Beijing and Chongqing appears to be a more recent phenomenon.

3.2 Empirical measures and descriptive statistics

3.2.1 Measure of close ties with investees

We use two proxies to identify the social ties between the fund and its investees. Extant studies show that school ties can function as a channel for information transfer (Cohen and Malloy 2008). Following this literature, we exploit ties through education networks, namely attendance at identical institutions, to identify investees where fund managers are more likely to gain direct information access. An important benefit of education networks is that because they have been formed ex-ante the linkages are largely independent of the information being transferred. Empirically, we consider a fund to share close school ties with the investee if the fund manager went to the same university as the firm's senior managers (i.e., C-suite executives) and/or board of directors.

For each firm-year, we collect educational backgrounds of the management team and the board from CSMAR Corporate Governance Research database. The CSMAR Corporate Governance Research database contains biographical information (e.g., name, age, gender, and educational background) of the managers and the board members of each firm. For individuals with information

missing in CSMAR, we conduct online searches using professional networking websites.¹⁷ We follow a similar process for fund managers. For each fund-year, we collect the fund manager's educational background information from the individual's resume provided in CSMAR mutual fund research database, or professional networking websites when unavailable.

Our second proxy for close ties is based on the geographic distance between the fund manager and the investee. Coval and Moskowitz (2001) find that fund managers earn higher returns on holdings of nearby investees, suggesting a link between proximity and information transmission. We measure geographic proximity as the distance between the provinces where the fund and the investee are incorporated. Empirically, we consider a funds to have close ties with an investee if the investee's headquarter is located in the same province where the fund is incorporated.

Table 2 Panel A shows the percentage of the mutual fund holdings invested in investees with close ties. Using the school ties to identify the connected holdings, we find that than 12.77% of fund holdings are held in investees with shared educational background, measured as a % of the total assets being managed. Also, mutual funds hold 11.8% of their holdings in firms that are located in the same province.

3.2.2 Fund-level measure of monitoring mechanisms

We use an aggregate measure of the three monitoring mechanisms to classify funds into those with high vs. low monitoring. The three monitoring mechanisms are (i) institutional fund investors, (ii) the fund's auditor, and (iii) the location of the fund's management company.

Institutional fund investors: Institutional investors as a class of investors can play an important monitoring role because, unlike individual investors, they are equipped with better information and skills to monitor fund managers (Ayers et al. 2011). Chinese laws allow fund investors to gather

¹⁷ Source: <http://baike.baidu.com>.

together as a group to convene a general meeting and vote against the actions of fund managers or even to request their removal. Such enforcement actions, however, are difficult to coordinate and often require a large institutional investor to take the lead.¹⁸ We thus expect a large institutional fund investor to better discipline fund managers and reduce the potential for malfeasance caused by the close relationships between fund managers and their investees. Empirically, we classify the funds with institutional ownership of more than 30% as funds with strong monitoring. Panel B in Table 2 shows that 49% of the funds in our sample show institutional holdings greater than 30%. The remaining shares not held by institutional investors are held by retail investors.

Fund auditor: Our second monitoring mechanism is the quality of the fund's auditor. We consider funds audited by the Big 4 auditors to have strong monitoring. Prior research finds that auditors play a strong monitoring role in the capital market in China by improving the reporting quality and strengthening the internal controls (e.g., De Fond et al. 2000; Wang et al. 2008). We thus expect the Big 4 auditors to reduce the likelihood of fund managers engaging in opportunistic behaviors. As shown in Table 2, Panel B, a significant portion (84%) of domestic funds uses a Big 4 auditor. This is in contrast to Chinese listed firms, of which only 6% hire a Big 4 auditor, documented in Wang et al. (2008). A possible reason for the disproportionate representation of the Big 4 among mutual funds is that the agency problem of mutual funds is perceived as very serious and the funds, in turn, respond to the increased market demand.

Location of the fund management company: The third measure for the monitoring mechanism is the location of the fund management company. Although not a direct measure of monitoring per se, we argue that development in the fund's locale can facilitate monitoring by providing higher

¹⁸ To vote on such actions, investor classes that constitute more than 10% of the fund's assets had to convene a general meeting. For minority shareholders, the law granted private enforcement rights, which authorized investors to bring action against any person who is involved in the fund's management such as fund managers or custodians. (Article 43, *The Management Procedure for Fund Operating in the Securities Investment Funds* from CSRC China)

quality information and stronger investor protection as well as legal enforcement (Lin et al. 2012). Studies show that market development in China is largely imbalanced across regions and that regional development has a significant impact on economic activities ranging from foreign direct investment locations, the quality of firm governance, and the degree of earnings management (Du et al. 2008; Wang et al. 2008; Jian and Wong 2010). Empirically, we classify Shanghai and Guangdong, the most developed regions and where the only two stock exchanges in China are housed, as the locations that facilitate more effective monitoring. As reported in Table 2, Panel B, 86% of the funds have fund management companies located in these two regions; the rest are in Beijing, Tianjin, Chongqing, and Guangxi, regions that are considered to have relatively less developed capital markets and institutions.

For our empirical tests, we construct a composite measure of fund monitoring (*Composite factor*) using the sum of the three monitoring variables and classify funds into three categories, closely, moderately, and weakly monitored funds). Funds are considered closely monitored (i.e., a low agency cost fund) if they have more than two of the monitoring mechanisms listed above. Table 2, Panel B shows that 34% ($= (681*0.69)/1366$) of the funds in our sample qualify as closely monitored funds (i.e., a low agency cost fund). We classify funds as weakly monitored (i.e., high agency cost) funds if they have less than two of the aforementioned monitoring mechanisms. Fifteen percent ($= (681*0.31)/1366$) of the funds in our sample qualify as weakly monitored funds. All other funds fall into the moderately monitored category.

Panel C of Table 2 presents the characteristics of the domestic funds by the level of the fund monitoring. We find that the weakly monitored funds tend to be larger, with higher total (net) assets under management. Also, weakly monitored funds tend to charge higher management fees (*management fee ratios*) than do the closely monitored funds. The funds' investment patterns show systematic differences between weakly and closely monitored funds. Weakly monitored funds

maintain a greater number of holdings (*# of firm holdings*) compared to their closely monitored counterparts. The investment horizon (*holding period > one-year indicator*), seems to be slightly longer for closely monitored than weakly monitored funds, but the difference is statistically insignificant.

3.2.3 Firm-level measure of ownership

We measure mutual fund ownership at the firm-level using the total ownership as a percentage of the firm's float shares.¹⁹ The fund's holding is measured on an annual basis at the end of each fiscal year. The change in the ownership variable is defined as the difference in the level of holding from the previous year.

In Table 3 Panel A, we report the descriptive statistics of the firm-level ownership in our sample. For every firm-year, we differentiate between the ownership held by domestic funds and by QFIIs. For descriptive purposes, we show both firm-level ownership measured using the total # of funds investing (*# of funds*) and the % of ownership held by mutual funds (*% of holdings*).²⁰ The mean of the *# of funds* variable indicates that the number of QFIIs in the top 10 shareholders is only 0.14 for the average firm-year in our sample. For domestic funds, this figure increases to 1.76. The standard deviations of the two ownership variables show that domestic funds' holdings are far more volatile than those of the QFIIs' (i.e., 2.75 vs. 0.56).

When further classifying the domestic funds into closely monitored vs. weakly monitored groups, we find that, for an average firm, the number of closely monitored funds as top 10 shareholders is 0.49. The number of weakly monitored firms is reduced to 0.37. While this may indicate that weakly monitored funds tend to have more diversification and thus low allocation per

¹⁹ For QFIIs, the ownership information is available only for the top 10 shareholders. For consistency, we restrict our analysis to the top 10 largest shareholders also for domestic funds. In additional analysis (not tabulated), we find that our findings are robust to including domestic fund holdings below the top 10 shareholders (see section 5).

²⁰ In our empirical tests, we use *% of holdings* as our main proxy for fund-ownership and present the results using the *# of funds* in additional analysis. (See section 5).

investee, it can also reflect the weakly monitored funds' smaller asset size. Thus, to better identify the effect of the changes in the fund's demand for a specific asset, we use the *changes* (rather than the levels) in ownership throughout our empirical tests (Gompers and Metrick 2001).

4. Empirical Tests and Results

4.1 The timeliness of domestic funds and QFIIs' investment decisions

We test whether domestic funds show greater timeliness in their investment decisions than do the QFIIs. If the domestic fund's superior access to information is reflected in their holding decisions, the domestic fund's holding patterns will exhibit greater predictive ability of future returns (earnings). Empirically, we examine whether the *changes* in ownership of domestic funds are more likely to predict future firm performance than the ownership changes of QFIIs. We use a firm-level regression of one-year future firm performance on the ownership changes of QFIIs and domestic funds. This model is widely used in prior studies where a more positive coefficient on ownership changes is interpreted as evidence of a greater information advantage (e.g., Gompers and Metrick 2001; Baik et al. 2010). The intuition is that funds with superior information will purchase (sell) in advance of positive (negative) firm performance, leading to greater predictive ability in their ownership changes.²¹ We estimate the following model using ordinary least squares (OLS) with firms indexed as i and year as t :

$$\text{Firm performance}_{i,t+1} = \beta_0 + \beta_1 \times \Delta \text{QFII}_{i,t} + \beta_2 \times \Delta \text{DF}_{i,t} + \beta_{3-17} \times \text{Controls}_{i,t} + \text{Industry, Year FE} + e_{i,t}. \quad (1)$$

Firm performance _{$i,t+1$} is a proxy for future firm performance. We follow prior literature and use a returns based measure ($\text{BNHR}_{i,t+1}$), as well as an earnings based measure ($\Delta \text{ADJROA}_{i,t+1}$), to

²¹ Gompers and Metrick (2001) argue that *changes* in ownership reflect the fund's ability to trade on information advantages while the ownership *levels* proxy for the fund's demand shock. Thus throughout our analysis, we use the changes in ownership to draw most of our inferences.

proxy for future firm performance. $BNHR_{i,t+1}$ is the annualized 12-month risk-adjusted buy-and-hold return for year $t+1$.²² $\Delta ADJROA_{i,t+1}$ is the changes in abnormal income scaled by the total assets for year $t+1$, where abnormal income is defined as the net income adjusted by the industry mean.²³ $\Delta DF(QFII)_{i,t}$ is the changes in the ownership of domestic funds (QFIIs) from the previous year to the current year t for firm i . As discussed earlier, we use the total number of funds in the firm's top 10 shareholders to measure mutual fund ownership at the firm level. The coefficients of interest are β_1 and β_2 , which capture the predictive ability of future firm performance for QFIIs and domestic funds, respectively. If domestic funds have an information advantage over QFIIs, we predict that their ownership will show a greater predictive ability than the QFIIs' (i.e., $\beta_1 < \beta_2$).

We include a rich set of controls from prior literature. First, we include the level of ownership in the previous year ($t-1$) to control for the fund's demand shock of the funds (Gompers and Metrick 2001). Also, we include a battery of controls to account for other determinants of future returns (Ferreira and Matos 2008) and abnormal income (Ke and Petroni 2004). Firm-level controls include current size ($SIZE$), leverage (MTB), momentum (MOM), growth ($TURNOVER$, SG), volatility ($STDRET$), profitability (ROA), and dividend policy (DIV). We also include measures of the firm's visibility ($DOWJ$, $XLIST$, and AGE). All variables are defined in Appendix A. We include both industry and year fixed effects to control for unobserved time and industry factors that determine institutional fund holdings. Standard errors are clustered at the firm level to adjust for time-series dependencies.

²² The choice of 12 months is based on the calendar year, which coincides with the fiscal year for all firms in China. Returns are risk-adjusted using the value-weighted returns of a benchmark portfolio formed based on both size and the book-to-market ratio. See the appendix A for details.

²³ Industry classification is based on the one-digit CSRC industry code. For the manufacturing industry, we use the first two-digit industry code.

Table 4 shows the estimates from an OLS regression using equation (1). Column 1 presents the coefficient estimates using $BNHR_{i,t+1}$ as the dependent variable. We find no systematic evidence of QFIIs showing positive predictive ability for future returns ($\beta_1 = -0.232$, t-stat = -0.27). Also, for the domestic funds, we find no systematic pattern of an increase (a reduction) in ownership prior to periods of positive (negative) future returns ($\beta_2 = 0.021$, t-stat = 0.17). In columns 3, we estimate equation (1) using $\Delta ADJROA_{i,t+1}$ as the dependent variable. Column 3 shows that the changes in ownership for both domestic funds and QFIIs show strong predictive power when it comes to predicting future abnormal earnings. The coefficient on domestic funds is positive and significant ($\beta_2 = 0.092$, t-stat = 8.41), suggesting that a one standard deviation (=2.40) increase in the domestic fund ownership is associated with a 22% change in future abnormal ROA. Similarly, for QFIIs, the estimated coefficients suggest that a one standard deviation (=0.67) increase in their holdings is associated with a 4.9% change in future abnormal ROA. However, the difference in the predictive ability of domestic funds and QFIIs is statistically insignificant (diff = -0.018, F-stat = 0.26). Overall, the results in Table 4 suggest that both domestic funds and QFIIs show better predictive ability concerning future abnormal earnings than future returns. However, we find no clear evidence of domestic funds showing greater predictive ability of future earnings (or returns) compared to QFIIs.

Given such mixed findings on the relative predictive ability of domestic funds and QFIIs, we next examine how strong monitoring of domestic funds will affect their predictive ability of future performance. To do this, we disaggregate domestic fund ownership into closely vs. weakly monitored funds. Our prediction is that the domestic funds, due to their closer ties, will show greater predictive ability when the funds are closely monitored. We use the following regression model to examine whether domestic funds with varying levels of monitoring show different levels of predictive ability.

$$\text{Firm performance}_{i,t+1} = \beta_0 + \beta_1 \times \Delta QFII_{i,t} + \beta_2 \times \Delta DF_closely_monitored_{i,t} + \beta_3 \times \Delta DF_weakly_monitored_{i,t} + \beta_{4-18} \times \text{Controls}_{i,t} + \text{Industry, Year FE} + e_{i,t} \quad (2)$$

$\Delta DF_closely(weakly)_monitored$ is the changes in ownership of domestic funds that are classified as closely (weakly) monitored funds. $\Delta QFII$ is the changes in the ownership of QFIIs. The coefficients β_2 and β_3 capture the predictive abilities of domestic funds with close vs. weak monitoring, respectively. If closer monitoring increases the extent to which domestic funds use their information advantages, we expect domestic funds' predictive ability to be higher for the closely monitored funds than the weakly monitored ones, i.e., $\beta_2 > \beta_3$.

Columns 2 and 4 of Table 4 show the estimated coefficients from equation (2). Using $BNHR_{i,t+1}$ as the dependent variable in column 2, we find that when domestic funds are closely monitored, the domestic funds show positive predictive ability concerning future returns ($\beta_2 = 1.265$, t-stat= 3.41). Interestingly, for the weakly monitored funds, we find a negative coefficient ($\beta_3 = -0.562$, t-stat= -2.29) suggesting that these funds either increase their ownership prior to negative future returns and/or reduce their positions prior to future positive returns. As before, QFIIs show no systematic significant predictive ability concerning future returns ($\beta_1 = -0.305$, t-stat= -0.36). When we compare the predictive ability of QFIIs and domestic funds, we find systematic differences across the closely vs. weakly monitored funds. F-tests show that closely monitored domestic funds exhibit higher predictive ability relative to QFIIs (diff = 1.827, F-stats=15.68). The weakly monitored funds, however, show no significant difference in their predictive ability relative to QFIIs (not tabulated). The findings in column 2 suggest that the relative predictive ability of domestic funds over QFIIs depends largely on whether the domestic funds are closely monitored.

In column 4, we repeat our analyses using $\Delta ADJROA_{i,t+1}$ as the dependent variable. As shown earlier in column 3, we find that the changes in ownership of both domestic funds and QFIIs show strong predictive power. Within the domestic funds, we find that the predictive ability of the closely

monitored funds is higher ($\beta_2 = 0.144$, $t\text{-stat} = 6.88$) than is that of the weakly monitored funds ($\beta_3 = 0.040$, $t\text{-stat} = 1.66$). A one standard deviation ($=1.16$) increase in the ownership of closely monitored funds is associated a 16% change in future abnormal ROA, while a one standard deviation ($=1.04$) increase in the ownership of weakly monitored funds is associated with a 4.2% increase. As in column 3, we find that QFIIs have a positive predictive ability of change in future abnormal ROA. However, whereas in column 3 there was no systematic difference in the predictive abilities of domestic funds and QFIIs, we now find that significant differences exist once we differentiate the domestic funds by their level of monitoring. In particular, we find that closely monitored domestic funds show greater predictive ability relative to QFIIs and the difference in the coefficients ($=0.104$) is statistically significant ($F\text{-stats} = 10.41$). In contrast, for weakly monitored domestic funds, we find no significant difference in their predictive ability relative to QFIIs (not tabulated).

The results in Table 4 suggest that once we differentiate the domestic funds into the closely vs. weakly monitored funds, there is consistent evidence that closely monitored domestic funds show more timely investment patterns relative to QFIIs. Also, the closely monitored funds show more timely investment patterns relative to the weakly monitored funds. For the weakly monitored domestic funds, however, we find no clear evidence of these funds consistently showing greater predictive ability over QFIIs. We interpret this as greater monitoring of domestic funds increasing the extent to which domestic fund's information advantages get reflected in investment outcomes and facilitating the information-sharing role of their local ties.

4.2 The role of close ties and the timeliness of investment decisions: within domestic funds

One assumption underlying our analysis thus far is that the domestic funds have closer ties with investees relative to foreign funds. Undoubtedly, domestic funds and foreign funds differ in many ways—in addition to the differing levels of ties they share with investees—which will affect their investment performance. Also, it is possible that some domestic funds do not necessarily share close

ties with their investees. In our next tests, we therefore use more direct proxies of ties with investees within the domestic fund sample.

We use two proxies of the fund’s level of close ties with investees described earlier in section 3.2; educational background and geographic proximity. We differentiate the domestic fund holdings by the level of ties it shares with the investees and examine the differential investment timeliness. That is, for each investee, we disaggregate the domestic fund ownership into (i) the holdings of funds with close ties (ΔDF_highIA) and (ii) the holdings of funds with weak ties (ΔDF_lowIA). Using the disaggregate ownership of domestic funds, we examine whether the connected funds (i.e., funds with closer ties with their investees) show greater predictive abilities than those with less ties. We use the following regression model:

$$\text{Firm performance}_{i,t+1} = \beta_0 + \beta_1 \times \Delta DF_highIA_{i,t} + \beta_2 \times \Delta DF_lowIA_{i,t} + \beta_3 \times \Delta QFII_{i,t} + \beta_{4-18} \times \text{Controls}_{i,t} + \text{Industry, Year FE} + e_{i,t} \quad (3)$$

$\Delta DF_high(low)IA$ is the changes in the ownership of domestic funds that are classified as funds with close (weak) ties with the firm (i.e., investee). We compare the coefficients of β_1 and β_2 to examine the effect of close ties on the fund’s investment timeliness.

Table 5 shows the estimated results. We identify the funds that are more connected to the firm using (i) the fund manager’s educational background (columns 1 and 3) and (ii) the geographic proximity between the mutual fund manager and the investee (columns 2 and 4). Empirically, we consider a mutual fund to share educational background with an investee, if the fund manager went to the same university as the firm’s C-suite executives and/or board of directors (*educational ties*). Also, a fund manager is considered to share close ties with an investee, if the investee’s headquarter is located in the same province where the fund is incorporated (*geographic proximity*).

In columns 1 and 2, using $BNHR_{i,t+1}$ as the dependent variable, we find no evidence of fund with closer ties showing greater predictive ability. In column 1, using *educational ties* to identify

funds with close ties, we find that the coefficient on ΔDF_highIA is negative and insignificant ($\beta_1 = -0.304$, t-stat= -0.56), as is with the coefficient on ΔDF_lowIA ($\beta_2 = -0.111$, t-stat= -0.80). In column 2, we use geographic proximity to proxy for close ties with investees and find largely similar results. In columns 3 and 4, we find that the coefficients on both ΔDF_highIA and ΔDF_highIA are positive and significant. However, we find that the differences in the two coefficients are insignificant for both *educational ties* (diff =0.0001, F-stats=0.002) and *geographic proximity* (diff =0.006, F-stats=0.04). In contrast to prior studies which show that closer ties function as conduits of information transfers, we fail to document that having closer ties with an investee leads to greater predictive ability of investees' future performance.

The fact that closer ties do not necessarily lead to more timely investment can suggest no information transfers. However, it is also possible that there are countervailing effects of having close ties (e.g., favoritism/collusion) that undermine efficient information sharing. In order to differentiate the two effects, we condition the domestic funds by their level of agency conflicts, using monitoring proxies described earlier in section 3.2. The intuition is that if funds are strongly monitored, the information-sharing role of closer ties will dominate inefficient favoritism. If monitoring promotes efficient information-sharing of close ties, we expect funds with close ties to show greater investment timeliness in presence of quality monitoring. When funds are not properly monitored, closer ties will fail to serve as a channel of efficient information transfer and can even lead to collusion and inefficient favoritism.

We differentiate the ownership of the closely connected funds into those that are closely vs. weakly monitored. That is, we disaggregate the ΔDF_highIA variable into ownership of closely monitored funds ($\Delta DF_highIA_closely_monitored$) and weakly monitored funds ($\Delta DF_highIA_weakly_monitored$). Using the disaggregate ownership, we examine whether the

closely monitored funds are able to use their close ties to improve investment timeliness. We use the following model in equation (4):

$$\text{Firm performance}_{i,t+1} = \beta_0 + \beta_1 \times \Delta \text{DF_highIA_closely_monitored}_{i,t} + \beta_2 \times \Delta \text{DF_highIA_weakly_monitored}_{i,t} + \beta_3 \times \Delta \text{DF_lowIA}_{i,t} + \beta_{4-20} \times \text{Controls}_{i,t} + \text{Industry, Year FE} + e_{i,t} \quad (4)$$

$\Delta \text{DF_highIA_closely(weakly)_monitored}_i$ is the changes in ownership of domestic funds with close ties and closely (weakly) monitored. $\Delta \text{DF_lowIA}_i$ is the changes in the ownership of domestic funds with no close ties with its investees. The coefficients β_1 and β_2 capture the predictive abilities of domestic funds with close vs. weak monitoring, respectively, in presence of strong ties. If quality monitoring increases the extent to which domestic funds use their information advantages, we expect connected funds to show greater predictive ability when the funds are closely monitored, i.e., $\beta_1 > \beta_2$. That is, we predict that the extent to which close ties lead to more timely investment will increase with the quality of fund's monitoring (hypothesis 2).

Table 6 shows the estimated results from equation (4). Columns 1 and 2 use $\text{BNHR}_{i,t+1}$ as the dependent variable. In column 1, we use educational ties to identify the connected funds. We find that closer ties lead to greater predictive ability when funds are closely monitored ($\beta_1 = 3.360$, t-stat = 2.24). Interestingly, for the weakly monitored connected funds, we find a negative coefficient ($\beta_2 = -2.115$, t-stat = -2.23). That is, the connected funds, when weakly monitored, not only show weaker predictive abilities relative to their closely monitored counterparts, but their ownership pattern seems to move in the opposite direction of investee's future returns. In later analysis, we find that this is due to these funds increasing their ownership prior to negative future returns, especially when the investees are under financial distress (see section 4.3). We interpret this as close ties, when not properly monitored, leading to favoritism, especially when the investees are in need.

The F-test shows that within the connected funds, the difference in the predictive abilities of the closely and weakly monitored funds is statistically significant (diff =5.475, F-stats=9.28). Domestic funds with no close ties ($\Delta DF_lowIA_{i,t}$) show negative predictive ability for future returns yet statistically insignificant ($\beta_3 = -0.121$, t-stat= -0.87). The F-test shows that the difference in the predictive abilities of the funds without close ties ($=\beta_3$) and the connected funds under proper monitoring ($=\beta_1$) is statistically significant (diff =3.481, F-stats=5.26). This suggests that having close ties facilitates efficient information transfer, when the funds are closely monitored. In column 2, using geographic proximity to proxy for the ties with investees, we find very similar results.

Next, in columns 3 and 4, we use $\Delta ADJROA_{i,t+1}$ as the dependent variable to measure investees' performance. Again, we find that having close ties lead to positive predictive ability only when the funds are closely monitored. Using educational ties in column 3, we find a positive and significant β_1 coefficient on $\Delta DF_highIA_closely_monitored$ ($\beta_1=0.245$, t-stat=2.30). For the connected yet weakly monitored funds ($\Delta DF_highIA_weakly_monitored$), we find positive yet insignificant predictive ability ($\beta_2=0.057$, t-stat=0.54). Funds without close ties ($\Delta DF_lowIA_{i,t}$) show significant predictive ability concerning future returns ($\beta_3 = 0.098$, t-stat= 7.95), however, the magnitude is smaller than the connected funds with strong monitoring. In column 4, we find largely similar results using geographic proximity to measure close ties. Overall, the findings in Table 6 support the view that quality monitoring is an important pre-condition for close ties to serve as a channel of information transfer that leads to timely investment. Quality monitoring increases the information sharing role of close ties.

4.3. Asymmetric effect of close ties when investees are under financial distress

We next delve deeper into the negative predictive abilities of the closely connected, yet weakly monitored, funds observed earlier in Table 6. While we interpret the negative coefficient as

evidence of favoritism, it is possible that the negative predictive ability is due to poor investment skills of these weakly monitored funds. To provide sharper tests on favoritism, we identify sub-samples where the funds are more likely to offer favors to the investees, i.e., when investees are under financial distress. If the poor predictive ability of these funds is driven by the fund's investment skills, there is no clear reason why the fund's ability will differ when investees are in financial distress vs. other normal periods.

We repeat our analysis in Table 6 after classifying the firm-years into periods when the investees are under financial distress. *Financially distressed* firm-years are defined as years when the investee reports negative net income, net operating cash flow, or stockholders' equity. Table 7 presents the result from estimating equation (4) using the *BNHR* as the dependent variable. In columns 1 and 2, we use educational ties to identify funds with close ties with the investee. Column 1 reports the estimates using only the financially distressed sub-sample and column 2 reports the findings using all other firm-years.

We find that the negative predictive ability of weakly monitored funds is observed only when the investees are under financial distress ($\beta_2 = -4.901$, $t\text{-stat} = -2.41$ in column 1). That is, when investee's are under financial distress, the connected funds are more likely to hold or even increase their investment positions. In column 2, for years when investees are well performing, we find no such evidence of negative predictive ability. The asymmetric findings in the two sub-samples suggest inefficient favoritism when investees are in need. This suggests that, absent sufficient monitoring, close ties can lead to inefficient favoritism between the fund manager and the investees.

5. Sensitivity analysis

We perform multiple sensitivity tests to verify the validity of our inferences. One potential alternative explanation for the QFIIs' weak predictive ability is due to the differences in their

investment horizons. Since QFIIs are institutions that underwent the CSRC's stringent approval process, it is possible that these funds have a more long-term investment horizon. To mitigate the concern that our findings may be capturing QFIIs' longer-term investment horizon, we repeat our analysis using a 3-year forecasting window. Table 8 Panel A shows the estimated results after repeating Table 6 using a longer, 3-year forecasting horizon. Not surprisingly, we find that all funds show a weaker predictive ability when we move from the 1-year (in Table 6) to the 3-year forecasting horizon. Nonetheless, we continue to find that for future returns, for funds that share close ties with investees, the closely monitored domestic funds show greater timeliness in their investment decisions compared to the weakly monitored funds.

Second, we run additional analysis using an alternative measure of fund ownership. Mutual funds in China are subject to limits on the maximum ownership. Shares held by a single fund in one listed company could not exceed 10% of the company's total outstanding shares. Thus, it is possible that this regulatory requirement affects our changes in ownership variable, especially for funds that already hold large shares. We address this concern by repeating our results using the # of funds (instead of the % holdings) to proxy for fund ownership. Table 8, Panel B shows the estimated results. We confirm our earlier findings in Table 6 that the weakly monitored funds continue to underperform the closely monitored funds.

Finally, we note that our ownership data is limited only to the top 10 shareholders of each firm. Therefore, an assumption underlying our analysis is that the investment patterns of mutual funds do not vary systematically by ownership levels. We perform a sensitivity analysis by relaxing the top 10 shareholders restriction for domestic funds. We note that for the QFIIs, we cannot conduct this analysis due to the lack of fund-level holdings data. To reduce the noise from mutual funds that hold small fractions of each firm, we exclude the ownership of domestic funds with the smallest 1%

ownership among all firms for any given year. The estimated coefficients are consistent with our earlier findings in Table 6 (not tabulated).

6. Conclusion

In this paper, we show how domestic institutions may also be limited by the weak governance of their own institutions. Prior literature has focused mostly on whether and why foreign investors face greater costs than local investors do in acquiring information. To our knowledge, the fund's agency costs have not been examined in the context of the differential information advantages of domestic and foreign investors. The study contributes to both the cross-border investment and the delegated portfolio management literatures by highlighting how an information advantage is also affected by the agency costs of the informed party. Our findings suggest that an important precondition for a local information advantage translating into a superior investment outcome is the incentive alignment of the (informed) decision making party.

We note one important caveat regarding our analysis. It is possible that an information advantage may manifest itself in ways other than making timely investments with respect to one-year future performance. While we attempt to test for different investment horizons and extend the event window of future performance, it is possible that some institutional investors have no intention of correlating their ownership patterns with the future performance of the firms. Notwithstanding such possibilities, we believe that the predictability of future performance is one important dimension by which one evaluates institutional investors' information advantage.

The findings have important policy implications. Since 2000, the CSRC has placed high priority on developing securities investment funds in China. The CSRC has viewed the development of such securities companies as a way of stabilizing China's capital market, which is dominated by

retail investors. Our study highlights that these institutional investors, because of agency conflicts, can fail to reflect their investors' best interests. Hence, improved governance and quality monitoring that will safeguard investors' interests is an important prerequisite to the development of the mutual fund industry.

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Appendix A: Variable definitions

Variable name	Definition and empirical measures
Dependent variable (firm performance)	
$BNHR_{t+1}$	Risk-adjusted buy-and-hold return in t+1 year. Returns are risk-adjusted using a benchmark portfolio formed based on both the size and the book-to-market ratio. The benchmark portfolio is constructed based on a double sort on both firm size (i.e., natural log of total assets) and book-to-market ratio in the previous year. For each year, we form size terciles using all common stocks, and then further sort firms into book-to-market portfolios within each size tercile. We calculate the risk-adjusted buy-and-hold returns by subtracting the value-weighted buy-and-hold returns of each portfolio from the raw buy-and-hold return of each firm.
$\Delta ADJROA_{t+1}$	Changes in abnormal ROA from year t to year t+1. Abnormal ROA is defined as the firm's ROA – the median ROA of all firms in the same industry-year. Industry is based on the two-digit CSRC industry code for the manufacturing industry and the single-digit code for all other industries.
Independent variable (changes in fund ownership)	
$\Delta QFII$	Changes in the % of the firms' tradable float shares held by all QFIIs in the top 10 shareholders at the end of each year.
ADF	Changes in the % of the firms' tradable float shares held by all domestic funds in the top 10 shareholders at the end of each year.
$ADF_closely_monitored$	The % of the firms' tradable float shares held by all closely monitored domestic funds at the end of each year. Closely monitored funds are defined as domestic funds with a composite factor score of agency costs of less than 2. See Table 2, Panel A for details of the composite score.
$ADF_weakly_monitored$	The % of the firms' tradable float shares held by all weakly monitored domestic funds at the end of each year. Weakly monitored funds are defined as domestic funds with a composite factor score of agency costs of greater than 2. See Table 2, Panel A for details of the composite score.
$ADF_high\ IA$	The % of the firms' tradable float shares held by all domestic funds with close ties with investees. Funds with close ties are defined based on proxies of information access, described in section 4.
$ADF_low\ IA$	The % of the firms' tradable float shares held by all domestic funds with weak ties with investees. Funds with close ties are defined based on proxies of information access, described in section 4.
$ADF_highIA_closely_monitored$	The % of the firms' tradable float shares held by all closely monitored domestic funds with strong ties with investees. Closely monitored funds are defined as domestic funds with a composite factor score of agency costs of less than 2. See Table 2, Panel A for details of the composite score. Funds with close ties with investees are defined based on proxies of information access, described in section 4.
$ADF_highIA_weakly_monitored$	The % of the firms' tradable float shares held by all weakly monitored domestic funds with strong ties with investees. Weakly monitored funds are defined as domestic funds with a composite factor score of agency costs of greater than 2. See Table 2, Panel A for details of the composite score. Funds with close ties with investees are defined based on proxies of information access, described in section 4.
Proxies for the fund's ties an investee	
<i>Education network</i>	The school ties, namely attendance at identical institutions, between the fund manager the firm's senior officers and/or board members. We consider a fund to share close educational ties with the investee if the fund manager went to the same university as the firm's senior managers (i.e., C-suite executives) and/or board of directors.
<i>Geographic proximity</i>	The geographic distance between the mutual fund manager and investee. We measure geographic proximity as the distance between the provinces where the fund and the investee are incorporated. A fund manager is considered to have close ties with an investee if the investee's headquarter is located in the same province where the fund is incorporated.
Firm-level controls	
MTB	Market value divided by book value of total equity at year-end.
$SIZE$	The natural logarithm of year-end total assets.
$STDRET$	The standard deviation of monthly returns over the previous two years.
$TURNOVER$	The average daily turnover rate, where the daily turnover rate is defined as the sum of the total daily trading volume divided by the daily tradable shares.
P	The share price at the year-end.
$DOWJ$	Indicator variable that takes a value of 1 if a firm is included in the Dow-Jones 600 index and 0 otherwise.
MOM	Annual raw stock return of the firm.
AGE	The number of months since the firm first listed.
DIV	Dividend per share scaled by stock price at the beginning of each year.
LEV	The ratio between year-end total liabilities and total assets.
ROA	Return to total assets, i.e., net income scaled by total assets.

<i>CASH</i>	Ratio of cash and short-term investments to total assets.
<i>SG</i>	Two-year weighted average of percentile rank of annual growth rate in sales.
<i>XLIST</i>	Indicator variable that takes a value of 1 if a firm issues shares available to foreign investors (B-share or H-share), and zero otherwise.
<i>FIRM GOVERNANCE</i>	Equal-weighted average of percentile rank of the three governance variables (RPT_L, MARKET, and BIG4).
<i>RPT_L</i>	Level of related party lending scaled by total assets.
<i>BIG4</i>	Indicator that takes a value of 1 if a firm is audited by a BIG 4 auditor, 0 otherwise.
<i>MARKET</i>	The two-year lagged market capitalization index of the region where the sample firm is located.

Appendix B: Mutual fund scandals in China

Fund	Year	Fund family	Related equities
唐建	2007	上投摩根(Shanghai)	新疆众和(新疆)
王黎敏	2008	南方(Guangdong)	太钢不锈(山西)
张野	2009	融通基金(Guangdong)	新中基(新疆), 广州冷机(广东), 川化股份(四川)和海南海药(海)
韩刚	2009	长城(Guangdong)	金马集团(广东), 宁波华翔(浙江), 澳洋科技(江苏), 江南高纤(江苏)等 15 只
涂强	2009	景顺长城(Guangdong)	赣粤高速(江西), 泰豪科技(江西), 济南钢铁(山东), 广州友谊(广东), 浦发银行(广东), 海油工程(天津), 兴业银行(福建), 武钢股份(湖北), 中联重科(湖南), 金地集团(广东), 神火股份(河南), 贵州茅台(贵州), 置信电气(上海), 华发股份(广东), 天音控股, 中兴通讯(广东), 中信证券(广东), 宝钢股份(上海), 国药股份(北京), 云南铜业(云南), 哈空调(黑龙江), 合肥百货(安徽), 泸州老窖(四川)等
刘海	2009	长城(Guangdong)	鞍钢股份(辽宁), 海通证券(浙江), 东百集团(福建)
许春茂	2010	光大保德信(Shanghai)	新年百货(宁夏)
李旭利	2010	交银施罗德基金(Shanghai)	工行(北京), 建行(北京); 浦发银行, 深发展, 兴业银行, 民生银行
郑拓	2010	交银施罗德基金(Shanghai)	西山煤电(山西), 中国船舶(上海), 中国远洋(天津)等 50 余只
黄林	2010	国海富兰克林(Guangxi)	宁波华翔(浙江), 华发股份(广东), 东软股份, 华东医药(浙江), 百联股份, 岳阳纸业(湖南), 振华港机(上海), 大族激光(广东)等 8 只

Table 1 Distribution of QFIIs and domestic funds

Panel A: Distribution of QFIIs by home country

Country	# of fund (QFIIs)							Total quotas approved (in million USD as of 2009)	Mean quota approved (in million USD per fund as of 2009)
	2003	2004	2005	2006	2007	2008	2009		
Australia	0	0	0	1	1	3	3	570	190
Belgium	0	1	1	2	2	3	3	750	250
Canada	0	1	1	2	2	3	5	400	80
France	0	3	3	4	4	4	4	420	110
Germany	1	2	2	2	2	3	4	780	190
Hong Kong	1	2	3	4	4	4	6	1,280	210
Japan	2	3	4	6	6	8	10	1,650	170
Malaysia	0	0	0	0	0	0	1	200	200
Netherlands	1	2	2	2	2	4	4	830	210
Norway	0	0	0	1	1	1	1	500	500
Singapore	0	0	2	4	4	6	6	950	160
South Korea	0	0	0	0	0	2	7	620	90
Switzerland	2	2	2	4	4	6	6	1,950	330
UAE	0	0	0	0	0	1	1	200	200
UK	1	2	3	5	5	6	10	970	100
U.S.	4	8	10	14	14	20	22	4,510	210
Total	12	26	33	51	51	74	93	1,657	

Panel B: Distribution of domestic funds by region

	# of fund							Total capital registered (per fund) (in million USD as of 2009)	Total AUM (in million USD per fund as of 2009)
	2003	2004	2005	2006	2007	2008	2009		
Beijing	7	8	11	16	37	35	38	1,654	62,958
Tianjin	0	0	1	1	1	1	1	73	624
Chongqing	0	0	1	0	2	3	5	117	2,211
Guangxi	0	0	0	1	3	4	0	225	2,416
Shanghai	29	46	60	75	104	111	118	5,974	149,341
Guangdong	54	71	78	91	117	108	128	4,583	158,126
Total	90	125	151	184	264	262	290	12,627	375,675

Notes: Table 1 shows the distribution of QFIIs and domestic funds from 2003 to 2009. Panel A shows the distribution of QFIIs by the country of the fund's incorporation. Information on QFIIs' approval years and investment quota are obtained from the websites of China Securities Regulatory Commission and China's Foreign Exchange Control Bureau. Panel B shows the distribution of the # of registered domestic (non-index) funds. Information on registered domestic funds is collected from CSMAR (China Stock Market and Accounting Research). Total AUM is the total assets under management of the fund-management company.

Table 2 Characteristics of domestic funds

Panel A: Distribution of mutual fund holdings invested in investees with close ties

<i>Variable</i>	Measure	High IA	Low IA	% of fund-investee pairs (# of holdings)	% of fund-investee pairs (as % of AUM)
<i>Educational ties</i>	Shared school ties between the fund manager and managers of the investee	The fund manager went to the same university as the firm's senior managers and/or board members.	If the fund manager shares no school ties with the firm's senior managers and/or board members.	11.82	12.77
<i>Geographic proximity</i>	The proximity of fund family firms and their investees	The investee's headquarter is located in the same province as where the fund is incorporated.	The investee's headquarter is located in a different province from where the fund is incorporated.	11.48	11.81

Panel B: Distribution of the domestic funds by the quality of monitoring

<i>Variable</i>	Measure	Weakly monitored funds	Closely monitored funds	# funds year	Mean	Std	P1	P25	P50	P75	P99
<i>Location of Mgmt. Company</i>	Development of the region where the fund management firm is registered	Beijing/Tianjin/Chongqing/Guangxi	Shanghai/Guangdong	1366	0.87	0.34	0.00	1.00	1.00	1.00	1.00
<i>Big4 auditor</i>	Fund is audited by Big4 accounting firms	No	Yes	1358	0.82	0.38	0.00	1.00	1.00	1.00	1.00
<i>Monitor</i>	Fund's institutional ownership>30%	Low	High	1351	0.49	0.50	0.00	0.00	0.00	1.00	1.00
<i>Composite score</i>	Composite monitoring score	# of monitoring measures <2	# of monitoring measures >2	681	0.69	0.46	0.00	0.00	1.00	1.00	1.00

Panel C: Characteristics of domestic funds, by weakly monitored (W) vs. closely monitored (C) funds

	<i>Agency cost</i>	# of funds	Mean	Diff(t-test)	Std	P10	P25	P50	P75	P90
<i>Ln(assets)</i>	<i>W</i>	208	22.29	1.02	1.14	20.83	21.52	22.41	23.17	23.70
	<i>C</i>	412	21.27	(11.92)***	0.94	19.99	20.63	21.35	21.91	22.54
<i>Ln(Net value)</i>	<i>W</i>	209	22.26	1.07	1.15	20.78	21.48	22.34	23.15	23.68
	<i>C</i>	472	21.19	(12.86)***	0.93	19.97	20.52	21.27	21.81	22.43
<i>Management fee ratio</i>	<i>W</i>	209	1.46	0.03	0.17	1.50	1.50	1.50	1.50	1.50
	<i>C</i>	471	1.43	(1.88)*	0.22	1.25	1.50	1.50	1.50	1.50
<i># of firms holdings</i>	<i>W</i>	209	17.69	6.91	16.41	3.00	5.00	13.00	23.00	44.00
	<i>C</i>	472	10.78	(6.53)***	10.72	1.00	3.00	7.50	15.00	24.00
<i>Holding period > one-year (Indicator)</i>	<i>W</i>	209	0.12	-0.02	0.21	0.00	0.00	0.00	0.19	0.51
	<i>C</i>	465	0.15	(-1.27)	0.23	0.00	0.00	0.00	0.27	0.49

Notes: Panel A shows the percentage of mutual fund holdings invested in firms with which the fund shares close ties. Panel B presents the descriptive statistics of various fund characteristics by funds with high and low information access (t-values in the parentheses). Panel C presents the descriptive statistics of various fund characteristics by funds with different agency costs (t-values in the parentheses). *Ln(assets)* is the log of the fund's total assets under management. *Ln(Net value)* is the log of the fund's net assets under management. *Management fee ratio* is the annual average of the daily management fee ratio. Holding more than 1 year is an indicator variable which takes a value of one if a fund holds a firm more than one year, and zero otherwise. Refer to Appendix A for detailed definitions of all other variables.

Table 3 Descriptive statistics

Panel A: Firm-level ownership of QFIIs and domestic funds

<i>Variables</i>	# firm-years	Mean	Std	P10	P25	P50	P75	P90
a. Fund ownership (levels)								
	<i># of funds</i>							
<i>QFII</i>	10035	0.14	0.56	0.00	0.00	0.00	0.00	0.00
<i>DF</i>	10035	1.76	2.75	0.00	0.00	0.00	3.00	6.00
<i>DF_weakly_monitored</i>	10035	0.37	0.92	0.00	0.00	0.00	0.00	1.00
<i>DF_closely_monitored</i>	10035	0.49	1.18	0.00	0.00	0.00	0.00	2.00
	<i>% of holding</i>							
<i>QFII</i>	10035	0.00	0.01	0.00	0.00	0.00	0.00	0.00
<i>DF</i>	10035	0.04	0.08	0.00	0.00	0.00	0.05	0.16
<i>DF_weakly_monitored</i>	10035	0.01	0.03	0.00	0.00	0.00	0.00	0.03
<i>DF_closely_monitored</i>	10035	0.04	0.07	0.00	0.00	0.00	0.04	0.13
b. Fund ownership (Changes)								
	<i># of funds</i>							
$\Delta QFII$	8343	0.02	0.67	0.00	0.00	0.00	0.00	0.00
ΔDF	8343	0.11	2.40	-2.00	0.00	0.00	0.00	3.00
$\Delta DF_weakly_monitored$	8343	0.07	1.04	-1.00	0.00	0.00	0.00	1.00
$\Delta DF_closely_monitored$	8343	-0.07	1.16	-1.00	0.00	0.00	0.00	1.00
	<i>% of holding</i>							
$\Delta QFII$	8343	0.00	0.01	0.00	0.00	0.00	0.00	0.00
ΔDF	8343	0.00	0.08	-0.07	0.00	0.00	0.00	0.07
$\Delta DF_weakly_monitored$	8343	0.00	0.03	-0.01	0.00	0.00	0.00	0.02
$\Delta DF_closely_monitored$	8343	0.00	0.06	-0.06	0.00	0.00	0.00	0.06

Panel B: Firm characteristics

<i>Variables</i>	# firm-years	Mean	SD	P10	P25	P50	P75	P90
a. Future performance								
$BNHR_{t+1}$	9789	0.06	0.73	-0.56	-0.24	-0.04	0.21	0.71
$\Delta ADJROA_{t+1}$	10029	0.00	0.11	-0.06	-0.02	0.00	0.02	0.06
b. Control variables								
<i>MTB</i>	9674	3.18	3.21	1.04	1.28	1.95	3.86	6.50
<i>SIZE</i>	10033	21.38	1.21	20.05	20.59	21.25	22.01	22.87
<i>STDRET</i>	9908	0.13	0.07	0.06	0.08	0.11	0.17	0.23
<i>TURNOVER</i>	9969	2.99	2.45	0.73	1.23	2.36	4.05	5.89
<i>P</i>	10035	10.11	9.33	3.10	4.35	7.01	11.88	20.95
<i>DOWJ</i>	10035	0.35	0.48	0.00	0.00	0.00	1.00	1.00
<i>MOM</i>	9421	0.52	1.11	-0.59	-0.30	0.11	1.16	2.06
<i>AGE</i>	10035	7.49	4.25	1.00	4.00	8.00	11.00	13.00
<i>DIV</i>	9997	0.01	0.01	0.00	0.00	0.00	0.01	0.03
<i>LEV</i>	10034	0.54	0.32	0.24	0.37	0.52	0.65	0.78
<i>ROA</i>	10033	0.02	0.08	-0.02	0.00	0.02	0.05	0.08
<i>CASH</i>	10033	0.17	0.13	0.03	0.07	0.13	0.22	0.35
<i>SG</i>	9476	0.49	0.23	0.18	0.32	0.49	0.67	0.80
<i>XLIST</i>	10035	0.09	0.29	0.00	0.00	0.00	0.00	0.00

Notes: Table 3 shows the descriptive statistics of the firm-level variables included in the study. Panel A presents the firm-level ownership aggregated by different types of funds. Panel B shows the distribution of the dependent variables and all other controls variables. Refer to Appendix A for detailed definitions. *QFII*, *DF*, *DF_closely_monitored* and *DF_weakly_monitored* have the same definition as $\Delta QFII$, ΔDF , $\Delta DF_closely_monitored$ and $\Delta DF_weakly_monitored$ except that they are measured at levels at the end of each year.

Table 4 Timeliness of investment decisions of domestic funds and QFII

Model (1): $BNHR(\Delta ADJROA)_{i,t+1} = \beta_0 + \beta_1 \times \Delta QFII_{i,t} + \beta_2 \times \Delta DF_{i,t} + \beta_{3-17} \times \text{Controls}_{i,t} + e_{i,t}$

Model (2): $BNHR(\Delta ADJROA)_{i,t+1} = \beta_0 + \beta_1 \times \Delta QFII_{i,t} + \beta_2 \times \Delta DF_{\text{closely_monitored},i,t} + \beta_3 \times \Delta DF_{\text{weakly_monitored},i,t} + \beta_{4-18} \times \text{Controls}_{i,t} + e_{i,t}$

	<i>BNHR_{t+1}</i> (Size and BTM adjusted)		$\Delta ADJROA_{t+1}$ (industry adjusted)	
	(1)	(2)	(3)	(4)
$\Delta QFII_t$	-0.232 (-0.27)	-0.305 (-0.36)	0.074** (2.13)	0.061* (1.77)
ΔDF_t	0.021 (0.17)		0.092*** (8.41)	
$\Delta DF_{\text{closely_monitored},t}$		1.265*** (3.41)		0.144*** (6.88)
$\Delta DF_{\text{weakly_monitored},t}$		-0.562** (-2.29)		0.040* (1.66)
F-test:	$H_0: \Delta QFII_t = \Delta DF_t$	$H_0: \Delta QFII_t = \Delta DF_{\text{closely_monitored},t}$	$H_0: \Delta QFII_t = \Delta DF_t$	$H_0: \Delta QFII_t = \Delta DF_{\text{closely_monitored},t}$
	-0.253 (0.09)	1.827 (15.68)***	-0.018 (0.26)	0.104 (10.41)***
<i>MTB</i>	(-0.90) -0.011***	(-0.88) -0.011***	(3.03) 0.001*	(2.90) 0.001*
<i>SIZE</i>	(-3.80) 0.015	(-3.74) 0.017	(1.71) 0.004***	(1.72) 0.004***
<i>STDRET</i>	(1.32) 0.057	(1.41) 0.034	(3.33)	(3.42)
<i>TURNOVER</i>	(0.26) -0.016**	(0.15) -0.017***		
<i>P</i>	(-2.46) -0.002*	(-2.65) -0.001		
<i>DOWJ</i>	(-1.82) -0.044*	(-1.13) -0.046*		
<i>MOM</i>	(-1.87) -0.015	(-1.93) -0.018		
<i>AGE</i>	(-1.09) -0.000	(-1.27) 0.000		
<i>DIV</i>	(-0.10) 0.175	(0.09) 0.164		
<i>LEV</i>	(0.25)	(0.23)		
<i>ROA</i>			-0.036*** (-5.32)	-0.036*** (-5.35)
<i>CASH</i>			-0.519*** (-13.15)	-0.522*** (-13.19)
<i>SG</i>			0.037*** (4.59)	0.037*** (4.59)
<i>XLIST</i>			0.016*** (2.98)	0.016*** (3.05)
<i>Constant</i>			0.001 (0.35)	0.001 (0.35)
<i>Lagged ownership</i>	-0.349 (-1.40)	-0.387 (-1.54)	-0.089*** (-3.42)	-0.090*** (-3.47)
<i>Industry dummy</i>	yes	yes	yes	yes
<i>Year dummy</i>	yes	yes	yes	yes
<i>SE clustering</i>	yes	yes	yes	yes
<i># of observations</i>	Firm	Firm	Firm	Firm
<i>Adjusted R-squared</i>	7,902	7,902	7,999	7,999

Notes: This table reports the predictive ability of the ownership of QFIIs and domestic funds. Columns 1 and 3 report the results of model (1). In columns 2 and 4, we differentiate ΔDF (in model (1)) into those that are closely monitored vs. weakly monitored ($\Delta DF_{closely_monitored}$ and $\Delta DF_{weakly_monitored}$) using model (2). Closely (weakly) monitored funds are defined as domestic funds with a composite factor score of agency costs of less (greater) than 2. See Table 2, Panel A for details of the composite score. Columns 1 and 2 report the estimation from an OLS regression using the future $BNHR$ as the dependent variable. The future buy-and-hold returns measured over a 12-month window, risk-adjusted by subtracting the value-weighted returns of the size and book-to-market portfolio formed each year. Columns 3 and 4 report the estimation from an OLS regression using $\Delta ADJROA$ as the dependent variable, defined as the firm's ROA minus the median ROA of all firms in the same industry-year. Industry is based on the two-digit CSRC industry code for the manufacturing industry and the single-digit code for all other industries. All other variables are defined in Appendix A. Standard errors are clustered at the firm level. Significance is denoted by t-values (or F-statistics for F-tests), in parentheses, and by ***, **, and * for 1%, 5%, and 10% respectively, using a two-tailed test.

Table 5 Timeliness of investment decisions when domestic fund have close ties with investees

Model: $BNHR(\Delta ADJROA)_{i,t+1}$

$$= \beta_0 + \beta_1 \times \Delta DF_high IA_{i,t} + \beta_2 \times \Delta DF_low IA_{i,t} + \beta_3 \times \Delta QFII_{i,t} + \beta_{4-18} \times Controls_{i,t} + e_{i,t}$$

	<i>BNHR_{t+1}</i> (Size and BTM adjusted)		<i>ΔADJROA_{t+1}</i> (Industry adjusted)	
	(1)	(2)	(3)	(4)
Proxies of close ties (IA):	<i>Educational ties</i>	<i>Geographic proximity</i>	<i>Educational ties</i>	<i>Geographic proximity</i>
<i>ΔDF_high IA_t</i>	-0.304 (-0.56)	0.009 (0.02)	0.100** (2.17)	0.098*** (3.56)
<i>ΔDF_low IA_t</i>	-0.111 (-0.80)	0.0001 (0.002)	0.100*** (8.11)	0.092*** (7.91)
<i>ΔQFII_t</i>	-0.264 (-0.31)	-0.240 (-0.28)	0.077** (2.26)	0.074** (2.13)
F-test				
<i>H₀: ΔDF_high IA_t</i>	-0.04	0.009	0.0001	0.006
<i>=ΔDF_low IA_t</i>	(0.12)	(0.002)	(0.002)	(0.04)
Lagged holdings	yes	yes	yes	yes
Industry dummy	yes	yes	yes	yes
Year dummy	yes	yes	yes	yes
SE clustering	Firm	Firm	Firm	Firm
# of observations	7,902	7,999	7,999	7,999
Adjusted R-squared	0.028	0.121	0.121	0.122

Notes: This table reports the predictive ability of the ownership of domestic funds with close and weak ties with investees. In columns 1 and 3, we measure the domestic fund's level of IA using the fund manager's educational background. A mutual fund is considered to have close school ties, if the fund manager went to the same university as the firm's senior managers (i.e., C-suite executives) and/or board of directors. In columns 2 and 4, we measure the domestic fund's ties with the investee using the geographic distance between the mutual fund manager and investee. A fund manager is considered to have close ties with an investee if the investee's headquarter is located in the same province where the fund is incorporated. Columns 1 and 2 report the estimations from an OLS regression using future *BNHR* as the dependent variable. The future buy-and-hold returns measured over a 12-month window, risk-adjusted by subtracting the value-weighted returns of the size and book-to-market portfolio formed each year. Columns 3 and 4 report the estimation from an OLS regression using *ΔADJROA* as the dependent variable, defined as the firm's ROA minus the median ROA of all firms in the same industry-year. Industry is based on the two-digit CSRC industry code for the manufacturing industry and the single-digit code for all other industries. All other variables are defined in Appendix A. Standard errors are clustered at the firm level. Significance is denoted by t-values (or F-statistics for F-tests), in parentheses, and by ***, **, and * for 1%, 5%, and 10% respectively, using a two-tailed test.

Table 6: Effect of monitoring in presence of close ties with investees

$$\text{Model: BNHR}(\Delta\text{ADJROA})_{i,t+1} = \beta_0 + \beta_1 \times \Delta\text{DF_highIA_closely_monitored}_{i,t} + \beta_2 \times \Delta\text{DF_highIA_weakly_monitored}_{i,t} + \beta_3 \times \Delta\text{DF_lowIA}_{i,t} + \beta_{4-18} \times \text{Controls}_{i,t} + e_{i,t}.$$

	<i>BNHR_{t+1}</i> (Size and BTM adjusted)		<i>ΔADJROA_{t+1}</i> (Industry adjusted)	
	(1)	(2)	(3)	(4)
Proxies of information access:				
<i>ADF_high IA_closely_monitored_t</i>	3.360** (2.24)	3.279* (1.80)	0.245** (2.30)	0.130** (2.52)
<i>ADF_high IA_weakly_monitored_t</i>	-2.115** (-2.23)	-1.146* (-1.92)	0.057 (0.54)	0.030 (0.67)
<i>ADF_lowIA_t</i>	-0.121 (-0.87)	-0.000 (-0.00)	0.098*** (7.95)	0.092*** (7.93)
F-test:				
<i>H₀: ΔADF_high IA_closely_monitored_t</i> <i>= ΔADF_high IA_weakly_monitored_t</i>	5.475 (9.28)***	4.425 (5.52)**	0.188 (1.57)	0.100 (2.10)
<i>H₀: ΔADF_high IA_closely_monitored_t</i> <i>= ΔADF_low IA_t</i>	3.481 (5.26)**	3.279 (3.27)*	0.147 (1.87)	0.038 (0.53)
<i>ΔQFII_s</i>	yes	yes	yes	yes
Lagged holdings	yes	yes	yes	yes
Industry dummy	yes	yes	yes	yes
Year dummy	yes	yes	yes	yes
SE clustering	Firm	Firm	Firm	Firm
# of observations	7,902	7,902	7,999	7,999
Adjusted R-squared	0.029	0.030	0.121	0.121

Notes: This table reports the predictive ability of the ownership of domestic funds that have close ties with investees. We differentiate the domestic fund ownership into those that are closely monitored vs. weakly monitored. Closely (weakly) monitored funds are defined as domestic funds with a composite factor score of agency costs of less (greater) than 2. See Table 2, Panel A for details of the composite score. Columns 1 and 2 report the estimation from an OLS regression using future *BNHR* as the dependent variable. The future buy-and-hold returns measured over a 12-month window, risk-adjusted by subtracting the value-weighted returns of the size and book-to-market portfolio formed each year. Columns 3 and 4 report the estimation from an OLS regression using *ΔADJROA* as the dependent variable, defined as the firm's ROA minus the median ROA of all firms in the same industry-year. Industry is based on the two-digit CSRC industry code for the manufacturing industry and the single-digit code for all other industries. In columns 1 and 3, we measure the domestic fund's level of IA using the fund manager's educational background. A mutual fund is considered to have close educational ties, if the fund manager went to the same university as the firm's senior managers (i.e., C-suite executives) and/or board of directors. In columns 2 and 4, we measure the domestic fund's ties with the investee using the geographic distance between the mutual fund manager and investee. A fund manager is considered to have close ties with an investee if the investee's headquarter is located in the same province where the fund is incorporated. All other variables are defined in Appendix A. Standard errors are clustered at the firm level. Significance is denoted by t-values (or F-statistics for F-tests), in parentheses, and by ***, **, and * for 1%, 5%, and 10% respectively, using a two-tailed test.

Table 7: Asymmetric effect of close ties when investees are under financial distress

$$\text{Model: } BNHR_{i,t+1} = \beta_0 + \beta_1 \times \Delta DF_highIA_closely_monitored_{i,t} + \beta_2 \times \Delta DF_highIA_weakly_monitored_{i,t} + \beta_3 \times \Delta DF_lowIA_{i,t} + \beta_{4-18} \times \text{Controls}_{i,t} + e_{i,t}$$

Dependent variable - Size and BTM adjusted $BNHR_{t+1}$

Proxies of close ties (IA):	Education networks		Geographic proximity	
	(1)	(2)	(3)	(4)
	<i>Financially distressed firm-years</i>	<i>All other firm-years</i>	<i>Financially distressed firm-years</i>	<i>All other firm-years</i>
$\Delta DF_high\ IA_closely_monitored_t$	1.648 (0.48)	3.408** (2.02)	3.454 (1.24)	3.087 (1.47)
$\Delta DF_high\ IA_weakly_monitored_t$	-4.901** (-2.41)	-1.178 (-1.12)	-1.302* (-1.65)	-1.052 (-1.50)
$\Delta DF_low\ IA_t$	-0.197 (-0.69)	-0.082 (-0.52)	-0.099 (-0.38)	0.040 (0.30)
F-test:				
$H_0: \Delta DF_highIA_closely_monitored_t = \Delta DF_highIA_weakly_monitored_t$	6.549 (3.32)	4.586 (5.34)**	4.756 (2.70)	4.139 (3.72)*
$H_0: \Delta DF_highIA_closely_monitored_t = \Delta DF_low\ IA_t$	1.845 (0.29)	3.49 (4.18)**	3.553 (1.63)	3.047 (2.12)
$\Delta QFII$	yes	yes	yes	yes
Lagged holdings	yes	yes	yes	yes
Industry dummy	yes	yes	yes	yes
Year dummy	yes	yes	yes	yes
SE clustering	Firm	Firm	Firm	Firm
# of observations	2,190	5,712	2,190	5,712
Adjusted R-squared	0.051	0.025	0.051	0.026

Notes: This table reports the predictive ability of the ownership of domestic funds that have close ties with investees when the funds are weakly monitored vs. closely monitored. The estimation is from an OLS regression using future $BNHR$ as the dependent variable. The future buy-and-hold returns measured over a 12-month window, risk-adjusted by subtracting the value-weighted returns of the size and book-to-market portfolio formed each year. We differentiate the firm-years into periods when the investees are financially distressed vs. non-financially distressed. *Financially distressed firm-years* are defined as years when the investee reports negative net income, net operating cash flow, or stockholders' equity. In columns 1 and 2, we measure the domestic fund's level of IA using the fund manager's educational background. A mutual fund is considered to have close educational ties, if the fund manager went to the same university as the firm's senior managers (i.e., C-suite executives) and/or board of directors. In columns 3 and 4, we measure the domestic fund's ties with the investee using the geographic distance between the mutual fund manager and investee. A fund manager is considered to have close ties with an investee if the investee's headquarter is located in the same province where the fund is incorporated. Closely (weakly) monitored funds are defined as domestic funds with a composite factor score of agency costs of less (greater) than 2. See Table 2, Panel A for details of the composite score. All other variables are defined in Appendix A. Standard errors are clustered at the firm level. Significance is denoted by t-values (or F-statistics for F-tests), in parentheses, and by ***, **, and * for 1%, 5%, and 10% respectively, using a two-tailed test.

Table 8: Sensitivity analysis

Panel A: Predicting future firm performance over a long-term window

	<i>BNHR_{t+3}</i> (Size and BTM adjusted)		<i>ΔADJROA_{t+3}</i> (Industry adjusted)	
	(1)	(2)	(3)	(4)
	<i>Educational ties</i>	<i>Geographic</i>	<i>Educational</i>	<i>Geographic</i>
Proxies of information access:				
<i>ΔDF_highIA_closely_monitored_t</i>	4.517 (1.36)	5.432* (1.88)	-0.037 (-0.48)	-0.034 (-0.62)
<i>ΔDF_highIA_weakly_monitored_t</i>	-3.562*** (-2.61)	-2.187*** (-2.79)	-0.206* (-1.88)	-0.021 (-0.40)
<i>ΔDF_low IA_t</i>	1.090*** (2.82)	0.646** (2.24)	-0.021* (-1.83)	-0.016 (-1.59)
F-test:				
<i>H₀: ΔDF_highIA_closely_monitored_t</i> <i>= ΔDF_highIA_weakly_monitored_t</i>	8.079 (4.99)**	7.619 (6.75)***	0.169 (1.70)	-0.013 (0.03)
<i>H₀: ΔDF_highIA_closely_monitored_t</i> <i>= ΔDF_low IA_t</i>	3.427 (1.06)	4.786 (2.72)*	-0.016 (0.04)	-0.018 (0.10)
<i>ΔQFII</i>	yes	yes	yes	yes
Lagged holdings	yes	yes	yes	yes
Industry dummy	yes	yes	yes	yes
Year dummy	yes	yes	yes	yes
SE clustering	Firm	Firm	Firm	Firm
# of observations	7,906	7,906	7,997	7,997
Adjusted R-squared	0.034	0.034	0.008	0.007

Panel B: Using alternative measure of fund ownership

	<i>BNHR_{t+1}</i> (Size and BTM adjusted)		<i>ΔADJROA_{t+1}</i> (Industry adjusted)	
	(1)	(2)	(3)	(4)
	<i>Educational</i>	<i>Geographic</i>	<i>Educational</i>	<i>Geographic</i>
Proxies of close ties (IA):				
<i>ΔDF_highIA_closely_monitored_t</i>	0.070** (2.10)	0.060** (2.13)	0.007*** (3.33)	0.005*** (3.97)
<i>ΔDF_highIA_weakly_monitored_t</i>	-0.058* (-1.74)	-0.068*** (-3.16)	0.001 (0.32)	0.002 (0.99)
<i>ΔDF_low IA_t</i>	0.003 (0.60)	0.006 (1.39)	0.003*** (8.49)	0.003*** (8.54)
F-test:				
<i>H₀: ΔDF_highIA_closely_monitored_t</i> <i>= ΔDF_highIA_weakly_monitored_t</i>	0.128 (7.28)***	0.128 (14.82)***	0.006 (2.24)	0.003 (1.18)
<i>H₀: ΔDF_highIA_closely_monitored_t</i> <i>= ΔDF_low IA_t</i>	0.067 (3.92)**	0.054 (3.69)*	0.004 (2.74)*	0.002 (1.54)
<i>ΔQFII</i>	yes	yes	yes	yes
Lagged holdings	yes	yes	yes	yes
SE clustering	Firm	Firm	Firm	Firm
Industry dummy	yes	yes	yes	yes
Year dummy	yes	yes	yes	yes
# of observations	7,902	7,902	7,999	7,999
Adjusted R-squared	0.029	0.029	0.122	0.122

Notes: This table reports the predictive ability of the ownership and domestic funds. In Panel A, we expand the forecasting window to a 3-year time horizon. In panel B, we repeat Table 6 using an alternative measure of ownership. Firm-level ownership measured using the total # of funds investing in the firm. For both panels, columns 1 and 2 report the estimation from an OLS regression using the future *BNHR* as the dependent variable. The future buy-and-hold returns measured over a 12-month window, risk-adjusted by subtracting the value-weighted returns of the size and book-to-market portfolio formed each year. Columns 3 and 4 report the estimation from an OLS regression using $\Delta ADJROA$ as the dependent variable, defined as the firm's ROA minus the median ROA of all firms in the same industry-year. Industry is based on the two-digit CSRC industry code for the manufacturing industry and the single-digit code for all other industries. All other variables are defined in the appendix. Standard errors are clustered at the firm level. Significance is denoted by t-values, in parentheses, and by ***, **, and * for 1%, 5%, and 10% respectively, using a two-tailed test.