Partial private sector oversight in China's A-share IPO market: An empirical study of the sponsorship system

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Abstract
The Chinese IPO market has introduced the private oversight of sponsors under tight government control. We examine the performance of IPOs that are managed under private sector oversight, known as the sponsorship system. Using buy-and-hold returns, operating performance measures, Fama-French five factor models, propensity score matching, and triple DiD (DDD), we find that long-term performance is better under the sponsorship system. Additionally, we find that IPOs with reputable sponsor institutions and reputable sponsor representatives perform better. Relatedly, the CSRC takes less time to review the admission documents prepared by reputable-sponsor institutions. Regulatory action taken by the CSRC is shown to be effective, as the number of IPO businesses declines for sanctioned sponsor institutions, and the IPOs managed by them perform better once they have received a penalty.

Keywords: Private sector oversight, Sponsorship system, IPOs, Buy-and-hold return, Fama-French five factor model, CSRC.

JEL Classifications: G12, G18, G24, G32, G38, K22.

1. Introduction

It is far from clear whether public sector regulation and enforcement can protect investors from overpaying for low-quality firms; however, there is no doubt that a centralized regulatory approach imposes high compliance costs on affected firms (e.g. Stigler, 1964; Bushee and Leuz, 2005; Cattaneo et al., 2015). In fact, it is difficult for a regulator to identify an appropriate regulatory framework that strikes a balance between investor protection and the costs of raising capital (Cattaneo et al., 2015). To some extent, public regulators seem to be caught in a dilemma: tightening regulations may screen poor quality firms and protect investors, but it also creates costly barriers preventing some (small) firms from going public; easing regulations enables more firms to access the capital markets, but it can also bring low-quality firms into the market. With the drop in foreign listings in the US market following the Sarbanes-Oxley Act (e.g. Piotroski and Srinivasan, 2008) and the flourishing of London's AIM in drawing foreign listings relative to other major markets (e.g. Nielsson, 2013), both policymakers and academics began to revisit public sector regulation compared to private sector regulation. We contribute to the debate surrounding public vs private sector regulation by examining the Chinese IPO market, which is characterized by tight government control with high political intervention and the existence of a sponsorship system.

Most of the IPO markets across the globe function without political intervention or government control, with the Chinese market being an exception. Though the Chinese A-share IPO market has moved from the approval system to the so-called sponsorship system, the IPO process is still highly regulated. The China Securities Regulatory Commission (CSRC) reviews every IPO. The CSRC's Public Offering Review Committee (PORC) decides which companies are allowed to make a public offering. This process can be demanding, and the outcome may not be determined solely by economic merit, as previous research found that political connections play a significant role in China's IPO allocation decisions (e.g. Piotroski and Zhang, 2014). More importantly, the total number of firms that can raise money through IPOs is highly controlled by the CSRC, often leading to a large backlog of candidate firms awaiting review.[1]

[1] For instance, there were 441 applicant companies (meeting the profitability and revenue thresholds) waiting for approval at the end of 2017.

Although China's sponsorship system follow the example of London's AIM Sponsorship approach, there are some striking differences between the two regulatory models. The Chinese sponsorship system incorporates private sector oversight (i.e. sponsoring entities) with mandatory listing requirements, while the AIM regulatory model adopts both private sector oversight (i.e. Nominated advisors (Nomads)) and light touch regulation (i.e. tailor-made regulation). Since the Chinese sponsorship system still requires approval from the regime, the admission documents prepared by sponsoring-entities need to be reviewed and approved by the CSRC. In contrast, the admission documents of Nomads-selected IPO firms do not require examination by the UK listing authority. The CSRC entrusts not only sponsor institutions, but also individual sponsor representatives to perform the role of oversight, whereas only Nomads are entrusted to the supervisory role on the AIM. This implies that, under the sponsorship system, specific individuals (representatives) will have more concern for their reputational capital in a sponsorship-related industry. Finally, the CSRC only requires sponsoring entities to perform IPO oversight and ongoing oversight for two fiscal years post-listing, while AIM-listed firms are always required to have a Nomad. This implies that relationships with Nomads are long-term, which creates some conflicts of interest, whereas, in the Chinese market, the relationship is short-term. In this paper, we examine the performance of the sponsorship system in China's A-share IPO market. The sponsorship system, with tight government regulation, has been running for more than a decade, but the empirical question of whether the sponsorship regulatory model can effectively screen out low-quality firms and protect investors in a weak investor-protection country like China remains unanswered.

Previous literature has shed light on the importance of the quality of the legal environment, enforcement, and investor protection to equity market development (e.g. La Porta et al., 1997, 1998, 2000, 2002). La Porta et al. (2006) document that the type of legal framework that governs an IPO market, through mandating disclosure and facilitating private enforcement, contributes to preventing the issuance of poor quality company shares, and they also cast doubt on the efficiency of adopting a purely private solution or strictly public enforcement. The experiences and changes of China's securities laws and regulations give us an opportunity to compare regulatory efficiency between two different

legal arrangements, i.e. those proposed in La Porta et al. (2006), under one country's institutional background. The first version of China's securities laws were drafted in 1992 and were formally promulgated in 1999, which largely empowered central and local government agencies or official authorities to verify and supervise IPO applications (i.e. candidate firms). The largest amendment to China's Securities Law occurred in 2004 and went into effect from 2005, following the promulgation of the CSRC's (2003) decree regarding the sponsorship regulatory model. The law highlights the role of sponsor institutions and sponsor representatives in overseeing and verifying candidate firms' admission documents and information disclosure materials (see, Articles 11 and 12 of China's Securities Law, 2005 version), while all IPO applications still need to be approved by the financial authority.

We compare the market-adjusted post-IPO return performance of IPO firms screened by the sponsorship regulatory model and IPO firms that went public under quota and channel regulatory models. After controlling for other potential factors, we found that the market-adjusted post-IPO returns of sponsoring-entity-managed IPOs outperformed non-sponsoring-entity-selected IPOs. This result is robust when we drop a sample of IPO firms that went public under the channel system, and the finding is also robust when we use operating performance measures, Fama and French (2015) five-factor calendar-time regressions, propensity score matching DiD and triple DiD (DDD).

Next, we hand-collected several sponsorship system-related characteristics and examined whether these factors can explain the variation in the market-adjusted post-listing return performance of IPO firms that went public through the sponsorship system. First, we investigate the impact of sponsoring entities' reputations on market-adjusted post-IPO return performance. We find that certain characteristics of sponsoring entities, as measures for reputation, can explain the cross-sectional variation in the market-adjusted return performance of IPO firms of the sponsorship system. In particular, the work experience of sponsoring entities in sponsorship-related industries has a strong association with the client firm's post-IPO return performance. These results confirm that the reputation of sponsoring entities does play a role in IPO screening and oversight. Our findings also suggest that, under the sponsorship regulatory model, IPO firms can signal their quality by hiring a reputable sponsor.

Third, since the CSRC still inspects the admission documents, we examine the time taken by the CSRC to review admission documents, and we relate it to the post-IPO return of firms. We find that

the processing times of IPO applications (or admission document review), as a proxy for the degree of centralized inspection of candidate firm quality, has a negative connection with market-adjusted post-IPO return performance. This implies that if the CSRC takes a longer time to review the admission documents, the IPO performs badly.

Finally, we investigate the behaviour changes of sponsoring entities before and after the CSRC's disciplinary actions for weak oversight. We find that the biggest impact of disciplinary actions on sponsoring entities is a dramatic reduction in the number of subsequent IPO client firms (relative to the number of IPOs before penalties). We further anticipate that sponsoring entities have an incentive to re-build their reputations following disciplinary penalties (i.e. suffered from loss of reputational capital in a sponsorship-related industry), and thereby they can provide a higher level of oversight in subsequent sponsoring activities. Based on the evidence of post-listing return performance, we find sponsor representatives tend to provide a greater level of oversight after penalties than before penalties only if they were subject to a serious penalty (i.e. suspension of sponsorship qualification). In sum, the findings above reinforce our primary examination that the sponsorship regulatory model is effective in screening out low-quality firms and protecting investors in a weak investor-protection country like China, relative to the Administrative Approval regime in China's IPO market.

Our results imply that the Chinese IPO market should move towards being a less regulated market, such as the registration system, where sponsors ensure the quality of a firm. Our results also imply that high-quality sponsor institutions tend to substitute the centralized governmental inspection (in terms of the CSRC's time to review admission documents) for the quality of candidate firms, based on China's IPO market setting. In fact, China is planning to move towards the registration and disclosure system that exists in the US.[2] The introduction of a sponsorship system is a step in the right direction ahead of achieving a less regulated market. The role of Chinese regulators, like other regulators in a market-based system, should be to make sure that firms follow regulations, which are largely disclosure-oriented.

This study makes contributions to several strands of literature. First, it provides additional

[2] CSRC Releases Opinions on Further Promoting the IPO System Reform, http://www.csrc.gov.cn/pub/csrc_en/newsfacts/release/201402/t20140214_243817.html

evidence on the experience of private-sector oversight under a different institutional environment from the pattern of London's AIM (e.g. Espenlaub et al., 2012; Gerakos et al., 2013; Doukas and Hoque, 2016). Second, we show that the sponsorship system works in a weak investor-protection country like China when the regulators have sufficient disciplinary mechanisms in place. Third, we contribute to the debate that exists regarding government and political intervention in IPO markets (e.g. Chen, Ke, Wu and Yang, 2018).

The remainder of this paper is organized as follows. Section 2 provides institutional background. Section 3 provides a literature review and hypothesis development. Section 4 discusses data, methodology, variable definitions, and descriptive statistics. Empirical results are presented in Section 5. Section 6 conducts some robustness checks. Finally, section 7 concludes the paper.

2. Intuitional setting of the Chinese IPO market

2.1 Regulatory systems in China

China's stock issuance regulatory regime has experienced two phases – *Administrative Approval Regime* and *Approval Regime* – since the government established the capital markets of the Shanghai Stock Exchange (SSE) and Shenzhen Stock Exchange (SZSE) in 1990. In the first regime, from 1990 to 2001, under the auspices of planned economy, the government dominated and directly engaged in the IPO selection process by enforcement of *Quota System*. Specifically, every year, central government[3] distributed a certain number of IPO quotas to each local government (i.e. provinces) and local government officials had to comply with the quotas to identify and recommend candidate firms within their jurisdiction. In this manner, local government chose the candidate firms, and the IPO applications of these candidate firms faced further screening and approval by the regional financial regulator (i.e. affiliate of the CSRC at the province level), stock exchange, and central financial regulator. Under this regulatory model, the role of underwriter was diluted, as they did not have discretion around firm selection, pricing, or offering. Chen et al. (2014) point out that most underwriters are controlled by the government under a quota system and their service quality is not important because government controls the IPO process. In sum, IPO screening and/or selection largely relied on

[3] As of 1992, the CSRC took over the role of financial market regulator from central government.

governmental oversight during the period of the quota system.

Next was the approval regime, which was a move towards a market-oriented regulatory model, starting with the *Channel System* from 2001 to 2003. Under this regulatory system, government empowers underwriters (known as IPO supervisors in this period) to oversee IPO candidate firms, but these underwriters are subject to channel quotas for the number of IPO recommendations and the CSRC monitors the process of IPO selection. Specifically, like the method of the previous quota system, the CSRC assigns channel quotas (or so-called channels) to each lead underwriter in the channel system, and underwriters are not allowed to recommend more than one firm at a time (i.e. use more than one channel quota at once) to the central regulator. Thus, incentive for the competition of underwriters was limited during the period of the channel system (Liu et al., 2013). In addition, since the CSRC did not formulate clear regulations for IPO supervisors regarding screening and advice,[4] the CSRC (2001) also appointed regional regulators to provide monthly feedback of inspections to the central regulator. In sum, while under the channel system IPO selection and firm's quality controls are partially taken from the hand of government and given to private sector entities, the CSRC still closely engages in the IPO screening process and underwriters may have little concern for their reputational capital due to the constraints of channel quotas and/or weak disciplinary regulations.

From early 2004, the previous regulatory system was replaced by the *Sponsorship System*, which is a more market-oriented IPO regulatory model than the previous regulatory systems.[5] There are three main features with respect to the sponsorship system. First, most important is that the CSRC entrusts nominated advisors (i.e. sponsor institution and representative individuals) to perform the functions of IPO screening, oversight, advice, and monitoring. Under this regulatory system, while sponsoring entities can choose any number of candidate firms (without quota constraints) to apply for an IPO, they are the primary entities responsible for IPO firm quality. The CSRC (2003) no longer requires regional regulators to guide and closely monitor the process of IPO oversight. Instead, the

[4] For example, the CSRC's (2001) Decree No.125 of Article 36 requires that the 'Supervisory company should advise the client firm to establish a sound accounting and/or management system that avoids accounting fraud'. However, the CSRC does not interpret how to establish such an accounting and/or management system within a client firm in terms of both qualitative and quantitative standards.

[5] While CSRC (2003) Decree No. 18 requires the sponsorship system shall be put into effect in February 2004, we treat the first time of sponsor representatives' signature on IPO prospectus as the effective date of sponsorship system for IPO firms in our empirical study.

CSRC focuses on training and regulating the sponsoring entities, such as representatives being required to regularly attend sponsorship vocational training and the CSRC updates a series of regulatory interpretations for the sponsorship rules in the CSRC's (2003, 2008) decrees. Nevertheless, the CSRC still holds the power of inspecting the IPO admission documents produced by sponsoring entities and makes IPO-approval decisions. In practice, if the stock issuance examination committee of the CSRC questioned the information in an IPO admission document during the period of review, sponsoring entities would need to provide explanations on behalf of client firms. In this regard, it is possible that sophisticated sponsoring entities help to increase the probability of approval or reduce the processing times for admission review. Second, the CSRC clearly describes the potential disciplinary actions for sponsoring entities. For example, the CSRC (2008) Decree No. 58 of Article 72 – (2) regulates that 'if the client firm's business profits slide over 50% in the year of issuing relative to the previous year, the representative will be punished with 3 – 12 months of suspension from sponsorship-related activities'. In this manner, most disciplinary actions are clearly related to the post-listing performance of client firms, which may incentivize sponsoring entities to provide a high level of oversight of client firms. Moreover, the CSRC also sorts disciplinary actions into three categories (i.e. warning, suspension, and withdrawal of sponsorship qualification) based on the degree of violation of the regulations. Third, along with the IPO prospectus, the CSRC requires sponsoring entities to produce issuance sponsorship documents that mainly contain qualitative information, along with the private entities' comments on the quality of the client firm. For instance, the most important of these documents is the issuance sponsorship letter, with a hundred pages of disclosure information that includes (but is not limited to) the assessment of risk factors, competitive advantages, profitability, and business development of candidate firms by sponsoring entities. As mandatory disclosure information files, sponsorship documents also need to be reviewed by the CSRC and thereafter be available to public investors. Thereby, investors can evaluate the IPO firm quality by consulting the information in the sponsorship documents. Taken together, under this system, the sponsor institution and representative individual are the primary entities who attest the quality of firms; however, the CSRC still holds certain power for controlling IPO approval by inspecting admission documents. These reforms under the sponsorship system make it distinguishable from the previous regulatory models in ways of investor protection and

firm oversight.[6]

2.2 Sponsor institution vs. Representative individual

According to the CSRC (2003, 2008), the eligibility requirements for sponsor institutions and representative individuals are different, where the eligibility criteria of a representative focuses on Competence Examination and 2 – 3 years of work experience in an investment banking division, while the criteria for sponsor institutions focuses on the number of employed representatives (min. 4) and sponsorship-related personnel (min. 35) and the registered capital of the company (min. 100 million RMB).

In practice, sponsor institutions and representatives fulfil different functions in the process of an IPO. Specifically, the sponsor needs to appoint a sponsoring team (consisting of representatives and related personnel) to conduct IPO oversight. Before submitting admission documents to the CSRC, the sponsor needs to appoint an internal examiner to re-examine the quality of the documents. With respect to the representatives, they are mainly in charge of due diligence and producing the admission documents. The responsibility of the representatives is complicated by the fact that they are employed by the sponsor institution and they are also entrusted by the CSRC. In theory, the CSRC (2008) Decree No. 58 of Article 5 states that a 'representative shall be independent when fulfilling his/her duties, and shall not be involved in fraudulent activities by the issuer and sponsor institution'. However, in practice, it is difficult to judge whether representatives fulfil their oversight role independently and that they are not affected by the sponsor institution.

3. Related Literature and Hypothesis Development

Sponsoring entities are entrusted by the listing authority (i.e. CSRC) with conducting due diligence, offering premarket advice, and performing ongoing monitoring of regulatory compliance and information disclosure. By launching the sponsorship system, the CSRC aspired to enhance investor

[6] During this sponsorship regime, the Chinese government introduced another important reform in 2005 to abolish the split share structure by converting all non-tradable shares into tradable shares. By the end of 2007, 1,254 firms representing over 97% of the Chinese A-share market capitalization at the time, had completed the reform (Li, Wang, Cheung, and Ziang, 2011). We control for non-tradable shares in our regressions to prevent our results being driven by non-split share reforms.

protection and IPO firm quality (CSRC, 2003; CSRC, 2008). Since the introduction of China's IPO sponsoring system, offerings must be endorsed by a qualified sponsor who guarantees the information provided in prospectuses.

The introduction of the sponsorship system makes the IPO market more efficient in comparison to the previous approval system. The main differences between the approval regime and the sponsorship regime are in terms of pricing mechanisms, issuer selection, restriction of IPO amounts, IPO advisors, oversight duration, and admission documents. In the approval regime, issue price was fixed by governmental control and short trials of the auction and book building methods, whereas in the sponsorship system, as of January 2005, the A-share IPOs adopted the book building mechanism to determine the offering price. However, China's book building approach incorporated the central regulator's intervention until the end of 2013. Jia et al. (2014) review this central control, where the underwriters must report the pricing results (e.g. initial price range, offer price, and relevant reasons for the price) to the CSRC at the end of the book building process and then wait for the final adjustment in the price. In the approval regime, the IPO issuer was selected by the government, whereas in the sponsorship system they are selected by the sponsor. In the approval regime, central government distributed IPO quotas to local government, whereas in sponsorship system there is no restriction, per se. In terms of IPO advisors, under the approval regime, government officials, with the assistance of state-owned investment banks, worked as advisors. Under the sponsorship system, the IPO advisors are the sponsors and sponsor representatives. Under the approval regime an IPO was only looked after in the pre-IPO period, but under the sponsorship system a sponsor looks after an IPO both pre-IPO and for two years post-IPO. In the approval regime, admission documents were inspected by local government and the central regulator, whereas under the sponsorship system, admission documents are inspected by central regulator only, removing an extra layer of political scrutiny by the local government.

Finally, the sponsorship system enhances the requirements for information disclosure. In order to enrich the IPO information for investors and standardize the format of information disclosure, the CSRC frequently updates the contents of mandatory information disclosure in the period of the sponsorship system. For example, if we compare the contents of the IPO prospectus across the three systems, there

are only approximate 20 pages of information related to the IPO under the 1990s' quota system; since then, the channel system required that information disclosures in the prospectus increased to about 150 pages; moving on to the current sponsorship system, there are more than 300 pages to disclose. As the overseers and insiders on the issuers' compliance with information disclosure, sponsors and representatives are required to disclose their oversight details by producing three sponsoring documents: 'Issuance Sponsorship Letter', 'Issuance Sponsorship Report', and 'Ongoing Sponsorship Report'. These documents describe the statuses of issuers in different ways. The issuance sponsorship letter mainly contains the explicit comments of sponsoring entities on the issuers' risk factors, advantages, profitability, prospects for development, related party connections, and transactions to reveal any information related to price-sensitive or fundamental change in the business. The issuance sponsorship report is a detailed record about the process of sponsoring activities that highlight the detected problems/risks (i.e. the problems in the business affecting investors' decisions) and the corresponding solutions. The ongoing sponsorship report must be periodically disclosed to explicate how the IPO proceeds are used, how the issuers comply with the pre-IPO claims or plans, and whether the issuers violate regulations during the ongoing oversight period. Accordingly, investors can access more information about the issuers to make investment decisions under the sponsorship system. Investors would be protected if the sponsoring entities revealed the issuers' statuses in full and frank detail.

The sponsorship system was put in place to introduce more market forces in the share issuance process, whereby a sponsor firm was to be responsible for supervising a candidate IPO firm for one year before making a listing recommendation to the CSRC. The sponsor must undertake certain responsibilities after it submits its recommendation to the CSRC. Despite its move towards more market-oriented mechanisms, government intervention has not been fully removed, as the CSRC has final authority to approve an IPO. One of the important empirical questions is how the PORC and the sponsorship system can co-exist, or whether the introduction of the sponsorship system is more efficient than the previous approval system.

Because China's financial authority, the CSRC (2003, 2008), claims that the sponsorship system is used to improve IPO firm quality and investor protection relative to the previous regulatory systems,

our primary variable of interest is the market-adjusted post-IPO return performance across these systems. Previous regulatory studies of Chinese IPOs, such as Tian (2011), discussed the regulatory model of the (strictly government-oriented) quota system that promotes rent-seeking activities and ultimately leads to a failure in pricing. Du and Xu (2009) concluded that the early administrative regulatory model might help to jump-start China's financial market, while the quota system should not be effective in the long term. We anticipate that IPO firms screened by the sponsorship regulatory model (or sponsoring entities) have better market-adjusted post-IPO return performances than IPO firms selected by previous regulatory models.

Hypothesis 1. Sponsoring-entity-backed IPO firms experience a better market-adjusted post-listing stock performance than non-sponsoring-entity-backed IPO firms.

Most of the studies related to the Chinese IPO market view political participation as an explanation of post-IPO underperformance in the A-share market. Fan et al. (2007) found that IPO firms with politically-connected CEOs significantly underperform those without politically-connected CEOs, whereas Liu et al. (2012) and Liu et al. (2013) documented a positive impact of firms' politically-connected executives on post-IPO stock performance. Moreover, Liu et al. (2013) suggest that underwriters with politically-connected executives help to increase the probability of IPO approval, but there is no significant difference in post-listing return performance for IPO firms managed by underwriters with and without politically-connected executives. In contrast, Chen et al. (2017) found that those underwriters with political connections have negative impact on IPO firms' post-listing return performance. Piotroski and Zhang (2014) documented that IPO firms under China's political promotion period underperform IPOs outside of the promotion period in terms of post-listing return performance.

Unlike those studies, we attempt to examine whether the sponsorship system-related factors/characteristics can help to provide insight into the causes of China's A-share IPO underperformance. Since sponsor institutions and representatives are the primary entities in attesting the quality of candidate firms, it is interesting to figure out whether the cross-sectional variation of post-IPO stock performance is driven by the type of sponsoring entities chosen. The empirical results in

Gerakos et al. (2013) indicate that reputable Nomads have limited influence on mitigating AIM firms' post-IPO return underperformance, where there is a light touch regulatory environment. In this regard, based on China's sponsorship regulatory model, we can examine the effectiveness of sponsoring entities in IPO oversight when the regulatory rules are stringent. While Espenlaub et al. (2012) studied IPO survival in the AIM, they found that Nomads compete for their reputational capital in the AIM and thus they found that reputable Nomads have positive associations with IPO survival. Motivated by those studies, we developed an array of reputation measures for sponsoring entities based on their sponsorship-related characteristics in China's IPO market setting (see Appendix A). Following Carter et al., (1998), Jain and Kini (1999), Chan et al. (2008), and Dong et al. (2011), we anticipate that reputable sponsoring entities can provide a higher level of oversight and screening of candidate firms and thereby a better post-IPO stock performance.

Hypothesis 2a. Sponsor institution reputation has a positive impact on market-adjusted post-IPO stock performance.

Hypothesis 2b. Sponsor representative reputation has a positive impact on market-adjusted post-IPO stock performance.

Another difference between China's sponsorship regulatory model and the AIM regulatory model is that the IPO admission documents need to be reviewed by the listing authority (CSRC). In this manner, the CSRC inspects the quality of candidate firms, which are selected/screened by sponsoring entities. However, it is unclear how such centralized admission reviews are related to the sponsoring-entity-managed IPO's post-listing return performance. Because sponsoring entities are entrusted by the CSRC to perform the roles of IPO oversight and screening, we expect that certain sponsoring entities should have tendencies to substitute for the function of the CSRC in controlling firm quality. More specifically, when reputable (or high-quality) sponsoring entities attest the quality of candidate firms, the CSRC may need to scrutinize less. To this extent, we anticipate a negative relationship between the degree of the CSRC's admission review and the candidate firm's post-IPO return performance. In practice, because it is difficult to directly measure the level of the CSRC's admission review, we use the processing times of the CSRC's review of IPO admission documents as a proxy for the degree of

centralized regulatory admission inspection. We address this in the following hypothesis.

Hypothesis 3. Market-adjusted post-IPO stock performance is negatively related to the processing times of the CSRC's regulatory review of IPO admission documents

It is an interesting question whether an authority's disciplinary actions have any implications in changing the behaviour of sponsor firms after they receive penalties. As there are some events of disciplinary actions on sponsoring entities in China's IPO market, we would like to examine the behaviour shifts of sponsoring entities after these penalties. In theory, as repeated players in market, sponsoring entities survive on reputation. The number of IPOs managed by sponsors and sponsors' representatives should decline after a penalty from the CSRC. They should become more concerned about reputation after receiving the penalties and, thereby, sponsoring entities have incentive to rebuild their reputation in subsequent sponsoring activities. Therefore, we expect that, after penalties, sponsoring entities would provide a higher level of due diligence or oversight on candidate firms than before their penalties. As a result, IPO firms screened by sponsoring entities after receiving a penalty should be better in post-IPO stock performance than IPO firms selected by these sponsoring entities before their punishment. Thus,

Hypothesis 4a. IPO firms screened by sponsors after receiving a penalty have a positive association with market-adjusted post-IPO return performance.

Hypothesis 4b. IPO firms screened by representatives after receiving a penalty have a positive association with market-adjusted post-IPO return performance.

4. Data and descriptive statistics

4.1. Data and sample description

We collected all the IPOs in China's A-share IPO market between January 1992 and October 2012. The sample ends in 2012 because the CSRC suspended A-share IPO activity on November 2012. After eliminating 16 issuances with missing returns data, the overall sample consists of 2,518 IPOs. In fact, our sample covers 98.86% of the IPOs that went public from the beginning of China's stock market to the recent IPO moratorium of the IPOs under sponsorship system, for a coverage rate 98.78%.

To split the sample precisely into sponsoring-entity-backed IPOs and non-sponsoring-entity-backed IPOs, we hand-collected the names of sponsors and sponsor representatives from the IPO prospectuses. A firm can be identified as a sponsoring-entity-backed IPO only if its prospectus contains the signatures of sponsoring entities (or the relevant information of sponsoring entities). Hence, starting from June 1, 2004, there are 1,230 IPOs backed by sponsoring entities. We drop 15 IPOs from the sponsoring-entity-backed sample due to incomplete returns data, ultimately leaving 1,215 sponsoring-entity-backed IPOs to examine hypotheses 2 – 4.

With respect to the data for calculating key independent variables, we hand-collected the profiles of sponsoring entities, the penalties on sponsoring entities, and the CSRC review times (days) for admission documents from the CSRC website. In addition, the number of IPO risk factors and advantage factors were hand-collected from the issuance sponsorship letters.[7] The stock return and financial data are from the China Security Market and Accounting Research (CSMAR) database. The remaining data for working out control variables were collected from either the IPO prospectuses or from the CSMAR database.

Table 1 provides the overall sample description. As shown in Panel A, the number of sponsoring-entity-backed IPOs (48.25% of the total sample) is close to the number of non-sponsoring-entity-backed IPOs (51.75% of the total sample). Since Channel System is a temporary transitional system, there are only 220 firms going public under this system. A noticeable pattern is the uneven distribution of IPO numbers across the sponsorship period, such as the lowest volume in 2005 (14 IPOs) and the highest number in 2010 (349 IPOs). The possible explanation is the frequent IPO moratoriums of the CSRC. For instance, the CSRC suspended IPOs in 2005 due to the split-share structure reform on state-owned enterprises (SOEs), which directly led to few issuances in that year. The CSRC suspended IPOs again between September 2008 and June 2009 due to the financial crisis. Thus, some firms that intended to go public in 2008 and 2009 postponed their listings until 2010.

[Insert Table 1 here]

Panel A also presents the cumulative distribution of annually registered sponsors and sponsor

[7] Issuance sponsorship letters are disclosed documents for investors that can be collected from the CNINFO web. CNINFO is an authorized website of the CSRC to disclose IPO information to public investors.

representatives during the period of the sponsorship system. In each year (except 2005), the number of IPOs is greater than the cumulative number of sponsors. This implies that, on average, each sponsor institution needs to oversee more than one IPO firm in any given year. While the cumulative number of representatives is far greater than the number of IPOs in each year, the CSRC requires that each firm needs to be overseen by two representatives and each representative is only allowed to monitor two candidate firms simultaneously.

Panels B and C of Table 1 present the distribution of sample IPOs by industry[8] and by listed market, respectively. As shown in Panel B, A-share IPOs are highly concentrated in the manufacturing sector (62.43% of the entire sample), as in past decades, China is one of the world's leading manufacturing countries. Besides the manufacturing sector, IPOs are also concentrated in the wholesale and retail industry (5.84%), the real estate industry (5.28%), and the information technology industry (5.12%). Panel C shows that there are 58.58% A-share IPO listings on the main market and the remainder of firms go public in China's second market (i.e. SME and GEM). In the multivariate analysis, we control for those potential year, industry, and market listing effects using an array of dummy variables.

4.2 Variable definition

Our main dependent variable is buy-and-hold abnormal return (BHAR). We also use return on sales, Earnings before interest and taxes divided by sales, return on assets and return on equity. We use a number of independent variables to test hypotheses 1 – 4. To control the other potential impacts to post-IPO stock performance, we use several control variables that were found to have explanatory power on the cross-sectional variation of post-IPO returns in previous research. A summary of the definitions of variables is in Appendix A.

4.3. Descriptive statistics and post-IPO stock performance

Table 2 presents descriptive statistics for variables. Panel A shows that there are significant differences

[8] The categorization of industry is based on Guidelines for the Industry Classification of Listed Companies by the CSRC (2012 Revisions).

between performance measures and firm- and offer-level characteristics between sponsoring-entity-backed IPOs and non-sponsoring-entity-backed IPOs. First, the average under-pricing level (IR) of the non-sponsoring-entity-backed IPO firms (231.694%) is much higher than the IPO firms backed by sponsoring entities (61.104%). To some extent, this result implies that the launching of the sponsorship system with sponsoring entities may contribute to reducing the level of asymmetric information and improve pricing efficiency at initial public offering. Second, IPO firms selected by sponsoring entities, on average, are significantly larger in both offer size and firm size, and higher in company age than the non-sponsoring-entity-backed firms, where Ritter (1991) found a tendency for large firms (in offer size) with higher age more likely to have a better post-IPO stock return performance. Third, IPO firms screened by sponsoring entities have better pre-IPO operating performances (on average, higher EPS of 56.902%, ROA of 14.588%, and lower leverage ratio of 51.275%) than non-sponsoring-entity-backed firms. If the pre-IPO operating performance was a proxy for ex ante quality of candidate firms, this result implies that sponsoring entities tend to choose good quality firms to go public. In other words, sponsoring entities appear to play a screening function on the quality of candidate firms relative to the governmental overseers of the previous regulatory systems. In contrast, the last row of Panel A indicates that governmental overseers prefer to select SOEs to go public, where the dummy variable of SOEs (D_SOE) has a coverage rate of 62.7% in the group of non-sponsoring-entity-backed IPOs. As expected, due to a high proportion of SOEs in this group, non-sponsoring-entity-backed firms on average retain a high percentage of non-tradable shares (37.545%) and a large proportion of firms' shares for the largest shareholders (47.803%). This may lead to a reduction of liquidity and an increase of agency costs and, ultimately, a worse post-IPO stock return performance.

[Insert Table 2 here]

In Panel B of Table 2, we report delisting rates[9] and caution rates of delisting risk[10] on both sponsoring-entity-backed IPO firms and non-sponsoring-entity-backed IPO firms. To some extent, those two rates reflect the poor performance of IPO firms after going public. The group of IPO firms backed by sponsoring entities apparently have a lower delisting rate (0.329%) and lower rates of Special

[9] Due to the unavailability of data, we do not sort delisted firms for reasons of delisting.

[10] The listed firms that suffer losses for two consecutive years or more will be labelled Special Treatment (ST) tag and *ST tag. This is also a type of risk caution or admonition to investors, informing of the potential risk of delisting for those stocks.

Treatment (ST) tag and *ST tag cautions (3.786%) than the non-sponsoring-entity-backed IPOs (6.293% and 59.094% for delisting rates and caution rates, respectively).[11] As the 'failure rates' are low for sponsoring-entity-backed IPO firms, it appears that sponsoring entities are able to provide a high level of screening and oversight on firms.

Panel C presents the summary statistics of key independent variables. Concerning the number of years for sponsoring entities who engaged in the sponsoring activities prior to the offering date of sponsored firms, sponsor institutions (SponsorDate=4.746 years) on average have a slightly longer experience than sponsoring representatives (RepDate=4.016 years). In addition, sponsor representatives on average have approximately 10 years of working experience in the investment banking division (RepIBDExp, median is also 10 years). This suggests that most sponsoring representatives were experts in the share issuance before they became representatives. With respect to the length of the CSRC review of the IPO admission documents, we find that the average processing time for IPO applications is quite long (215 net working days) and more than half of sample IPO firms are subject to CSRC review for at least 177 net working days.[12] Panel C shows low coverage rates on D_PENALTY1 and 2 (18.6% and 31.9%), which suggests a pronounced decline in the number of managed IPOs by sponsoring entities after their disciplinary actions. For example, the number of IPOs managed by sponsor institutions is 371 [=456*(1-18.6%)] before penalties on institutions, while this number dramatically declines to 85 [=456*18.6%] after the penalties on institutions. The possible interpretation of this result is a damage in reputation caused by disciplinary actions. To this extent, it appears that sponsor institution are more sensitive to the loss of reputational capital than sponsor representatives because the former has a more dramatic decrease in sponsoring activities than the latter after the CSRC's disciplinary actions.

5. Empirical Results

5.1 Post-IPO returns across regulatory systems

We compared the post-IPO return performance between sponsoring-entity-backed IPO firms (i.e. firms that went public under the sponsorship regulatory system) and the non-sponsoring-entity-backed IPO firms (i.e. firms that went public under the quota and/or channel systems). Table 3 Panel A reports

[11] The caution of ST tag on stocks started in April 1998 in China.
[12] There are about 250 net working days per year in China.

multivariate regression results for the comparison of the 12-month market-adjusted post-IPO buy-and-hold returns across regulatory systems using a pooled sample of A-share IPOs between 1992 and 2012. As expected, the estimated coefficient on the D_SPONSOR indicator is positive and significant after controlling for the other specific factors, suggesting that the IPO firms from the sponsorship system outperform the firms from the quota and channel systems in terms of post-IPO return performance. To be precise, in the 12 months after issuing, the IPO firms screened (or selected) by the sponsorship regulatory model outperform those of IPO firms under the regulatory model of government-dominated selection by 19.03 percentage points. It appears that IPO firms performed even better if the government (or the financial authority) partially entrusted oversight and selection of candidate firms to the private sector.[13]

[Insert Table 3 here]

A potential concern in the comparison of the performance of new issues between the private sector model and government-dominated (IPO oversight and selection) model is the effect of a sample of channel system-related IPOs from 2001 to 2003. As a transitional regulatory model, IPO oversight and selection in the channel system are provided together by governmental overseers and interim private advisors (called IPO supervisors). In other words, the channel system is not a strict government-dominated model because it involves the role of private advisors in IPO oversight and selection. Thus, for the IPOs from the channel system, it is difficult to distinguish which form of oversight has an impact on their post-listing return performance.

As a robustness test, in Table 3 Panel B, we re-estimate the regression excluding firms that went public during the period of the channel regulatory model. The estimated coefficient on the D_SPONSOR indicator variable is still positive and significant, while it is statistically significant (t-stat = 6.56). More importantly, for this specification, the coefficient on D_SPONSOR (52.12 percentage points) is greater in magnitude than the coefficient estimate presented in Panel A. This provides a straightforward comparison of evidence that the sponsoring-entity-screened IPO firms largely outperform those firms strictly selected (or screened) by both central and local governmental overseers,

[13] Partially entrusting to the private sector means the financial authority (CSRC) still holds certain power of IPO approval, which controls firm quality by inspecting admission documents. We empirically address the issue of private sector oversight and governmental reviews of firm quality in Section 5.4.

based on the market-adjusted post-IPO returns.

With respect to the control variables, we found that the average three-year pre-IPO EPS of candidate firms is positively and significantly related to the market-adjusted buy-and-hold returns, which is consistent with the results of Su and Bangassa (2011). To the extent that the EPS of sponsoring-entity-selected IPO firms, as a proxy for firm (pre-IPO), quality is, on average, higher than those candidate firms selected by non-sponsoring entities, the finding of a positive relation between EPS and return performance implies sponsoring entities serve as a better screening function than governmental overseers when they choose the candidate firms to go public.[14] However, not all measures of pre-IPO operating performance are related to the return performance. In line with Fan et al. (2007) and Liu et al. (2013), we do not find a significant connection between the level of leverage ratio and the post-IPO return performance. The coefficient estimates of (predicted value) IR[15] are negative and significant, mirroring those of Liu et al. (2013) and Chen et al. (2015) for China's A-share market.

Overall, the multivariate regression results show a strong positive effect of the sponsorship regulatory model on the market-adjusted post-IPO return performance after controlling for the other specific factors. In contrast to the magnitudes of the coefficient estimates on firm-, offer- and market-level factors, the 19 to 52 percentage points out-performance of IPO firms from the sponsorship system is economically substantial. This confirms our hypothesis 1, and empirically supports the claim of the CSRC (2003, 2008) that the 'sponsorship system is set to improve investor protection and IPO firm quality' by examining market-adjusted return performance.

In sum, the introduction of the sponsorship system seems to be more efficient than the approval system, as IPOs perform better under the sponsorship system. In fact, China is planning to move towards the registration system that exists in the US. It seems the move from a purely government-controlled system to a more market-oriented system was the right choice by the Chinese government.

5.2 Effect of sponsoring entities' reputations on post-IPO performance

We develop an array of reputation measures for sponsoring entities (see Appendix A) by identifying

[14] For a robustness test, we re-ran regressions replacing the control variable EPS by each firm's pre-IPO ROA. This variable is also significantly positive and does not affect our key findings.

[15] As IR is endogenously determined we use D_SPONSOR, age, D_SOE, D_B/Hoffer, D_Big4, firm size, largest ownership, EPS, leverage to estimate the IR in first stage regression and use the predicted value in second stage regression.

nominated entities' characteristics (i.e. the information in their profiles and/or CVs) from the SAC and CSRC websites. In our view, China's financial authority disclosed and updated sponsoring entity-related information for the public with the aim of making investors and client firms assess the quality of those sponsoring entities before investment.

Table 4 Panel A presents estimates of OLS regressions for the impact of sponsor institution reputation on the 12-month market-adjusted post-IPO return performance.[16] Most importantly, in column (1), the significant and positive coefficients on SponsorDate suggest that sponsor institutions that have been entrusted and engaged in sponsorship-related activities longer prior to IPO firms have better market-adjusted return performance. This confirms our hypothesis 2a, which implies reputable sponsors provide a greater level of IPO oversight and screening in terms of better market-adjusted post-IPO return performance. For robustness tests, we also examined the hypothesis by using alternative reputation measures based on the other characteristics of the sponsor. In column (2), the coefficient on SponsorCapital is positive and significant, suggesting that the larger sponsors in terms of registered capital (marginal contribution in millions of Chinese RMB) can provide a higher level of screening and oversight on candidate firms in terms of a better market-adjusted return performance. Also, in column (3), the positive and significant coefficient on SponsorPersonnel confirms that the bigger sponsors in terms of human capital play a better role in monitoring client firms in terms of better market-adjusted returns. Nevertheless, as for economic significance, the magnitudes of coefficient estimate on both SponsorCapital (=0.0001) and SponsorPersonnel (=0.0009) indicate that the effect of sponsor reputation is relatively minor when we use sponsor registered capital and human capital as reputation measures. In column (4), the coefficients on Ln(SponsorAge) are positive and significant, suggesting that older sponsor institutions serve as a better screening function of IPO firms that have better market-adjusted return performance. The results in column (5) suggest that the Top-10 securities companies (based on SAC annual ranking) are not necessarily good in the role of sponsor, where the estimated coefficients on D_TOP10 are insignificantly (while positively) related to market-adjusted return performance. Finally, in column (6), we introduce all the sponsor reputation/quality measures into the regression.[17]

[16] Alternatively, we use fixed effects model and the results are qualitatively similar. These results are available from the authors.
[17] Because the measures SponsorCapital and SponsorPersonnel are highly correlated with each other and with the other measures, we do not include them together in the model.

For this specification, the SponsorDate measure is the most significant (in terms of both statistical and economic significance) in explaining the cross-sectional variation in the market-adjusted return performance of sponsorship IPOs.

[Insert Table 4 here]

As the CSRC entrusts not only institutions, but also specific individuals (i.e. representatives) to perform IPO oversight, it is of interest to investigate whether the degree of oversight, in terms of market-adjusted return performance, varies based on some individual representatives' characteristics and reputations. At this point, we extend the studies of Gerakos et al. (2013) and Espenlaub et al. (2012) to include the effect of Nomad institution-related characteristics with the influence of private individual advisors.

Table 4 Panel B presents estimates of OLS for the effect of sponsor representative reputation on 12-month market-adjusted post-IPO return performance.[18] As our primary investigation of interest, in column (1), the positive and significant coefficient on RepDate suggests that representatives who have been entrusted and engaged in sponsorship-related activities longer prior to IPO firms have better market-adjusted return performance. This confirms our hypothesis 2b, as the prestige of sponsor institutions implies reputable representatives could also provide a higher level of IPO oversight and screening. In comparing economic significance, the magnitude of the coefficient estimate on RepDate (primary measure for representative reputation) is relatively smaller than the estimate on SponsorDate (primary measure for sponsor reputation). As robustness tests for the hypothesis, we replicate the analysis using several alternative measures for representatives' reputations based on their other characteristics. In column (2), the coefficient on RepIBDExp is positive and significant, suggesting that representatives with more work experience in an investment bank division can perform the oversight function well on client firms that have better market-adjusted post-IPO return performance. In column (3), the coefficient on Ln(RepAge) is positive and significant, suggesting that mature representatives are able to perform the role of IPO oversight well and monitor client firms in terms of better post-IPO return performance. The result in column (4) indicates that the oversight quality (based on return performance) is not related to the education levels of representatives, where the estimated coefficient

[18] Alternatively, we use fixed effects model and the results are qualitatively similar. These results are available from authors.

on D_RepEdu indicator is negative and insignificant.[19] Finally, in column (5), we include all the representative reputation measures in the regression. Like the finding for sponsor institution, we found that the RepDate measure is the most significant for explaining the cross-sectional variation in market-adjusted return performance of sponsorship IPOs. In sum, the empirical results suggest a strong positive connection between the reputations of sponsoring entities (i.e. sponsor institutions and representatives) and the client firms' market-adjusted post-IPO return performances. Specifically, the more reputable (or higher quality) sponsoring entities have tendencies to provide a greater level of oversight and screening of client firms that show better return performance after an IPO.

The results here imply that market-supporting institutions, such as sponsors and sponsor representatives, are in place in China to support the move towards more market-oriented IPO processes. The strict criteria for becoming a sponsor representative is helping the move towards a more market-based system.

5.3 IPO admission review

Although China's government or financial authority (CSRC) is no longer directly involved in the process of IPO firm selection/oversight under the sponsorship system,[20] the authority still holds power to inspect IPO admission documents and make decisions around IPO approval to control the quality of sponsoring-entity-selected firms. This is different to the form of private sector oversight in the AIM (e.g. Mendoza, 2008; Gerakos et al., 2013), which allows Nomad-selected firms into the market without undergoing inspection by the listing authority. Therefore, in this section, we would like to explore some patterns in relationships between the degree of the CSRC's regulatory review, the level of sponsoring entities' oversight, and the market-adjusted post-IPO return performance. We anticipate that, if private sector oversight had a tendency to be a substitute for the 'oversight' of the financial authority, the authority should relax the inspection of IPO firms' admission documents when the firms were backed by high-quality sponsoring entities.

[19] We also re-ran the regression using the re-defined D_RepEdu indicator which takes a value of one if representatives hold a PhD degree. However, the effect of education levels was still insignificant.

[20] As mentioned earlier, before the sponsorship regulatory model, central governments were planning and allocating IPOs, and local governments worked together with a few state-controlled securities companies to recommend local firms to central financial authority.

Because the proceedings of the CSRC's regulatory review of IPO admission documents are not public, it is difficult to observe the judgements of the listing authority for the quality of candidate firms. Instead, we use the processing times of IPO applications (ApprovalCSRC) as a proxy for the degree of admission review by a financial authority, where a long (short) processing time means a stringent (relaxed) centralized control on the quality of candidate firms.

Table 5 presents the results of multivariate regressions that investigate the connection between the degree of the CSRC's admission review and market-adjusted post-IPO return performance. As the CSRC's review is endogenously determined by the sponsor-related and IPO-related characteristics, in the first stage we estimate the ApprovalCSRC in a tobit model and then use the estimated values in the second stage regression.[21] In column (1), as expected, the coefficient estimate on ApprovalCSRC is negative and significant, suggesting that a shorter CSRC processing time for IPO applications is associated with better post-IPO return performance. The magnitude of coefficient estimate implies that the influence of the CSRC's admission review (e.g. marginal contribution in net working days) on firms' return performances is small in terms of economic significance. The results in column (2) confirm the robustness of our findings, after introducing the sponsoring entities' reputation measures along with the measure of the CSRC's processing times into regression. Finally, in column (3), we include all previous measures (i.e. RISK, ADVANTAGE, primary reputation measures of SponsorDate and RepDate, and ApprovalCSRC) in the regression. For this specification, the coefficient estimates on those key measures are consistent with our previous results and, in particular, the coefficient on ApprovalCSRC remains significantly negative. This confirms our hypothesis 3 and implies that the degree of the CSRC's regulatory review (i.e. proxy by the length of processing times) helps to signal the quality of candidate firms.

[Insert Table 5 here]

The results in this section imply that more reputable sponsors and sponsor representatives substitute the CSRC's IPO approval as the processing times are much lower for reputable sponsors and sponsor representatives.

[21] We use Sponsor date, rep date, age, D_SOE, offer size, D_B/Hoffer, D_Big4, firm size, largest ownership, EPS, leverage to estimate the ApprovalCSRC.

5.4 Effect of disciplinary actions

In contrast with the limited punishment of Nomads in the AIM (e.g. Gerakos et al., 2013),[22] a certain number of sponsoring entities (e.g. 11 sponsors and 68 representatives) was punished by the CSRC. In practice, the CSRC does publicly disclose disciplinary actions and relevant reasons on the official website, while most descriptions on the reasons for sanctions are quite simple, where we find most sanctions on sponsoring entities are related to 'minimal due diligence', 'misrepresentations in admission documents', and 'insufficient disclosure'.[23] In theory, sponsoring entities would face loss of reputation in the IPO sponsorship market if they received any disciplinary action. As indicated in Table 4 (for descriptive results), the low mean values of the D_PENALTY1 and D_PENALTY2 indicators suggest that the number of client firms dramatically declined after sponsoring entities received disciplinary action. This implies a loss of reputation for those nominated entities in the IPO sponsorship market. As repeated players in the market, sponsoring entities are concerned about and/or struggle for their reputational capital (Espenlaub et al., 2012). Therefore, we anticipate that sponsoring entities have incentive to rebuild their reputations after disciplinary action and thus provide a higher level of oversight on subsequent client firms.

Table 6 Panel A presents regression results for market-adjusted post-IPO returns between IPO firms screened by sponsors before sponsors' sanctions and IPO firms managed by sponsors after sponsors' sanctions. Column (1) presents comparison results that take account of all types of disciplinary actions (i.e. include both suspension and warning sanctions), where the coefficient estimate on D_PENALTY1 indicator is positive but insignificant. This suggests that, while disciplinary actions have positive impacts on sponsors that motivate them to provide a higher level of oversight for subsequent client firms, such impact is relatively weak in terms of statistical significance. Similarly, in column (2) of Panel B, we replicate the analysis using the sample of IPO firms related to the punished representative individuals. In line with the preceding results, the coefficient estimates on D_PENALTY2 indicator is also positive and insignificant, indicating that there is no significant change

[22] In Appendix B of Gerakos et al. (2013), they identify seven penalties related to AIM Nomads.
[23] Several sanctions on nominated advisors are related to 'huge decline in client firm's post-IPO operating performance' and 'untruthful updates of entities' profiles'.

in the degree of IPO oversight of client firms (in terms of post-IPO return performance) between those representatives after their sanctions and before their sanctions. Collectively, our results reject the hypothesis 4a. Based on the examination of uncategorized disciplinary actions, we do not find empirical evidence that an authority's sanctions have binding force on nominated advisors for the quality of their subsequent IPO oversight.

[Insert Table 6 here]

Next, we further evaluate whether different classifications of disciplinary action have impact on the sponsoring entities' oversight. We anticipate that sponsoring entities are more sensitive to more severe sanctions (e.g. sorted by severity: withdrawal of sponsorship certification > suspension > warning), which means sponsoring entities would provide a higher level of oversight if they suffered more severe sanctions. Due to sponsoring entities being unable to engage in sponsorship-related activities after certification withdrawal, we did not observe the impact of withdrawal. Moreover, since there was only one sponsor institution punished with suspension, we did not perform analysis of penalty classification for sponsor institution. The results in column (3) of Table 9 suggest that the use of representative individuals who were punished with suspension is associated with better market-adjusted post-IPO performance. While the statistical significance is only at the 5% level, this result indicates that representative individuals tend to serve a better screening/monitoring function for client firms after representatives' sanctions of suspension, which supports hypothesis 4b. By contrast, in column (4), the coefficient estimate on D_PENALTY2 is positive but insignificant, suggesting that the type of warning sanction has limited impact on representatives for a better quality of IPO oversight. Our results suggest that individual advisors are sensitive to more severe disciplinary actions.

Overall, the empirical results above indicate that a more market-oriented system works well in a low investor-protection country like China, in the presence of the correct disciplining mechanism.

6. Robustness Checks

6.1 Additional control variables from issuance sponsorship letter

We used risk factor variables and the sizes of advantage factors as control variables to see how the main effect of the sponsorship system continues to hold, even after controlling for these risk factors, and in

order to rule out the alternative explanation that the findings might be driven by the risk or advantage factors. Table 7 presents estimates of multivariate regressions after controlling for the effect of information disclosures in the Risk and Advantage Factors sections of issuance sponsorship documents. When we introduce sponsoring entities' reputation measures simultaneously along with RISK and ADVANTAGE measures into the regression, the coefficient estimates on SponsorDate and RepDate are positive and significant, as in our previous findings.

The RISK variable is not significant in any of the regressions, however, the coefficient on ADVANTAGE remains significantly positive, which also implies the Advantage Factors section of the sponsorship letter is informative. Given that the informational content can be used as a proxy for the quality of premarket due diligence (Hanley and Hoberg, 2010), our findings also confirm that (at least based on the evidence of the ADVANTAGE measure) IPO oversight provided by sponsoring entities is effective.

[Insert Table 7 here]

6.2 Operating Performance

We also examine some accounting performance measures[24] as robustness of our findings. In particular, we use ROS as net income divided by sales, EBIT/Sales as Earnings before interest and taxes divided by sales, ROA as net income divided by total assets and ROE as net income divided by total equity. We run regressions where the dependent variable is operating performance measures and the main independent variable is sponsorship dummy. Table 8 show that for regressions where dependent variable is operating performance, the dummy for sponsor backed IPO is significant at 1% level in all regressions except ROA. Hence, we conclude that IPOs under sponsorship system performs better.

[Insert Table 8 here]

6.3 Propensity Score Matching-DiD

Apparently, IPOs under the sponsorship system are much larger, much more mature, and more profitable. One could argue that they do not need quality sponsors or the sponsorship system, as it simply needs the CSRC to raise listing standards. Hence, a more sensible comparison is to compare a matching sample of sponsor-backed and approval-based IPOs of similar and basic firm characteristics.

[24] We thank an anonymous reviewer for suggesting this analysis.

One might argue that higher level of performance for the sponsor backed IPOs is driven by the firm-level and IPO characteristics at the time of IPO. To address this potential endogeneity issue, we use propensity score matching to neutralize the firm level differences and estimate the difference in performance between IPOs under the sponsorship system and IPOs under the approval system.[25] Specifically, we use propensity score matching DiD estimation that combines the Abadie and Imbens (2011) bias-adjusted propensity score matching with the standard DiD approach. The matching between the IPOs under the sponsorship regime (treatment group) and the approval regime (control group) employs the matching variables at the time of an IPO. To calculate propensity scores, we estimate a probit model where the dependent variable is 1 if the IPO is issued under the sponsorship system and 0 if the IPO is issued under the approval system, and the independent variables are age, offer size, firm size, leverage, EPS, ROA, non-tradable and Tobin's Q at the time of IPO. For each IPO under the sponsorship regime, we use the four best matches out of the control group according to the bias-adjusted propensity score.[26] The ATE shows the average performance of IPOs under the sponsorship regime over the approval regime.

The results in Table 9 show that after applying the PSM-DiD approach, the IPOs under the sponsorship system perform better than the approval system. All ATE (for BHAR, ROS, EBIT/Sales, and ROE) are significant except for ROA. Thus, we conclude that the better performance of IPOs under the sponsorship system is not driven by the difference in firm-level basic characteristics at the time of IPO.

[Insert Table 9 here]

6.4 Triple DiD (DDD)

The PSM-DiD can only control for the cross-sectional differences between the testing sample and the control sample but not the time-series differences of the two samples. That is even two identical IPO firms could perform differently in different periods of time. Hence, a triple DiD (DDD)[27] is required. Specifically, we find a matching firm for the sponsor-backed (SB) and approval-based (AB) IPOs with their own corresponding non-IPO firm to come up with four sample groups. The first difference is the

[25] We thank two anonymous reviewers for suggesting this analysis.
[26] Abadie and Imbens (2011) reported that the quality of the matches is best in the case of four nearest neighbours.
[27] We thank an anonymous reviewer for suggesting this analysis.

difference between the SB IPO firms against their corresponding non-IPO firms. The second difference is the difference between AB IPO firms against their corresponding non-IPO firms. The third difference is the difference of the SB difference and the AB difference. We expect such difference should be significantly different if sponsorship system is related to better IPO performance.

Table 10 reports median improvement in performance that arises from sponsorship system as the difference between matched sponsor based IPOs ($DD^{SB}_{non-IPO}$) and approval based IPOs ($DD^{AB}_{non-IPO}$) when we use industry and size matching (-/+ 25%) as our primary matching criteria to identify their comparable non-IPO firms. We use size matching (-/+25%) from Approval based IPOs to identify comparable firms for sponsor based IPOs.[28] Wilcoxon Z-statistics are reported in the parentheses to examine if there is any significant difference in the median value of performance measures. Z-statistics show that for all the measures DDD is significant at 1% level (except for ROA). Hence, we conclude that the improvement in performance is due to the sponsorship system not due to time difference.

[Insert Table 10 here]

6.5 Calendar-time factor model regressions

As an alternative to our previous findings in event-time returns, we also estimated the Fama and French (2015) five-factor model using calendar-time portfolio returns. Following Ritter and Welch (2002), we included lagged factors in the regression. We ran time-series OLS regressions and tabulate results in Table 11 where Panel A and B reported the estimates of equal- and value-weighted returns of IPO portfolios, respectively.[29] Specifically, using the median value of key independent variables corresponding to the hypotheses, we formed a series of calendar-time portfolios by splitting IPO firms

[28] Alternatively, we match between the IPOs under the sponsorship regime (treatment group) and the approval regime (control group) by matching variables at the time of an IPO. To calculate propensity scores, we estimate a probit model where the dependent variable is 1 if the IPO is issued under the sponsorship system and 0 if the IPO is issued under the approval system, and the independent variables are age, offer size, firm size, leverage, EPS, ROA, non-tradable and Tobin's Q at the time of IPO. The results are qualitatively similar.

[29] We ran alternative WLS regressions, such as Gompers and Lerner (2003), which weighed each month by the square root of the number of IPOs in the monthly portfolio to address the potential issue of the measured performance correlated with the number of firms in our calendar-time portfolios. These WLS regression results are similar to the ones from the OLS regressions in Table 12. Also, our findings are robust to the use of the traditional Fama and French (1993) three-factor model. For brevity, we did not tabulate these results.

into specified groups.[30]

[Insert Table 11 here]

The results show that between columns (1) and (2) of Panels A and B, the intercept term of monthly abnormal returns for sponsoring-entity-managed IPOs (-2.99% to -3.27%) is greater than non-sponsoring-entity-selected IPOs (-3.91% to -4.47%). This result provides robust evidence for hypothesis 1, which implies IPO firms screened by the sponsorship regulatory model suffer less from post-listing stock underperformance than IPO firms selected by the governmental dominated model. Based on the median value of the primary reputation measures, SponsorDate and RepDate, for sponsoring entities, we split IPO firms into calendar-time portfolios of reputable entity-managed firms and non-reputable entity-managed firms. Between columns (3) and (4), the intercept term of monthly abnormal returns for reputable sponsor-managed IPO portfolios (-2.89% to -3.40%) is higher than non-reputable sponsor-managed IPO portfolios (-3.46% to -4.39%). We find a similar comparison result between reputable and non-reputable representative-backed IPO portfolios in columns (5) and (6). These results confirm the robustness of hypotheses 2a and 2b, which suggest that IPO firms with reputable sponsoring entities suffer less from post-listing underperformance than firms with non-reputable sponsoring entities. For columns (7) and (8), using the median value of the ADVANTAGE measure, we split IPO firms into two portfolios that include firms with large and small sizes of Advantage Factors section, revealed by nominated advisors in sponsoring documents. We find that the underperformance level (i.e. the intercept term of abnormal return) for IPO firms with large-size disclosure of Advantage Factors section (-2.79% to -2.95%) is slightly lower than IPO firms with small-size disclosure (-3.00% to -3.07%). To some extent, this confirms our previous finding that the additional information disclosure (especially for advantage factors) by sponsoring entities is mildly capable of signalling candidate firms' post-listing return performance. Finally, the estimated abnormal returns between columns (9) and (10) suggest that a candidate firm with a short processing time for its IPO application/approval (-2.87% to -3.14%) suffers less from post-listing stock underperformance than a firm with a long CSRC regulatory review (-3.15% to -3.58%). This is consistent with the negative

[30] If the key independent variable was an indicator variable, we directly split the IPO firms into two groups.

connection that we predicted in the event-time analysis for hypothesis 3.[31] The mean differences t-test between the intercepts of different groups are highly statistically significant.

7. Conclusion

The sponsorship regulatory model has been running for over a decade in China's IPO market, since the CSRC (2003) claimed that the sponsorship system improves IPO firm quality and protects investors. However, there is limited research focusing on this regulatory model. Motivated by the recent examination of the experience of private sector oversight and regulation in London's AIM (e.g. Gerakos et al, 2013; Piotroski, 2013), we investigate the effectiveness of the sponsorship system in China's IPO market (the form of private sector oversight) in combination with mandatory listing regulation and the tight government control of IPOs.

We found that there is a better market-adjusted post-listing return performance and operating performance for IPO firms when government partially transferred the IPO oversight and selection to the private sector. IPO firms screened by the sponsorship regulatory model also experienced a lower delisting rate. To check the robustness of our finding, we next evaluated the contribution of sponsorship-related features in explaining the return performance of IPO firms under the sponsorship system. First, we found that certain characteristics of sponsoring entities (proxies for reputation/quality) can explain the cross-sectional variation in the market-adjusted return performance of IPO firms of the sponsorship system. In particular, work experience of sponsoring entities in sponsorship-related industries has a strong association with the client firm's post-IPO return performance. This result implies that the strict criteria applied by the CSRC for becoming a sponsor representative is a step in the right direction. Second, we find that the processing times for IPO applications (or admission document review), as a proxy for the degree of centralized inspection on candidate firm quality, has a negative connection with market-adjusted post-IPO return performance. A possible cause for such a negative connection is that IPO oversight provided by (reputable or high-quality) sponsor institutions has a tendency to substitute the traditional centralized review of IPO admission documents by the listing authority. To the extent

[31] We do not perform the robustness test for hypothesis 4 by calendar-time time-series regression, because it is difficult to construct calendar-time IPO portfolios with a small number of firms related to sponsoring entities' disciplinary actions.

that reputable sponsoring entities are likely to select candidate firms with better pre-IPO operating performances to apply to go public, sponsoring entities tend to serve as better screening functions of candidate firms. These results imply that China should move towards a more deregulated IPO market, such as a registration system with sponsors looking after the quality of IPO firms. Finally, we find that only the suspension penalty is effective in making representatives provide a higher level of oversight on subsequent client firms, while light disciplinary action for both sponsor institution and representative seems not to make them feel the loss of reputation, such that entities may not have incentive to provide a better IPO oversight of subsequent firms. These results imply that the move towards a more market-based system works in the presence of the correct disciplining mechanism in a weak investor-protection country like China. Overall, these results provide empirical evidence on the effectiveness of private sector oversight (i.e. sponsoring entities) in China's IPO market.

Appendix A: Variable definition

Variable	Description
Dependent Variable	
BHAR	Market-adjusted Buy-and-hold abnormal return for 12 months after IPO, excluding initial return.
ROS	Net income divided by sales 12 months after IPO
EBIT/sales	Earnings Before Interest and taxes divided by sales 12 months after IPO
ROA	Net income divided by total assets 12 months after IPO
ROE	Net income divided by total equity 12 months after IPO
Key Independent Variable	
D_SPONSOR	A dummy variable that equals 1 if the IPO firm is backed by sponsoring entities (i.e. under the sponsorship system).
RepDate	The number of years for a sponsor representative engaged in the sponsoring activities prior to the offering date of the sponsored firm.
RepIBDExp	The number of years that a sponsor representative worked in the investment banking division prior to the offering date of the sponsored firm (exclusive of the working years which are not related to the share issuance such as M&A and stock broker).
RepAge	Sponsor representative's age at the IPO date; Ln(RepAge) for natural logarithm value.
D_RepEdu	A dummy variable that equals 1 if the sponsor representative holds a PhD or Master degree.
SponsorDate	Year difference between the offering date of the sponsored firm and the registration date of the sponsor.
SponsorCapital	Sponsor institution's registered capital. Ln(SponsorCapital) for natural logarithm value.
SponsorPersonnel	The number of employees hired by the sponsor (include sponsor representatives and related personnel).
SponsorAge	The number of years between the incorporation of the sponsor institution and the offering date of the sponsored firm; Ln(SponsorAge) for natural logarithm value.
D_TOP10	A dummy variable that equals 1 if the sponsor is placed in the Top 10 (based on the SAC's annual ranking of the securities companies for the number of managed issuances) at the offering date of the sponsored firm.
RISK	The number of risk factors in the issuance sponsorship letters.
ADVANTAGE	The number of advantage factors (include the sponsoring entities' positive comments about the firm's competitive advantages and the good growth prospects) in the issuance sponsorship letters.
ApprovalCSRC	The net working days between the submission date of the IPO admission documents and the CSRC approval date for the IPO submission.
D_PENALTY1	A dummy variable that equals 1 if the sponsored IPO after the sponsor institutions' disciplinary proceedings and, otherwise, equals 0 if the sponsored IPO before the disciplinary proceedings.
D_PENALTY2	A dummy variable that equals 1 if the sponsored IPO after the sponsor representatives' disciplinary proceedings and, otherwise, equals 0 if the sponsored IPO before the disciplinary proceedings.
Control Variable	
IR	IPO initial return calculated as closing price at day 1 minus offer price divided by offer price.
OfferSize	The gross proceeds raised by the IPO; Ln(OfferSize) for natural logarithm value.
AGE	The difference between the year of IPO firm's incorporation and the year of going public; Ln(1+AGE) for natural logarithm value.
FirmSize	IPO firm's total assets at the pre-IPO fiscal year end; Ln(FirmSize) for natural logarithm value.
Pre-IPO EPS	IPO firm's average earning per share in three fiscal years prior to the offering.
TobinQ	The sum of the market value of equities (at the end of initial trading month) and the difference between total assets and book equities divided by the firm's total assets.
Pre-IPO ROA	IPO firm's operating income over total assets at the pre-IPO fiscal year-end.
Pre-IPO Leverage	IPO firm's total liabilities over total assets at the pre-IPO fiscal year-end.
D_Big4	A dummy variable that equals 1 if the IPO firm is backed by the Big4 auditors.
D_B/Hoffer	A dummy variable that equals 1 if the IPO firm also issue B- or/and H-share before its A-share IPO or within three years after its A-share IPO.
D_SOE	A dummy variable that equals 1 if the IPO firm is a state-owned entity.
NonTradable	Ratio of the firm's non-tradable shares to total shares at the IPO.
LargestOwnership	Proportion of the IPO firm's shares held by the largest shareholder at the listing.

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Table 1 IPO sample distribution: full sample

This table presents full IPO sample distribution by year (Panel A), by industry (Panel B) and by listed market/board (Panel C), and it also shows accumulative distributions of annually registered sponsor institutions and sponsor representatives (Panel A). For parsimony, in Panel A, the year distribution of IPO firms before sponsorship system (June 2004 – October 2012) presents in two subsamples: Quota System (January 1992 – March 2001) and Channel System (March 2001 – May 2004). The industry categorization (or industry code) is based on the CSRC's Guidelines for the Industry Classification of Listed Companies (2012 Revision).

Panel A: Distribution of IPOs and registered sponsoring entities by year

Year	Number of IPO Firms	%	Cumulative Number of Sponsors	Cum %	Cumulative Number of Representatives	Cum %
Quota System (1992 – March 2001)	1083	43.01	0	0	0	0
Channel System (2001 – May 2004)	220	8.74	0	0	0	0
June 2004	61	2.42	39	60.94	517	38.35
2005	14	0.56	47	73.44	555	41.17
2006	65	2.58	50	78.13	607	45.03
2007	126	5.00	55	85.94	785	58.24
2008	77	3.06	57	89.06	899	66.69
2009	99	3.93	62	96.88	997	73.96
2010	349	13.86	63	98.44	1173	87.02
2011	279	11.08	64	100	1323	98.15
2012	145	5.76	64	100	1348	100
Total	2518	100	64	100	1348	100

Panel B: Distribution of IPOs by industry

Industry (Code)	Number of IPO Firms	%
Agriculture, Forestry, Farming & Fishery (A)	45	1.79
Mining (B)	73	2.90
Manufacturing (C)	1572	62.43
Energy (D)	85	3.38
Construction (E)	69	2.74
Wholesale & Retail (F)	147	5.84
Transportation (G)	83	3.30
Lodging & Catering (H)	11	0.44
Information Technology (I)	129	5.12
Finance (J)	44	1.75
Real Estate (K)	133	5.28
Leasing & Commercial Services (L)	22	0.87
Scientific Research & Technical Services (M)	11	0.44
Environment & Utilities (N)	25	0.99
Community Services, Repair Services and Others (O)	0	0
Education (P)	1	0.04
Social Services & Health Care (Q)	4	0.16
Culture, Entertainment & Sport (R)	31	1.23
Others (S)	33	1.31
Total	2518	100

Panel C: Distribution of IPOs by listed market/board

Market/Board	Number of IPO Firms	%
SHSE & SZSE Main Market	1475	58.58
Small and Medium Enterprises (SME)	699	27.76
Growth Enterprise Market (GEM)	344	13.66
Total	2518	100

Table 2 Descriptive Statistics

This table presents descriptive statistics on the sample of A-share IPOs, where N indicates the number of observations. Panel A presents comparisons between sponsoring-entities-backed IPOs and non-sponsoring-entities-backed IPOs. Both OfferSize (i.e. gross proceeds) and FirmSize (i.e. pre-IPO total assets) are measured in Chinese Yuan (RMB) of 2000 purchasing power using the China's GDP deflator. Panel B reports the delisting rates of the IPO stocks, and the caution rates of delisting risk of the IPO stocks which have been labeled *Special Treatment (ST)* and * *Special Treatment (*ST)* tags by stock exchanges (i.e. the stocks trade on risk alert board). *ST tag* represents a risk admonition/caution on the listing stocks which have suffered losses for two consecutive years; **ST tag* represents a risk admonition/caution (close to the delisting risk) on the listing stocks which have suffered losses for three consecutive years or more. Panel C reports descriptive statistics concerning the sponsorship system-specific characteristics (i.e. key independent variables) of the sponsoring-entities-backed IPOs. The variable definitions are in Appendix A. For the test difference on the variables (non-dummy variables) between sponsoring-entities-backed IPO group and non-sponsoring-entities-backed IPO group in Panel A, the significant levels are based on t-statistics (mean difference) and Wilcoxon-Mann-Whitney test (median difference). ***, ** and * denote statistical significant at 1%, 5% and 10% level, respectively.

Panel A: Mean and Median differences

	Pooled Sample			Non-Sponsoring-Entities-Backed IPOs			Sponsoring-Entities-Backed IPOs		
Variable	N	Mean	Median	N	Mean	Median	N	Mean	Median
BHAR	2518	-0.059	-0.086	1303	-0.129	-0.141	1215	0.004***	-0.030***
EBIT/sales	2518	0.116	0.086	1303	0.081	0.067	1215	0.154***	0.129***
ROS	2518	0.047	0.044	1303	0.046	0.043	1215	0.069***	0.065***
ROE	2518	0.151	0.125	1303	0.140	0.122	1215	0.164***	0.157***
ROA	2518	0.079	0.073	1303	0.072	0.068	1215	0.096***	0.090***
IR	2518	1.493	0.781	1303	2.316	1.238	1215	0.611***	0.372***
AGE (year)	2518	5.229	4	1303	2.841	2	1215	7.790***	7***
FirmSize (¥m)	2373	22400	566	1161	1780	388	1212	42100**	787***
Pre-IPO EPS	2407	45.198	38.630	1243	34.239	29.939	1164	56.902***	52.317***
Pre-IPO ROA	2210	0.135	0.120	1002	0.123	0.106	1208	0.146***	0.132***
TobinQ	2373	1.555	1.192	1161	1.660	1.227	1212	1.455***	1.154**
Pre-IPO Leverage	2343	0.540	0.555	1135	0.569	0.596	1208	0.513***	0.519***
NonTradable	2518	0.253	0.060	1303	0.375	0.431	1215	0.121***	0.00***
LargestOwnership	2473	0.434	0.425	1258	0.478	0.491	1215	0.388***	0.377***
D_Big4	2518	0.048	0	1303	0.039	0	1215	0.058	0
D_B/Hoffer	2518	0.061	0	1303	0.085	0	1215	0.035	0
D_SOE	2518	0.408	0	1303	0.627	1	1215	0.174	0

Panel B: Delisting Report

	Pooled Sample			Non-Sponsoring-Entities-Backed IPOs			Sponsoring-Entities-Backed IPOs		
	N	Delisting/Caution Numbers	Delisting/Caution Rates (%)	N	Delisting/Caution Numbers	Delisting/Caution Rates (%)	N	Delisting/Caution Numbers	Delisting/Caution Rates (%)
Delisting	2518	86	3.415	1303	82	6.293	1215	4	0.329
ST tag	2518	361	14.337	1303	352	27.014	1215	9	0.741
*ST tag	2518	455	18.070	1303	418	32.080	1215	37	3.045

Panel C: Sponsorship System-Specific Characteristics (Key Independent Variables)

	Sponsoring-Entities-Backed IPOs				
Variable	N	Min	Max	Mean	Median
RepDate (year)	1125	0	8	4.016	4
RepIBDExp (year)	1106	2	18	10.483	10
RepAge (year)	1106	25	49	37.763	38
D_RepEdu	1106	0	1	0.914	1
SponsorDate(year)	969	0	8	4.746	5
SponsorCaptial(¥m)	969	100	11016.900	4589.043	5000
SponsorPersonnel	969	36	664	284.954	260
SponsorAge	969	0	24	12.579	14
D_TOP10	1156	0	1	0.483	0
RISK	1156	0	35	6.644	5
ADVANTAGE	1156	0	30	6.889	7
ApprovalCSRC (day)	1131	5	1007	215.441	177
D_PENALTY1	456	0	1	0.186	0
D_PENALTY2	116	0	1	0.319	0

Table 3

This table presents estimates of ordinary least squares regressions that compare the market-adjusted post-IPO buy-and-hold returns for IPO firms which were screened by sponsorship regulatory system versus the IPO firms which were screened by quota and/or channel regulatory systems. To address the potential endogeneity issue of control variable IR (initial returns) in regression models, this table shows the second stage regression of two-stage least squares regressions where $\widehat{IR}$ is the predicted value of initial returns obtained from the first-stage regression. We use D_SPONSOR, age, D_SOE, D_B/Hoffer, D_Big4, firm size, largest ownership, EPS, leverage to estimate the IR. The dependent variable in each regression is the 12-month market-adjusted buy-and-hold stock return (BHAR) following the firm's initial public offering, excluding the initial return. The key independent variable (for Hypothesis 1) is the indicator variable D_SPONSOR which equals one if firm's IPO was managed by private sector overseers (i.e. sponsoring entities of sponsorship system) and zero otherwise. Definitions of all independent (control) variables are reported in Appendix A. T-statistics are based on cluster (year) adjusted robust standard errors. ***, ** and * denote statistical significance at the 1%, 5% and 10% level, respectively.

	Panel A: Sponsorship vs Quota & Channel IPOs		Panel B: Sponsorship vs Quota System IPOs	
	BHAR		BHAR	
	Coef.	t-stat	Coef.	t-stat
D_SPONSOR	0.1903***	6.13	0.5212***	6.56
$\widehat{IR}$	-0.0199**	-2.49	-0.0213**	-2.43
Ln(AGE)	-0.0108	-0.96	-0.0087	-0.9
D_SOE	-0.0052	-0.04	0.0004	0.03
D_B/Hoffer	0.0022	0.04	-0.0036	0.03
D_Big4	0.0137	0.55	0.0015	0.38
NonTradable	-0.0385	-0.39	-0.0354	-0.29
TobinQ	-0.0275	-1.28	-0.0251	-1.21
Ln(FirmSize)	-0.0352	-0.82	-0.0452	-1.01
LargestOwnership	0.0003	-0.60	0.0003	-0.67
Pre-IPO Leverage	-0.0654	0.61	-0.0512	0.97
Pre-IPO EPS	0.1490**	2.23	0.1567**	2.18
Constant	0.4713	0.64	0.7302	
Market Indicators	Included		Included	
Year Indicators	Included		Included	
Industry Indicators	Included		Included	
No. of Observations	2126		1915	
R-squared	0.251		0.261	

Table 4

Effect of sponsoring entities' reputation on post-IPO stock performance

This table presents regression results for the impact of sponsoring entities' reputation/quality on the market-adjusted post-IPO stock returns. Panel A presents estimates of sponsor (institution) effects regressions and Panel B presents sponsor representatives effect regression. All the variables are defined in Appendix A. To address the potential endogeneity issue of control variable IR (initial returns) in regression models, this table shows the second stage regression of two-stage least squares regressions where $\widehat{IR}$ is the predicted value of initial returns obtained from the first-stage regression. We use sponsor date, repdate, age, D_SOE, D_B/Hoffer, D_Big4, firm size, largest ownership, EPS, leverage to estimate the IR. In each regression, the dependent variable is the 12-month market-adjusted buy-and-hold stock return (BHAR) following the firm's initial public offering, exclusive of the initial return. The stock returns of IPO firms are winsorized at the 99th percentile. T-statistics are (in parenthesis) based on robust standard errors where the observations are clustered at the sponsor level and year level to take account of potential error dependence within each sponsor and Year (Petersen, 2009). ***, ** and * denote statistical significance at the 1%, 5% and 10% level, respectively.

	Panel A: The effect of sponsor institution reputation on IPO Performance					
	(1)	(2)	(3)	(4)	(5)	(6)
SponsorDate	0.2374***					0.2387***
	(4.15)					(4.41)
Ln(SponsorCapital)		0.0001***				
		(4.62)				
Ln(SponsorPersonnel			0.0009***			
			(5.15)			
Ln(SponsorAge)				0.3117**		0.1674
				(2.02)		(1.52)
D_TOP10					0.0537	0.0760
					(0.45)	(0.57)
$\widehat{IR}$	0.2977***	-0.1894**	-0.1515*	-0.3883***	-0.8205***	0.1580
	(4.32)	(-2.17)	(-1.69)	(-2.69)	(-7.39)	(1.55)
Ln(AGE)	-0.0340	-0.0700**	-0.0686**	-0.0755**	-0.0972***	-0.0383
	(-1.25)	(-2.37)	(-2.21)	(-2.35)	(-3.57)	(-1.32)
D_SOE	-0.1601**	-0.1185	-0.1211	-0.0949	-0.0442	-0.1439*
	(-2.05)	(-1.15)	(-1.25)	(-1.02)	(-0.43)	(-1.81)
Ln(OfferSize)	0.3927***	-0.0368	-0.0052	-0.2001*	-0.5665***	0.2760***
	(6.24)	(-0.39)	(-0.11)	(-1.67)	(-5.21)	(2.87)
D_B/Hoffer	0.1911	0.1653	0.1705	0.1229	0.1493	0.1557
	(1.49)	(1.19)	(1.21)	(0.91)	(1.12)	(1.21)
D_Big4	0.0047	-0.0836	-0.0779	-0.0834	-0.2576***	0.0027
	(0.11)	(-0.72)	(-0.66)	(-0.81)	(-2.67)	(0.05)
NonTradable	0.1231	0.0848	0.0843	0.0780	-0.0521	0.1173
	(0.87)	(0.55)	(0.51)	(0.49)	(-0.36)	(0.83)
TobinQ	-0.1936***	0.0328	0.0151	0.1222**	0.3502***	-0.1300***
	(-7.01)	(0.32)	(0.37)	(2.03)	(5.54)	(-2.67)
Ln(FirmSize)	-0.3175***	-0.0177	-0.0405	0.0936	0.3849***	-0.2362***
	(-5.35)	(-0.19)	(-0.49)	(0.92)	(4.11)	(-2.89)
LargestOwnership	0.0019**	0.0023***	0.0023***	0.0021***	0.0018**	0.0017**
	(2.37)	(3.05)	(3.11)	(2.65)	(2.14)	(2.02)
Pre-IPO Leverage	0.0657	0.0510	0.0560	0.0156	0.0632	0.0366
	(0.35)	(0.32)	(0.25)	(0.11)	(0.41)	(0.18)
Pre-IPO EPS	0.1439**	0.0300	0.0389	-0.0126	-0.1258*	0.1134
	(2.15)	(0.29)	(0.25)	(-0.11)	(-1.76)	(1.52)
Constant	-1.4972**	0.3707	0.1617	1.1299	4.4865***	-0.9805
	(-2.35)	(0.45)	(0.18)	(1.25)	(5.11)	(-1.32)
Market Indicators	Included	Included	Included	Included	Included	Included
Year Indicators	Included	Included	Included	Included	Included	Included
Industry Indicators	Included	Included	Included	Included	Included	Included

No. of Observations	969	969	969	969	1137	969
R-squared	0.301	0.230	0.230	0.237	0.273	0.304

	Panel B: The effect of representative individual reputation on IPO performance				
	(1)	(2)	(3)	(4)	(5)
RepDate	0.0243***				0.0197***
	(3.67)				(3.14)
RepIBDExp		0.0113***			0.0039
		(3.21)			(0.75)
Ln(RepAge)			0.2808**		0.1347
			(2.33)		(0.87)
D_RepEdu				-0.0279	-0.0434
				(-0.47)	(-0.76)
$\widehat{IR}$	0.4751***	0.4915***	0.4969***	0.4965***	0.4955***
	(3.21)	(3.15)	(3.22)	(3.11)	(3.17)
Ln(AGE)	-0.0342	-0.0350	-0.0314	-0.0337	-0.0316
	(-1.08)	(-1.21)	(-1.11)	(-1.18)	(-1.05)
D_SOE	-0.1348*	-0.1310*	-0.1356*	-0.1327*	-0.1321*
	(-1.77)	(-1.68)	(-1.75)	(-1.67)	(-1.77)
Ln(OfferSize)	0.5662***	0.5745***	0.5840***	0.5847***	0.5832***
	(4.02)	(3.85)	(3.99)	(4.01)	(3.89)
D_B/Hoffer	0.2505**	0.2535**	0.2592**	0.2556**	0.2472**
	(2.11)	(2.16)	(2.31)	(2.25)	(2.15)
D_Big4	-0.0416	-0.0418	-0.0471	-0.0507	-0.0406
	(-0.37)	(-0.37)	(-0.39)	(-0.47)	(-0.38)
NonTradable	0.0712	0.0492	0.0487	0.0439	0.0510
	(0.57)	(0.32)	(0.31)	(0.31)	(0.32)
TobinQ	-0.2694***	-0.2747***	-0.2789***	-0.2771***	-0.2793***
	(-3.47)	(-3.25)	(-3.42)	(-3.23)	(-3.41)
Ln(FirmSize)	-0.4192***	-0.4204***	-0.4253***	-0.4238***	-0.4263***
	(-3.65)	(-3.66)	(-3.75)	(-3.68)	(-3.67)
LargestOwnership	0.0016*	0.0015*	0.0016*	0.0016*	0.0017**
	(1.81)	(1.74)	(1.81)	(1.75)	(1.85)
Pre-IPO Leverage	0.1483	0.1739	0.1741	0.1699	0.1713
	(1.02)	(1.23)	(1.23)	(1.31)	(1.25)
Pre-IPO EPS	0.1679**	0.1718***	0.1767***	0.1749***	0.1787***
	(2.62)	(2.91)	(2.89)	(2.85)	(2.95)
Constant	-3.4861***	-3.8123***	-4.8122***	-3.8248***	-4.1664***
	(-3.55)	(-3.45)	(-4.32)	(-3.43)	(-3.67)
Market Indicators	Included	Included	Included	Included	Included
Year Indicators	Included	Included	Included	Included	Included
Industry Indicators	Included	Included	Included	Included	Included
No. of Observations	1125	1106	1106	1106	1105
R-squared	0.181	0.181	0.180	0.177	0.187

Table 5

Relation between regulatory review and post-IPO performance

This table presents estimates of ordinary least squares regressions that investigate the relation between the degree of centralized regulatory review on IPO admission documents (using processing times of IPO application as a proxy) and the market-adjusted post-IPO stock performance. To address the potential endogeneity issue of control variable IR (initial returns) and ApprovalCSRC in regression models, this table shows the second stage regression of two-stage least squares regressions where $\widehat{IR}$ and $\widehat{ApprovalCSRC}$ is the predicted value of initial returns and approvalCSRC, respectively obtained from the first-stage regressions. We use Sponsor date, rep date, age, D_SOE, offer size, D_B/Hoffer, D_Big4, firm size, largest ownership, EPS, leverage to estimate the ApprovalCSRC and IR in separate regressions. In each regression, the dependent variable is the 12-month market-adjusted buy-and-hold stock return (BHAR) following the firm's initial public offering, exclusive of the initial return. Definitions of all independent (control) variables are reported in Appendix A. The stock returns of IPO firms are winsorized at the 99th percentile. T-statistics are (in parenthesis) based on robust standard errors where the observations are clustered at the sponsor level and year level to take account of potential error dependence within each sponsor and Year (Petersen, 2009). ***, ** and * denote statistical significance at the 1%, 5% and 10% level, respectively.

	(1)	(2)	(3)
$\widehat{ApprovalCSRC}$	-0.0015***	-0.0016***	-0.0018***
	(-3.21)	(-3.52)	(-3.66)
RISK			-0.0015
			(-0.86)
ADVANTAGE			0.0051*
			(1.96)
SpoonsorDate		0.0438**	0.0547*
		(2.02)	(1.90)
RepDate		0.0358***	0.0424***
		(3.87)	(3.67)
$\widehat{IR}$	0.3981***	-0.3235	-0.3561
	(3.23)	(-0.98)	(-0.95)
Ln(AGE)	-0.0258	-0.0612*	-0.0674*
	(-1.22)	(-1.67)	(-1.74)
D_SOE	-0.2158	-0.0877	-0.1025
	(-1.00)	(-1.12)	(-1.31)
Ln(OfferSize)	0.0489***	-0.1654	-0.1689
	(4.01)	(-0.55)	(-0.58)
D_B/Hoffer	0.2548**	0.1748	0.1478
	(2.32)	(1.32)	(1.31)
D_Big4	-0.0296	-0.1987**	-0.1741**
	(-0.31)	(-2.05)	(-2.10)
NonTradable	0.1012	0.3215	0.1987
	(0.63)	(1.48)	(1.45)
TobinQ	-0.3258***	0.1589	0.1157
	(-3.01)	(0.67)	(0.71)
Ln(FirmSize)	-0.4012***	0.1251	0.1215
	(-3.75)	(0.52)	(0.41)
LargestOwnership	0.0018*	0.0031**	0.0019**

	(1.84)	(2.36)	(2.31)
Pre-IPO Leverage	0.1104	0.0523	0.0562
	(0.81)	(0.41)	(0.41)
Pre-IPO EPS	0.2251***	0.0078	0.0103
	(3.14)	(0.09)	(0.12)
Constant	-4.5893***	-2.5891***	-3.5687***
	(-3.19)	(-2.97)	(-3.01)
Market Indicators	Included	Included	Included
Year Indicators	Included	Included	Included
Industry Indicators	Included	Included	Included
No. of Observations	1112	949	949
R-squared	0.188	0.199	0.202

Table 6

Comparison across disciplinary actions on sponsor and representative

This table presents estimates of ordinary least squares regressions that compare the market-adjusted post-IPO stock performances between the IPO firms screened by sponsoring entities after entities' disciplinary actions and the IPO firms screened by sponsoring entities before entities' disciplinary actions. Panel A presents the multivariate regression results for the comparison of return performances on the IPO firms screened by sponsor institutions after versus before the sponsors' disciplinary actions. Since there was only one sponsor institution to be punished of suspension (before its suspension, this sponsor managed only one IPO; after its penalty, this sponsor managed one IPO as well), the regression analysis does not further sort disciplinary actions into suspension and warning for sponsor institution. Panel B presents multivariate comparisons of post-IPO return performances across disciplinary actions on representatives, where representatives' disciplinary actions are sorted into suspension (i.e. a serious penalty) and warning (i.e. a mild penalty). The key independent variable D_PENALTY1 is an indicator variable that equals one if the IPO firms screened/selected by sponsor institutions after sponsors' disciplinary actions and, otherwise, equals zero if the IPO firms screened/selected by sponsor institutions before sponsors' disciplinary actions. Another key independent variable D_PENALTY2 is an indicator variable for representatives that equals one if the IPO firms managed by representatives after representatives' disciplinary actions and, otherwise, equals zero if the IPO firms managed by representatives before representatives' disciplinary actions. In each regression, the dependent variable is the 12-month market-adjusted buy-and-hold stock return (BHAR) following the firm's initial public offering, exclusive of the initial return. To address the potential endogeneity issue of control variable IR (initial returns) in regression models, this table shows the second stage regression of two-stage least squares regressions where $\widehat{IR}$ is the predicted value of initial returns obtained from the first-stage regression. We use sponsor date, repdate, age, D_SOE, D_B/Hoffer, D_Big4, firm size, largest ownership, EPS, leverage to estimate the IR. Definitions of all independent (control) variables are reported in Appendix A. The stock returns of IPO firms are winsorized at the 99th percentile. T-statistics are (in parenthesis) based on robust standard errors where the observations are clustered at the sponsor level and year level to take account of potential error dependence within each sponsor and Year (Petersen, 2009). ***, ** and * denote statistical significance at the 1%, 5% and 10% level, respectively.

	Panel A: Penalties on sponsor institution and related IPOs' performance		Panel B: Penalties on representatives and related IPOs' performance					
			Market-adjusted buy-and-hold returns					
	(1) All disciplinary actions (on 11 sponsor institutions)		(2) All disciplinary actions (on 68 representative individuals)		(3) Suspension classification (on 18 representative individuals)		(4) Warning classification (on 46 representative individuals)	
	Coef.	t-stat	Coef.	t-stat	Coef.	t-stat	Coef.	t-stat
D_PENALTY1	0.0552	(1.60)						
D_PENALTY2			0.0231	(0.35)	0.6303**	(2.12)	0.0787	(1.01)

$\widehat{IR}$	-0.0984	(-0.23)	-0.0480	(-0.18)	-0.1301	(-0.23)	0.1587	(0.62)
Ln(AGE)	-0.0598**	(-2.21)	-0.0233	(-0.31)	0.0398	(0.31)	0.0005	(0.01)
D_SOE	0.0558	(0.41)	-0.0329	(-0.29)	0.4571	(0.48)	0.0119	(0.08)
Ln(OfferSize)	-0.0231	(-0.05)	0.0897	(0.32)	0.1618	(0.30)	0.3107	(1.21)
D_B/Hoffer	0.2491	(0.98)	0.1027	(0.34)	–		0.1490	(0.81)
D_Big4	-0.0818	(-0.42)	0.0716	(0.61)	–		0.0509	(0.43)
NonTradable	-0.1878	(-1.41)	-0.4208**	(-2.02)	-1.0073	(-1.67)	-0.3891**	(-2.01)
TobinQ	0.0332	(0.21)	-0.0759	(-0.32)	0.2583	(0.87)	-0.2963*	(-1.85)
Ln(FirmSize)	-0.0035	(-0.10)	-0.0734	(-0.31)	0.1673	(0.48)	-0.3180*	(-1.78)
LargestOwnership	0.0009	(0.59)	0.0014	(0.39)	0.0069	(1.21)	-0.0007	(-0.30)
Pre-IPO Leverage	0.1742*	(1.66)	-0.1915	(-0.49)	0.8649	(0.98)	-0.2589	(-0.98)
Pre-IPO EPS	0.0460	(0.24)	-0.0436	(-0.31)	-0.1443	(-1.01)	-0.0213	(-0.14)
Constant	0.4373	(0.25)	0.4219	(0.27)	-7.7604	(-1.25)	0.6810	(0.42)
Market Indicators	Included		Included		–		Included	
Year Indicators	Included		Included		–		Included	
Industry Indicators	Included		Included		–		Included	
No. of Observations	456		116		27		89	
R-squared	0.321		0.692		0.515		0.824	

Table 7

Connection between information disclosure by sponsoring entities and post-IPO stock performance

This table presents estimates of ordinary least squares regressions that investigate, connection between information disclosure by sponsoring entities and post-IPO stock performance. To address the potential endogeneity issue of control variable IR (initial returns) in regression models, this table shows the second stage regression of two-stage least squares regressions where $\widehat{IR}$ is the predicted value of initial returns obtained from the first-stage regression. We use sponsor date, repdate, age, D_SOE, D_B/Hoffer, D_Big4, firm size, largest ownership, EPS, leverage to estimate the IR. In each regression, the dependent variable is the 12-month market-adjusted buy-and-hold stock return (BHAR) following the firm's initial public offering, exclusive of the initial return. Definitions of all independent (control) variables are reported in Appendix A. The stock returns of IPO firms are winsorized at the 99th percentile. T-statistics are (in parenthesis) based on robust standard errors where the observations are clustered at the sponsor level and year level to take account of potential error dependence within each sponsor and Year (Petersen, 2009). ***, ** and * denote statistical significance at the 1%, 5% and 10% level, respectively.

	Market-adjusted buy-and-hold returns					
	(1)	(2)	(3)	(4)	(5)	(6)
RISK	0.0004	0.0006			-0.0008	-0.0007
	(0.20)	(0.35)			(-0.31)	(-0.26)
ADVANTAGE			0.0048*	0.0052*	0.0050**	0.0053*
			(1.96)	(1.85)	(2.52)	(1.86)
SpoonsorDate		0.0414*		0.0429*		0.0536*
		(1.96)		(2.03)		(1.98)
RepDate		0.0209***		0.0212***		0.0341***
		(3.28)		(3.12)		(3.22)
$\widehat{IR}$	0.4767***	0.4477***	0.4708***	0.4424***	0.4718***	0.4431***
	(3.11)	(2.67)	(3.02)	(2.81)	(3.14)	(2.76)
Ln(AGE)	-0.0382	-0.0289	-0.0391	-0.0294	-0.0392	-0.0296
	(-1.28)	(-0.86)	(-1.36)	(-0.75)	(-1.38)	(-0.86)
D_SOE	-0.1300*	-0.1634**	-0.1314*	-0.1651**	-0.1317*	-0.1655**
	(-1.76)	(-2.01)	(-1.75)	(-2.12)	(-1.69)	(-2.02)
Ln(OfferSize)	0.5582***	0.5215***	0.5490***	0.5129***	0.5496***	0.5134***

	(3.86)	(3.36)	(3.89)	(3.22)	(3.95)	(3.19)
D_B/Hoffer	0.2749**	0.2502*	0.2693**	0.2436*	0.2698**	0.2441*
	(2.32)	(1.89)	(2.23)	(1.85)	(2.31)	(1.89)
D_Big4	-0.0502	-0.0357	-0.0466	-0.0296	-0.0464	-0.0297
	(-0.46)	(-0.28)	(-0.46)	(-0.31)	(-0.38)	(-0.21)
NonTradable	0.0588	0.1652	0.0606	0.1713	0.0613	0.1717
	(0.41)	(1.01)	(0.36)	(1.19)	(0.47)	(1.21)
TobinQ	-0.2660***	-0.2540***	-0.2621***	-0.2510***	-0.2627***	-0.2515***
	(-3.22)	(-3.02)	(-3.25)	(-3.01)	(-3.41)	(-3.01)
Ln(FirmSize)	-0.4120***	-0.4062***	-0.4045***	-0.3992***	-0.4048***	-0.3993***
	(-3.67)	(-3.25)	(-3.68)	(-3.29)	(-3.40)	(-3.21)
LargestOwnership	0.0014	0.0015**	0.0014	0.0015**	0.0014	0.0015**
	(1.54)	(2.00)	(1.55)	(2.01)	(1.33)	(2.02)
Pre-IPO Leverage	0.1495	0.1919	0.1484	0.1890	0.1481	0.1888
	(1.12)	(1.35)	(1.05)	(1.41)	(1.11)	(1.42)
Pre-IPO EPS	0.1531***	0.1464**	0.1519***	0.1459**	0.1525***	0.1462**
	(2.67)	(2.25)	(2.67)	(2.35)	(2.64)	(2.41)
Constant	-3.4044***	-2.9809***	-3.4959***	-2.9662***	-3.4095***	-2.9712**
	(-3.34)	(-2.87)	(-3.41)	(-2.81)	(-3.52)	(-2.37)
Market Indicators	Included	Included	Included	Included	Included	Included
Year Indicators	Included	Included	Included	Included	Included	Included
Industry Indicators	Included	Included	Included	Included	Included	Included
No. of Observations	1137	960	1137	960	1137	960
R-squared	0.171	0.181	0.173	0.183	0.173	0.183

Table 8

Determinants of Operating Performance

This table presents estimates of ordinary least squares regressions that compare the operating performance for IPO firms which were screened by sponsorship regulatory system versus the IPO firms which were screened by quota and/or channel regulatory systems. To address the potential endogeneity issue of control variable IR (initial returns) in regression models, this table shows the second stage regression of two-stage least squares regressions where $\widehat{IR}$ is the predicted value of initial returns obtained from the first-stage regression. We use sponsor date, repdate, age, D_SOE, D_B/Hoffer, D_Big4, firm size, largest ownership, EPS, leverage to estimate the IR. The dependent variable ROS is net income divided by sales, EBIT/Sales is Earnings Before Interest and taxes divided by sales, ROA is net income divided by total assets and ROE is net income divided by total equity. The key independent variable (for Hypothesis 1) is the indicator variable D_SPONSOR which equals one if firm's IPO was managed by private sector overseers (i.e. sponsoring entities of sponsorship system) and zero otherwise. Definitions of all independent (control) variables are reported in Appendix A. T-statistics are based on cluster (year) adjusted robust standard errors. ***, ** and * denote statistical significance at the 1%, 5% and 10% level, respectively.

	ROS		EBIT/sales		ROA		ROE	
	Coef.	t	Coef.	t	Coef.	t	Coef.	t
D_SPONSOR	0.0421**	2.05	0.0187***	4.88	0.0238	1.32	0.0319***	5.37
$\widehat{IR}$	-0.0031***	-3.36	-0.000*	-1.65	-0.0013*	-1.66	-0.0014***	-5.09
Ln(AGE)	-0.0053	-1.46	-0.0038***	-5.67	-0.0084**	-2.61	-0.0051***	-4.89
D_SOE	-0.0003	-0.04	0.0019	1.70	-0.0021	-0.40	0.0024	1.41
D_B/Hoffer	-0.0131	-1.11	0.0003	0.12	-0.0110	-1.03	-0.0019	-0.56
D_Big4	-0.0191	-1.51	0.0037	1.56	-0.0178	-1.57	0.0041	1.12
NonTradable	-0.0013	-0.13	-0.0076	-0.89	-0.0019	-0.21	-0.0118	-0.82
TobinQ	0.0099***	7.32	0.0007***	2.70	0.0032**	2.65	0.0013***	3.31
Ln(FirmSize)	0.0123***	4.02	-0.0021***	-3.65	0.0025	0.88	0.0009	0.98
LargestOwnership	0.0000	0.01	0.0002***	7.23	0.0001	0.87	0.0003***	7.17
Pre-IPO Leverage	-0.2861***	-19.16	-0.0469***	-16.78	-0.2169***	-16.41	0.0027	0.62
Pre-IPO EPS	0.0816***	8.97	0.0338***	19.88	0.0484***	6.03	0.0552***	21.01
Constant	0.2941***	4.49	0.0800	6.53	0.1956***	3.27	0.0336*	1.78
Market Indicators	Included		Included		Included		Included	
Year Indicators	Included		Included		Included		Included	
Industry Indicators	Included		Included		Included		Included	
No. of Obs	2256		2256		2231		2256	
R-squared	0.612		0.421		0.361		0.365	

Table 9

Propensity Score matching results

Table 11 shows results for propensity score matching DID estimation that combines the Abadie and Imbens (2011) bias-adjusted propensity score matching with the standard DID approach. The matching between the IPO under sponsorship regime (treatment group) and the approval regime (control group) employs the matching variables at the time of IPO. For each IPO under sponsorship regime, we use the four best matches out of the control group according to the bias-adjusted propensity score. The ATE shows the average performance of IPOs under sponsorship regime over the approval regime. The ATEs' standard errors are provided in parenthesis.***, ** and * represent significant at 1,5 and 10 percent level respectively.

	BHAR	EBIT/Sales	ROS	ROA	ROE
ATE	0.200 **	0.036***	0.024***	0.022	0.033***
	(0.090)	(0.012)	(0.009)	(0.020)	(0.011)
Matching variables					
Age	Yes	Yes	Yes	Yes	Yes
Offer size	Yes	Yes	Yes	Yes	Yes
Firm size	Yes	Yes	Yes	Yes	Yes
Pre-IPO Leverage	Yes	Yes	Yes	Yes	Yes
Pre-IPO EPS	Yes	Yes	Yes	Yes	Yes
Pre-IPO ROA	Yes	Yes	Yes	Yes	Yes
Nontradable	Yes	Yes	Yes	Yes	Yes
Tobin's Q	Yes	Yes	Yes	Yes	Yes
Matching method	Bias adjusted	Bias adjusted	Bias adjusted	Bias adjusted	Bias adjusted
Number of Matches	4	4	4	4	4
Observations	1923	1923	1923	1923	1923

Table 10

Triple DiD (DDD) results

This table reports median improvement in performance that arises from sponsorship system as the difference between matched sponsor based IPOs ($DD_{non-IPO}^{SB}$) and approval based IPOs ($DD_{non-IPO}^{AB}$) when we use industry and size matching (-/+ 25%) as our primary matching criteria to identify their comparable non-IPO firms. We use size matching (-/+25%) from Approval based IPOs to identify a comparable firm for sponsor-backed IPOs. BHAR stands for buy-and-hold abnormal returns, ROS is net income divided by sales, EBIT/Sales is Earnings Before Interest and taxes divided by sales, ROA is net income divided by total assets and ROE is net income divided by total equity. Wilcoxon Z-statistics are reported in the parentheses to examine if there is any significant difference in the median value of performance measures. ***, **, and * represent significance at the 1%, 5% and 10%, respectively.

Variable	$DD_{non-IPO}^{SB}$	$DD_{non-IPO}^{AB}$	DDD
BHAR	-0.052***	-0.127***	0.075***
	(3.23)	(5.21)	(4.32)
EBIT/Sales	-0.021***	-0.042**	0.022***
	(-5.23)	(-8.31)	(3.36)
ROS	-0.019***	-0.032***	0.014***
	(-4.52)	(-3.25)	(3.91)
ROA	-0.020***	-0.019***	-0.008
	(-3.15)	(-2.68)	(0.74)
ROE	-0.018***	-0.030***	0.013***
	(-3.65)	(-3.47)	(3.28)

Table 11

Robustness tests by calendar-time factor model regressions

This table presents OLS estimates of Fama-French (2015) five-factor model regressions, where the research factors are constructed by 2x3 sorts using all A-share stocks listed on Main, SME and GEM boards of Shanghai and Shenzhen stock exchanges. Following Ritter and Welch (2002), we include lagged factors in the model:

$$R_{pt} - R_{ft} = \alpha_p + b_t(R_{mt} - R_{ft}) + b_{t-1}(R_{mt-1} - R_{ft-1}) + s_t SMB_t + s_{t-1} SMB_{t-1} + h_t HML_t + h_{t-1} HML_{t-1} + \gamma_t RMW_t + \gamma_{t-1} RMW_{t-1} + c_t CMA_t + c_{t-1} CMA_{t-1} + \varepsilon_{pt}$$

The dependent variable is the monthly excess returns on either equal-weighted portfolios (Panel A) or value-weighted portfolios (Panel B) that include any firm has an IPO during the previous 12 months. Specifically, in terms of our robustness tests of interest, the construction of IPO portfolios is based on the conditions from column (1) to (10) using the median value of key independent variables in Appendix A to split IPO firms into different types of portfolios. To classify reputable and non-reputable sponsoring entities, we use the median values of the primary reputation measures SponsorDate and RepDate. Except calendar-time IPO portfolio in column (2) which contains IPO firms from 1992 through 2001 (i.e. under quota system), all other calendar-time IPO portfolios contains IPO firms during 2004 – 2012 (i.e. under sponsorship system). R_{mt} is the return on the value-weighted index of all A-shares. R_{ft} is the three-month Chinese deposit rate. SMB_t is the return difference between small-cap stock portfolio and big-cap stock portfolio. HML_t is the return difference between high B/M stock portfolio and low B/M stock portfolio. RMW_t is the return difference between robust (high) operating profitability stock portfolio and weak (low) operating profitability stock portfolio. CMA_t is the return difference between conservative (low) investment firm portfolio and aggressive (high) investment firm portfolio. For parsimony, we only report the t-statistics of intercepts (i.e. Fama-French alphas) in parentheses. ***, ** and * denote statistical significant at 1%, 5% and 10% level, respectively.

	Sponsorship or not		Reputable vs. Non-reputable entities				Information signals		Degree of regulatory review	
	(1) IPO with entities	(2) IPO without entities	(3) Reputable sponsor	(4) Non-reputable sponsor	(5) Reputable reps.	(6) Non-reputable reps.	(7) Large size of advantage factors section	(8) Small size of advantage factors section	(9) Long processing times	(10) Short processing times
Panel A: Equal-weighted returns of IPO portfolios (during the previous 12 months)										
Intercept	-0.0327***	-0.0391***	-0.0289***	-0.0346***	-0.0314***	-0.0365***	-0.0295***	-0.0307***	-0.0358***	-0.0314***
t-stat	(-6.64)	(-9.32)	(-4.73)	(-4.39)	(-5.05)	(-5.27)	(-4.41)	(-6.68)	(-6.52)	(-5.62)
b_t	1.028***	1.020***	1.253***	1.113***	1.123***	0.912***	0.948***	1.081***	1.006***	1.059***
b_{t-1}	-0.0638	0.0423	0.0313	-0.0396	-0.0187	-0.00651	-0.0319	-0.0612	-0.0949	-0.0603
s_t	1.342***	0.476***	1.666***	1.825***	1.706***	1.630***	1.493***	1.154***	1.399***	1.344***
s_{t-1}	-0.0486	0.0687	-0.310	-0.225	-0.278	-0.264	0.00417	-0.0659	-0.0214	-0.109
h_t	-0.162	-0.114	0.249	-0.0181	0.101	0.0289	0.0319	-0.274	-0.101	-0.148

h_{t-1}	-0.0226	-0.0258	-0.454*	-0.233	-0.273	-0.398	-0.0328	-0.0414	-0.0194	0.102
γ_t	0.860***	0.203	1.026***	0.934**	1.018***	0.566	1.037***	0.806***	0.924***	0.835**
γ_{t-1}	-0.227	-0.180	-0.416	0.234	-0.330	-0.279	-0.0829	-0.257	-0.114	-0.258
c_t	0.0928	-0.107	-0.307	-0.344	0.0591	-0.0301	0.0961	0.0892	0.0473	0.0865
c_{t-1}	-0.156	-0.0362	-1.016**	0.0792	-0.383	0.00687	-0.0695	-0.252	-0.0448	-0.164
Adj.R^2	80.2%	95.5%	86.9%	81.0%	87.3%	82.5%	67.7%	82.8%	75.6%	77.5%
Mean diff t test between Intercepts		-35.13		-13.12		-15.12		-8.32		-11.58
Panel B: Value-weighted returns of IPO portfolios (during the previous 12 months)										
Intercept	-0.0299***	-0.0447***	-0.0340***	-0.0439***	-0.0341***	-0.0394***	-0.0279***	-0.0300***	-0.0315***	-0.0287***
t-stat	(-6.52)	(-9.28)	(-5.97)	(-5.28)	(-5.40)	(-4.75)	(-4.04)	(-5.95)	(-5.93)	(-4.78)
b_t	1.176***	1.087***	1.219***	1.212***	1.127***	0.848***	0.894***	1.193***	1.067***	1.120***
b_{t-1}	-0.0157	-0.0408	0.0672	-0.0443	-0.00555	-0.0459	-0.0220	-0.0143	-0.0733	-0.0360
s_t	0.521***	0.167	1.126***	1.607***	1.395***	1.187***	1.209***	0.380*	0.791***	0.471**
s_{t-1}	-0.315*	0.147	-0.330	-0.0561	-0.288	-0.190	-0.0912	-0.326*	-0.0514	-0.392*
h_t	-0.327*	0.327*	0.0390	-0.0118	0.161	-0.277	-0.0799	-0.341*	-0.428**	-0.333
h_{t-1}	0.169	-0.331**	-0.330	0.0170	-0.184	-0.109	0.0210	0.171	0.00312	0.158
γ_t	0.600**	0.629***	0.835**	0.944*	0.922**	0.394	0.862**	0.433	0.693**	0.250
γ_{t-1}	-0.711***	-0.201	-0.250	0.208	-0.303	-0.433	-0.281	-0.711**	-0.167	-0.810**
c_t	-0.444	0.0694	-0.182	-0.0412	0.375	0.347	-0.125	-0.470	-0.00440	-0.629*
c_{t-1}	-0.918***	-0.0935	-0.782*	-0.170	-0.407	-0.739*	-0.296	-0.926***	-0.0386	-1.032***
Adj.R^2	84.0%	94.7%	86.5%	79.4%	85.8%	72.3%	61.1%	82.0%	76.2%	75.4%
Mean diff t test between Intercepts		-38.56		-22.65		-15.47		-10.87		-9.54