Avoiding China's Capital Market:

Evidence from Hong Kong-Listed Red-chips and P-chips

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Abstract

The purpose of this paper is to explore the puzzle of why so many Chinese firms eschew listings in China. Hundreds of firms founded in China have reorganized themselves as overseas corporations and listed on the Hong Kong Stock Exchange. These firms are called Red-chips if they are state-owned enterprises (SOEs) and P-chips if they are not state-owned (Non-SOEs). To examine the rationale behind the listing decisions of P-chips and Red-chips, we compare the characteristics of Red-chips (P-chips) with SOEs (Non-SOEs) listed on China stock exchanges. We find that SOEs are more likely to list in China. Moreover, while we do not observe any significant difference between the performance of Hong Kong-listed and Mainland-listed SOEs, we find Non-SOEs that are listed in Hong Kong are significantly more profitable than those listed in China. We then explore three possible explanations for why Chinese firms, especially Non-SOEs, may prefer to be listed in Hong Kong: (a) to facilitate personal wealth transfers out of China; (b) to increase access to debt capital; and (c) to facilitate more efficient stock price formation. We find that all three of these explanations have statistical support.

Avoiding China's Capital Market:
Evidence from P-chips and Red-chips Listed in Hong Kong

I. Introduction

The stock market of the People's Republic of China, composed of the Shanghai and Shenzhen Stock Exchanges (SHSE and SZSE), is the second largest in the world, behind only the U.S. stock market with the New York Stock Exchange (NYSE), the American Stock Exchange (ASE), and the National Association of Securities Dealers Automated Quotation System (NASDAQ).[1] Yet hundreds of publicly traded Chinese firms, some of them large state-owned enterprises (SOEs), are not listed on their home stock exchanges but are only listed abroad. Most of these expatriate firms with China operations are organized as offshore firms and listed on the Hong Kong Stock Exchange (HKSE). If they are SOEs, they are called "Red-chips" and if they are not SOEs, they are called "P-chips".[2] The purpose of this paper is to explore the puzzle of why so many Chinese firms eschew listings in China.[3,4]

Chinese firms that seek stock exchange listings either at home or abroad are subject to required government approval to list.[5] Almost 900 firms are currently waiting for government approval to go public, and hundreds more may have chosen not even to apply for approval because

[1] World of Federation of Exchanges, *Statistics 2008-2015* show that as of Q4 2015, SHSE was ranked fourth largest in the world (behind only NYSE, NASDAQ, and London Stock Exchange), with $5,694 billion market capitalization, $12,583 billion volume, and 1,070 listed companies. SZSE was ranked sixth largest (behind Tokyo) with $3,907 billion market cap, $10,107 billion volume, and 1,727 listed companies. HKSE was the seventh largest in the world, with $3,751 billion market cap, $1,259 billion volume, and 1,793 listed companies.

[2] According to the HKSE: "The term P chip (Chinese: P 股) refers to Chinese companies listed on the Hong Kong Stock Exchange which are incorporated in the Cayman Islands, Bermuda and the British Virgin Islands with operations in mainland China, and are run by private sector Chinese businessmen."

[3] We refer to the People's Republic of China as the PRC, China, or Mainland China interchangeably.

[4] We focus on Hong Kong listings because the majority of overseas listings from China are on the HKSE. In addition, the proximity, cultural similarity, and political integration of Hong Kong and Mainland China facilitates our comparison of the sample firms' listing choices while holding constant other facets of the economic and political climate. Hong Kong is the world's second largest IPO market by value over the last two decades (after the NYSE), and most of the listings consist of Mainland companies. By the end of 2016, almost half of the listings on HKSE were Chinese firms, representing 63% of the total market capitalization and 69% of the turnover. The Chinese firms raised HK$156.6 billion in 2016, representing 82% of all listings on the HKSE. (South China Post, 2017, available at http://www.scmp.com/business/companies/article/2099755/hong-kong-remains-pole-position-ipos)

[5] See section 2 for details of the Chinese government's approval process.

of the low probability of success.[6] Therefore, the Red-chips and P-chips may be firms the Chinese government has rejected for listing on domestic or foreign stock exchanges. Alternatively, they may be firms that do not fit the profile of firms that have gained listing approval and therefore did not bother to apply. In either case, Red-chips and P-chips may be informative about the criteria the government uses to pick firms for the Chinese capital market.

The largest publicly traded Chinese firms are those with H-shares traded in both Hong Kong and the U.S., all of which are listed with government approval. They constitute the sample in most prior research (see Hung, Wong, and Zhang 2012). In contrast, we include the H-share firms in our descriptive analyses but exclude them from our empirical analyses because they are in general listed in both China and Hong Kong and have been granted government approval, in contrast to the Red-chips and P-chips that are listed only in Hong Kong and did not go through the same listing process with the government. In addition, we use all (non-H-share) SOEs and Non-SOEs with Chinese operations that are publicly listed on the SHSE and the SZSE as well as the Red-chips and P-chips listed on the HKSE. By using a more representative sample of Chinese firms and comparing Red-chips with SOEs listed in China and P-chips with Non-SOEs listed in China, we hold constant many factors that are alternative explanations for performance, such as state ownership and control, size, leverage, culture, etc.

The Chinese government's goal may be to pick firms with the strongest prospects for access to Chinese capital resources to develop the Chinese capital market as quickly and efficiently as possible (Walter and Howie 2011). If this is the goal, it likely grants approval for the best companies to have their initial public offerings (IPOs) in the domestic capital market, which encourages the best companies to apply for listing on SHSE or SZSE. If so, then we expect that companies that organize

[6] According to Reuters, the number of companies waiting to get approvals from CSRC swelled to more than 800 at the end of 2013 (http://www.reuters.com/article/2012/12/21/china-ipo-idUSL4N09V08120121221, accessed 2/25/2014). Bloomberg reports as of 7 July 2016, almost 900 Chinese companies were waiting to IPO, with attendant consequences for the Hong Kong Stock Exchange (http://www.bloomberg.com/news/articles/2016-07-07/the-magical-transformation-of-hong-kong-s-listed-companies, accessed 7/8/2016).

as offshore corporations and list in Hong Kong but not in China are smaller, perform less well, are riskier, or for some other reasons are less attractive.

Alternatively, it may be that the Chinese government advantages firms that are highly politically-connected, such as those that are owned or controlled by the provincial or central government. If political connectedness is the criteria by which the government chooses firms to issue IPOs, then we expect the firms listed on SHSE or SZSE are the ones with the strongest political connections, and the Red-chips and P-chips are less well-connected politically. In our first set of tests, we maintain the assumption that the data reveal the government's choice criteria (rather than the firms' choice criteria) and test whether political connectedness or performance are more strongly associated with the government's revealed preferences. Univariate statistics suggest that more SOEs are listed on SHSE and SZSE, but the better performing Non-SOEs are listed on the HKSE as P-chips.

We compare the characteristics of SOEs listed domestically with Red-chip, and find that Red-chips are slightly more profitable on average than China-listed SOEs, except for the firms listed as H-shares on stock exchanges in China, Hong Kong, and frequently New York. We compare the characteristics of Non-SOEs listed on Chinese stock exchanges with P-chips, and find that the China-listed Non-SOEs are less profitable than P-chips. In addition, P-chips are on average more profitable than either Chinese-listed SOEs or Red-chips.

Logistic regressions confirm that political connectedness (proxied by SOE status) is positively associated with listing in China. On the other hand, performance (proxied by return on assets) is negatively associated with listing in China. The interaction of the two factors (to capture the potential interaction in the government's incentives to approve the most profitable firms depending on political connectedness) is positively associated with listing in China. The positive coefficient on the interaction term of approximately the same size as the negative coefficient on profitability suggests that the government picks SOEs without respect to their performance, to list in

China. Separate logistic regressions of SOEs and Non-SOEs (excluding H-shares) confirm that more profitable Non-SOEs are more likely to be listed in Hong Kong.

Because we are unable to find evidence that the vast majority of the Red-chips and P-chips ever applied for permission to list in China or abroad, we next turn to the Chinese firms' decisions, as opposed to the government's decisions, and examine three potential explanations for why Red-chips and P-chips list in Hong Kong. We find support for all three explanations.

The first explanation we consider is personal wealth transfers. Chinese firms may choose to organize as offshore corporations and issue IPOs in Hong Kong primarily to transfer personal wealth abroad. As Chinese individuals accumulate more wealth, the need to invest overseas is increasing. However, the Chinese government has set limits on how much personal wealth Chinese citizens can transfer and invest abroad (State Administration of Foreign Exchange (hereafter, SAFE), 2007).[7] Issuing IPOs on the HKSE can be a convenient way to generate substantial Hong Kong or U.S. currency. Discussions with industry practitioners reveal that personal wealth transfer is often an important reason for Chinese Non-SOEs to list in Hong Kong. Therefore, it is reasonable to believe that getting personal wealth out of China is more likely to have an effect on Non-SOEs than SOEs.

The second explanation for firms' choices to list in the HKSE is to facilitate new debt issues. Firms that lack access to debt capital provided by state-owned and controlled Chinese banks (see Walter and Howie 2012) may list their shares on the HKSE as a bonding mechanism to improve their access to debt capital from the Hong Kong bond market (see Coffee 1999 and 2002, Reese and Weisbach 2002, Doidge, Karolyi and Stulz 2004, and Karolyi 2012). Firms may choose to list on markets with more stringent regulation and monitoring to gain lower cost of capital. In our case, a listing in Hong Kong by a Chinese firm may demonstrate high-quality corporate governance and

[7] The Chinese government strictly monitors and manages the currency outflow (SAFE 2016). Order No. 3 of the People's Bank of China issued on December 28, 2016 demonstrates how determined the government is to scrutinize foreign currency exchange. The regulation specifies the maximum size of transaction individuals and businesses can conduct. For example, individuals need to report to the government any transaction that is more than 50,000 yuan or 10,000 US dollars. According to the Chinese Mistry of Commerce, Chinese outbound investment dropped nearly 46% to $48.19 billion in the first half of 2017 (MOFCOM, 2017).

financial reporting quality, to attract lenders in the bond market. Whether the strength of the bonding incentives is equally strong for the Red-chips and P-chips is an empirical matter.

Finally, firms may choose to list shares in Hong Kong in preference to China because Hong Kong stock prices better reflect the fundamental value of the firm (Foucault and Gehrig 2008, Foucault and Fresard 2010). The HKSE is more developed than the Chinese stock market with more complete systems for monitoring and enforcing regulations. The HKSE has more institutional investors and sophisticated market participants, such as analysts. The institutional investors are from China, Hong Kong, and other regions. This means valuations are more likely to be based on fundamentals and investors are more likely to be sophisticated and to understand economic conditions and the business environment (Worthington and Higgs 2006, Qu 2008).

We find strong results in support of each of these three explanations. These three explanations are not mutually exclusive and collectively exhaustive, but together they suggest that the phenomena of Chinese firms listing in Hong Kong as offshore firms may be as informative about the firms' incentives as they are about the Chinese government's strategy.

Hung et al. (2012) examine whether firms from the PRC that list on stock exchanges overseas in addition to their Chinese listings are better performers (their performance hypothesis) or are seeking non-pecuniary advantage like political advancement of the firm's managers or better political connections (their political connectedness hypothesis).[8] The finding is that H-share firms that list in Hong Kong or the U.S. are better connected politically but perform worse than less politically connected firms with similar listings. The sample firms are mostly large SOEs that are listed abroad and their focus is on the firms' listing choices. Their conclusion is that large Chinese SOEs value political connections and political advancement of the firm's managers above efficiency and performance. In contrast, our focus is on the listing choices of a more representative sample of

[8] See also Leuz and Oberholzer-Gee (2006) for an examination of the association between political relationships and global financing in the Indonesian context, Yang 2013 for an examination of the effect of political connections on IPO audit outcomes in China, and Chen and Yuan 2004 for an examination of the effect of the auditor's political connections on the probability of IPO approval outcomes.

Chinese firms including the Non-SOEs, and by inference on the listing approval choices of the Chinese government.

Our paper contributes to the literature in three main areas. The first is that we draw our inferences based on a much larger and more representative sample of Chinese SOEs and Non-SOEs, both those listed on SHSE and SZSE and those listed in Hong Kong as offshore corporations. By using the broader sample in our primary analysis and extending those analyses separately to SOEs and Non-SOEs, we highlight the differences between the two samples. We are the first study to show that incentives for SOEs and non-SOEs to list in Hong Kong differ. Second, this is the first study to document personal wealth transfer as an incentive for overseas listing decisions. The wealth transfer phenomenon is driven by the unique institutional environment in the Chinese market, but this may generalize to other markets that have constraints on currency transfers. The third area of our contribution is explicitly comparing Chinese firms with and without state-sanctioned listings, consistent with the assertion that the decisions of the Chinese government in selecting firms to approve for listing are not based on performance but are strongly associated with political connectedness. Although we cannot rule out that the government would have chosen the bigger and more profitable firms for listing on SHSE and SZSE had they applied for approval, its failure to prosecute the firms for skirting the approval process suggests that this is not the case.

The rest of the paper is organized as follows: section 2 describes the institutional background, reviews the literature, and poses our research questions. Section 3 describes the sample, data, and empirical design. We report results of our primary tests in section 4, along with diagnostics and extensions. Section 5 contains a summary and conclusions.

II. Institutional Background and Literature Review

II.1 China's Stock Market

China Securities Regulatory Commission (CSRC) is China's counterpart of the U.S. Securities and Exchange Commission (SEC). CSRC oversees the Chinese capital market and is directly under the State Council. CSCR drafts laws and regulations for securities and futures markets, enforces the laws, oversees domestic and overseas listings, and supervises the securities and futures exchanges.[9] Securities regulation in China has undergone significant changes since the formation of the Chinese capital market in 1990, and can be summarized in four stages, as follows.

1. First Stage (1990-2001)

SZSE and SHSE were organized by the Chinese Government in the early 1990s. Although there were regional trading centers in the 1980s, the formation of the formal exchanges in Shanghai and Shenzhen represented the official start of the Chinese stock market. Before September 2000, both SHSE and SZSE traded large SOEs.

From December 1990 to April 2001, the Chinese government decided the number of IPOs allowed in the Chinese stock market. This is known as the quota system. Once the quota was determined by the central government, the government distributed a share of the quota to each province. Then the local governments recommended local firms for IPOs based on the quota they received from the central government. An IPO during this period had the goal of helping Chinese firms (almost all SOEs) get out of financial distress. The well-performing SOEs were selected to issue IPOs or cross-list on HKSE.

2. Second Stage (2001-2003)

In 2001 the government's influence started to decrease, when CSRC replaced the quota system with the approval system. The government allowed companies to apply for IPOs, strictly screened the issuers, and oversaw the process of IPO approval. The approval system was more comparable to a market-oriented structure than the quota system, but the government still had vital influence over the IPO process.

[9] http://www.csrc.gov.cn/pub/csrc_en/about/

3. Third Stage (2004-2009)

During this period, China adopted the representative sponsor system, with sponsorship by the investment banks, who played the dual role of underwriter and sponsor representative. This change was meant to encourage market participants to increase the efficiency of the IPO process. In 2004, the government also launched a new board as part of SZSE – the Small and Medium Enterprise Board (SME Board). The SME Board was the first step toward China's multi-tier capital market. Its aim was to provide financing for the SMEs. The SME Board is subject to CSRC governance, and companies listed on the SME Board have to satisfy the SZSE's listing requirements, such as the size requirement (Best and Soulier, 2005). Both SOEs and Non-SOEs are allowed to list on the SME Board.

4. Fourth Stage (2009 – present)

After the success of the SME Board, on March 31, 2009, CSRC announced the launch of ChiNext, which started trading on October 30, 2009. ChiNext was established by SZSE as a separate market segment for small-and-medium sized, innovative, and fast growing enterprises. The initial listing requirements (such as firm size) of ChiNext are less demanding than those of the SME Board, but ChiNext has higher continuing listing requirements to mitigate risk. ChiNext also has its own public offering review committee which is dominated by specialists from industries, rather than officials from the government. The overwhelming majority of the firms listed on ChiNext are Non-SOEs.

In diagnostic analyses reported in section 4, we replicate our results on subperiods which correspond to three stages of Chinese capital market regulation (pre-SME Board, post-SME Board but pre-ChiNext, and post-ChiNext). Although there are differences, especially once the SME Board and ChiNext gave access to the Chinese capital market to smaller firms, our main inferences hold in the shorter time periods.

II.2.1 Domestic Listings

The Public Offering Review Committee, which operates under CSRC, reviews IPO applications case by case and decides which firms can become listed. The Committee includes CSRC staff and at times outside experts such as accountants and engineers. The Committee has two groups that evaluate applications. Each group has seven members who vote by anonymous ballot. The final decision is based on majority votes, but the process lacks transparency. For instance, one of the CSRC officials on the Committee was arrested in 2005 for selling IPO approval information (Xin, 2004).

Although the government advantaged SOEs in its decisions to approve listings on SHSE and SZSE, it is extremely difficult for Chinese firms to get listings. According to Reuters, the number of companies waiting for approval from CSRC swelled to more than 800 at the end of 2013.[10] Some of these firms may have to wait five years to issue IPOs.[11] Even when a firm is approved, it is a long wait for the firm to get listed. The wait is even longer for Non-SOEs (Walter and Howie, 2011).

In December 2015, the State Council passed a draft resolution to move within two years from an approval-based IPO process to a registration-based stock listing process, similar to the registration-based IPO process in Hong Kong. The move followed five months in which the government froze IPOs (July to November). In a registration-based system, if a firm meets the bright line listing requirements, it is allowed to IPO and there are no limits other than supply and demand to keep eligible firms from accessing capital. The listing requirements are usually specified as size and features of disclosure and capital governance. [12] However, probably due to volatility in the Chinese capital market in recent years, the resolution has not been implemented.

II.2.2 Approved Overseas Listings

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[10] http://www.reuters.com/article/2012/12/21/china-ipo-idUSL4N09V08120121221

[11] http://www.bloomberg.com/news/2012-12-21/china-eases-rules-on-overseas-listings-as-ipo-requests-swell.html

[12] http://news.xinhuanet.com/english/2015-12/10/c_134903776.htm. "Under the current initial public offering (IPO) system, new shares are subject to approval from the China Securities Regulatory Commission (CSRC), which controls both the timing and pricing. After the reform, the new IPO system will highlight information disclosure and let the market play a bigger role in determining prices," said Zhang Shuyu, a researcher with the University of International Business and Economics.

Similar to domestic listings, CSRC retains full power to grant Chinese firms approval to list overseas. The first time the Chinese government brought up the idea of overseas listing was in mid-October 1992 when it announced that a group of nine Chinese SOEs were designated to list on the HKSE. The first "official" Chinese overseas listing occurred on October 7, 1992 at the NYSE.[13] Tsingtao Beer became the first Chinese SOE to list on HKSE on June 29, 1993. Since then, the use of overseas listings by Chinese firms to raise capital has steadily increased. However, Chinese firms still have to get approval from the Chinese government to list overseas and the approval process varies for different types of firms.

In the early 1990's, the Chinese government chose the biggest and best Chinese firms to get the financing in the international capital market that the Chinese capital market could not afford (Walter and Howie, 2011), which gave Chinese SOEs the same opportunity as other international firms to compete in a global economy. The government picked the strongest SOEs, carved out the most productive parts to establish as "companies", and listed those companies on both domestic and overseas stock exchanges. However, due to the complicated restructuring procedures and the limited number of outperforming SOEs, use of this approach quickly came to an end. Later in the decade, the Chinese government began packaging companies together to list them domestically and overseas. The package of companies sometimes consisted of an entire industry (e.g., China Mobile). These companies were listed as H-shares in China and abroad, or as Red-chips in Hong Kong. H-share firms represent focused businesses and they normally have strong positions in China's domestic economy. Red-chips tend to be conglomerates in which the Hong Kong entity acts as a funding vehicle for its Chinese operations. Some Red-chips are created by municipal governments desperate for money. These Red-chips often consist of multiple infrastructure companies.

[13] The first group of Chinese firms listed overseas in the 1970's as part of Xiaoping Deng's economic reforms. These firms were listed as Red-chips (e.g., China Everbright Ltd. listed in 1973; Industrial and Commercial Bank of China Ltd listed in 1973; and CITIC 21CN Co. Ltd. listed in 1972) (Jonge, 2008).

H-shares are subject to strict approval processes by CSRC to list overseas (Walter and Howie, 2011). Red-chips, on the other hand, face less stringent scrutiny from the central government. On August 8, 2006, the Chinese government promulgated "Regulations Concerning the Merger and Acquisition of Domestic Enterprises by Foreign Investors" (《關於外國投資者併購境內企業的規定》), (commonly known as the "M&A Rules" or Circular No. 10). According to the M&A Rules, Red-chips must be approved by the Ministry of Commerce (MOFCOM) and CSRC, but this rule is not strictly enforced by the Chinese government. Companies found various loopholes to escape from the stringent screenings (Liu, 2012). For example, China Zhongsheng Resources Holdings Limited ("ZSR") successfully listed on the HKSE with only approvals from provincial government agencies (ONC, 2015).

Non-SOEs are also desperate for capital and they do not have as close relationships with the Chinese government as do H-shares and Red-chips. It is extremely hard for them to be approved by CSRC to list domestically or overseas (Walter and Howie, 2011). These firms, like Red-chips, have found ways to restructure themselves to be listed on an overseas market through one or several offshore entities. They are known as P-chips. On paper, P-chips look like any other foreign firms that are incorporated and have operating offices outside of China.

II.3.1 Domestic vs Approved Overseas Listings

The IPO processes for both domestic and international listings are highly subject to the political process in China (Aharony et al., 2000; Walter and Howie, 2011). However, it is an empirical question whether the Chinese government picks better firms for the domestic market (to build and develop the Chinese capital market) or the overseas market (to gain global visibility for Chinese firms and to access capital). Anecdotal evidence suggests the central government responded to complaints from SHSE and SZSE that not enough good firms were being retained for domestic listings (Walter and Howie, 2011). Hung et al. (2012) find that SOEs that list in Hong Kong (both H-shares and Red-chips) have stronger political connections and perform worse than non-connected firms. They also find that these firms' managers list their companies overseas for private (political) gains rather than bonding to a superior stock market to obtain capital. On the other hand, Walter and Howie (2011) assert that the government chooses the best companies for overseas listings and leaves the rest for domestic stock exchanges.

These arguments concern mainly SOEs. The recent establishment of the SME Board and ChiNext as parts of the SZSE caused new listings of Non-SOEs to surge. Zhao (2012) finds that the high continuing listing requirements of ChiNext have selected better performing enterprises to list on ChiNext relative to those listed on the SME Board. As for overseas listings, this is the first study that studies and compares Chinese Non-SOEs that list domestically and in Hong Kong. As Walter and Howie (2011) note, identifying Chinese firms listed overseas is challenging. Prior literature on overseas listing uses H-shares and sometimes Red-chips, which are mainly SOEs.

II.3.2 Hong Kong Stock Exchange Listings

The approval process differs dramatically between the Chinese market and the HKSE. The Hong Kong market uses the registration system, in which a firm submits all required documents to register with the stock exchange and if it qualifies it is listed. The registration process offers certainty when a firm is ready to IPO. According to conversations with Hong Kong legal and finance experts, it takes a firm six to nine months to complete an IPO on HKSE. On the other hand, the Chinese market uses the approval system. After a firm submits all the required documents, the CSRC considers factors other than firm performance and quality, such as the market and economic conditions. There is much uncertainty about the approval even if the firm meets all the required listing standards. The waiting time is also uncertain, frequently stretching to several years. At several points in recent years the Chinese government has frozen IPOs for periods of months to support the Chinese stock market.

In addition, the HKSE is more flexible with share issues subsequent to the IPO than are SHSE and SZSE. For instance, on the HKSE, as long as the re-issued shares do not exceed 20% of total market value, the board can make the reissue decision without holding a shareholder meeting. Firms listed in the Chinese capital market must hold a shareholder vote on the decision to re-issue shares and get approval from the CSRC.

II.4. Research Questions

We are interested in the underlying rationale behind the Chinese government's criteria in choosing firms to be listed on China's stock exchanges and firms' incentives to seek listing on SHSE and SZSE versus HKSE. Our first research question is whether the firms the government chose to be listed on SZSH and SHSZ are better performing, and/or better connected politically than the Red-chips and P-chips. Since it is not feasible to collect data on how the Chinese government approves IPO decisions, our second research question examines firms' incentives to seek listings in Hong Kong. Although the two research questions are not mutually exclusive because the underlying assumption is different, the answers may suggest other avenues for follow-up inquiries to expand our understanding of Chinese firms' incentives beyond those of the biggest and most politically connected firms studied in Hung et al. (2012).

III. Sample and Data

III.1. Sample Selection

Our sample selection begins with all firms listed on the HKSE, SZSE, and SHSE from 1996 to 2013. We collect listings on the HKSE from its official website. The HKSE classifies listed firms into three categories: 1) Mainland enterprises, 2) Hong Kong enterprises, and 3) Others (firms not from China or Hong Kong). Included in Mainland enterprises are H-shares, Red-chips, and P-chips.[14,15] The HKSE provides separate lists of all listed companies, H-shares, and Red-chips.

[14] H-shares refer to shares issued by a mainland Chinese issuer under mainland Chinese law and listed on HKSE (Hong Kong Stock Exchange Fact book 2012). The vast majority of H-share issuers are state-controlled enterprises.

[15] Red-chips refer to companies that (1) have at least 30% shareholding held in aggregate directly by mainland Chinese entities, and/or through companies that are controlled by mainland Chinese entities, or (2) have below 30% but 20% or above of their shares held in aggregate directly by mainland Chinese entities that have an influential presence on the corporate board. Mainland Chinese entities include SOEs controlled by provincial or municipal authorities (HKSE Fact book 2012).

Removing H-shares and Red-chips from the full list leaves a pooled sample of firms that consist of P-chips, Hong Kong firms, and foreign firms with domiciles outside of China and Hong Kong.

To identify P-chips and Hong Kong firms, we first exclude foreign firms from the pooled sample based on their domicile information, and then we adopt the following identification scheme: (1) if a firm's origin of establishment is China (Hong Kong), then it is classified as a P-chip firm (Hong Kong firm), (2) if a firm's origin of establishment is not available, then we refer to its headquarter location. If the headquarter is in China (Hong Kong), then we classify it as a P-chip firm (Hong Kong firm), (3) if a firm's origin of establishment and headquarter location are both unavailable, then we check the source of the majority of its revenues and assets. If the majority of its revenues and assets are generated and located in China (Hong Kong), then we classify it as a P-chip firm (Hong Kong firm), (4) if none of the above information is available, then we refer to the names of the firms' directors. If the majority of the directors' names are spelled in Pinyin (Cantonese phonetics) and written in simplified (traditional) Chinese, then it is classified as a P-chip firm (Hong Kong firm).[16] Panel A of table 1 presents the distribution of P-chip observations added in each step described above.

We then collect data on firms listed on SHSE and SZSE. We classify listings on SZSE into three subgroups based on the specific board on which they are listed (SZSE Main Board, SME Board, and ChiNext). Stock market and financial data are from Thomson One Database and the Chinese Stock Market & Accounting Research (CSMAR) Database. Ownership data are from the Bureau van Dijk Osiris Database. The sample selection is delineated on table 1 panel B.

[Insert Table 1 About Here]

Our initial sample consists of 3,273 firms (78,576 firm-years). After deleting observations with missing financial data and ownership data (see table 1 panel B), our sample consists of 3,119

[16] This identification scheme is compiled based on the classification procedure provided by HKSE. See http://www.hkex.com.hk/eng/listing/listhk/our_markets.htm for more details. Our inferences are unchanged if we exclude firms for which we cannot identify origin of establishment, location of headquarters, and location of majority of assets and revenues (i.e., those for which we would have to rely on the spelling of names).

firms (31,847 firm-years). We then choose the first two post-IPO years (i.e., IPO+1 and IPO+2) of the listed firms and use their two-year averages to capture firm-specific conditions at the time the government and the sample firms made their choices. Our final sample consists of 2,175 firms (4,350 firm-years). Most of the observations we lose are due to missing financial accounting data for the first two post-IPO years. The final sample is described in panel C of table 1, and includes 95 H-shares[17], 46 Red-chips, 340 P-chips, 217 SZSE Main Board firms, 640 SME Board firms, 279 ChiNext firms, and 558 SHSE firms.

We could discover neither a public record of how the Chinese government approves IPO applications nor a record of firms rejected by the government, so we cannot provide direct evidence on whether firms listed on the HKSE were rejected. However, we can infer the rejection rate by manually matching firms that applied for listing in China with firms subsequently listed on HKSE. We obtained a list of Chinese firms that applied for IPOs from July 2004 to September 2015 from the CSRC website.[18] We then identified firms that applied for IPOs in China and later listed on HKSE. This matching process was challenging because many firms changed their names or reorganized themselves, and later were incorporated in a tax haven region such as Cayman Islands. These firms do not have universal unique identifiers. We matched firms by both their English and Chinese names and went to each firm's website to confirm its identity by looking through its financial statement and structuring history.

Of the 1,660 firms that applied for IPOs in China, 46 are listed on HKSE, which constitute approximately 10% of all HKSE-listed Chinese firms. This suggests that at least 3% of the firms rejected by the government from July 2004 to September 2015 restructured and registered to list on the HKSE. Of those 46 firms, five are P-chips and 41 are H-shares without listings in China.[19] This

[17] H-shares are included in sample selection and descriptive statistics (to facilitate comparisons between our sample and the samples used in most prior research) but excluded from main analyses because H-shares are cross-listed in both domestic Chinese stock exchanges and the Hong Kong Stock Exchange. Domestic listings of H-shares are excluded from sample descriptive statistics to avoid double counting.
[18] http://www.csrc.gov.cn/pub/newsite/xxpl/yxpl/
[19] These H-shares are not included in our sample because they are listed after the end of 2013.

evidence suggests that most of the Red-chips and P-chips chose to list on HKSE without applying for domestic listings, providing insights into our second research question.

III.2. Data

The appendix describes the variables we use in our analysis, and table 2 presents summary statistics for those variables. Our selection of variables is largely based on Piotroski (2000). Total assets in millions of U.S. dollars is a proxy for size. As expected, H-shares are considerably larger than Chinese firms listed exclusively in Hong Kong and firms listed exclusively in China. Red-chips are on average about two thirds the size of H-shares and more than three times as large as firms listed on SHSE and SZSE. P-chips are on average larger than the firms listed on SHSE, SZSE, SME Board, and ChiNext. Clearly, the Chinese government does not use size as the dominant criteria by which to approve firms to list in the Chinese capital market.

[Insert Table 2 About Here]

We use ROA as a proxy for profitability. We observe from table 2 panel A that the category of firms with the highest mean ROA (10%) are the P-chips listed on the HKSE, followed by the small firms listed on the SME Board and H-shares (both with 7% ROA on average). We also include Growth of Total Assets in table 2. The fastest growing category of firms is P-chips (31%), followed by H-shares (25%) and firms listed on the SME Board and Red-chips (21%). Growth for SZSE firms, ChiNext firms, and SHSE firms ranges from 16% to 20%.

We split the sample into SOEs and Non-SOEs, and describe the Non-SOEs in panel B.1 of table 2. As in panel A, Non-SOEs listed as H-shares and P-chips on HKSE are the most profitable. In contrast, panels B.2, B.3 and B.4 suggest that SOEs listed on HKSE on average perform slightly better than SOEs listed in China. For instance, in panel B.2, Red-chips' ROA, operating cash flows, current ratio, and margins are all higher than the average of domestically listed SOEs.

Table 3 presents the distribution of firms in each listing category by industry. We note two industry clusters. First, most of the 39 Chinese Agriculture, Forestry and Fishing firms are listed in

China (10 on the SME Board, seven on ChiNext, and 14 on SHSE). Second, the vast majority (68%) of Chinese firms are in the Manufacturing industry (1,406 firms), and around 90% of those are listed in China stock exchanges.

[Insert Table 3 About Here]

Table 4 categorizes sample firms according to their government control. Table 4 panel A presents SOEs relative to Non-SOEs for each listing category, and shows that most H-shares (62%), SZSE firms (91%), and SHSE firms (72%) are SOEs. All Red-chips are SOEs and all P-chips are Non-SOEs, by definition. Most SME Board firms (84%) and ChiNext firms (97%) are Non-SOEs. Table 4 panel B breaks the SOEs down by whether the controlling shareholder is the central government or a provincial government. Most H-shares (71%) and Red-chips (78%) are controlled by a provincial government. Among the SOEs listed in China, most SZSE firms (86%), SME Board firms (82%), and SHSE firms (85%) are controlled by a provincial government, and among the nine ChiNext-listed SOEs, four are controlled by the central government and five by a provincial government.

[Insert Table 4 About Here]

Table 5 presents summary statistics (panel A) and a correlation matrix (panel B) for the variables used in our main analyses. The correlation between SOE status and a listing in China is positive and significant, while the correlation between ROA and a listing in China is negative and significant, consistent with the univariate statistics presented in table 2.

[Insert Table 5 About Here]

IV. Empirical Design and Results

The logistic regressions on table 6, using a reduced set of independent variables because of the multicollinearity, take the following form:

$$CHINA = \alpha + \beta_1 SOE + \beta_2 ROA + \beta_3 SOE*ROA + \beta_4 LN(TOTAL\_ASSETS)$$
$$+ \beta_5 LEVERAGE + IndFE + YearFE + \varepsilon_{it}$$

where

CHINA= 1 if a firm is listed in China and zero if it is listed in Hong Kong;

SOE= 1 if the firm is a SOE, and zero if the firm is a Non-SOE;

ROA= average return on assets for IPO+1 and IPO+2 years. Return on assets is calculated as net income before extraordinary items divided by total assets at the beginning of the fiscal year;

*SOE*ROA*= an interaction term as a proxy for differences in the government's incentives to use profitability as a criterion to approve SOEs for domestic listings since by construction *SOE* is zero for Non-SOEs;

Size (*LN(TOTAL_ASSETS)*) and Leverage (*LEVERAGE*) are included as control variables.[20] Industry fixed effects (*IndFE*) and year fixed effects (*YearFE*) are included but not reported. We do not cluster standard errors when estimating coefficients.

[Insert Table 6 About Here]

SOE is significantly positively associated with being listed in China in model 1 (in which it is included with only controls for size, leverage, industry, and year), in model 3 (in which it is included with profitability and the controls), in model 4 (in which it is included with profitability and an interaction term between government ownership and profitability, and the controls), and in model 5 (in which it is included with profitability, an interaction, controls for size and leverage, and additional controls). We conclude that the presence of government ownership and control is a significant determinant of approval for listing on Chinese exchanges. In terms of economic significance, SOEs are about six times more likely to list in China, compared to Non-SOEs. Moreover, a one percent increase in *ROA* reduces the probability of listing in China by about 8% for Non-SOEs.

[20] In model 5 of table 6, we include *OCF_SCALED*, *CURRENT_RATIO*, *MARGIN* and *GROWTH_TA* as additional variables in the regression. The coefficient estimates for *SOE*, *ROA*, and *SOE*ROA* remain significant with the expected sign.

Profitability, on the other hand, is significantly negatively associated with listing in China. However, when we include the interaction between government ownership and profitability (model 4 and model 5) to capture the potential interaction in the government's incentives to approve the most profitable firms depending on political connectedness, the coefficient on the interaction term is significantly positive. The positive interaction term of approximately the same magnitude as the negative coefficient on *ROA* by itself means that for SOEs (the only firms for which the interaction term takes a non-zero value), profitability has little or no association with gaining government approval to become listed, but for Non-SOEs the association between profitability and being listed in China is still strongly negative. The R^2s for the five models range from 14% to 22%.

Table 7 presents the results of estimating the logistic regressions separately for SOEs and Non-SOEs. Model 1 gives the results for the Non-SOEs and therefore does not contain a proxy for political connectedness (i.e., variable *SOE*). The results show that *ROA* has a significantly negative coefficient, suggesting that Non-SOEs listed on HKSE outperform Non-SOEs listed on SHSE and SZSE. The results of model 1 in table 7 mean that the largest and most profitable Non-SOEs are not listed in China, because they chose a listing on HKSE in preference to a chance at being listed on SHSE or SZSE.

Model 2 gives the results for the pooled sample of SOEs, and fails to find statistical significance for *ROA*. This suggests that for SOEs, profitability is unrelated to their listing destinations. Model 3 gives the results for the subsample of SOEs controlled by provincial governments, and model 4 gives the results for the subsample of SOEs controlled by the central government. The results from models 3 and 4 are completely consistent with those from model 2, in that profitability is not associated with listing in China but size is negatively associated with listing in China. Results including growth in the models (not tabulated) lead to identical conclusions.

(Insert Table 7 About Here)

Finally, table 8 replicates the table 6 regressions over three subperiods, using the years in which SME Board and ChiNext Board were established as cutoff points. The results for the subperiods are largely consistent with the table 6 inferences: SOE as a proxy for political connectedness (*ROA* as a proxy for financial performance) is positively (negatively) associated with a listing in China, and SOE affects the association between performance and listing location.

(Insert Table 8 About Here)

In tables 9 through 11, we explore three explanations for why Red-chips and P-chips prefer to list on HKSE. Our first conjecture is that listing in Hong Kong may facilitate the transfer of personal wealth outside of China for the firm's shareholders. If this is the case, then we should observe a decrease in ownership by individuals or families after listing in Hong Kong, and this reduction should be more salient for P-chips, which are Non-SOEs. In the univariate analysis reported in panel B of table 9, Hong-Kong listed firms, which include both P-chips and Red-chips, experience a significant decrease in individual ownership, while China-listed firms experience a general increase in individual ownership after listing, consistent with the wealth transfer hypothesis. In panel C, we first regress individual ownership on *HK*, an indicator variable for Red-chips and P-chips; *POST*, an indicator variable for post-IPO years; *HK*POST*, an interaction term between *HK* and *POST*; and control variables. The coefficient estimate for the interaction term is negative and significant in the first two models, suggesting a significant decrease in individual ownership after a Hong Kong listing, compared to a listing in China. This is consistent with shareholders of the firm reducing their holdings and converting shares to cash after the firm's IPO in Hong Kong. We then replace *HK* with *PCHIP*, an indicator variable for P-chip firms only in models 3 and 4 and find similar reductions in individual ownership. The coefficient for the interaction term in model 4 suggests P-chips experience a sharper decrease of individual ownership by about 2%, compared to Non-SOEs listed in China. We do not find significant results when regressing individual ownership on *REDCHIP*, an indicator variable for Red-chip firms only in models 5 and 6, which suggests the wealth transfer effect is concentrated in P-chip firms. Overall, results in table 9 provide support for the wealth transfer hypothesis that a Hong Kong listing is preferable because it facilitates the transfer of personal wealth overseas.

(Insert Table 9 About Here)

The second explanation that we examine is whether Red-chips and P-chips use a listing in Hong Kong as a bonding mechanism to gain better access to the debt market. We first analyze the change in bonds payable (scaled by total assets) after IPOs for China and Hong Kong-listed firms in table 10 panel A. Univariate tests in panel B show that there is a significant increase in bonds for firms listed on both exchanges. In panel C, we assess the relative magnitude of the increase in bonds for firms listed on China versus Hong Kong by regressing bonds payable on *HK*, *POST2*, an interaction term between *HK* and *POST2*, and control variables. We find positive and significant coefficient estimates for the interaction term in both models 1 and 2, suggesting Red-chips and P-chips issue more bonds than do China-listed firms after their IPOs. Specifically, the increase in bonds as a percentage of total assets for P-chips and Red-chips is approximately 0.3% more than that for firms listed on SZSE and SHSE. In models 3 and 4, we assess the increase in bonds payable for P-chips only. We find that when compared with all firms listed in China, P-chips experience a significantly larger increase in bonds payable (model 3). However, this increase is not significantly different from that experienced by China-listed Non-SOEs (model 4), suggesting limited improvement in access to the bond market for P-chips. We then analyze the increase in bonds payable for Red-chips in models 5 and 6. The significant coefficient for the interaction term in model 6 indicates Red-chips benefit from listing in Hong Kong by having improved access to the bond market. Overall, table 10 supports our conjecture that firms choose the HKSE to gain better access to debt financing.

(Insert Table 10 About Here)

We test whether a Hong Kong listing provides firms with more efficient stock pricing in table 11. We regress annual stock price synchronicity for each firm on an indicator variable for the Hong Kong stock market (*HK*) and a set of control variables in model 1 and 2. We follow Morck, Yeung, and Yu (2000) and Chan and Hameed (2006) in the calculation of stock synchronicity.[21] The coefficient estimate for *HK* is negative and significant for both models, consistent with Red-chips and P-chips stock prices reflecting more firm-specific information relative to China-listed firms. Separate regressions for P-chips (models 3 and 4) and Red-chips (models 5 and 6) produce similar results. Overall results in table 11 provide support for our hypothesis that Red-chips and P-chips list in Hong Kong to seek more efficient stock pricing.

(Insert Table 11 About Here)

Finally, because the independent variables are highly correlated (see table 5 panel B), we factor-analyze the data in table 12 as a diagnostic test in an attempt to exploit the correlations and reduce the dimensionality of the data. Panel A of table 12 gives the details of the factor analysis.

We include all relevant variables from table 2 (*SOE, LN(TOTAL_ASSETS), LEVERAGE, ROA, OCF_SCALED, CURRENT_ RATIO, MARGIN, GROWTH_TA*) to compute the factors that capture political connectedness and profitability. We retain the first principal component as the political connectedness factor, *POLICON_FACTOR*. *POLICON_FACTOR* captures 31% of the variance in the underlying variables. We retain the second principal component as the performance factor, *PERFORM_FACTOR*, which captures 22% of the variance in the underlying variables.

Our next analyses use the factors from panel A to re-estimate the regressions in table 6. We estimate the following logistic regression model and report the results in table 12 panel B:

$$CHINA = \alpha + \beta_1 POLICON\_FACTOR + \beta_2 PERFORM\_FACTOR$$
$$+\beta_3 POLICON\_FACTOR*PERFORM\_FACTOR + IndFE + YearFE + \varepsilon_{it}$$

[21]Morck, et al. (2000) and Chan and Hameed (2005) capture the intuition that synchronicity is the extent to which market-wide variation explains more of a firm's stock return variation than do firm fundamentals using the R^2 of the market model. To make the synchronicity measure suitable as a dependent variable, both papers use the log transform of the regression R^2, i.e., $\ln [R^2/(1- R^2)]$.

where the variables are as defined previously. Models 1 through 4 focus on the association between being listed in China and a firm's political connectedness (model 1), financial performance (model 2), both political connectedness and financial performance (model 3), and both political connectedness and financial performance while controlling for the possibility that the Chinese government uses different criteria for SOEs than for Non-SOEs by including an interaction term between *POLICON_FACTOR* and *PERFORM_FACTOR* (model 4).

The results on table 12 panel B are consistent with the results on table 6, in that the coefficient on political connectedness, *POLICON_FACTOR*, is positive and significant in models 1, 3 and 4. The coefficient on *PERFORM_ FACTOR* is significantly negative, which means that more profitable firms are not listed in China, either because the government does not choose them or because they prefer listings in Hong Kong even given the subterfuge in which they must engage to gain HKSE listings. Model 4 includes the interaction between political connectedness and performance to capture the incremental effect of performance on the probability of listing in China for politically connected firms. The coefficient on the interaction term is positive and significant, and roughly the size of the negative coefficient on *PERFORM_FACTOR*, meaning that for highly politically connected firms, performance is unrelated to the listing destination. Table 12 panel C reports on partitioning observations by *POLICON_FACTOR* below and above the median value. Consistent with the table 7 results, the significantly negative coefficient on *PERFORM_FACTOR* for those firms with *POLICON_FACTOR* below the median and the insignificant coefficient on *PERFORM_FACTOR* for those firms with *POLICON_FACTOR* above the median suggest that political connectedness affects the strength of association between performance and listing destination. Table 12 panel D replicates the subperiod analyses with individual variables from table 8 and finds consistent results that while political connectedness is negatively related to a listing in

China, the association between financial performance and a domestic listing depends on the level of government control.[22]

[Insert Table 12 About Here]

V. Summary, Conclusions, and Suggestions for Future Research

Using a large and comprehensive sample of Chinese firms, we examined the differences between those firms which sought and gained state-sanctioned approval for their listings and those firms that did not gain (and apparently did not seek) government listing approval. We sought to understand the choice of the Chinese government to grant approval to list on domestic exchanges to some firms and not others, and Chinese firms' choices to apply for government approval to list in China or abroad. We compared firms listed on the SZSE (and its constituent segments the SME Board and ChiNext) and on the SHSE, with the Red-chips and P-chips organized as offshore corporations and listed on the HKSE. We performed the comparisons separately for the SOE and Non-SOE subsamples.

Regression results for the full sample consistently show that the firms with the strongest political connections are listed on SHSE and SZSE, and that the most profitable Chinese firms are the Red-chips and P-chips. These results suggest that political connections are a factor in the Chinese government's decisions to grant domestic listing approval and in firms' choices to seek government approval. Coefficients on the performance proxy in combination with an interaction between political connectedness and performance indicate that for the SOEs, profitability is

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[22] Our results are largely insensitive to the form of the factor analysis. In addition to the factor analysis reported in table 12, with the data pooled to estimate our two factors, we also included subsets of the data in separate factor analyses for the political connectedness and performance factors, with similar results for the logistic regressions. Our primary results are also robust to using SOE and a performance factor derived from factor analyzing the remaining variables. Finally replicating the factor analyses with varimax rotations also supported our inferences. The logistic regression result on political connectedness factor is inconsistent with our main analysis in table 12 for the factor analysis with all variables and with the varimax rotation. We believe the factor analysis with the varimax rotation does not properly capture the political connectedness dimension of the data. While it is tempting to use more data to capture underlying constructs even when the data is collinear, there is no version of the factor analysis in which the factor loadings were intuitively plausible and separated the explanatory power of the data into two precise factors. Since the various factor analyses all produced similar results in the logistic regressions with the underlying variables, they increase our confidence in our primary results but do not constitute a better way to approach testing the hypotheses.

unrelated to the probability of being listed in China. The results are complicated by the multicollinearity among the explanatory variables, but are robust across specifications, including an analysis that uses the principal factors underlying the explanatory variables, and consistent with the univariate results. In addition, we explore three potential explanations for why Chinese firms may prefer to be listed in Hong Kong: (a) to facilitate personal wealth transfers out of China; (b) to increase access to debt capital; and (c) to facilitate more efficient stock price formation. We find that all three of these explanations have statistical support.

Although we are unable to empirically separate the Chinese government's decisions from firms' decisions, these results are at least suggestive that the largest and most profitable Chinese firms that are unconstrained by their relationships with central and provincial government prefer to be listed in the Hong Kong capital market. Because our sample is larger and more representative of the population of publicly traded Chinese firms than samples used in prior research (especially with our inclusion of SOEs), these results contribute to our understanding of the Chinese capital market and Chinese firms' listing decisions. In addition, by studying Chinese firms' state-sanctioned vs. non-state-sanctioned listings, we contribute to an understanding of the Chinese government's regulation of the capital market.

Researchers with better access to data generated by the government's approval process for IPOs (including which firms applied and were rejected as well as the firms that were granted approval and became listed on SHSE and SZSE) might profitably examine the causes and consequences of the government's choices to grant IPO approval. In addition, future research might examine the long-run performance of the SHSE and SZSE-listed firms with that of the Red-chips and P-chips to better understand the causes and consequences of firms' listing choices. Finally, future research could deepen our understanding of Chinese firms' listing choices by studying Chinese firms listed in other capital markets (such as the US and Singapore), and by using fieldwork and other qualitative methods.

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Appendix Variable definitions

Variable	Description
TOTAL_ASSETS	Average total assets in millions of US dollars for IPO+1 and IPO+2 years
LN(TOTAL_ASSETS)	Average natural log of total assets in millions of US dollars for IPO+1 and IPO+2 years
ROA	Average return on assets for IPO+1 and IPO+2 years. Return on assets is calculated as net income before extraordinary items divided by total assets at the beginning of the fiscal year
OCF_SCALED	Average cash flow from operating activities for IPO+1 and IPO+2 years. Cash flow from operating activities are scaled by average total assets at the end of the fiscal year
LEVERAGE	Average leverage ratio for IPO+1 and IPO+2 years. Leverage ratio is calculated as total liabilities divided by total assets at fiscal year-end
CURRENT_ RATIO	Average current ratio for IPO+1 and IPO+2 years. Current ratio is calculated as current assets divided by current liabilities at fiscal year-end
MARGIN	Average gross margin for IPO+1 and IPO+2 years. Gross margin is calculated as (revenue-cost of revenue)/revenue for the fiscal year
GROWTH_TA	Average growth rate of *TOTAL_ASSETS* for IPO+1 and IPO+2 years
SOE	An indicator variable coded as follows: (1) any firms in the categories of P-chips will automatically have *SOE*=0, any firms in the category of Red-chips will automatically have *SOE*=1, these decisions are made based on the definition of these firms; (2) any firms with *CENTRAL_SOE*=1 will automatically have *SOE*=1; (3) for the remaining firms, we obtain ownership data from China Center for Economic Research (CCER) database where state-owned firms are identified.
CENTRAL_SOE	We manually code the indicator variable *CENTRAL_SOE* based on the list of central SOEs provided by the State-Owned Assets Supervision Commission of the State Council (SASAC), the People's Republic of China. Please see (http://www.sasac.gov.cn/n2963340/n2971121/n4956567/index.html) for the list. There are 117 enterprises on this list, but given the pyramid structure of Chinese SOEs, each enterprise may own several listed firms. We classify all firms fully owned by the enterprises on the list as central SOE, i.e., *CENTRAL_SOE*=1.
CHINA	An indicator variable equal to 1 if the firm share is listed on the two domestic exchanges in mainland China (i.e., SZSE and SHSE), equal to 0 if the firm is listed on the Hong Kong Stock Exchange.
%IND_OWN	The percentage of individual ownership for each firm at year end. Individual ownership is defined as ownership controlled by individuals or families, according to Bureau van Dijk Osiris database.
HK	An indicator variable equal to 1 for Red-chip and P-chip observations, and 0 otherwise.
PCHIP	An indicator variable equal to 1 for P-chip observations, and 0 otherwise.
REDCHIP	An indicator variable equal to 1 for Red-chip observations, and 0 otherwise.
POST	An indicator variable equal to 1 for all observations in the IPO+2 and IPO+3 years, equal to 0 for all observations in the IPO and IPO+1 years.
LN(TOTAL_ASSETS)_YR	Natural log of total assets in millions of US dollars for year t.
ROA_YR	Return on assets for year t.
BOND_TA	The ratio of bonds payable to total assets in year t. Bonds payable data for firms listed in mainland China are from CSMAR, for firms listed in Hong Kong are hand collected from their financial filings.
POST2	An indicator variable equal to 1 for all observations in the IPO+1 year, and 0 for all observations in the IPO year.
RSQ	We follow Morck et al. (2000) and Chan and Hameed (2006) in the calculation of stock synchronicity. Specifically, for each firm-year, we estimate the market model by regressing daily firm return on daily market return using all daily return observations of the year. RSQ is the R^2 from estimating the market model for each firm in each year.
SYNC	A measure of stock synchronicity calculated for each firm-year. SYNC is the log transformation of RSQ, and is calculated as log(RSQ/(1-RSQ)). A higher *SYNC* indicates that the firm return is highly correlated with the market return.
LEVERAGE_YR	Leverage ratio for year t.

Table 1 Sample selection procedure

Panel A: Steps to develop initial P-chip firm sample

Step	Procedure	Number of P-chip firms indentified
1	Number of firms that were established in mainland China	187
2	Number of firms that have headquarters located in mainland China	37
3	Number of firms whose majority of assets are located in mainland China	82
4	Number of firms whose majority of revenue is from mainland China	4
5	Number of firms whose chairman's name is spelled in simplified Pinyin	4
6	Number of firms whose majority of board of directors' names are spelled in simplied Pinyin	2
7	Number of firms whose data are no longer available for classification	24
	Total P-chip observations used in main analyses	340

Panel B: Full sample

Sample selection procedure	# Firm-years	#Firms	H-shares	Red-chips	P-chips	SZ Main	SME	ChiNext	SH Main
HKSE-listed Chinese firms, Shenzhen Exchange-listed firms and Shanghai Exchange-listed firms from 1996 to 2013	78,576	3,273	151	105	475	505	701	355	981
Sample after deleting missing TOTAL_ASSETS	36,685	3,180	146	105	469	466	701	355	938
Sample after deleting missing ROA	33,476	3,180	146	105	469	466	701	355	938
Sample after deleting missing OCF_SCALED	33,067	3,180	146	105	469	466	701	355	938
Sample after deleting missing LEVERAGE	33,063	3,180	146	105	469	466	701	355	938
Sample after deleting missing CURRENT_RATIO	32,547	3,128	131	103	468	460	698	355	913
Sample after deleting missing MARGIN	32,217	3,119	129	99	465	460	698	355	913
Sample after deleting missing GROWTH_TA	32,217	3,119	129	99	465	460	698	355	913
Sample after deleting missing ownership data	31,847	3,119	129	99	465	460	698	355	913
Sample after selecting the first two post-IPO years	4,350	2,175	95	46	340	217	640	279	558

Panel C: Composition of full sample

	Hong Kong Stock Exchange				Mainland Stock Exchanges					
	Mainland Enterprises			*Subtotal*	SZSE			SHSE	*Subtotal*	Total[2]
	H-shares[1]	Red-chips	P-chips		SZ Main	SME	ChiNext	SH Main		
#Firm-years	*190*	92	680	*962*	434	1,280	558	1,116	*3,388*	4,160
#Firms	*95*	46	340	*481*	217	640	279	558	*1,694*	2,080

This table describes the sample selection procedure. All variables are defined in the appendix.

[1]H-shares are included in sample descriptive statistics but excluded from main analyses because H-shares are cross listed in both domestic Chinese stock exchanges and the Hong Kong Stock Exchange. Domestic listings of H-shares are excluded from sample descriptive statistics to avoid double counting.

[2]H-shares are excluded from the calculation of the Total column.

Table 2 Summary statistics

Panel A: Summary statistics by category of firms [firm-level observations]								
	Hong Kong Stock Exchange			Mainland Stock Exchanges				Total[2]
Variables	*H-shares[1]*	Red-chips	P-chips	SZ Main	SME	ChiNext	SH Main	
SOE	*0.62*	1.00	0.00	0.91	0.16	0.03	0.72	0.36
TOTAL_ASSETS (mils of USD)	*4,544.87*	3,286.03	918.63	555.77	309.61	207.61	835.23	627.99
LN(TOTAL_ASSETS)	*7.00*	6.46	5.64	5.39	5.40	5.17	5.43	5.44
ROA	*0.07*	0.06	0.10	0.05	0.07	0.06	0.05	0.07
OCF_SCALED	*0.07*	0.07	0.07	0.04	0.04	0.02	0.05	0.05
LEVERAGE	*0.48*	0.46	0.39	0.44	0.35	0.22	0.44	0.38
CURRENT_RATIO	*2.26*	3.04	3.18	2.12	3.76	6.80	2.00	3.42
MARGIN	*0.31*	0.33	0.35	0.25	0.28	0.38	0.26	0.30
GROWTH_TA	*0.25*	0.21	0.31	0.20	0.21	0.16	0.20	0.22
Number of obs	*95*	*46*	*340*	*217*	*640*	*279*	*558*	*2,080*

Panel B: By category of firms and SOE status [firm-level observations]								
Panel B.1: Non-SOEs: ***SOE=0***								
	Hong Kong Stock Exchange			Mainland Stock Exchanges				Total[2]
Variables	*H-shares[1]*	Red-chips	P-chips	SZ Main	SME	ChiNext	SH Main	
SOE	*0.00*		0.00	0.00	0.00	0.00	0.00	0.00
TOTAL_ASSETS (mils of USD)	*1,838.48*		918.63	145.52	305.32	208.02	691.60	485.75
LN(TOTAL_ASSETS)	*6.31*		5.64	4.71	5.40	5.17	5.41	5.41
ROA	*0.10*		0.10	0.07	0.07	0.06	0.05	0.07
OCF_SCALED	*0.08*	n.a.	0.07	0.04	0.04	0.02	0.05	0.04
LEVERAGE	*0.45*		0.39	0.39	0.34	0.22	0.43	0.34
CURRENT_RATIO	*2.20*		3.18	2.35	3.93	6.75	2.14	4.08
MARGIN	*0.34*		0.35	0.29	0.28	0.38	0.27	0.32
GROWTH_TA	*0.32*		0.31	0.30	0.21	0.16	0.20	0.23
Number of obs	*36*	*n.a.*	*340*	*19*	*540*	*270*	*154*	*1,323*

Table 2 Summary statistics (continued)

Panel B: By category of firms and SOE status [firm-level observations]

Panel B.2: All SOEs: ***SOE=1***

	Hong Kong Stock Exchange			Mainland Stock Exchanges				Total[2]
Variables	*H-shares*[1]	Red-chips	P-chips	SZ Main	SME	ChiNext	SH Main	
SOE	*1.00*	1.00		1.00	1.00	1.00	1.00	1.00
TOTAL_ASSETS (mils of USD)	*6,196.23*	3,286.03		595.14	332.77	195.27	889.99	876.60
LN(TOTAL_ASSETS)	*7.42*	6.46		5.45	5.39	5.20	5.44	5.50
ROA	*0.05*	0.06		0.05	0.06	0.08	0.05	0.05
OCF_SCALED	*0.06*	0.07	n.a.	0.04	0.07	0.03	0.05	0.05
LEVERAGE	*0.50*	0.46		0.45	0.41	0.21	0.45	0.44
CURRENT_RATIO	*2.29*	3.04		2.10	2.86	8.19	1.96	2.25
MARGIN	*0.29*	0.33		0.24	0.27	0.34	0.26	0.26
GROWTH_TA	*0.20*	0.21		0.19	0.21	0.17	0.20	0.20
Number of obs	*59*	*46*	n.a.	*198*	*100*	*9*	*404*	*757*

Panel B: By category of firms and SOE status [firm-level observations]

Panel B.3: Provincial SOEs: ***SOE=1 and CENTRAL_SOE=0***

	Hong Kong Stock Exchange			Mainland Stock Exchanges				Total[2]
Variables	*H-shares*[1]	Red-chips	P-chips	SZ Main	SME	ChiNext	SH Main	
SOE	*1.00*	1.00		1.00	1.00	1.00	1.00	1.00
TOTAL_ASSETS (mils of USD)	*2,229.07*	2,472.28		600.10	338.91	212.07	709.26	728.07
LN(TOTAL_ASSETS)	*6.71*	6.22		5.43	5.42	5.29	5.38	5.45
ROA	*0.06*	0.06		0.05	0.06	0.09	0.05	0.05
OCF_SCALED	*0.05*	0.07	n.a.	0.04	0.07	0.06	0.05	0.05
LEVERAGE	*0.42*	0.44		0.45	0.42	0.21	0.45	0.44
CURRENT_RATIO	*2.70*	3.45		2.09	2.93	6.61	1.98	2.25
MARGIN	*0.33*	0.30		0.25	0.27	0.33	0.26	0.26
GROWTH_TA	*0.15*	0.19		0.18	0.20	0.18	0.19	0.19
Number of obs	*33*	*36*	*n.a.*	*171*	*82*	*5*	*345*	*639*

Table 2 Summary statistics (continued)

Panel B: By category of firms and SOE status [firm-level observations]

Panel B.4: Central SOEs: ***SOE=1 and CENTRAL_SOE=1***

	Hong Kong Stock Exchange			Mainland Stock Exchanges				
Variables	*H-shares*[1]	Red-chips	P-chips	SZ Main	SME	ChiNext	SH Main	Total[2]
SOE	*1.00*	1.00		1.00	1.00	1.00	1.00	1.00
TOTAL_ASSETS (mils of USD)	*11,231.46*	6,208.33		563.75	304.82	174.27	1,946.75	1,680.90
LN(TOTAL_ASSETS)	*8.32*	7.33		5.54	5.29	5.08	5.83	5.78
ROA	*0.05*	0.07		0.06	0.08	0.06	0.06	0.06
OCF_SCALED	*0.08*	0.07	n.a.	0.04	0.08	-0.02	0.06	0.06
LEVERAGE	*0.61*	0.52		0.45	0.39	0.20	0.47	0.45
CURRENT_RATIO	*1.77*	1.58		2.13	2.56	10.16	1.85	2.28
MARGIN	*0.25*	0.44		0.21	0.25	0.35	0.23	0.25
GROWTH_TA	*0.26*	0.27		0.21	0.23	0.16	0.23	0.22
Number of obs	*26*	*10*	*n.a.*	*27*	*18*	*4*	*59*	*118*

This table presents summary statistics (sample mean) for our main variables. All variables are defined in the appendix. Observations are at the firm level.

[1]H-shares are included in sample descriptive statistics but excluded from main analyses because H-shares are cross listed in both domestic Chinese stock exchanges and the Hong Kong Stock Exchange. Domestic listings of H-shares are excluded from sample descriptive statistics to avoid double counting.

[2]H-shares are excluded from the calculation of means in the Total column.

Table 3 Industry distribution of firms (SIC Primary Industry Division)

	Hong Kong Stock Exchange			Mainland Stock Exchanges				
	Mainland Enterprises			SZSE			SHSE	Total[2]
Industry	*H-shares*[1]	Red-chips	P-chips	SZ Main	SME	ChiNext	SH Main	
Agriculture, Forestry and Fishing	*0*	1	4	3	10	7	14	39
Construction	*8*	6	36	15	24	6	45	132
Finance, Insurance and Real Estate	*1*	3	12	7	3	1	8	34
Manufacturing	*43*	14	206	128	581	207	333	1,406
Mining	*9*	5	16	13	7	3	30	74
Retail Trade	*3*	1	22	11	15	1	15	65
Services	*7*	2	22	4	38	47	20	133
Transportation, Communications, Electric, Gas and Sanitary Services	*20*	11	11	26	12	4	64	128
Wholesale Trade	*4*	3	11	10	13	3	29	69
Total	*95*	46	340	217	640	279	558	2,080

This table presents the industry distribution of our sample of firms. Industry classification is based on SIC primary industry division. Observations are at the firm level.
[1]H-shares are included in sample descriptive statistics but excluded from main analyses because H-shares are cross listed in both domestic Chinese stock exchanges and the Hong Kong Stock Exchange. Domestic listings of H-shares are excluded from sample descriptive statistics to avoid double counting.
[2]H-shares are excluded from the calculation of the Total column.

Table 4 Distribution of variables *SOE* and *CENTRAL_SOE* by category of firms

Panel A: Distribution of variable ***SOE*** by category of firms

	Hong Kong Stock Exchange			Mainland Stock Exchanges				
	Mainland Enterprises			SZSE			SHSE	Total[2]
Variables	*H-share*[1]	Red-chips	P-chips	SZ Main	SME	ChiNext	SH Main	
SOE	*59*	46	0	198	100	9	404	757
Non-SOE	*36*	0	340	19	540	270	154	1,323
Total	*95*	46	340	217	640	279	558	2,080

Panel B: Distribution of variable ***CENTRAL_SOE*** by category of firms

	Hong Kong Stock Exchange			Mainland Stock Exchanges				
	Mainland Enterprises			SZSE			SHSE	Total[2]
Variables	*H-share*[1]	Red-chips	P-chips	SZ Main	SME	ChiNext	SH Main	
Central SOE	*26*	10	0	27	18	4	59	118
Provincial SOE	*67*	36	0	171	82	5	345	639
Total SOE	*95*	46	0	198	100	9	404	757

This table presents the distribution of the variables ***SOE*** and ***CENTRAL_SOE*** by category of firms. Observations are at the firm level. Panel A describes the distribution of variable SOE. Panel B describes the distribution of variable ***CENTRAL_SOE***. The coding schemes for both variables are described in the Appendix.

[1]H-shares are included in sample descriptive statistics but excluded from main analyses because H-shares are cross listed in both domestic Chinese stock exchanges and the Hong Kong Stock Exchange. Domestic listings of H-shares are excluded from sample descriptive statistics to avoid double counting.

[2]H-shares are excluded from the calculation of the Total column.

Table 5 Descriptive statistics for regression analyses

Panel A: Summary statistics for variables used in the main regression analyses

Variable	Number of obs	Mean	Median	25th Pctl	75th Pctl
CHINA	2,080	0.81	1.00	1.00	1.00
LN(TOTAL_ASSETS)	2,080	5.44	5.32	4.76	5.98
LEVERAGE	2,080	0.38	0.37	0.23	0.52
ROA	2,080	0.07	0.06	0.03	0.09
OCF_SCALED	2,080	0.05	0.05	0.00	0.09
CURRENT_RATIO	2,080	3.42	2.07	1.38	3.76
MARGIN	2,080	0.30	0.26	0.17	0.38
GROWTH_TA	2,080	0.22	0.17	0.08	0.28
SOE	2,080	0.36	0.00	0.00	1.00

This table presents summary statistics on variables used in the regression analyses. All variables are defined in the appendix.

Panel B: Correlation matrix [N=2,080]

	Variable	1	2	3	4	5	6	7	8	9
1	CHINA	-	-0.100*	-0.048*	-0.185*	-0.136*	-0.009	-0.127*	-0.129*	0.243*
2	LN(TOTAL_ASSETS)	-0.141*	-	0.294*	0.062*	0.040*	-0.220*	-0.076*	0.201*	0.022
3	LEVERAGE	-0.058*	0.337*	-	-0.291*	-0.158*	-0.860*	-0.442*	0.367*	0.282*
4	ROA	-0.229*	0.066*	-0.277*	-	0.486*	0.269*	0.456*	0.411*	-0.159*
5	OCF_SCALED	-0.126*	0.020	-0.178*	0.516*	-	-0.010	0.238*	0.031	0.052*
6	CURRENT_RATIO	0.031	-0.149*	-0.664*	0.147*	0.035	-	0.421*	-0.264*	-0.301*
7	MARGIN	-0.157*	-0.030	-0.419*	0.410*	0.249*	0.372*	-	0.031	-0.167*
8	GROWTH_TA	-0.180*	0.204*	0.326*	0.443*	0.001	-0.190*	0.032	-	-0.068*
9	SOE	0.243*	0.043*	0.272*	-0.151*	0.054*	-0.231*	-0.161*	-0.071*	-

This table presents the Pearson and Spearman correlation coefficients of the variables used in the main regression analysis. Pearson correlations are reported on the left bottom corner and Spearman correlations are reported on the right top corner. * denotes significance level at less than 10%. H-shares and corresponding domestic shares are excluded. All variables are defined in the appendix.

Table 6 Determinants of listing destinations

Dependent variable = CHINA					
	Model 1	Model 2	Model 3	Model 4	Model 5
SOE	2.69***		2.53***	1.98***	1.97***
	(12.03)		(11.25)	(7.65)	(7.53)
ROA		-8.84***	-7.03***	-8.13***	-6.03***
		(-8.48)	(-6.52)	(-7.10)	(-3.51)
SOE*ROA				9.32***	9.62***
				(3.44)	(3.56)
LN(TOTAL_ASSETS)	-0.55***	-0.20***	-0.43***	-0.44***	-0.40***
	(-7.39)	(-2.87)	(-5.48)	(-5.66)	(-5.03)
LEVERAGE	0.69*	-0.65	-0.44	-0.40	-1.11*
	(1.67)	(-1.50)	(-0.95)	(-0.87)	(-1.71)
OCF_SCALED					-2.47**
					(-2.20)
CURRENT_RATIO					0.02
					(0.63)
MARGIN					-1.55***
					(-3.41)
GROWTH_TA					0.22
					(0.53)
Intercept	3.95***	3.37***	4.14***	4.32***	4.55***
	(7.48)	(6.61)	(7.61)	(7.84)	(7.53)
Number of obs	2,080	2,080	2,080	2,080	2,080
R-Square	0.19	0.14	0.20	0.21	0.22
Industry FE	YES	YES	YES	YES	YES
Year FE	YES	YES	YES	YES	YES
Test H_0: ROA+SOE*ROA=0				P-value = 0.65	P-value = 0.22

This table presents the estimation from a series of logistic regressions with ***CHINA*** as the dependent variable. All variables are defined in the appendix. Industry and year fixed effects are included but not reported. All models exclude H-shares and their corresponding domestic shares. ***, **, and * indicate significance at the 1%, 5%, and 10% levels, respectively, using a two-tailed test. Z-statistics are reported in the parenthesis. We do not cluster standard errors when estimating coefficients.

Table 7 Diagnostics:
Determinants of listing destinations - Separate regressions for SOEs and Non-SOEs

Dependent variable = CHINA				
	Model 1	Model 2	Model 3	Model 4
	Non-SOEs	SOEs	Provincial SOEs	Central SOEs
ROA	-8.14***	-0.50	1.27	-5.34
	(-6.89)	(-0.16)	(0.34)	(-0.72)
LN(TOTAL_ASSETS)	-0.35***	-0.73***	-0.71***	-0.73***
	(-3.83)	(-4.73)	(-4.26)	(-2.82)
LEVERAGE	-0.81	1.91*	1.52	-0.87
	(-1.59)	(1.77)	(1.27)	(-0.33)
Intercept	4.01***	5.86***	5.72***	7.83***
	(6.36)	(4.51)	(4.65)	(3.94)
Number of obs	1,323	757	639	118
R-Square	0.20	0.10	0.04	0.10
Industry FE	YES	YES	YES	NO
Year FE	YES	YES	NO	NO

This table presents the estimation from a series of logistic regressions with ***CHINA*** as the dependent variable. All variables are defined in the appendix. All models exclude H-shares and their corresponding domestic shares. ***, **, and * indicate significance at the 1%, 5%, and 10% levels, respectively, using a two-tailed test. Z-statistics are reported in the parenthesis. We do not cluster standard errors when estimating coefficients. We exclude year fixed effects in model 3 and year/industry fixed effects in model 4 to avoid complete separation of data points.

Table 8 Diagnostics:
Determinants of listing destinations – Separate regressions for different sample periods

Dependent variable = CHINA			
	Model 1	Model 2	Model 3
	Pre-SME (Prior to 2004)	Post-SME and Pre-ChiNext (2004-2008)	Post-ChiNext (After 2008)
SOE	2.12***	2.23***	0.91
	(5.84)	(4.47)	(1.55)
ROA	-7.78***	-1.09	-11.79***
	(-3.87)	(-0.50)	(-5.64)
SOE*ROA	10.38**	2.65	14.53**
	(2.54)	(0.55)	(2.11)
LN(TOTAL_ASSETS)	0.20	-1.00***	-0.22
	(1.23)	(-6.91)	(-1.51)
LEVERAGE	1.04	4.20***	-3.93***
	(1.08)	(4.67)	(-4.94)
Intercept	-0.79	5.63***	4.54***
	(-0.75)	(4.30)	(4.80)
Number of obs	735	497	848
R-Square	0.22	0.32	0.19
Industry FE	YES	YES	YES
Year FE	YES	YES	YES

This table presents the estimation from a series of logistic regressions with ***CHINA*** as the dependent variable over different sample periods. All variables are defined in the appendix. Industry and year fixed effects are included but not reported. All models exclude H-shares and their corresponding domestic shares. ***, **, and * indicate significance at the 1%, 5%, and 10% levels, respectively, using a two-tailed test. Z-statistics are reported in the parenthesis. We do not cluster standard errors when estimating coefficients. We do not cluster standard errors when estimating coefficients.

Table 9 Regression analyses on the change in individual ownership for Chinese firms listed in mainland China and Hong Kong stock exchanges in post-IPO years

Panel A: Descriptive Statistics

Variable	Number of firm-year obs	Mean	Median	25th Pctl	75th Pctl
%IND_OWN	4,896	2.11	0.00	0.00	0.71
HK	4,896	0.22	0.00	0.00	0.00
PCHIP	4,896	0.20	0.00	0.00	0.00
REDCHIP	4,896	0.02	0.00	0.00	0.00
POST	4,896	0.50	0.50	0.00	1.00
LN(TOTAL_ASSETS)_YR	4,558	5.64	5.46	4.91	6.14
ROA_YR	4,558	0.10	0.08	0.04	0.13

Panel B: Univariate analysis

Mean of variable %IND_OWN	(1)	(2)	(3)	(4)
	Number of firms	POST=0	POST=1	Diff = (2) - (1)
Mainland China-listed firms	955	1.58	3.27	1.68***
Mainland China-listed Non-SOEs	816	1.79	3.70	1.91***
Mainland China-listed SOEs	139	0.37	0.76	0.38*
Hong Kong-listed firms	269	1.22	0.77	-0.45*
P-chips	250	1.28	0.82	-0.47*
Red-chips	19	0.42	0.12	-0.30

Table 9 Regression analyses on the change in individual ownership for Chinese firms listed in mainland China and Hong Kong stock exchanges in post-IPO years (continued)

Panel C: Multivariate regressions

Dependent variable = %IND_OWN						
	All firms		Non-SOEs: P-chips		SOEs: Red-chips	
	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
HK	-0.05	-0.05				
	(-0.15)	(-0.16)				
HK*POST	-2.14***	-1.80***				
	(-4.63)	(-3.91)				
PCHIP			-0.04	-0.34		
			(-0.11)	(-0.89)		
PCHIP*POST			-1.82***	-2.08***		
			(-3.80)	(-4.06)		
REDCHIP					0.20	-0.04
					(0.17)	(-0.08)
REDCHIP*POST					-1.71	-0.58
					(-1.10)	(-0.80)
POST	1.68***	1.48***	1.48***	1.64***	1.68***	0.52**
	(7.78)	(6.59)	(6.53)	(6.34)	(6.88)	(2.03)
LN(TOTAL_ASSETS)_YR		-0.12	-0.11	0.02	-0.14	-0.07
		(-1.14)	(-1.07)	(0.16)	(-1.16)	(-0.62)
ROA_YR		0.50	0.49	0.27	3.12**	3.50**
		(0.77)	(0.75)	(0.39)	(2.31)	(2.44)
Intercept	0.88*	1.45**	1.39*	0.96	1.61*	0.43
	(1.93)	(1.94)	(1.81)	(1.07)	(1.66)	(0.51)
Number of obs	4,896	4,558	4,483	3,936	3,609	622
R-Square	0.03	0.02	0.02	0.02	0.03	0.03
Industry FE	YES	YES	YES	YES	YES	YES
Year FE	YES	YES	YES	YES	YES	YES
Control firms	All mainland-China listed firms	All mainland-China listed firms	All mainland-China listed firms	All mainland-China listed Non-SOEs	All mainland-China listed firms	All mainland-China listed SOEs

This table presents univariate and multivariate regression analyses on the change in individual ownership for Chinese firms in post-IPO years. Only observations in IPO, IPO+1, IPO+2, and IPO+3 years for each firm are included. All variables are defined in the appendix. Model 1 and 2 include both Red-chips and P-chips as Hong Kong-listed firms (treatment firms) and all mainland China-listed firms as control firms. Model 3 (Model 5) only includes P-chips (Red-chips) as Hong Kong-listed firms and all mainland China-listed firms as control firms. Model 4 only includes P-chips as Hong Kong-listed firms and all mainland China-listed non-SOEs as control firms. Model 6 only includes Red-chips as Hong Kong-listed firms and all mainland China-listed SOEs as control firms. H-share observations and their corresponding domestic shares are excluded from all models. ***, **, and * indicate significance at the 1%, 5%, and 10% levels, respectively, using a two-tailed test. T-statistics are reported in the parenthesis. We do not cluster standard errors when estimating coefficients.

Table 10 Regression analyses on the change in bonds for Chinese firms listed in mainland China and Hong Kong stock exchanges from IPO year to IPO+1 year

Panel A: Descriptive statistics

Variable	Number of firm-year obs	Mean	Median	25th Pctl	75th Pctl
BOND_TA	3,974	0.17%	0.00%	0.00%	0.00%
HK	3,974	0.15	0.00	0.00	0.00
PCHIP	3,974	0.13	0.00	0.00	0.00
REDCHIP	3,974	0.01	0.00	0.00	0.00
POST2	3,974	0.50	0.00	0.00	1.00
LN(TOTAL_ASSETS)_YR	3,568	5.35	5.16	4.64	5.86
ROA_YR	3,568	0.12	0.08	0.05	0.14

Panel B: Univariate analysis

Mean of Variable BOND_TA	(1)	(2)	(3)	(4)
	Number of firms	POST2=0	POST2=1	Diff = (2) - (1)
Mainland China-listed firms	1,694	0.0004	0.0018	0.0015**
Mainland China-listed Non-SOEs	983	0.0002	0.0021	0.0019***
Mainland China-listed SOEs	711	0.0006	0.0015	0.0009***
Hong Kong-listed firms	293	0.0028	0.0079	0.0051**
P-chips	268	0.0029	0.0079	0.0050**
Red-chips	25	0.0015	0.0074	0.0059

Table 10 Regression analyses on the change in bonds for Chinese firms listed in mainland China and Hong Kong stock exchanges from IPO year to IPO+1 year (continued)

Panel C: Multivariate regressions

Dependent variable = BOND_TA	All firms		Non-SOEs: P-chips		SOEs: Red-chips	
	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
HK	0.0021**	0.0020*				
	(2.32)	(1.92)				
HK*POST2	0.0036***	0.0030**				
	(2.92)	(2.21)				
PCHIP			0.0021**	0.0019		
			(1.99)	(1.49)		
PCHIP*POST2			0.0029**	0.0023		
			(2.10)	(1.37)		
REDCHIP					-0.0004	-0.0004
					(-0.16)	(-0.17)
REDCHIP*POST2					0.0045	0.0051*
					(1.53)	(1.87)
POST2	0.0015***	0.0014**	0.0014**	0.0017**	0.0015***	0.0008
	(3.14)	(2.51)	(2.47)	(2.19)	(4.18)	(1.32)
LN(TOTAL_ASSETS)_YR		0.0015***	0.0016***	0.0017***	0.0014***	0.0010***
		(5.64)	(5.86)	(4.16)	(6.87)	(3.97)
ROA_YR		0.0001	0.0001	0.0003	-0.0000	-0.0047
		(0.22)	(0.21)	(0.49)	(-0.11)	(-1.28)
Intercept	0.0013	-0.0076***	-0.0079***	-0.0112***	-0.0059***	0.0022
	(1.43)	(-4.19)	(-4.34)	(-3.99)	(-4.34)	(1.05)
Number of obs	3,974	3,568	3,525	2,420	3,066	1,148
R-Square	0.030	0.041	0.04	0.05	0.04	0.10
Industry FE	YES	YES	YES	YES	YES	YES
Year FE	YES	YES	YES	YES	YES	YES
Control firms	All mainland-China listed firms	All mainland-China listed firms	All mainland-China listed firms	All mainland-China listed Non-SOEs	All mainland-China listed firms	All mainland-China listed SOEs

This table presents univariate and multivariate regression analyses on the change in bonds payable for Chinese firms listed in mainland China and Hong Kong stock exchanges from IPO year to IPO+1 year. Only observations in IPO year and IPO+1 year for each firm are included. All variables are defined in the appendix. Model 1 and 2 include both Red-chips and P-chips as Hong Kong-listed firms (treatment firms) and all mainland China-listed firms as control firms. Model 3 (Model 5) only includes P-chips (Red-chips) as Hong Kong-listed firms and all mainland China-listed firms as control firms. Model 4 only includes P-chips as Hong Kong-listed firms and all mainland China-listed non-SOEs as control firms. Model 6 only includes Red-chips as Hong Kong-listed firms and all mainland China-listed SOEs as control firms. H-share observations and their corresponding domestic shares are excluded from all models. ***, **, and * indicate significance at the 1%, 5%, and 10% levels, respectively, using a two-tailed test. T-statistics are reported in the parenthesis. We do not cluster standard errors when estimating coefficients.

Table 11 Regression analyses on stock synchronicity of Chinese firms listed in mainland China and Hong Kong stock exchanges in post-IPO years

Panel A: Descriptive Statistics

Variable	Number of firm-year obs	Mean	Median	25th Pctl	75th Pctl
SYNC	5,597	-1.30	-0.86	-1.94	-0.27
RSQ	5,597	0.30	0.30	0.13	0.43
HK	5,597	0.19	0.00	0.00	0.00
PCHIP	5,597	0.17	0.00	0.00	0.00
REDCHIP	5,597	0.02	0.00	0.00	0.00
LN(TOTAL_ASSETS)_YR	5,597	5.32	5.17	4.65	5.84
LEVERAGE_YR	5,597	0.35	0.33	0.19	0.49
ROA_YR	5,597	0.10	0.08	0.04	0.13

Panel B: Univariate analysis

		Mean of Variable SYNC	Mean of Variable RSQ
	Number of firm-year obs	Using IPO, IPO+1, IPO+2 years only	Using IPO, IPO+1, IPO+2 years only
Mainland China-listed firms	4,524	-1.06	0.33
Mainland China-listed Non-SOEs	2,813	-1.14	0.30
Mainland China-listed SOEs	1,711	-0.92	0.37
Hong Kong-listed firms	1,073	-2.34	0.15
P-chips	961	-2.38	0.15
Red-chips	112	-2.03	0.20

Table 11 Regression analyses on stock synchronicity of Chinese firms listed in mainland China and Hong Kong stock exchanges in post-IPO years (continued)

Panel C: Multivariate regressions

Dependent variable = SYNC						
	All firms		Non-SOEs: P-chips		SOEs: Red-chips	
	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
HK	-1.22***	-1.24***				
	(-24.28)	(-24.85)				
PCHIP			-1.20***	-1.19***		
			(-23.24)	(-22.79)		
REDCHIP					-1.04***	-1.21***
					(-7.63)	(-7.32)
LN(TOTAL_ASSETS)_YR		0.37***	0.37***	0.43***	0.23***	0.23***
		(17.31)	(16.63)	(16.71)	(8.51)	(5.30)
ROA_YR		-1.11***	-1.45***	-1.08***	-2.83***	-1.41***
		(-7.83)	(-9.26)	(-7.07)	(-13.29)	(-4.28)
LEVERAGE_YR		-0.26**	-0.30**	-0.38***	-0.08	0.06
		(-2.08)	(-2.42)	(-2.78)	(-0.55)	(0.24)
Intercept	-0.65***	-2.63***	-2.63***	-2.92***	-1.68***	-1.78***
	(-5.42)	(-16.30)	(-15.89)	(-14.76)	(-8.99)	(-4.87)
Number of obs	5,597	5,597	5,485	3,774	4,636	1,823
R-Square	0.19	0.24	0.24	0.29	0.21	0.14
Industry FE	YES	YES	YES	YES	YES	YES
Year FE	YES	YES	YES	YES	YES	YES
Control firms	All mainland-China listed firms	All mainland-China listed firms	All mainland-China listed firms	All mainland-China listed Non-SOEs	All mainland-China listed firms	All mainland-China listed SOEs

This table presents univariate and multivariate regression analyses on stock synchronicity of Chinese firms in post-IPO years. Only observations in IPO, IPO+1, IPO+2 years are included in the analyses. All variables are defined in the appendix. Model 1 and 2 include both Red-chips and P-chips as Hong Kong-listed firms (treatment firms) and all mainland China-listed firms as control firms. Model 3 (Model 5) only includes P-chips (Red-chips) as Hong Kong-listed firms and all mainland China-listed firms as control firms. Model 4 only includes P-chips as Hong Kong-listed firms and all mainland China-listed non-SOEs as control firms. Model 6 only includes Red-chips as Hong Kong-listed firms and all mainland China-listed SOEs as control firms. H-share observations and their corresponding domestic shares are excluded from all models. ***, **, and * indicate significance at the 1%, 5%, and 10% levels, respectively, using a two-tailed test. T-statistics are reported in the parenthesis. We do not cluster standard errors when estimating coefficients.

Table 12 Principal component analysis

Panel A: Principal component analysis [N=2,080]

Panel A.1: Eigenvalues

	Eigenvalue	Cumulative
Factor1	2.47	0.31
Factor2	1.77	0.53
Factor3	1.10	0.67
Factor4	0.86	0.78
Factor5	0.71	0.87
Factor6	0.56	0.94
Factor7	0.32	0.98
Factor8	0.19	1.00

Panel A.2: Principal Component Analysis Loadings

	Factor1	Factor2	Factor3	Factor4	Factor5	Factor6	Factor7	Factor8
SOE	-0.39	0.02	0.72	0.13	0.53	0.14	-0.06	-0.02
LN(TOTAL_ASSETS)	-0.28	0.47	-0.17	0.79	-0.13	0.10	-0.09	-0.05
LEVERAGE	-0.85	0.33	-0.03	0.00	0.00	-0.16	0.29	0.26
ROA	0.57	0.71	0.05	-0.16	0.02	0.14	-0.26	0.24
OCF_SCALED	0.42	0.46	0.61	-0.02	-0.41	0.04	0.24	-0.10
CURRENT_RATIO	0.73	-0.32	-0.17	0.25	0.22	0.37	0.29	0.11
MARGIN	0.70	0.20	0.00	0.22	0.30	-0.57	0.06	-0.01
GROWTH_TA	-0.12	0.76	-0.39	-0.28	0.32	0.15	0.13	-0.20

This table presents the results for principal component analysis. We retain the first two factors from the principal component analysis. Specifically, Factor1*(-1) is labelled ***POLICON_FACTOR***, short for factor for political connectedness; and Factor2 is labelled ***PERFORM_FACTOR***, short for factor for financial performance.

Table 12 Principal component analysis (continued)

Panel B: logistic regression with retained factors (replication of Table 6 with retained factors)

Dependent variable = CHINA				
	Model 1	Model 2	Model 3	Model 4
POLICON_FACTOR	0.36***		0.32***	0.18**
	(5.66)		(4.98)	(2.50)
PERFORM_FACTOR		-0.57***	-0.55***	-0.46***
		(-9.24)	(-8.82)	(-6.85)
POLICON_FACTOR*PERFORM_FACTOR				0.40***
				(6.78)
Intercept	1.32***	1.39***	1.33***	1.35***
	(3.92)	(4.05)	(3.79)	(3.68)
Number of obs	2,080	2,080	2,080	2,080
R-Square	0.11	0.13	0.14	0.17
Industry FE	YES	YES	YES	YES
Year FE	YES	YES	YES	YES

This table presents the estimation from a series of logistic regressions with ***CHINA*** as the dependent variable. All variables are defined in the appendix. Industry and year fixed effects are included but not reported. All models exclude H-shares and their corresponding domestic shares. ***, **, and * indicate significance at the 1%, 5%, and 10% levels, respectively, using a two-tailed test. Z-statistics are reported in the parenthesis. We do not cluster standard errors when estimating coefficients.

Panel C: separate regressions for different levels of POLICON_FACTOR (replication of Table 7 with retained factors)

Dependent variable = CHINA		
	Model 1	Model 2
	Low POLICON_FACTOR (below median)	High POLICON_FACTOR (above median)
PERFORM_FACTOR	-0.84***	-0.05
	(-9.44)	(-0.50)
Intercept	1.43**	1.04**
	(2.27)	(2.37)
Number of obs	1,040	1,040
R-Square	0.21	0.13
Industry FE	YES	YES
Year FE	YES	YES

This table presents the estimation from a series of logistic regressions with ***CHINA*** as the dependent variable. All variables are defined in the appendix. Industry and year fixed effects are included but not reported. All models exclude H-shares and their corresponding domestic shares. ***, **, and * indicate significance at the 1%, 5%, and 10% levels, respectively, using a two-tailed test. Z-statistics are reported in the parenthesis. We do not cluster standard errors when estimating coefficients.

Table 12 Principal component analysis (continued)

Panel D: logistic regression with retained factors for different sample periods (replication of Table 8 with retained factors)

Dependent variable = CHINA			
	Model 1	Model 2	Model 3
	Pre-SME (Prior to 2004)	Post-SME and Pre-ChiNext (2004-2008)	Post-ChiNext (After 2008)
POLICON_FACTOR	1.18***	0.38***	-0.31**
	(6.55)	(3.07)	(-2.54)
PERFORM_FACTOR	0.11	-0.25**	-0.78***
	(0.44)	(-2.20)	(-6.43)
POLICON_FACTOR*PERFORM_FACTOR	0.51***	0.29***	0.53***
	(4.14)	(3.03)	(4.44)
Intercept	1.21*	2.39**	1.31**
	(1.93)	(2.18)	(2.23)
Number of obs	735	497	848
R-Square	0.17	0.20	0.19
Industry FE	YES	YES	YES
Year FE	YES	YES	YES

This table presents the estimation from a series of logistic regressions with ***CHINA*** as the dependent variable over different sample periods. All variables are defined in the appendix. Industry and year fixed effects are included but not reported. All models exclude H-shares and their corresponding domestic shares. ***, **, and * indicate significance at the 1%, 5%, and 10% levels, respectively, using a two-tailed test. Z-statistics are reported in the parenthesis. We do not cluster standard errors when estimating coefficients.