

The Brain Gain of Corporate Boards: Evidence from China

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ABSTRACT

We study the impact of directors with foreign experience on firm performance in emerging markets. Using a unique data set from China, we exploit the introduction of policies to attract talented emigrants and increase the supply of individuals with foreign experience in different provinces at different times. We document that performance increases after firms hire directors with foreign experience and identify the channels through which the emigration of talent may lead to a brain gain. Our findings provide evidence on how directors transmit knowledge about management practices and corporate governance to firms in emerging markets.

THE BOARD OF DIRECTORS is expected to monitor and provide advice to management (Fama and Jensen (1983)). The extent to which boards fulfill these duties is widely debated and may depend largely on the characteristics and skills of the directors (Adams, Hermalin, and Weisbach (2010)). Board composition may be particularly important in emerging markets, where firm performance

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is known to be hampered by weak corporate governance and poor management practices (Syverson (2011)).

Board members with foreign experience could help to improve firm performance in emerging markets through at least three channels. First, having learned how foreign organizations work, directors with foreign experience may facilitate the adoption of superior management practices, shown to enhance firm performance and productivity (Bloom and Van Reenen (2007)). These directors could thus help to reduce the large productivity gaps that persist across countries and firms (Hall and Jones (1999), Jones and Romer (2009)). Second, directors with foreign experience may have connections in foreign countries that facilitate foreign acquisitions and international capital raising activities. Finally, directors with foreign experience may be more effective at performing the monitoring function and improving firm-level corporate governance, not only thanks to the expertise accumulated abroad, but also because they have relatively weaker local ties and hence may have stronger incentives to pursue profitability rather than pleasing politicians and other local constituencies.

However, in environments with weak investor protection, it is also possible that the board of directors is captured by management and controlling shareholders, and is therefore ineffective. Thus, whether the board matters and how it affects corporate policies are particularly relevant for emerging markets.

This paper examines whether attracting exceptionally talented individuals with foreign experience to the board has positive effects on the performance of firms in emerging markets. To do so, we use a unique hand-collected data set from China. China provides a unique environment to address these issues for several reasons. First, Chinese firms face a severe shortage of managers that can effectively work in an international environment (see, for instance, Farrell and Grant (2005)). Since individuals with foreign experience are scarce, not all firms with similarly high demand for directors with foreign experience are able to attract one. Second, individuals obtain their foreign experience in a variety of countries and we are able to hand-collect information on foreign education, work experience, and other demographic characteristics from the bios of 32,823 executive and nonexecutive directors of 1,667 publicly listed companies from 1999 to 2009. This wealth of information allows us to explore how directors' foreign experience matters. Third, and most importantly, during the sample period, almost all provinces introduced incentives for highly skilled individuals with foreign experience to return and did so at different times. We document that the labor market for board directors is largely local in China as in the United States (Knyazeva, Knyazeva, and Masulis (2013)). Therefore, the introduction of the provincial policies led to an exogenous change in the supply of potential directors with foreign experience for the firms headquartered in those provinces.

The timing of the introduction of the incentives was largely independent from the characteristics and growth opportunities of the publicly listed firms in the province. We show that, after the policy changes, the number of directors with foreign experience increases more for the firms headquartered in the provinces adopting the policies than for comparable firms elsewhere. This is the case not

only because some individuals return and become executive directors of the company, but mostly because there is a larger pool of individuals with foreign experience working in the area who can become independent directors.

By exploiting the change in directors with foreign experience due to the change in provincial policies, we can estimate the effects of directors with foreign experience for firms whose behavior can be manipulated by the policies.¹ Our estimates indicate that, when individuals with foreign experience join a firm's board, the firm's valuation improves and its total factor productivity increases. In the subsequent years, the firm's profitability increases. We also show that these improvements in performance are accompanied by changes in corporate policies that are generally set by the board. First, firms' propensity to manage earnings decreases, indicating that corporate governance improves. Second, among the firms that make mergers and acquisitions, those with board members with foreign experience are more likely to make an international merger or acquisition. This suggests that these firms are able to access a broader range of investment opportunities. Similarly, firms with board members with foreign experience are more likely to engage a foreign investor when raising capital through private placements than other firms. Finally, firms that hire directors with foreign experience start exporting more.

Overall, these results suggest that firm performance improves because, among other effects, directors with foreign experience facilitate the adoption of strong corporate governance practices and internationalization. These findings contribute to the growing literature on whether and how boards matter and provide first-time evidence on the extent to which international competition for talent affects firm corporate governance and performance.

The benefits produced by directors with foreign experience may arise because of their exceptional talent or their foreign experience. It is difficult to distinguish between these two nonmutually exclusive explanations because exceptional talent is often considered a result of exceptional experience.² Nevertheless, we provide suggestive evidence that the directors' foreign experience matters beyond their abilities.³ First, we show that firms internationalize their businesses by expanding sales, raising funds, and acquiring firms in the countries where the directors obtained their foreign experience. Second, the type of foreign experience affects corporate policies. When individuals that gained their foreign experience in countries with strong management practices, such as Germany or Sweden, join the board, firms experience improvements in operational efficiency. Conversely, directors that gained their foreign experience in strong corporate governance countries are associated with higher CEO pay-performance sensitivity, higher sensitivity of turnover to performance, less

¹ While the estimates are specific to these firms, we believe that this is the population of intrinsic interest as these are the firms that demand directors with foreign experience.

² See, for instance, the discussion in Colvin (2008) and Gladwell (2008).

³ Our results, however, should not be interpreted as indicating that any individual, if they acquired some foreign experience and joined the board of a listed company, would have an effect on firm performance similar to the one we find, as the policies were clearly directed to exceptional individuals.

earnings management, and higher cumulative abnormal returns following foreign acquisitions.

These findings highlight the channels through which the emigration of the best and brightest may provide connections in foreign markets and transfer knowledge on management practices and corporate governance to local firms, thus leading to a brain gain for emerging markets. We acknowledge, however, that these results are only suggestive of the importance of different types of foreign experience as individuals with different abilities may obtain their foreign experience in different countries and we have no exogenous variation explaining the heterogeneity of foreign experience.

We provide a number of additional tests supporting the mechanism behind our empirical evidence. Our estimates can be interpreted as evidence that directors with foreign experience enable the changes in corporate policies we observe as long as the control sample of firms in the provinces implementing the policies at different times has similar demand for directors with foreign experience. To evaluate this identification assumption, we restrict the sample to firms that employ at least one director with foreign experience during the sample period. In these tests, the control sample includes firms that are more homogeneous and more likely to experience the same shocks as the firms that hire directors with foreign experience after the policy changes. The identification comes from the fact that the control firms are not affected by the policies (and do not hire directors with foreign experience) at the same time as the affected firms. The estimates continue to consistently indicate a positive impact of directors with foreign experience on firm performance.

In addition, to mitigate concerns that the provinces implementing the reforms later or not at all have different economic performance, we estimate alternative models including province fixed effects, firm fixed effects, controls for previous firm performance, and controls for changing economic conditions across provinces and industries over time. Overall, these tests indicate that the increase in board members with foreign experience induced by the provincial policy changes is unlikely to have coincided with changes in the demand for directors with these skills (or with other firm-level changes) for firms affected by the policies in comparison to similar firms headquartered elsewhere. We can thus conclude that directors with foreign experience *enable* the changes in corporate policies concurrent with their arrival on the board of the firm.

This paper is related to a growing literature exploring the effects of board expertise and structure on performance (e.g., Klein (1998), Coles, Daniel, and Naveen (2008), Field, Lowry, and Mkrtchyan (2013)). Adams, Hermalin, and Weisbach (2010) provide a recent survey of this literature. Ahern and Dittmar (2012) explore the effect of gender quotas in Norway on changes in board composition and firm performance. Particularly related to our study are papers exploring how directors' expertise affects firm decision-making and corporate governance. Most of these papers, spurred by the Sarbanes-Oxley Act, focus on the effects of board independence and financial expertise (Agrawal and Chadha (2005), Güner, Malmendier, and Tate (2008), Chhaochharia and

Grinstein (2009), Guthrie, Sokolowsky, and Wan (2012)). To the best of our knowledge, this is the first paper to explore the effect of foreign experience and returnee migrants in corporate boards. Furthermore, while most of the existing literature focuses on the United States, we focus on an emerging market where institutions may affect the monitoring role of the board in a way that is so far unexplored, and where directors may have more room for transferring international know-how.

Our work is also related to a strand of literature exploring how knowledge and corporate governance practices can be transmitted to firms in emerging markets. Most of this literature focuses on the role of foreign ownership (e.g., Aggarwal et al. (2011), Guadalupe, Kuzmina, and Thomas (2012)). We highlight the role of the board, a mechanism of corporate governance that can also be effective in the presence of foreign ownership restrictions, which are widespread in emerging markets like China. In a recent paper, Bloom et al. (2013) show that offering consulting services leads to higher productivity in a sample of 17 Indian firms. Our paper complements these findings by highlighting the role of board members with foreign experience in transmitting knowledge on management practices. It should not be concluded, however, that consulting services could have had the same effects as changes in board structure. First, a considerable portion of the performance improvements we document arises from corporate governance changes, as a result of better monitoring. Consultants may provide advice, but do not monitor. Second, directors with foreign experience allow firms to seize international financing and merger and acquisition opportunities in a way that consultants, not being directly involved in the decision process of the firm, would be unlikely to do. Finally, while Bloom et al. (2013) rely on a neat experimental setting, they point out that concerns about the external validity of their findings and the possibility of transmitting knowledge on management practices to more complex firms remain.⁴ Thus, also in this respect, our paper fills a gap.

The rest of the paper is organized as follows. Section I discusses the institutional background in China and our research setting. Section II introduces our data sources and sample construction. Sections III to V present the empirical results. Section VI concludes the paper. Variable definitions are in the Appendix. Additional robustness tests are presented in an Internet Appendix.⁵

I. Background

A. The Chinese Environment

China is the largest emerging market and has experienced spectacular economic growth since the late 1970s, when it initiated an overhaul of its economic

⁴ Bloom et al. (2013) rely on 17 firms in the woven cotton fabric industry that are mostly unlisted and family owned and are described as grossly disorganized before hiring consulting services.

⁵ The Internet Appendix is available in the online version of the article on the *Journal of Finance* website.

system. While the economy has a large surplus of unskilled labor, there is a significant talent shortage. Little practical experience in projects or teamwork, poor English, and poor communication style and cultural fits are commonly given as limitations of local hires. Farrell and Grant (2005) estimate that over the next 10 to 15 years, firms active in China will need 75,000 managers who can work effectively in an international environment; today, however, they have only 3,000 to 5,000, mostly consisting of highly skilled returnee emigrants who have worked or studied in developed economies.

Another problem constraining the growth of Chinese firms is poor corporate governance and disclosure (Green (2003), Gul, Kim, and Qiu (2010)). In this regard, the board of directors may perform an important monitoring role. Newcomers that have been exposed to governance practices in developed countries may educate and coax the older guard of directors to adhere to international standards of governance (Khanna (2008)).

Scarcity of managerial talent and poor corporate governance are problems common to many emerging markets. For this reason, we believe that we can draw broader conclusions from the experience of China on the effects that highly talented directors with foreign experience, and more generally, labor flows and return migration, have on firm performance and corporate governance.

B. Policies to Attract Highly Skilled Emigrants

The flows of students from China toward universities in the developed world became sizable in the early 1990s. After completing their studies, many Chinese immigrants also gained foreign work experience. Starting in the early 2000s, tens of thousands of individuals trained abroad have been returning to China. According to the China Statistical Yearbook 2006, while the number of individuals with foreign training returning to China in 1995 was about 5,000, the number of returnees had reached 35,000 in 2005. These returnees are mostly foreign-trained scientists and academics, who once in China may join corporate boards as dependent or independent directors.

The inversion of the brain drain was fostered by economic growth and political stability. However, government policies and interregional competition favored the process. Starting in the late 1990s, provincial governments adopted policies to attract highly skilled emigrants and did so at different points in time (Zweig (2006)). The policies' main objectives were increasing the quality of academic and industrial research, fostering entrepreneurial activity, and promoting the entry of new businesses. The policies were directed only to the most distinguished Chinese expatriates and included tax breaks, subsidized housing, tax-free imports of automobiles and computers, schooling for the children of the returnees, local grants and awards, medical benefits, jobs for spouses, and long-term residence permits.

Table I provides detailed information on the timing of the policies' adoption, which we collect from Wang, Zeng, and Pu (2011) and verify through internet

Table I
Policies to Attract Highly Skilled Emigrants

This table reports the year of the policy adoption, the number of unique sample firms, and the proportion of directors with foreign experience for each province that implements a policy to attract highly talented emigrants. The sample period is 1999 to 2009. "Issuing Year" is the year the policy was adopted. "After" corresponds to observations after the issuing year. "Before" corresponds to observations before and during the issuing year. For "Percent of directors with foreign experience," the unit of analysis is firm-year-director.

Province	Issuing Year	No. of Unique Firms	Total	No. of Firm-Year Observations		Percent of Directors with Foreign Experience	
				Before	After	Before	After
Anhui	1994	55	424	0	424	0	7.03
Beijing	2000	104	803	85	718	7.05	10.73
Chongqing	2005	30	262	175	87	6.63	9.57
Fujian	2000	61	464	70	394	5.14	9.97
Gansu	2003	23	193	80	113	2	3.21
Guangdong	1999	210	1,576	112	1,464	7.85	13.61
Guangxi	2005	26	222	129	93	2.94	7.99
Guizhou	2003	18	157	55	102	2.34	3.63
Hainan	2001	21	207	52	155	9.49	9.4
Hebei	2001	38	342	72	270	1.08	5.98
Heilongjiang	2002	33	318	118	200	3.56	7.35
Henan	1992	42	328	0	328	0	5.08
Hubei	2002	65	612	204	408	5.12	8.84
Hunan	2001	53	422	86	336	2.5	10.81
Inner Mongolia	2001	23	213	49	164	2.94	5.78
Jiangsu	2004	121	894	382	512	7.2	7.75
Jiangxi	2003	27	236	85	151	6.25	5.78
Jilin	2001	38	342	88	254	4.35	7.47
Liaoning	1999	61	532	43	489	3.41	6.59

(Continued)

Table I—Continued

Province	Issuing Year	No. of Unique Firms	No. of Firm-Year Observations			Percent of Directors with Foreign Experience	
			Total	Before	After	Before	After
Ningxia	2003	11	114	49	65	6.48	3.42
Qinghai	1999	10	94	7	87	0	3.25
Shaanxi	1995	30	253	0	253	0	5.33
Shandong	2005	99	783	434	349	5.58	7.69
Shanghai	2005	158	1,468	912	556	9.79	11.91
Shanxi	2007	26	230	181	49	4.02	4.19
Sichuan	2005	77	668	408	260	5.06	7.69
Tianjin	2001	27	242	49	193	3.1	10.86
Tibet	N/A	9	78	N/A	N/A	N/A	N/A
Xinjiang	2003	32	263	97	166	5.08	4.78
Yunnan	2001	27	229	49	180	4.09	7.87
Zhejiang	2001	128	871	140	731	4.81	9.5

and news searches.⁶ It is apparent that an earlier adoption of the policies is not necessarily related to higher economic development. While the highly developed Beijing and Guangdong were early adopters (in 2000 and 1999, respectively), so were the far less developed Inner Mongolia and Yunnan (in 2001). The highly developed Shanghai, on the other hand, implemented similar policies only in 2005.

This evidence is indicative of the fact that provincial leaders, who implement provincial policies, are often guided by career concerns (Li and Zhou (2005), Huang et al. (2013)). Provincial leaders' promotions are determined not only by the region's performance, but also, and indeed to an even larger extent, by their affiliation with different factions of the Communist Party and personal connections with central government leaders (Guo (2001)). This implies that, in designing the policies, provincial leaders are largely concerned with pleasing the central government leaders they are closest to, irrespective of the real needs and demands of the province they govern. For all these reasons, it is unlikely that the adoption of such policies was related to expected growth opportunities. Furthermore, the policies were never explicitly targeted at publicly listed companies and their boards. We cannot exclude the possibility, however, that in a few instances the provincial leaders may have taken firms' demands into account.

We argue that firms with headquarters in the provinces adopting the policies could take advantage of the increase in the supply of potential directors with foreign experience to a larger extent than other firms because the director labor market is largely local. Knyazeva, Knyazeva, and Masulis (2013) provide evidence that this is the case in the United States. To demonstrate that this is also the case in China, we hand-collect information on the province of residence of the directors of Chinese listed companies, using the address of their primary employer.⁷ Table II shows that the large majority of directors of Chinese-listed companies reside in the province where the firm is headquartered. This corroborates our conjecture that the policies caused a positive shock to the supply of potential directors with foreign experience for firms headquartered in those provinces.

II. Data and Sample Characteristics

A. Data Sources and Sample Construction

We hand-collect information on foreign education and work experience of the executive and nonexecutive directors of all nonfinancial companies in mainland China that are publicly traded on the A-share market from 1999 to 2009. We only consider firms for which we can access basic accounting and market information from the China Stock Market & Accounting Research Database

⁶ Our sample includes firms located in 22 provinces, five autonomous regions, and four municipalities (Beijing, Chongqing, Tianjin, and Shanghai). The municipalities are directly governed by the central government and enjoy the same status as provinces and autonomous regions.

⁷ Details on the sample construction are provided in Section II.A.

(CSMAR), developed by GTA Information Technology, one of the major providers of Chinese data.⁸ After excluding firms with missing financial information, our final sample consists of 1,667 unique firms and 13,840 firm-year observations.⁹

We obtain the directors' bios for the sample firms from sina.com.cn and the companies' annual reports. We screen 32,823 directors' bios and cross-verify the information obtained from the bios through various news and internet searches. In this way, we obtain information on any academic degrees that the board member obtained abroad, the academic institution granting the degree, whether the director has worked abroad, and the country in which the director studied or worked. We consider an individual as having foreign experience if he or she studied and/or worked outside (mainland) China. To ensure that foreign experience captures actual exposure to a foreign environment, we do not consider Chinese individuals who worked for a foreign branch of a Chinese company or for a Chinese branch of a foreign company or joint venture as having foreign (work) experience. At the director level, we have a total of 32,823 unique directors and 138,092 individual-firm-year observations.

From the CSMAR database, complemented with hand-collected data from news and internet searches, we also obtain information on CEO turnover, the tenure of board members, the top 10 shareholders, private placements, mergers and acquisitions, and various other board characteristics. To identify foreign ownership, we conduct various news and internet searches to determine whether any of the top 10 largest shareholders are foreign. Our definition of foreign ownership includes foreign institutional, corporate, and individual investors, but excludes foreign branches of Chinese firms. In the same way, we establish the presence of foreign investors in private placements and foreign sellers in mergers and acquisitions.

We gather information on firms' foreign sales from the Supplement Information on Sales in the annual reports starting from 2000.¹⁰ Firms generally

⁸ Chinese firms may issue three categories of shares: A shares, B shares, and H shares. A shares were originally issued for domestic investors, but since 2002 foreign investors have also been allowed to purchase them. B shares were originally issued for foreign investors; however, since March 2001, domestic investors can also hold B shares. Finally, a limited number of firms can issue H shares on the Hong Kong Stock Exchange. In our sample, there are 52 firms with H shares. Before the 2005 ownership reform, Chinese firms also issued nontradable shares, which were held by the government and other domestic institutions. Chinese firms that list overseas are generally not listed in the domestic market.

⁹ Our initial sample includes 1,738 firms for a total of 14,425 firm-year observations. We then apply the following filtering criteria. We first exclude 66 firm-year observations for which we have missing observations for sales, net income, number of employees, and market capitalization, and for which we are unable to compute the firm performance proxies that we describe below. We next exclude 12 firm-year observations for firms whose board has fewer than two directors or firms with missing information on the number of directors. We further exclude 16 firm-year observations with missing industry information. Finally, we exclude 491 firm-year observations with missing information on free cash flow and stock volatility.

¹⁰ CSMAR began reporting the Supplement Information on Sales in 2002. We manually collect data on foreign sales for 2000 to 2001. Most of our sample firms did not disclose their sales by region in 1999. Therefore, the sample period for foreign sales is 2000 to 2009.

provide a regional breakdown of their sales. When a firm discloses the regional breakdown of its sales and does not report any sales outside mainland China, we code the firm's foreign sales as zero. If a firm does not disclose the regional breakdown of its sales, we code the firm's foreign sales as missing.

Finally, we obtain information on firms' industries and government ownership from the CCER China Economic and Financial Database managed by SinoFin Information Services. Firms are classified as state-owned if their largest ultimate shareholders are either the central or a provincial government.¹¹

B. Descriptive Statistics

Table I shows the number of firms and the number of firm-years affected by the provincial policies.¹² Importantly, the number of firms in different cities and provinces is such that each year we have a large sample of firms that are unaffected. While in 1999 only 194 sample firms had at least one director with foreign experience, by the end of the sample 760 firms had at least one director with foreign experience (not tabulated). The table also shows that in most provinces the proportion of directors with foreign experience indeed increases after the policy adoption. We confirm this result in the multivariate analysis below.

Panel A of Table III presents the main characteristics of the director-level data set. Approximately 6.3% of the observations (8,476 director-firm-year observations) involve directors with some foreign education; of these, 3,904 director-firm-year observations correspond to short-term visits, short-term training, or post-docs in foreign academic institutes, 855 correspond to foreign bachelor degrees, 2,273 correspond to foreign master degrees, and 1,444 correspond to foreign doctoral degrees.

Most of the directors received their foreign education in the United States (3,444 director-firm-year observations), followed by the United Kingdom (1,142), Japan (969), Hong Kong (740), Canada (555), and Germany (480). A considerable number of directors has foreign experience in a variety of other countries, such as Australia, Singapore, and Sweden.

Besides foreign experience, we collect information on other characteristics of board members that are generally used in the literature. For example, slightly over 60% of the directors can be defined as independent because they are not employees of the firm whose board they sit on.

Panel B of Table III describes the firm-level data set, which is at the center of the empirical analysis. We start by listing our firm performance proxies: the market-to-book ratio (MTB), a measure of firm profitability (ROE), and total

¹¹ The government owns over 15% of the shares in 99% of the firms in which it is the largest ultimate shareholder.

¹² The results we report hereafter are not driven exclusively by Beijing, Shanghai, and Guangdong. The estimates are unchanged if we exclude all firms from these three regions from the sample, as we show in the Internet Appendix.

Table III
Summary Statistics

Panel A summarizes characteristics of the directors of our sample firms from 1999 to 2009. The unit of observation is the director-firm-year. "Director with Foreign Experience" is a dummy equal to one if a director has foreign education or foreign work experience. "Director with Foreign Work Experience" is a dummy equal to one if a director has foreign work experience. "Director with Foreign Education" is a dummy equal to one if a director has foreign education. "Foreign Visiting Scholar/Training/Postdoc" is a dummy equal to one if a director was a visiting scholar or post-doc, or did a short-term training program. "Foreign Bachelor Degree" is a dummy equal to one if a director holds a bachelor degree from a foreign country. "Foreign Master Degree" is a dummy equal to one if a director holds a bachelor degree from a foreign country. "Foreign Doctoral Degree" is a dummy equal to one if a director holds a doctoral degree from a foreign country. "Director Age" is the difference between the current year and the birth year of the director. "Female Director" is a dummy equal to one if the director is female. "Director Tenure" is one plus the difference between the current year and the year when the individual joined the board of a given firm. "Non-independent Director" is a dummy equal to one if a director also receives a salary as an employee of the firm. "Foreign Director" is a dummy equal to one if a director is a foreign national. "Busy Director" is a dummy equal to one if a director sits on the boards of two or more publicly traded companies. "Politically Connected Director" is a dummy equal to one if a director is a current or former government bureaucrat. Panel B reports summary statistics for the sample firms between 1999 and 2009. The unit of observation is the firm-year. ROE is the firm's return on equity led by one year. All variable definitions are in the Appendix. Panel C reports the industry distribution of the sample firms. Statistics are based on firm-year observations. The 21 industries are based on the official industry classification of the China Securities Regulatory Commission.

Panel A: Director Characteristics				
	Mean	Median	Std. Dev.	No. of Obs.
Director with Foreign Experience	0.081	0	0.273	133,581
Director with Foreign Work Experience	0.032	0	0.176	133,581
Director with Foreign Education	0.063	0	0.244	133,581
Foreign Visiting Scholar/Training/Postdoc	0.029	0	0.168	133,581
Foreign Bachelor Degree	0.006	0	0.08	133,581
Foreign Master Degree	0.017	0	0.129	133,581
Foreign Doctoral Degree	0.011	0	0.103	133,581
Director Age	48.219	47	8.881	133,565
Female Director	0.097	0	0.296	133,581
Director Tenure	2.001	2	1.051	133,581
Non-independent Director	0.392	0	0.488	133,469
Foreign Director	0.004	0	0.062	133,581
Busy Director	0.162	0	0.368	133,581
Politically Connected Director	0.197	0	0.397	133,581
Panel B: Firm Characteristics				
	Mean	Median	Std. Dev.	No. of Obs.
MTB	2.377	1.94	1.423	13,722
TFP	0	-0.008	0.265	12,734

(Continued)

Table III—Continued

Panel B: Firm Characteristics				
ROE	0.046	0.065	0.191	13,294
Foreign Experience	0.081	0	0.111	13,840
No. of Directors with Foreign Experience	0.77	0	1.069	13,840
Directors with Foreign Experience Dummy	0.463	0	0.499	13,840
Board Size	9.448	9	2.111	13,840
State	0.703	1	0.457	13,840
Foreign Ownership	0.023	0	0.073	13,840
Block	0.403	0.386	0.166	13,840
Assets (RMB 100 millions)	32.636	14.781	59.287	13,840
Leverage	0.5	0.489	0.235	13,840
Director Tenure	1.982	2	0.833	13,840
Director Age	48.113	48.143	3.977	13,840
Busy Directors	16.0%	12.5%	14.3%	13,840
Non-Independent Directors	39.7%	37.5%	22.1%	13,840
Female Directors	9.7%	9.1%	10.3%	13,840
Foreign Directors	0.2%	0.0%	1.6%	13,840
Board Political Connection	19.5%	16.7%	16.5%	13,840
Average Chinese University Rank	4.719	5	0.441	13,840
No. of Business Segments	2.199	2	1.406	13,840
Free Cash Flow	-0.014	0.006	0.093	13,840
Young IPO Firm	0.269	0	0.444	13,840
Stock Volatility	0.034	0.029	0.021	13,840
CEO Age	45.822	45	6.651	13,644
CEO Tenure	3.265	3	2.42	13,743
CEO Turnover	0.147	0	0.354	13,826
Foreign M&A	0.057	0	0.233	4,094
Foreign Private Placement	0.132	0	0.339	357
Foreign Sales	0.121	0	0.214	5,917
Earnings Management	-0.001	-0.001	0.091	13,084

Panel C: Industry Distribution of Sample Firms		
Industry	%	No. of Obs.
Agriculture	2.48%	343
Mining	1.64%	227
Food	4.32%	598
Apparel	4.51%	624
Furniture	0.25%	34
Printing	2.02%	280
Gas and chemistry	11.12%	1,539
Electronic	3.63%	503
Metal	9.39%	1,300
Machinery	15.61%	2,161
Pharmaceutical products	6.29%	871
Other manufacturing	1.46%	202

(Continued)

Table III—Continued

Panel C: Industry Distribution of Sample Firms		
Energy supply	4.15%	575
Construction	1.94%	269
Transportation	4.12%	570
Information technology	5.77%	798
Retail and wholesale	7.16%	991
Real estate	4.09%	566
Other service supply	3.16%	438
Entertainment	0.86%	119
Other	6.01%	832

factor productivity (TFP).¹³ As is common in the literature (see, for instance, Schoar (2002)), we compute a firm's total factor productivity as the residual, $\hat{\varepsilon}_{it}$ of the firm level regression

$$y_{ijt} = \alpha_{jt} + \beta_{jt}l_{ijt} + \gamma_{jt}k_{ijt} + \delta_{jt}m_{ijt} + \varepsilon_{ijt}, \quad (1)$$

where y_{ijt} is the logarithm of the sales of firm i belonging to industry j during year t , l_{ijt} is the logarithm of the number of workers of firm i during year t , k_{ijt} is the logarithm of the total assets of firm i during year t , and m_{ijt} is the logarithm of the expenses for material and other inputs of firm i during year t . We estimate all equations by industry and year. For this reason, our estimate of total factor productivity captures a firm's deviation from the factor productivity within its industry in a given year. We also report the return on assets (ROA), board size, leverage, and state ownership, which are broadly consistent with existing studies (see Cao et al. (2011), Jiang, Wan, and Zhao (2013)).

We next present the firm-level variables capturing board expertise and structure. While in the empirical analysis we almost exclusively rely on the proportion of board members with foreign experience, we also report their number and a dummy variable taking a value of one if the firm has at least one director with foreign experience and zero otherwise. Approximately 46% of the observations in our sample correspond to firm-years in which firms have at least one director with foreign experience.

On average, Chinese firms have slightly less than 10 board members. Thus, board size is slightly smaller than in the United States, where, on average, listed companies have about 12 directors (Yermack (1996)). The average tenure of board members, approximately two years, is shorter than in the United States, but in line with figures reported in papers relying on samples of Chinese listed companies similar to ours (e.g., Jiang, Wan, and Zhao (2013)). This is also the case for CEO turnover, which, albeit quite high in comparison to the United States, is comparable to that reported by Cao et al. (2011).

¹³ We censor extreme values of the firm performance proxies as detailed in the Appendix. The censoring, however, does not affect our results.

Finally, we present proxies for firms' ownership structure. An important firm characteristic is the percentage ownership of the largest shareholder. Existing literature (e.g., Morck, Shleifer, and Vishny (1988), McConnell and Servaes (1990)) finds that, by strengthening shareholders' incentive to monitor, ownership concentration may improve firm performance. The government, which includes local governments and the central government, is the largest ultimate shareholder in nearly 70% of the firm-year observations in our sample.

Foreign blockholders are believed to bring superior technology, organizational capital, and access to international capital markets (see, for instance, Desai, Foley, and Forbes (2007), Haskel, Pereira, and Slaughter (2007), Chari, Chen, and Dominguez (2011)). However, because of regulatory restrictions on foreign ownership of listed companies and on the activities of foreign financial institutions, foreigners own about 2% of the shares of our sample firms.

Panel C of Table III reports the industry distribution of firms with directors that do and do not have foreign experience. While all industries have firms with directors that have foreign experience, the industries in which more firms do so are machinery, gas and chemistry, metal, information technology, and pharmaceutical products. Not surprisingly, these are industries in which scientific knowledge acquired abroad may play a particularly important role.

III. Which Firms Have Directors with Foreign Experience?

The optimal board composition, and therefore whether firms hire directors with foreign experience, depends on firm characteristics such as the scope and complexity of operations and the type of ownership (Boone et al. (2007), Coles, Daniel, and Naveen (2008), Linck, Netter, and Yang (2008)). By increasing the supply of highly talented individuals with foreign experience, the provincial policies may also affect board structure.

Table IV relates the proportion of directors with foreign experience to firm characteristics and the provincial policies to attract highly skilled emigrants.¹⁴ It shows that firms with a greater proportion of directors with foreign experience have a higher level of foreign ownership and are less likely to have the government as shareholder. It also appears that these firms are larger. Other firm characteristics capturing firm complexity and the potential for extraction of private benefits of control, such as free cash flow, the number of business segments, a dummy identifying whether the firm went public within the last four years, and the variance of stock returns, do not help to explain the proportion of directors with foreign experience once we control for firm size. Moreover, in columns 3 and 4, the proportion of directors with foreign experience does not

¹⁴ Even though our dependent variable is truncated at zero and one, here we estimate parameters by ordinary least squares instead of a Tobit model. The Tobit estimator relies on the distributional assumptions and is inconsistent when disturbances are nonnormal (Arabmazar and Schmidt (1982)). In contrast, in a standard linear regression model, the ordinary least square estimator is unbiased and consistent even when the assumption of normality of the disturbances is violated.

Table IV
Policy Changes and the Board of Directors

This table relates the proportion of directors with foreign experience ("Foreign Experience") to firm characteristics and the provincial policies. "Provincial Policy" is a dummy that takes a value of one if the firm is headquartered in a given province in the years following the adoption of a policy to encourage the return of highly skilled emigrants, and zero otherwise. MTB ($t - 1$), ROE ($t - 1$), MTB ($t - 2$), and ROE ($t - 2$) are MTB and ROE lagged for one and two years, respectively. All other variables are defined in the Appendix. t -statistics, computed with robust standard errors clustered at the year level, are reported in parentheses. All models include a constant, different sets of fixed effects, and province-specific linear trends, as indicated in the table, but the coefficients are not reported. We also report an F -test to assess the joint significance of the policy dummies (F -test of excluded instruments). ***, **, and * indicate significance at the 1%, 5%, and 10% levels, respectively.

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Foreign Ownership	0.474*** (25.76)	0.473*** (24.55)	0.456*** (25.77)	0.461*** (25.03)	0.474*** (25.67)	0.413*** (8.68)	0.473*** (24.43)	0.413*** (8.56)
Block	-0.014** (-2.51)	-0.016** (-2.38)	-0.018* (-1.82)	-0.016* (-1.89)	-0.014** (-2.43)	-0.012* (-2.20)	-0.016** (-2.39)	-0.015** (-2.46)
State	-0.012*** (-3.94)	-0.012*** (-3.79)	-0.011** (-3.12)	-0.011** (-2.89)	-0.012*** (-3.93)	-0.013*** (-3.40)	-0.012*** (-3.78)	-0.014*** (-3.48)
Size	0.008*** (6.59)	0.008*** (6.41)	0.010*** (7.62)	0.007*** (3.94)	0.008*** (6.54)	0.008*** (6.54)	0.008*** (6.40)	0.008*** (6.32)
Leverage		-0.001 (-0.26)	0.004 (1.57)	0.005* (2.19)			-0.001 (-0.30)	-0.001 (-0.26)
# of Business Segments		-0.000 (-0.17)	-0.000 (-0.09)	-0.000 (-0.23)			-0.000 (-0.25)	-0.000 (-0.25)
Free Cash Flow		0.003 (0.24)	0.008 (0.75)	0.015 (1.30)			0.004 (0.32)	0.004 (0.33)
Young IPO Firm		0.004 (1.17)	0.001 (0.33)	0.001 (0.26)			0.005 (1.35)	0.005 (1.55)
Stock Volatility		-0.107 (-1.71)	-0.503 (-1.70)	-0.567 (-1.58)			-0.105 (-1.76)	-0.105 (-1.73)
MTB ($t - 1$)			0.003 (1.61)					

(Continued)

Table IV—Continued

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
MTB ($t - 2$)		0.002 (0.75)					
ROE ($t - 1$)			0.007 (0.89)				
ROE ($t - 2$)			0.002 (0.29)				
Provincial Policy				0.011** (2.99)	0.009** (2.27)	0.012** (3.11)	0.007* (1.96)
Provincial Policy × Foreign Ownership					0.093* (1.99)		0.092* (1.98)
Provincial Policy × Block					-0.002 (-0.29)		-0.000 (-0.06)
Provincial Policy × State					0.003 (0.68)		0.003 (0.92)
Province-Specific Trend	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Industry FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes
F -test of excluded instruments				8.96**	6.75***	9.67**	6.60***
No. of obs.	13,840	12,053	11,891	13,840	13,840	13,840	13,840
R^2	0.188	0.183	0.185	0.189	0.191	0.190	0.191

appear to depend on the firm's past growth opportunities and profitability, as captured by lagged ROE and MTB.

In columns 5 to 8, we explore the role of the provincial policies. As expected, the dummy capturing the timing of the policy changes has a positive and statistically significant effect on the proportion of board members with foreign experience.

Since blockholders may nominate board members in China, we consider how the effect of the policy differs across firms with different ownership structure. In columns 6 and 8, it appears that firms that have a foreign blockholder or the government as shareholders are more likely to be able to attract directors with foreign experience after the implementation of the policy (although the effect of the interaction of the policy dummy with the dummy capturing government ownership is not statistically significant at conventional levels). The proxy for ownership concentration, however, does not seem to be related to the way in which firms respond to the policies.

The effect of the policies we highlight is in excess of a province-specific (linear) trend, indicating that, after the policy adoption, the proportion of directors with foreign experience increases faster than during previous years in that province. This effect is highly significant even if we cluster errors at the year level to account for eventual common shocks leading to a higher proportion of directors with foreign experience. This indicates that the timing of the policy adoption can be used to construct instruments for the proportion of directors with foreign experience. The F -statistics of the variables involving the policies (i.e., the policy dummy in columns 5 and 7, and the policy dummy plus the interactions of the policy dummy with firm ownership characteristics in columns 6 and 8) indicate that these variables could provide relevant instruments for the proportion of directors with foreign experience.

Below, we construct instrumental variables for the proportion of directors with foreign experience using the policy dummy and provide more formal evidence that the instruments are not weak. Section IV.A explains strengths and weaknesses of our identification strategy.

IV. Directors with Foreign Experience and Firm Performance

A. Identification Strategy

Identifying the causal effect of board expertise on firm performance poses challenges because firms choose board structure optimally. In particular, firms that are in the process of implementing certain changes and that experience certain challenges or opportunities, irrespective of their board composition, could select or attract board members with foreign experience. Unobserved changes in firm characteristics could thus bias the relation between board structure and performance in ordinary least squares estimates in a way that is hard to predict.

Our sample of Chinese firms is well suited to explore this challenging issue. Since the labor market for board directors is local (as shown in Table II), the policies to attract highly skilled returnee migrants led to arguably exogenous

increases in the supply of potential directors with foreign experience in different provinces at different times. Table IV reveals that, in the years following the adoption of the policies, the proportion of board members with foreign experience does indeed increase for firms affected by the policies, but not as much for similar firms elsewhere. The policies can therefore be used to construct relevant instruments.

We construct an instrumental variable for the proportion of directors with foreign experience using the policy dummy. Although not essential for our identification strategy, to be able to construct a within-province test described below, we further instrument the proportion of directors with foreign experience by interacting the policy dummy with *ex ante* ownership characteristics. We use the percentage of foreign ownership, state ownership, and the fraction of shares held by the largest shareholder at the beginning of the sample period. In the second-stage estimation, we control for the contemporaneous effect of these firm ownership characteristics. Thus, the identifying assumption is that *ex ante* firm ownership characteristics, which we measure at the beginning of the sample period, do not predict future changes in firm performance, after controlling in the second-stage estimation for the contemporaneous firm ownership characteristics (along with other firm characteristics and in some models province or firm fixed effects). Put differently, the effect of the ownership characteristics on firm performance does not have to vary contextually to the policy change.

Our instruments, if valid, identify the average effect of directors with foreign experience for the subpopulation of firms whose behavior is affected by the policies. The noncompliant observations in the provinces adopting the policies lower the power of the identification.¹⁵

The supply shocks determined by the policies provide valid instruments as long as the firms in the province adopting the policy are not believed to experience contextual shocks that independently affect their performance and corporate policies. Since the policies were not explicitly targeted at listed companies and their boards, it is unlikely that the adoption of the policies occurs at the same time of a change in the firms' demand for directors with foreign experience. Furthermore, given the scarcity of individuals with foreign experience, the control sample is bound to include many firms that would have liked to hire directors with this characteristic, but were unable to do so.

Even more importantly, due to the staggered adoption of the policies we exploit as instruments, the control sample is not limited to firms without directors with foreign experience, but also includes firms that eventually hire or have already hired directors with foreign experience. Put differently, the control sample includes firms that are affected by the policies (and hire directors with foreign experience) at different times from the firms that hire directors with foreign experience because of the policy changes. For this reason, asymmetric shocks for firms that eventually hire directors with foreign experience and for those without directors with foreign experience should not be a big concern.

¹⁵ See Imbens and Angrist (1994) for a similar argument.

To mitigate any lingering doubts, we explore the extent to which our estimates vary if we limit the control sample by excluding firms that have no directors with foreign experience throughout the sample period. In these tests, the control sample includes only firms that hire or have hired directors with foreign experience at a different time in comparison to the firms that respond to the policy changes. The firms in this restricted control sample are therefore more likely to experience the same shocks as the firms that actually hire such directors after the policy changes.

Finally, we also design a test that exploits only *within* province (and within industry) variation as follows. After the introduction of the new policies, firms with certain ex ante ownership characteristics are more likely to hire individuals with foreign experience to their boards. We can thus test whether firms with ex ante characteristics that make them more likely to hire such directors grow more than the median listed firm within their province and industry after the policy change (and therefore after the increase in the supply of individuals with foreign experience). Since we focus on abnormal performance within the province and industry, these findings cannot be driven by industry- and province-specific shocks. The estimates are unbiased as long as the effect of ex ante firm characteristics on abnormal performance does not vary contextually with the policy changes.

We acknowledge that we cannot provide a definitive statistical demonstration that firms do not experience shocks concurrent with the policies. However, taken together, the tests described above, along with the analysis of the changes in corporate policies that are generally set by the board and a battery of additional robustness tests described below, allow us to gauge the extent to which directors with foreign experience affect firm performance.

B. Main Results

We study whether a larger proportion of directors with foreign experience is associated with better firm performance. Table V focuses on corporate valuations, as measured by MTB. In all columns but 6, we define the MTB in deviation from the industry-year median by subtracting from the firm's MTB the industry median MTB in year t . In this way, we capture firm abnormal performance within an industry and abstract from industry shocks to firm performance.¹⁶

In columns 1 to 3, we present the ordinary least squares estimates, first using a limited set of controls, then controlling for ownership structure and other firm characteristics, and finally also including firm fixed effects. Although the parameter estimate of our variable of interest becomes smaller especially when we add firm fixed effects, we always find a positive effect of a higher proportion of directors with foreign experience on performance.

¹⁶ Our results do not depend on the fact that we use industry-adjusted variables. In the Internet Appendix, where we estimate an ordinary least squares specification by including industry times year fixed effects, the results are quantitatively similar to those we report hereafter.

Table V
Directors with Foreign Experience and Firm Value

This table relates the firm's MTB to the proportion of directors with foreign experience. In columns 1 to 3, we present ordinary least squares estimates. In columns 4 to 8, we present instrumental variable estimates. The instrumental variables include "Provincial Policy," a dummy that takes a value of one in years following the implementation of the policy in each province, and interaction variables between the policy dummy and firm ownership characteristics "State," "Foreign Ownership," and "Block" in 1999 (the beginning of the sample period). If a firm enters our sample later than 1999, firm ownership characteristics computed in the year of the firm's entry in the sample are used to construct the interaction terms. In columns 1 to 5 and 7 to 8, the dependent variable is the firm's MTB, from which we subtract the industry-year median. The dependent variable in column 6 is the firm's MTB, from which we subtract the industry-year median and the province-year median. In column 8, we exclude all firms that do not hire directors with foreign experience during the sample period. All the variables are defined in the Appendix. *t*-statistics computed with robust standard errors clustered at the firm level are reported in parentheses. All models include a constant, but the coefficients are not reported. We report the partial *R*² of the instruments in the first stage and the Cragg-Donald Wald *F*-statistics. We also report the Stock-Yogo weak ID test critical values for the Cragg-Donald Wald *F*-statistics. ***, **, and * indicate significance at the 1%, 5%, and 10% levels, respectively.

	IV							
	OLS							
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
					Within-Province Test	Including Firm FE and Lagged Performance	Excluding Firms that Never Hired Directors with Foreign Experience	
Foreign Experience	0.900*** (6.69)	0.805*** (5.56)	0.480*** (2.80)	4.092*** (3.13)	7.310*** (4.17)	17.505*** (5.56)	11.350*** (4.84)	8.250*** (4.61)
Foreign Ownership		0.376 (1.48)	0.710 (1.45)	-1.278* (-1.92)	-2.835*** (-3.29)	-8.047*** (-4.68)	-5.617*** (-3.44)	-3.970*** (-3.16)
Block		0.545*** (5.49)	-0.228 (-1.32)	0.650*** (5.71)	0.676*** (4.89)	1.147*** (4.41)	0.323 (1.19)	0.341 (1.21)
State		-0.127*** (-3.48)	-0.078 (-1.56)	-0.065 (-1.35)	-0.030 (-0.50)	0.065 (0.60)	0.112 (1.38)	0.050 (0.65)
Size		-0.507*** (-24.67)	-0.679*** (-17.96)	-0.560*** (-19.66)	-0.593*** (-17.47)	-0.659*** (-10.93)	-0.732*** (-14.20)	-0.743*** (-13.98)
Leverage		0.071 (0.67)	0.231** (2.05)	0.243** (2.04)	0.235* (1.82)	0.293 (1.53)	0.577*** (4.52)	0.546*** (4.12)

(Continued)

Table V—Continued

	OLS			IV				
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
No. of Business Segments		-0.028*** (-2.81)	-0.008 (-0.68)	-0.034*** (-3.02)	-0.033** (-2.51)	-0.019 (-0.76)	-0.005 (-0.30)	-0.002 (-0.12)
Free Cash Flow		0.979*** (6.00)	0.800*** (5.71)	0.928*** (5.50)	0.880*** (4.84)	-0.177 (-0.61)	0.853*** (4.60)	0.788*** (4.05)
Young IPO Firm		-0.142*** (-4.77)	-0.163*** (-4.86)	-0.137*** (-4.36)	-0.113*** (-3.08)	-0.306*** (-4.69)	-0.070 (-1.59)	-0.071 (-1.50)
Stock Volatility		5.774*** (11.01)	5.359*** (11.70)	5.762*** (10.63)	5.804*** (9.81)	2.445*** (2.71)	13.320*** (7.29)	12.872*** (7.02)
MTB ($t - 1$)							0.176*** (12.54)	0.174*** (11.87)
Firm FE	No	No	Yes	No	No	No	Yes	Yes
Province FE	No	No	No	No	Yes	No	No	No
Partial R^2				0.011	0.008	0.011	0.009	0.014
Cragg-Donald Wald F -statistic				39.363	27.331	39.363	26.485	30.084
5% maximal IV relative bias				16.85	16.85	16.85	16.85	16.85
10% maximal IV relative bias				10.27	10.27	10.27	10.27	10.27
No. of obs.	13,722	13,722	13,722	13,722	13,722	13,722	12,862	9,798
R^2	0.194	0.218	0.125	0.214	0.233	0.159	0.172	0.175

In columns 4 to 8, we present the instrumental variable estimates. We already show the effect of the provincial policies on the proportion of directors with foreign experience (first stage) in Table IV. We report at the end of each specification the Cragg-Donald Wald F -statistic, which shows that the instruments in the first stage of the various regressions are strong. In all cases, the estimates indicate that the proportion of directors with foreign experience positively and significantly affects firm valuations. In column 5, we include province fixed effects, which account for time-invariant firm heterogeneity across provinces. Results are similar if, instead of the province fixed effects, we include firm fixed effects and control for lagged performance (column 7).

In column 6, we account for differences in time-varying growth opportunities across provinces by subtracting from the firm's MTB the median MTB of the firms in the same province in year t , as well as the median MTB of the firms in the same industry in year t . The estimates continue to imply a positive effect of the directors with foreign experience on firm valuation and indicate precisely that the firms that are more likely to attract directors with foreign experience perform better after the introduction of the policy. If anything, fully accounting for province time-varying heterogeneity increases the magnitude of the coefficient of our variable of interest.¹⁷

As discussed before, since the adoption of the policies is scattered across provinces, our control sample includes firms that experienced the policies and hired directors with foreign experience at different points in time. To mitigate concerns that firm-specific shocks correlated with the timing of the policies may drive our findings, in column 8 we restrict the control sample to firms that hire at least one director with foreign experience during the sample period and hence should be more likely to experience similar shocks to the firms affected by the policies. We also include firm fixed effects and control for lagged performance. These estimates should be conservative because they do not rely on cross-sectional differences between firms that hire directors with foreign experience (due to the policies) and firms that are unable or unwilling to hire such directors during our sample period. It is therefore comforting that the estimates continue to indicate a positive effect of directors with foreign experience on firm valuations.

Importantly, the effects we highlight are not only statistically significant, but also economically large, especially when we exploit the exogenous variation in the proportion of directors with foreign experience. Using the ordinary least squares estimates in column 3, a one standard deviation change in the proportion of directors with foreign experience leads to a 0.05 standard

¹⁷ Another test reported in the Internet Appendix goes in the same direction. We ask whether the adoption of a policy to attract highly talented returnee emigrants affects all firms in the province or only those firms that end up employing directors with foreign experience, as we would expect if the impact of the policies were exclusively through the board of directors (and not due to province-level growth opportunities). Our estimates indicate that the effect of the policies is through the board of directors.

deviation change in the dependent variable, a tiny number.¹⁸ By contrast, in column 8, when we consider only the variation in the proportion of board members with foreign experience due to the provincial policies, a one standard deviation change in the proportion of directors with foreign experience leads to an economically more relevant 0.78 standard deviation increase in the MTB of the firm, a change sufficient to bring a firm with median valuation to slightly above the 80th percentile.

This large increase in parameter estimates has an intuitive economic interpretation. The proportion of directors with foreign experience does not capture directors' quality of foreign experience or talents. Since the policies were directed to individuals with the most distinguished backgrounds, when we exploit the exogenous variation we concentrate on the most skilled individuals, who can make the most valuable contributions to firm performance. It is therefore natural that we obtain stronger results.¹⁹

The large effects we document are consistent with the findings of Bloom et al. (2013), who explore the effect of 11 Indian firms working with high-quality consultants for a total of 30 consulting days. The authors show that the benefits are huge: productivity increases by 17% in the first year. After three years, the treated firms open more production plants. A highly talented individual with foreign experience on the board who has at least some decision power for a number of years should be associated with even larger effects.

Tables VI and VII repeat the same set of exercises for two other measures of firm performance, namely TFP and ROE, respectively. Since we expect any effects on accounting profits to be delayed, we consider ROE not during the year in which the policy is implemented, as for the other performance measures, but one year afterwards. The estimates are still strongly supportive of a positive effect of directors with foreign experience on performance. For instance, based on the most conservative estimates in column 8 in each table, a one standard deviation increase in the fraction of directors with foreign experience can bring a firm with median TFP to the 69th percentile and a firm with median ROE to slightly above the 75th percentile.²⁰

Our results so far indicate a positive effect of directors with foreign experience on firm performance for the firms whose behavior is affected by the policies. This

¹⁸ We obtain the economic magnitude of the coefficients using the standard deviation of the industry-year-adjusted MTB, which is 1.179.

¹⁹ In the Internet Appendix, we provide direct evidence supporting this argument. We compare the effect of (any) foreign education and of foreign education that led to a foreign academic degree. In all cases, we find that the coefficient on foreign education that led to an academic degree is larger and more precisely estimated (although the difference between foreign experience and foreign experience that led to an academic degree is statistically significant only for TFP).

²⁰ It may appear surprising at first sight that foreign ownership has a negative and at least marginally statistically significant effect on performance in most of the instrumental variable estimates. However, one does not necessarily expect a positive effect of foreign ownership in China, as regulations constrain foreign investors to acquire small blocks and their incentives to exercise control. The negative effect of foreign ownership, once we can more precisely estimate the effect of board members with foreign experience, may indicate that foreign owners are able to influence firms only if they can affect the board.

Table VI
Directors with Foreign Experience and Total Factor Productivity

This table relates the firm's TFP to the presence of directors with foreign experience. In columns 1 to 3, we present ordinary least squares estimates. In columns 4 to 8, we present instrumental variable estimates. The instrumental variables in columns 4 to 8 include "Provincial Policy," a dummy that takes a value of one in years following the implementation of the policy in each province, and interaction variables between the policy dummy and firm ownership characteristics "State," "Foreign Ownership," and "Block" in 1999 (the beginning of the sample period). If a firm enters our sample later than 1999, firm ownership characteristics computed in the year of the firm's entry in the sample are used to construct the interaction terms. In columns 1 to 5, and 7 to 8, the dependent variable is the firm's TFP, from which we subtract the industry-year median. The dependent variable in columns 6 is the firm's TFP, from which we subtract the industry-year median and the province-year median. In column 8, we exclude all firms that do not hire directors with foreign experience during the sample period. All the variables are defined in the Appendix. *t*-statistics computed with robust standard errors clustered at the firm level are reported in parentheses. All models include a constant, but the coefficients are not reported. We report the partial R^2 of the instruments in the first stage and the Cragg-Donald Wald F -statistics. We also report the Stock-Yogo weak ID test critical values for the Cragg-Donald Wald F -statistics. ***, **, and * indicate significance at the 1%, 5%, and 10% levels, respectively.

	IV							
	OLS							
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
						Within-Province Test	Including Firm FE and Lagged Performance	Excluding Firms that Never Hired Directors with Foreign Experience
Foreign Experience	0.111*** (2.78)	0.134*** (3.19)	0.089** (2.30)	0.975*** (2.90)	0.822** (2.52)	0.797** (2.45)	0.967** (1.96)	0.903** (2.25)
Foreign Ownership		-0.050 (-0.79)	-0.088 (-0.86)	-0.490*** (-2.66)	-0.421** (-2.46)	-0.431** (-2.44)	-0.517* (-1.73)	-0.485** (-1.97)
Block		0.0633** (2.10)	0.037 (0.96)	0.092*** (2.81)	0.076** (2.37)	0.074** (2.32)	0.070 (1.59)	0.080 (1.59)
State		0.009 (0.99)	0.005 (0.42)	0.028** (2.14)	0.024* (1.94)	0.025** (1.95)	0.022 (1.36)	0.035** (2.06)
Size	0.001 (0.31)	-0.005 (-1.22)	-0.041*** (-5.59)	-0.014** (-2.30)	-0.013** (-2.11)	-0.011* (-1.92)	-0.051*** (-5.84)	-0.057*** (-5.86)
Leverage		-0.134*** (-6.74)	-0.030 (-0.14)	-0.029 (-1.28)	-0.033 (-1.49)	-0.034 (-1.56)	0.002 (0.07)	0.026 (0.92)

(Continued)

Table VI—Continued

	OLS			IV				
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
No. of Business Segments	-0.012*** (-4.28)	-0.004 (-1.38)	-0.014*** (-4.45)	-0.013*** (-4.25)	-0.015*** (-4.75)	-0.005* (-1.67)	-0.007** (-2.23)	
Free Cash Flow	0.574*** (15.48)	0.417*** (12.26)	0.556*** (13.99)	0.549*** (14.33)	0.532*** (13.78)	0.382*** (9.92)	0.398*** (9.07)	
Young IPO Firm	0.016*** (1.99)	-0.004 (-0.56)	0.016* (1.89)	0.016* (1.87)	0.014* (1.66)	0.001 (0.16)	-0.003 (-0.32)	
Stock Volatility	-0.048 (-0.47)	0.087 (0.84)	-0.051 (-0.47)	-0.053 (-0.50)	0.056 (0.54)	0.682*** (2.61)	0.624*** (2.28)	
TFP ($t - 1$)						0.208*** (11.96)	0.206*** (11.19)	
Firm FE	No	No	No	No	No	Yes	Yes	
Province FE	No	No	No	No	Yes	No	No	
Partial R^2			0.011	0.011	0.008	0.011	0.009	
Cragg-Donald Wald F -statistic			34.354	24.580	34.354	14.417	16.731	
5% maximal IV relative bias			16.85	16.85	16.85	16.85	16.85	
10% maximal IV relative bias			10.27	10.27	10.27	10.27	10.27	
No. of obs.	12,734	12,734	12,734	12,734	12,734	11,074	8,429	
R^2	0.015	0.054	0.053	0.064	0.050	0.080	0.083	

Table VII
Directors with Foreign Experience and Profitability

This table relates the firm's profitability to the presence of directors with foreign experience. In columns 1 to 3, we present ordinary least squares estimates. In columns 4 to 8, we present instrumental variable estimates. The instrumental variables in columns 4 to 8 include "Provincial Policy," a dummy that takes a value of one in years following the implementation of the policy in each province, and interaction variables between the policy dummy and firm ownership characteristics "State," "Foreign Ownership," and "Block" in 1999 (the beginning of the sample period). If a firm enters our sample later than 1999, firm ownership characteristics computed in the year of the firm's entry in the sample are used to construct the interaction terms. In columns 1 to 5, and 7 to 8, the dependent variable is the firm's ROE at $t + 1$, from which we subtract the industry-year median. In column 6, we exclude all firms that do not hire directors with foreign experience during the sample period. All the variables are defined in the Appendix. t -statistics computed with robust standard errors clustered at the firm level are reported in parentheses. All models include a constant, but the coefficients are not reported. We report the partial R^2 of the instruments in the first stage and the Cragg-Donald Wald F -statistics. We also report the Stock-Yogo weak ID test critical values for the Cragg-Donald Wald F -statistics. ***, **, and * indicate significance at the 1%, 5%, and 10% levels, respectively.

	OLS				IV			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Foreign Experience	0.053*** (2.81)	0.057*** (3.03)	0.031 (1.08)	0.541*** (2.82)	0.556*** (2.54)	0.362** (1.99)	0.657** (2.14)	0.430* (1.85)
Foreign Ownership		-0.040 (-1.27)	0.039 (0.47)	-0.284** (-2.57)	-0.289** (-2.46)	-0.209** (-2.00)	-0.305 (-1.57)	-0.192 (-1.23)
Block		0.050*** (4.05)	0.122*** (4.69)	0.066*** (4.30)	0.068*** (4.31)	0.066*** (4.56)	0.155*** (5.11)	0.148*** (4.36)
State		-0.018*** (-3.87)	-0.031*** (-3.43)	-0.009 (-1.45)	-0.006 (-0.87)	-0.009 (-1.55)	-0.018 (-1.55)	-0.015 (-1.25)
Size	0.019*** (8.66)	0.018*** (8.05)	-0.039*** (-7.41)	0.013*** (3.80)	0.013*** (3.67)	0.012*** (3.97)	-0.034*** (-5.58)	-0.038*** (-5.86)

(Continued)

Table VII—Continued

	OLS			IV				
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Leverage	-0.055*** (-3.69)	0.001 (0.09)	0.212*** (7.63)	0.005 (0.30)	0.003 (0.17)	-0.000 (-0.03)	0.113*** (4.64)	0.136*** (5.10)
No. of Business Segments		0.002 (1.31)	-0.000 (-0.11)	0.001 (0.52)	0.001 (0.61)	0.001 (0.84)	-0.001 (-0.43)	-0.002 (-0.80)
Free Cash Flow		0.363*** (12.94)	0.232*** (7.58)	0.348*** (12.14)	0.347*** (12.11)	0.323*** (11.50)	0.149*** (4.73)	0.175*** (4.81)
Young IPO Firm		0.032*** (8.34)	0.011** (2.09)	0.033*** (7.80)	0.030*** (7.23)	0.031*** (7.85)	0.014** (2.33)	0.010 (1.52)
Stock Volatility		0.103*** (1.98)	0.250*** (3.90)	0.097* (1.74)	0.093* (1.66)	0.005 (0.09)	0.274*** (3.95)	0.309*** (3.93)
ROE							0.094*** (4.11)	0.084*** (3.29)
Firm FE	No	No	Yes	No	No	No	Yes	Yes
Province FE	No	No	No	No	Yes	No	No	No
Partial R ²				0.013	0.009	0.013	0.009	0.013
Cragg-Donald Wald				42.664	29.009	42.664	24.602	28.505
F-statistic								
5% maximal IV relative bias				16.85	16.85	16.85	16.85	16.85
10% maximal IV relative bias				10.27	10.27	10.27	10.27	10.27
bias								
No. of obs.	13,294	13,294	13,294	13,294	13,294	13,294	13,139	9,972
R ²	0.013	0.045	0.030	0.045	0.051	0.039	0.026	0.027

effect is robust to absorbing province and even firm unobserved heterogeneity, and to controlling for a firm's previous performance. The effect appears even larger if we compare the performance of firms that hire directors with foreign experience and those that do not within the same province.

Doubts may remain on whether our estimates are driven by a few firms that lobbied for the adoption of the policies in anticipation of idiosyncratic shocks to their growth opportunities. Reverse causality may arise if one believes that these firms would have experienced the same improvements in performance even in the absence of the policy adoption and the arrival of the directors with foreign experience. This is unlikely because the proportion of directors with foreign experience is not related to a firm's previous performance (as shown in Table IV). To further mitigate concerns about this issue, however, we explore whether the effect of directors with foreign experience on firm performance is stronger for firms that have political or economic power, and therefore are able to influence provincial policies. Finding a similar effect for firms that are unlikely to have influenced the policies would mitigate concerns of reverse causality.

We classify firms with politically connected directors as having political power. Following Fan, Wong, and Zhang (2007) and Calomiris, Fisman, and Wang (2010), we define directors that are currently or were previously employed as bureaucrats by the central government or a local government as politically connected directors. Similarly, since provincial governors may be particularly sensitive to the demands of large firms with a high level of employment, we classify firms with more than 2,000 employees as having economic power.²¹ Next, using an interaction term with the proportion of directors with foreign experience, we explore whether the effect of the latter is smaller for firms with no political or economic power. As is common practice with interaction terms involving an endogenous regressor (Wooldridge (2002), p. 235–236), we augment our original set of instruments using their interaction with the dummy variable “No Power”.

Table VIII shows that the effect of directors with foreign experience is similar for firms with more or less power to influence provincial policies, as the interaction term between the proportion of directors with foreign experience and the dummy capturing low power is statistically insignificant, regardless of whether we use the definition based on political or economic power. This indicates that our results are unlikely to be driven by reverse causality or other unobserved changes in growth opportunities. Even if a few firms lobbied for the policies, the directors with foreign experience enabled the changes we observe in the firms that were able to hire them.

²¹ This is the cutoff used by the State-Owned Assets Supervision and Administration Commission of the State Council (SASAC) of China to define large firms.

Table VIII
Powerful Firms and Directors with Foreign Experience

In columns 1 to 3, we capture a firm's political influence using the presence of politically connected directors. The dummy "No Power" takes the value of one if a firm's board does not have politically connected directors. In columns 4 to 6, we measure a firm's economic power using the number of employees. The dummy "No Power" takes the value of one if the number of employees is less than 2,000. The State-Owned Assets Supervision and Administration Commission of the State Council of China considers large firms those with more than 2,000 employees. The dependent variables are the firm's MTB, TFP, and ROE at $t + 1$, from which we subtract the industry-year median. The instruments for "Foreign Experience" and "Foreign Experience" \times "No Power" are "Provincial Policy," a dummy that takes a value of one in years following the implementation of the policy in each province, interaction variables between the policy dummy and firm ownership characteristics "State," "Foreign Ownership," and "Block" in 1999 (the beginning of the sample period), and interactions of all the instruments mentioned above with the dummy "No Power." If a firm enters our sample later than 1999, "State," "Foreign Ownership," and "Block" computed in the year of the firm's entry in the sample are used to construct the interaction terms. All the variables are defined in the Appendix. t -statistics computed with robust standard errors clustered at the firm level are reported in parentheses. All models include a constant, but the coefficients are not reported. We report the partial R^2 of the instruments in the first stage and the Cragg-Donald Wald F -statistics. We also report the Stock-Yogo weak ID test critical values for the Cragg-Donald Wald F -statistics. ***, **, and * indicate significance at the 1%, 5%, and 10% levels, respectively.

	Political Power			Economic Power		
	MTB (1)	TFP (2)	ROE ($t + 1$) (3)	MTB (4)	TFP (5)	ROE ($t + 1$) (6)
Foreign Experience	4.453*** (3.27)	1.066*** (2.99)	0.476** (2.42)	3.722*** (3.36)	0.846*** (2.74)	0.596*** (3.38)
Foreign Experience \times No Power	-1.117 (-1.02)	-0.292 (-1.44)	0.082 (0.72)	-1.120 (-1.08)	0.290 (1.24)	0.085 (0.73)
No Power	0.015 (0.17)	0.022 (1.16)	-0.003 (-0.30)	0.201** (2.12)	-0.044** (-2.01)	-0.017 (-1.50)
Foreign Ownership	-1.285* (-1.90)	-0.490*** (-2.68)	-0.264** (-2.48)	-0.821 (-1.25)	-0.491*** (-2.78)	-0.331*** (-3.15)
Block	0.657*** (5.65)	0.091*** (2.72)	0.064*** (4.27)	0.666*** (6.14)	0.084*** (2.62)	0.064*** (4.14)
State	-0.069 (-1.43)	0.028** (2.18)	-0.010 (-1.56)	-0.074 (-1.62)	0.027** (2.18)	-0.008 (-1.21)

(Continued)

Table VIII—Continued

	Political Power			Economic Power		
	MTB (1)	TFP (2)	ROE ($t+1$) (3)	MTB (4)	TFP (5)	ROE ($t+1$) (6)
Size	-0.564*** (-19.79)	-0.015** (-2.36)	0.013*** (4.11)	-0.529*** (-17.67)	-0.017** (-2.51)	0.010*** (2.58)
Leverage	0.241** (2.03)	-0.029 (-1.28)	0.004 (0.28)	0.248** (2.10)	-0.030 (-1.31)	0.005 (0.33)
No. of Business Segments	-0.035*** (-3.12)	-0.014*** (-4.44)	0.001 (0.61)	-0.034*** (-3.15)	-0.014*** (-4.44)	0.000 (0.27)
Free Cash Flow	0.923*** (5.42)	0.553*** (13.80)	0.350*** (12.24)	0.918*** (5.47)	0.559*** (13.96)	0.347*** (11.83)
Young IPO Firm	-0.138*** (-4.34)	0.016* (1.85)	0.033*** (7.96)	-0.138*** (-4.47)	0.017* (1.94)	0.033*** (7.58)
Stock Volatility	5.793*** (10.66)	-0.054 (-0.50)	0.096* (1.75)	5.672*** (10.49)	-0.033 (-0.30)	0.105* (1.78)
Partial R^2	0.013	0.012	0.014	0.014	0.013	0.015
Cragg-Donald Wald F -statistic	19.684	17.134	21.133	21.336	19.112	23.068
5% maximal IV relative bias	17.70	17.70	17.70	17.70	17.70	17.70
10% maximal IV relative bias	10.22	10.22	10.22	10.22	10.22	10.22
No. of obs.	13,722	12,734	13,294	13,594	12,734	13,168
R^2	0.215	0.053	0.045	0.217	0.053	0.046

C. Foreign Experience and Innate Ability

So far we have shown that directors with foreign experience have a positive effect on firm performance. Since the policies were directed to exceptional individuals with foreign experience, our tests highlight that international competition for talent affects firm performance, but cannot disentangle whether exceptional ability or foreign experience drives the benefits. Nevertheless, in what follows, we provide some suggestive evidence that foreign experience may matter beyond directors' ability.

We start by asking whether directors with exceptional ability but without foreign experience have effects on firm performance similar to those we observe for directors with foreign experience. Most of the directors in our sample obtained their undergraduate degrees in China. Since access to university education in China is competitive, the university ranking enables us to capture director ability in a similar way as Chevalier and Ellison (1999) do for U.S. fund managers using the SAT scores. We measure director ability using the percentile ranking of the average student entrance exam score of the directors' Chinese universities. Unfortunately, only 3,696 of the 32,823 directors in our sample disclose the Chinese universities in their bios. We sort these universities into top tier, second tier, third tier, and fourth tier, as detailed in the Appendix. In Table IX, we relate the proportion of directors with foreign experience to our three measures of performance controlling for the ranking of the universities attended by the directors of the firm.²² For brevity, we report only the instrumental variable estimates.

Since directors with foreign experience may change the structure of the board along other dimensions known to affect performance, we also control for the following board characteristics: the average tenure of the directors, the proportion of board members who are also employed in the firm (which is an inverse measure of board independence), board size, the average age of the board members, the proportion of female directors, the proportion of foreign board members, the proportion of board members with political connections, and the proportion of busy directors.

It is apparent that the effect of the proportion of directors with foreign experience on firm performance is unchanged when the control for the average ability of the directors, as proxied by the ranking of the Chinese universities. With the obvious caveat that ability is difficult to measure, this result suggests that the ability of directors without foreign experience does not appear to lead to any benefits for firm performance.

It is also worth noticing that our estimates indicate that foreign directors are not as beneficial for firm performance as Chinese directors with foreign experience. This evidence is consistent with the findings of Masulis, Wang, and Xie (2012), who argue that, because of physical distance and cultural differences,

²² In constructing the average ranking of Chinese universities attended by the directors, we assume that directors that do not report their Chinese institution in the bio attended a fifth tier school. Assigning these directors' universities to the fourth tier does not alter our findings.

Table IX
Proportion of Directors with Foreign Experience and Board Characteristics

We present the instrumental variable estimates relating firm performance to the presence of directors with foreign experience controlling for additional board characteristics. In columns 1 to 3, the dependent variables are the firm's MTB, TFP, and ROE at $t + 1$, from which we subtract the industry-year median. The instruments for "Foreign Experience" are "Provincial Policy," a dummy that takes a value of one in years following the implementation of the policy in each province, and interaction variables between the policy dummy and firm ownership characteristics "State," "Foreign Ownership," and "Block" in 1999 (the beginning of the sample period). If a firm enters our sample later than 1999, "State," "Foreign Ownership," and "Block" computed in the year of the firm's entry in the sample are used to construct the interaction terms. Additional board characteristics include "Average Director Tenure," "Employed Directors," "Female Directors," "Busy Directors," "Foreign Directors," "Average Director Age," "Board Size," "Board Political Connection," and "Average Rank of Chinese Universities." All the variables are defined in the Appendix. t -statistics computed with robust standard errors clustered at the firm level are reported in parentheses. All models include a constant, but the coefficients are not reported. We report the partial R^2 of the instruments in the first stage and the Cragg-Donald Wald F -statistics. We also report the Stock-Yogo weak ID test critical values for the Cragg-Donald Wald F -statistics. ***, **, and * indicate significance at the 1%, 5%, and 10% levels, respectively.

	MTB	TFP	ROE ($t + 1$)
	(1)	(2)	(3)
Foreign Experience	4.311** (2.00)	1.040** (2.01)	0.639** (2.10)
Foreign Ownership	-0.894 (-1.16)	-0.408** (-2.04)	-0.258** (-2.05)
Block	0.639*** (5.67)	0.083*** (2.58)	0.062*** (4.10)
State	-0.109* (-1.96)	0.019 (1.32)	-0.009 (-1.24)
Size	-0.565*** (-20.01)	-0.019*** (-3.08)	0.013*** (4.00)
Leverage	0.240** (2.02)	-0.026 (-1.16)	0.006 (0.35)
No. of Business Segments	-0.037*** (-3.13)	-0.014*** (-4.30)	0.000 (0.09)
Free Cash Flow	0.931*** (5.49)	0.554*** (14.03)	0.346*** (11.93)
Young IPO Firm	-0.132*** (-4.12)	0.014 (1.57)	0.033*** (7.54)
Stock Volatility	5.804*** (10.51)	-0.043 (-0.38)	0.098 (1.58)
Average Director Tenure	0.021 (1.59)	0.002 (0.48)	0.004** (2.10)
Non Independent Directors	-0.204* (-1.80)	0.049* (1.73)	0.020 (1.22)
Board Size	0.013* (1.73)	0.006*** (2.81)	-0.000 (-0.19)
Female Directors	-0.176 (-0.98)	-0.016 (-0.37)	0.040 (1.57)
Average Director Age	0.004	0.004***	0.001

(Continued)

Table IX—Continued

	MTB	TFP	ROE ($t + 1$)
	(1)	(2)	(3)
	(0.85)	(2.88)	(0.90)
Foreign Directors	-5.306*	-1.241	-0.648
	(-1.67)	(-1.64)	(-1.53)
Board Political Connection	0.211*	-0.011	0.010
	(1.96)	(-0.34)	(0.64)
Average Rank of Chinese Universities	0.150	0.050*	0.035**
	(1.32)	(1.81)	(2.21)
Busy Directors	-0.143	0.004	0.001
	(-0.60)	(0.08)	(0.02)
Partial R^2	0.006	0.005	0.006
Cragg-Donald Wald F -statistic	18.808	16.751	20.979
5% maximal IV relative bias	16.85	16.85	16.85
10% maximal IV relative bias	10.27	10.27	10.27
No. of obs.	13,722	12,734	13,294
R^2	0.224	0.060	0.048

foreign directors cannot be effective monitors, even in a high transparency environment like the United States, and hence are extremely rare.

In an alternative test, we first conjecture that foreign experience may be more important for directors specializing in business and management because the gap in academic standards between China and the rest of the world has generally been smaller in scientific subjects, such as engineering or physics. We then ask whether firms with at least one director with a foreign business degree perform better than firms that have directors with foreign experience but no director with a foreign business degree.

In Table X, the coefficient on the dummy capturing the presence of directors with foreign business degrees is always larger than that for the analogous dummy capturing other foreign degrees (even though the difference is not statistically significant), suggesting that foreign experience matters. However, in interpreting this finding, and the other tests below exploiting heterogeneity of directors' foreign experience, it must be kept in mind that our instruments can explain changes in the proportion of directors with foreign experience but not in the kind of foreign experience acquired by the directors. Thus, we can only provide suggestive evidence based on ordinary least squares estimates.

V. What Do Directors with Foreign Experience Do?

The causal mechanism behind our maintained hypothesis that directors with foreign experience positively affect firm performance implies that the way in which firms are run changes when directors with foreign experience join the board. To provide evidence on the mechanisms driving our results, we explore

Table X
Business Education and Other Foreign Experience

This table presents ordinary least squares estimates relating firm performance to directors' foreign experience. "Foreign Economics/Business Degree" is a dummy equal to one if at least one director earned a foreign degree with an economics or business major, and zero otherwise. "Foreign Non-Economics/Business Degree" is a dummy equal to one if none of the directors with foreign experience have a foreign degree with an economics or business major. The dependent variables are the firm's MTB, TFP, and ROE at $t + 1$, from which we subtract the industry-year median. All the variables are defined in the Appendix. t -statistics computed with robust standard errors clustered at the firm level are reported in parentheses. All models include a constant, but the coefficients are not reported. ***, **, and * indicate significance at the 1%, 5%, and 10% levels, respectively.

	MTB	TFP	ROE($t + 1$)
	(1)	(2)	(3)
Foreign Economics/Business Degree	0.108*** (3.38)	0.026*** (2.80)	0.012*** (2.82)
Foreign Non-Economics/Business Degree	0.091** (2.29)	0.018* (1.75)	0.009* (1.79)
Foreign Ownership	0.621** (2.55)	-0.015 (-0.26)	-0.028 (-0.91)
Block	0.539*** (5.41)	0.062** (2.09)	0.050*** (4.05)
State	-0.136*** (-3.70)	0.008 (0.85)	-0.018*** (-3.94)
Size	-0.525*** (-24.56)	-0.006 (-1.38)	0.018*** (7.82)
Leverage	0.236** (2.10)	-0.028 (-1.33)	0.002 (0.12)
No. of Business Segments	-0.027*** (-2.75)	-0.012*** (-4.28)	0.002 (1.33)
Free Cash Flow	0.987*** (6.03)	0.574*** (15.52)	0.364*** (12.94)
Young IPO Firm	-0.141*** (-4.74)	0.016** (2.00)	0.032*** (8.38)
Stock Volatility	5.768*** (10.98)	-0.050 (-0.48)	0.103** (1.97)
No. of obs.	13,722	12,734	13,294
R^2	0.215	0.054	0.045

whether directors with foreign experience affect policies that are a prerogative of the board, such as mergers and acquisitions, capital-raising activities, and corporate governance. We further provide suggestive evidence on whether the geography of the firm's internationalization is consistent with the foreign experience of the directors, and whether directors who were more exposed to strong investor protection environments are ex post more likely to improve firm-level corporate governance. Similarly, we evaluate whether directors who gained their foreign experience in countries with advanced management practices bring about efficiency improvements.

A. Internationalization

Chinese firms internationalize with the goal of pursuing a broader set of investment and funding opportunities. The acquisition of foreign firms is an important component of the internationalization plans. Columns 1 and 2 of Table XI show that the probability that a firm conducts an international merger or acquisition, as opposed to a domestic deal, is larger when a higher proportion of the firm's board members have foreign experience. As before, we present ordinary least squares and instrumental variable estimates. The latter indicate that directors with foreign experience facilitate international mergers or acquisitions and are not simply hired concurrent with such deals. This interpretation is consistent with the results in column (3), where we interact the proportion of directors with foreign experience and a dummy for whether the seller is from the same country in which any of the directors obtained their foreign experience. Here, since our instruments cannot predict where the directors obtained their foreign experience, we report only ordinary least squares estimates. The coefficient on the interaction term is positive and highly significant, suggesting that directors' foreign experience in a particular country opens up investment opportunities in that country.

We next consider capital-raising activities, and in particular whether firms do private placements with international or domestic investors. By considering only firms that do a private placement, we keep the demand for equity constant. We also control for whether a firm issues B shares and/or H shares in addition to A shares, as a firm's ability to engage foreign investors depends on whether foreign investors can trade its shares. Unfortunately, private placements became common in China only after 2006. This limits the sample to the 2006 to 2009 period, which severely reduces the explanatory power of the instruments. For this reason, we are able to report only ordinary least squares estimates. Nevertheless, columns 4 and 5 indicate that a higher proportion of directors with foreign experience is associated with a higher probability of a private placement with a foreign investor. Importantly, the private placement is more likely to occur with investors from the countries in which the directors obtained their foreign experience (column 5), suggesting that the foreign experience of directors opens new funding opportunities.

Columns 6 to 8 provide analogous evidence for firms' proportion of foreign sales, which we adjust for the industry-year median. Not only do foreign sales appear to increase after the policy changes increase the proportion of directors with foreign experience, but they do so to a larger extent in the countries where the directors obtained their foreign experience.

Overall, these findings suggest that board members with foreign experience increase the firm's international activity. The geography of the firm's internationalization appears to be shaped by the directors' foreign experience, suggesting that directors may provide firms with connections in the countries where they earned their foreign experience.

Table XI
Internationalization

The dependent variable in columns 1 to 3 is "Foreign M&A," a dummy equal to one if at least one of the mergers and acquisitions that a sample firm announced in a given year involves a foreign firm. In columns 4 and 5, the dependent variable is "Foreign Private Placement," a dummy equal to one if at least one of the firm's private placements in a given year is targeted at foreign investors, and zero if none of these private placements is targeted at foreign investors. In columns 6 to 8, the dependent variable is "Foreign Sales," from which we subtract the industry-year median. "Same Country" is a dummy equal to one if at least one director obtained his/her foreign experience in the same country as the country of the selling firm, the foreign investors, and the foreign sales, respectively. The instrumental variables in columns 2 and 7 include "Provincial Policy," a dummy that takes a value of one in years following the implementation of the policy in each province, and interaction variables between the policy dummy and firm ownership characteristics "State," "Foreign Ownership," and "Block" in 1999. If a firm enters our sample later than 1999, firm ownership characteristics computed in the year of the firm's entry in the sample are used to construct the interaction terms. Variable definitions are in the Appendix. *t*-statistics computed with robust standard errors clustered at the firm level are reported in parentheses. All models include a constant, but the coefficients are not reported. We report the partial *R*² of the instruments in the first stage and the Cragg-Donald Wald *F*-statistics. We also report the Stock-Yogo weak ID test critical values for the Cragg-Donald Wald *F*-statistics. ***, **, and * indicate significance at the 1%, 5%, and 10% levels, respectively.

	Foreign M&A			Foreign Private Placement			Foreign Sales		
	OLS (1)	IV (2)	OLS (3)	OLS (4)	OLS (5)	OLS (6)	IV (7)	OLS (8)	
Foreign Experience	0.154*** (3.22)	0.899* (1.76)	0.007 (0.18)	0.319* (1.66)	0.076 (0.42)	0.216*** (3.35)	0.633** (2.14)	0.176*** (2.72)	
Foreign Experience × Same Country			2.990*** (14.26)		2.969*** (5.83)			1.103*** (3.82)	
Foreign Ownership	0.060*** (4.51)	0.005 (0.12)	0.042*** (3.54)	0.006 (0.12)	-0.004 (-0.09)	0.043*** (2.70)	0.014 (0.62)	0.038*** (2.41)	
Block	-0.054** (-2.05)	-0.040 (-1.32)	-0.036 (-1.59)	-0.118 (-1.01)	-0.096 (-0.89)	0.021 (0.61)	0.039 (1.07)	0.021 (0.62)	
State	-0.012 (-1.34)	-0.000 (-0.03)	-0.007 (-0.93)	-0.052 (-1.11)	-0.007 (-0.16)	0.009 (0.78)	0.016 (1.21)	0.010 (0.87)	
Size	0.009* (1.92)	0.000 (0.05)	0.006 (1.54)	0.026 (1.49)	0.028* (1.71)	-0.007 (-1.30)	-0.010* (-1.76)	-0.007 (-1.37)	

(Continued)

Table XI—Continued

	Foreign M&A		Foreign Private Placement		Foreign Sales			
	OLS (1)	IV (2)	OLS (3)	OLS (4)	OLS (5)	OLS (6)	IV (7)	OLS (8)
Leverage	-0.011 (-0.52)	-0.020 (-0.85)	-0.005 (-0.27)	-0.147 (-1.53)	-0.133 (-1.48)	-0.012 (-0.53)	-0.012 (-0.52)	-0.015 (-0.67)
No. of Business Segments	-0.001 (-0.52)	-0.002 (-0.58)	0.000 (0.21)	-0.025** (-1.98)	-0.020* (-1.65)	-0.000 (-0.08)	-0.000 (-0.07)	0.000 (0.09)
Free Cash Flow	0.050 (1.30)	0.022 (0.47)	0.053 (1.46)	0.059 (0.29)	0.148 (0.80)	-0.001 (-0.04)	-0.015 (-0.35)	0.003 (0.07)
Young IPO Firm	0.000 (0.01)	-0.007 (-0.67)	-0.004 (-0.46)	-0.032 (-0.55)	-0.012 (-0.22)	0.030*** (2.88)	0.024** (2.06)	0.029*** (2.78)
Fraction of Foreign M&A	0.049** (2.05)	0.062** (2.33)	0.046** (2.08)					
Dummy for B/H Share				-0.098 (-1.43)	-0.114* (-1.92)			
Year FE	No	No	No	Yes	Yes	No	No	No
Industry FE	Yes	Yes	Yes	Yes	Yes	No	No	No
Partial R ²		0.01					0.014	
Cragg-Donald		9.25					20.36	
Wald F-statistic								
5% maximal IV relative bias		16.85					16.85	
10% maximal IV relative bias		10.27					10.27	
No. of obs.	4,094	4,094	4,094	355	355	5,917	5,917	5,917
R ²	0.044	0.036	0.200	0.128	0.231	0.031	0.021	0.052

B. Corporate Governance

Table XII considers several aspects of corporate governance. We test whether several alternative indicators of corporate governance improve when directors with foreign experience join the board and whether foreign experience in a country with high standards of investor protection has a stronger effect.

A first indirect indicator of corporate governance is the quality of acquisitions, which we capture using the stock price reaction of the acquiring firm to the announcement of the transaction. This variable measures the present value, net of acquisition costs, of the deal for the acquirer's shareholders. Low-quality acquisitions tend to be considered evidence of agency problems at the acquiring firms (Lang, Stulz, and Walking (1991)). There is also evidence that acquirers whose stock price reacts negatively to a deal announcement tend to score low on standard corporate governance indices (Masulis, Wang, and Xie (2007)).

Since our earlier findings show that directors with foreign experience influence international acquisitions, we focus on the stock price reaction upon the announcement of international deals. In column 1, the cumulative abnormal returns in a $[-2, +5]$ window around the announcement day appear to be unrelated to the proportion of directors with foreign experience.²³ However, in column 2, the cumulative abnormal returns upon the announcement of foreign acquisitions are larger if the director gained her foreign experience in a country with strong investor protection, which we define as countries that score highest in investor protection using the antidirector rights index of La Porta et al. (1998).

Another indicator of corporate governance is earnings management. We expect firms to become more transparent and manage earnings to a lower extent if their corporate governance improves (Leuz, Nanda, and Wysocki (2003)). To capture earnings manipulation, we estimate discretionary accruals using an extension of the Jones model proposed by Kothari, Leone, and Wasley (2005). Specifically, we construct a proxy for earnings management from the residuals of an industry-year regression for discretionary revenues, which is described in the Appendix.²⁴ One advantage of our measure is that it controls for the effect of performance on discretionary accruals and mitigates potential biases arising from firms with extreme performance that are also likely to engage in earnings management. In columns 3 and 4, we find that a higher proportion of directors with foreign experience is associated with a lower degree of earnings management. Importantly, this effect is stronger if the firm has at least one director with foreign experience in a strong investor protection country (column 5).

²³ When considering announcement effects and the long-run returns of mergers and acquisitions in Section V.C, we do not report the instrumental variable estimates because current prices should already incorporate expectations of growth opportunities. The cross-sectional variation in the ex post returns thus reflects the value added by the directors with foreign experience in the merger and acquisition deal.

²⁴ For this reason, in these specifications we do not subtract from the dependent variable the industry-year median.

Table XII
Corporate Governance

This table relates corporate governance to the proportion of directors with foreign experience. The dependent variable in columns 1 and 2 is the firm's cumulative abnormal return starting two days before the announcement of a foreign merger and acquisition up to five days after the announcement. The dependent variable in columns 3 to 5 is a proxy increasing in the extent of earnings management computed as in Kothari, Leone, and Wasley (2005). The dependent variable in columns 6 and 7 is a dummy that takes a value of one if there is a CEO turnover event, and zero otherwise. The dependent variable in columns 8 and 9 is the natural logarithm of the average cash and bonus pay of the top three executives. "High CG Ranking" is a dummy equal to one if at least one director obtained his/her foreign experience from a country with the highest La Porta et al. (1998) antidirector rights index, and zero otherwise. Except for column 4, estimates are obtained by ordinary least squares; in column 4, we report instrumental variable estimates. The instrumental variables include "Provincial Policy," a dummy that takes a value of one in years following the implementation of the policy in each province, and interaction variables between the policy dummy and firm ownership characteristics "State," "Foreign Ownership," and "Block" in 1999 (the beginning of the sample period). If a firm enters our sample later than 1999, firm ownership characteristics computed in the year of the firm's entry in the sample are used to construct the interaction terms. Variable definitions are in the Appendix. *t*-statistics computed with robust standard errors clustered at the firm level are reported in parentheses. All models include a constant, but the coefficients are not reported. We report the partial *R*² of the instruments in the first stage and the Cragg-Donald Wald *F*-statistics. We also report the Stock-Yogo weak ID test critical values for the Cragg-Donald Wald *F*-statistics. ***, **, and * indicate significance at the 1%, 5%, and 10% levels, respectively.

	CAR		Earnings Management				CEO Turnover		Pay for Performance Sensitivity	
	OLS (1)	OLS (2)	OLS (3)	IV (4)	OLS (5)	OLS (6)	OLS (7)	OLS (8)	OLS (9)	
Foreign Experience	0.060 (0.71)	-0.350 (-1.53)	-0.008 (-0.92)	-0.150** (-2.22)	0.028 (1.13)	0.019 (0.59)	-0.078 (-0.94)	0.886*** (6.17)	1.093*** (3.94)	
Foreign Experience × High CG Ranking		0.411* (1.83)			-0.040* (-1.66)		0.105 (1.29)		-0.225 (-0.84)	
Foreign Experience × ROA						-0.387 (-1.14)	1.208 (1.20)	1.762 (1.17)	-4.215 (-1.56)	
Foreign Experience × ROA × High CG Ranking							-1.710* (-1.72)		6.361*** (2.37)	
ROA						-0.452*** (-7.07)	-0.462*** (-7.19)	2.696*** (10.40)	2.736*** (10.52)	
Foreign Ownership	-0.030 (-1.53)	-0.033 (-1.65)	-0.004 (-1.54)	0.007 (1.28)	-0.004 (-1.48)	-0.011 (-1.33)	-0.012 (-1.38)	0.153*** (4.34)	0.153*** (4.37)	

(Continued)

Table XII—Continued

	CAR		Earnings Management				CEO Turnover		Pay for Performance Sensitivity	
	OLS (1)	OLS (2)	OLS (3)	IV (4)	OLS (5)	OLS (6)	OLS (7)	OLS (8)	OLS (9)	
Block	-0.006 (-0.13)	0.003 (0.06)	-0.003 (-0.51)	-0.008 (-1.23)	-0.003 (-0.54)	0.030 (1.60)	0.029 (1.56)	-0.555*** (-5.46)	-0.551*** (-5.42)	
State	-0.012 (-0.63)	-0.011 (-0.60)	0.000 (0.02)	-0.003 (-1.17)	0.000 (0.06)	-0.017** (-2.38)	-0.017** (-2.41)	-0.130*** (-4.02)	-0.130*** (-4.01)	
Size	0.003 (0.29)	0.002 (0.21)	0.003** (2.51)	0.004*** (3.08)	0.003** (2.56)	-0.009*** (-2.62)	-0.009*** (-2.61)	0.308*** (17.60)	0.307*** (17.54)	
Leverage	0.046 (0.84)	0.047 (0.88)	0.011** (2.42)	0.011** (2.25)	0.011** (2.44)	0.013 (0.78)	0.012 (0.72)	0.032 (0.46)	0.037 (0.53)	
No. of Business Segments	0.005 (0.69)	0.005 (0.75)	0.002*** (3.23)	0.002*** (3.16)	0.002*** (3.25)	-0.004* (-1.73)	-0.004* (-1.70)	0.026*** (2.65)	0.026*** (2.63)	
Free Cash Flow	0.140 (0.85)	0.155 (0.94)	0.131*** (10.48)	0.133*** (10.45)	0.131*** (10.48)	0.086* (1.89)	0.084* (1.84)	-0.638*** (-4.23)	-0.630*** (-4.19)	
Young IPO Firm	0.011 (0.50)	0.008 (0.37)	0.010*** (4.78)	0.010*** (4.81)	0.010*** (4.79)	-0.017** (-2.52)	-0.017** (-2.56)	0.166*** (5.57)	0.166*** (5.61)	
Stock Volatility								-0.300 (-0.70)	-0.301 (-0.70)	
CEO Age						0.003*** (6.65)	0.003*** (6.66)			
CEO Tenure						-0.005*** (-3.16)	-0.004*** (-3.15)			
Year FE	No	No	No	No	No	Yes	Yes	Yes	Yes	
Industry FE	No	No	No	No	No	Yes	Yes	Yes	Yes	
Partial R^2				0.015						
Cragg-Donald				50.889						
Wald F -statistic				16.85						
5% maximal IV relative bias				10.27						
10% maximal IV relative bias										
No. of obs.	185	185	13,084	13,084	13,084	13,615	13,615	10,233	10,233	
R^2	0.036	0.052	0.019	0.020	0.019	0.094	0.094	0.369	0.369	

Next, we explore how the presence of directors with foreign experience affects the CEO turnover-performance sensitivity using a sample that spans 2000 to 2010. A higher turnover-performance sensitivity is often considered as evidence of improved monitoring and stronger governance (Weisbach (1988)). In column 7, the coefficient on the triple interaction term (among the proportion of directors with foreign experience, the firm's ROA, and the dummy for whether any of the directors has foreign experience from a strong corporate governance country) is negative and marginally significant.²⁵ This suggests that a higher proportion of directors with foreign experience increases the probability of CEO turnover in firms with relatively poor performance only if the directors obtained their foreign experience in a strong investor protection country.

Executive compensation is another important aspect of corporate governance. In well-governed firms, we expect pay to be highly sensitive to performance (Jensen and Murphy (1990)). This is precisely what we find in column 9, where the average pay of the top three executives, defined as the sum of salary, bonus, and other cash payments, is more sensitive to firm performance, as proxied by the firm's profitability (ROA), when directors gained foreign experience in countries with strong investor protection.

Interestingly, executive compensation appears to be higher in firms with directors with foreign experience. This may indicate that perks, which constitute an important part of compensation in China (Cai, Fang, and Xu (2011)), decrease and are substituted by cash compensation, a more transparent form of compensation. This would be consistent with an overall improvement in transparency and governance. While exploring the effect of directors with foreign experience on executive compensation is beyond the scope of our paper, such an interpretation is also consistent with the fact that executive compensation is low in China, averaging RMB 262,898 (approximately \$33,161) for the top three executives during our sample period, which is comparable with the levels reported by Cao et al. (2011) for a similar sample.²⁶

C. Performance Improvements and Advanced Management Practices

So far we provide suggestive evidence that the directors' foreign experience affects the geography of the firms' internationalization and the extent to which corporate governance improves. Here we show that experience in countries with advanced management practices also matters, and that the large valuation gains we document are driven by the directors' exposure to both strong investor protection and advanced management practices.

²⁵ Since we are interested in the sign of a triple interaction term, we are unable to report instrumental variable estimates. The effect would be hard to rationalize in any case using omitted factors.

²⁶ This is based on \$1 = RMB 7.93, the average daily exchange rate between January 4, 1999 and December 31, 2009.

We measure the quality of management practices in a country using the country's monitoring production index as reported in Bloom et al. (2012).²⁷ This index captures the extent to which firms in a country have introduced modern management techniques to meet business objectives, such as reducing costs and improving quality, and has been shown to be related to firm productivity and valuation in developed countries and emerging markets alike (Bloom and Van Reenen (2007)).

Table XIII relates directors' foreign experience to two alternative proxies for the way firms' operations are managed: firm asset turnover, a measure of operating efficiency, and the long-term performance of international mergers and acquisitions.

In columns 1 and 2 of Table XIII, an increase in directors with foreign experience is associated with an improvement in operational efficiency, as proxied by asset turnover. Column 3 shows that this effect is more pronounced if the firm has directors with foreign experience from countries with advanced management practices.

Furthermore, column 4 of Table XIII reveals that directors with foreign experience are not associated with higher long-term performance following mergers and acquisitions. However, column 5 shows that the 24-month buy-and-hold returns of acquiring firms are higher if the board of directors includes individuals that have been exposed to countries with advanced management practices. Integrating the merged firms' operations and human capital and enhancing internal resource allocation require sophisticated managerial skills, which only directors that acquired foreign experience in countries with advanced management practices seem to have.

Finally, Table XIV shows that foreign experience both in strong investor protection countries and in countries with advanced management practices is associated with larger valuation gains. Overall, these results suggest that directors with foreign experience facilitate firm internationalization and improve corporate governance in a way that appears to be affected by the type of their foreign experience.

²⁷ While there is a positive correlation between the quality of investor protection and management practices across countries, there are important differences that allow us to identify the effects of these two aspects of foreign experience. The countries that we classify as strong investor protection are the United States, Canada, South Africa, Hong Kong, India, United Kingdom, and Pakistan, while the countries that score at the top for advanced management practices are Sweden, Germany, and the United States. Also, while actual enforcement of investor protection is weak in countries like India or Pakistan, which may raise doubts about whether a director was indeed exposed to high corporate governance standards, only 11 directors in our sample have foreign experience in India, two directors have foreign experience in Pakistan, and three directors earned foreign experience in South Africa. Thus, the bulk of the identification for the exposure to strong corporate governance practices comes from the United States, Canada, and Hong Kong.

Table XIII
Management Practices

This table relates operating performance to the proportion of directors with foreign experience. The dependent variable in columns 1 to 3 is “Asset Turnover,” from which we subtract the year median. The dependent variable in columns 4 and 5 is a firm’s return over the 24 months after the announcement of an international merger and acquisition minus the market return during the same period. “High MP Ranking” is a dummy that equals one if at least one director obtained his/her foreign experience from one of the top three countries according to Bloom et al.’s (2012) monitoring management score, and zero otherwise. Except for column 2, estimates are obtained by ordinary least squares; in column 2, we report instrumental variable estimates. The instrumental variables include “Provincial Policy,” a dummy that takes a value of one in years following the implementation of the policy in each province, and interaction variables between the policy dummy and firm ownership characteristics “State,” “Foreign Ownership,” and “Block” in 1999 (the beginning of the sample period). If a firm enters our sample later than 1999, firm ownership characteristics computed in the year of the firm’s entry in the sample are used to construct the interaction terms. Variable definitions are in the Appendix. *t*-statistics computed with robust standard errors clustered at the firm level are reported in parentheses. All models include a constant, but the coefficients are not reported. We report the partial R^2 of the instruments in the first stage and the Cragg-Donald Wald *F*-statistics. We also report the Stock-Yogo weak ID test critical values for the Cragg-Donald Wald *F*-statistics. ***, **, and * indicate significance at the 1%, 5%, and 10% levels, respectively.

	Asset Turnover			Post M&A Performance	
	OLS (1)	IV (2)	OLS (3)	OLS (4)	OLS (5)
Foreign Experience	0.261*** (3.51)	1.045* (1.85)	0.131 (1.26)	0.193 (0.44)	-0.614 (-1.32)
Foreign Experience × High MP Ranking			0.171* (1.67)		0.914** (2.16)
Foreign Ownership	0.101 (0.84)	-0.288 (-1.06)	0.105 (0.88)	-0.050 (-0.41)	-0.035 (-0.29)
Block	0.194*** (3.45)	0.212*** (3.64)	0.194*** (3.47)	-0.214 (-0.80)	-0.221 (-0.81)
State	0.065*** (3.50)	0.077*** (3.55)	0.064*** (3.48)	-0.198* (-1.66)	-0.201* (-1.69)
Size	0.044*** (4.84)	0.036*** (3.09)	0.043*** (4.77)	-0.007 (-0.15)	-0.008 (-0.17)
Leverage	0.160*** (4.40)	0.160*** (4.34)	0.160*** (4.39)	-0.393 (-1.57)	-0.398 (-1.59)
No. of Business Segments	-0.001 (-0.18)	-0.002 (-0.38)	-0.001 (-0.17)	-0.056* (-1.81)	-0.048 (-1.53)
Free Cash Flow	0.723*** (11.59)	0.719*** (11.47)	0.723*** (11.57)	1.352** (2.06)	1.313** (2.01)
Young IPO Firm	0.023* (1.93)	0.025** (2.03)	0.023* (1.90)	-0.085 (-0.85)	-0.081 (-0.82)
Stock Volatility	-0.051 (-0.13)	-0.105 (-0.26)	-0.032 (-0.08)	4.415 (1.56)	4.238 (1.49)
Sales Growth	0.184*** (17.49)	0.180*** (16.16)	0.185*** (17.52)		
Partial R^2		0.009			

(Continued)

Table XIII—Continued

	Asset Turnover			Post M&A Performance	
	OLS (1)	IV (2)	OLS (3)	OLS (4)	OLS (5)
Cragg-Donald Wald <i>F</i> -statistic		31.122			
5% maximal IV relative bias		16.85			
10% maximal IV relative bias		10.27			
Industry FE	Yes	Yes	Yes	No	No
No. of obs.	13,183	13,183	13,183	233	233
<i>R</i> ²	0.247	0.217	0.248	0.097	0.107

Table XIV

Corporate Governance, Management Practices, and Corporate Valuations

This table presents the ordinary least squares estimates relating firm value to the proportion of directors with foreign experience. The dependent variable is the firm's MTB, from which we subtract the industry-year median. "High CG Ranking" is a dummy that equals one if at least one director obtained his/her foreign experience from a country with the highest La Porta et al. (1998) antidirector rights index, and zero otherwise. "High MP Ranking" is a dummy that equals one if at least one director obtained his/her foreign experience from one of the top three countries according to Bloom et al.'s (2012) monitoring management score, and zero otherwise. Variable definitions are in the Appendix. *t*-statistics computed with robust standard errors clustered at the firm level are reported in parentheses. All models include a constant, but the coefficients are not reported. ***, **, and * indicate significance at the 1%, 5%, and 10% levels, respectively.

	(1)	(2)	(3)
Foreign Experience	0.425** (2.06)	0.162 (0.55)	0.046 (0.15)
Foreign Experience × High MP Ranking	0.544** (2.57)		0.411* (1.79)
Foreign Experience × High CG Ranking		0.743** (2.54)	0.529* (1.66)
Foreign Ownership	0.339 (1.48)	0.304 (1.32)	0.318 (1.39)
Block	0.548*** (5.49)	0.550*** (5.49)	0.550*** (5.51)
State	-0.130*** (-3.57)	-0.131*** (-3.57)	-0.131*** (-3.59)
Size	-0.503*** (-22.97)	-0.502*** (-22.93)	-0.503*** (-23.00)
Leverage	0.223** (1.97)	0.222** (1.97)	0.222** (1.96)

(Continued)

Table XIV—Continued

	(1)	(2)	(3)
No. of Business Segments	−0.027*** (−2.67)	−0.027*** (−2.73)	−0.027*** (−2.70)
Free Cash Flow	0.957*** (5.86)	0.959*** (5.87)	0.957*** (5.86)
Young IPO Firm	−0.130*** (−4.33)	−0.130*** (−4.31)	−0.131*** (−4.34)
Stock Volatility	5.818*** (11.08)	5.812*** (11.06)	5.823*** (11.10)
No. of obs.	13,722	13,722	13,722
R^2	0.215	0.215	0.215

VI. Conclusions

The brain drain from emerging markets may have not only costs, but also positive, indirect, benefits. Talented individuals migrating to foreign countries accumulate knowledge and skills. The experiences that they accumulate, coupled with their presumably higher ex ante ability, may allow their talent to flourish. If these highly skilled emigrants decide to return, the experience they gained abroad can benefit their home country in which case the brain drain becomes a brain gain.

This paper documents a specific channel leading to brain gain. We show that, when individuals with foreign experience join corporate boards, firm performance improves and firms are run differently. The positive effects on firm valuations are large relative to the compensation of board members, which is moderate in China. Thus, our results suggest that, by successfully competing in attracting talent, governments can greatly benefit firm productivity and performance.

While our results suggest that directors with foreign experience can facilitate the transfer of knowledge and provide connections in foreign countries, it remains to be explored to what extent similar effects could be achieved through alternative channels such as foreign ownership. Our results suggest that directors with foreign experience are somewhat special. A possibility is that the background they share with the locals allows them to overcome cultural barriers. We consider this an exciting area for future research.

Appendix

Variable	Definition and Data Source
No. of Business Segments	The number of industries in which a firm operates, set to one if the information is missing, and set to five if the number is larger than five. Since information on business segments is not available for 1999, we backfill using business segments in 2000. Source: WIND database.
No. of Directors with Foreign Experience	The total number of directors that have foreign working experience, foreign education, or both. Winsorized at the 1% and 99% levels. Source: Manual collection and CSMAR database.
Asset Turnover	Sales divided by total assets. Winsorized at the 1% and 99% levels. Source: CSMAR database.
Assets	Total assets of the firm (in RMB 100 millions). Winsorized at the 1% and 99% levels. Source: CSMAR database.
Average Director Age	The average age of a firm's directors. Winsorized at the 1% and 99% levels. Source: Manual collection and CSMAR database.
Average Director Tenure	Average tenure of a firm's directors. Winsorized at the 1% and 99% levels. Source: Manual collection and CSMAR database.
Average Rank of Chinese Universities	The average ranking of the Chinese universities attended by the directors. The ranking is based on incoming freshmen students' national entrance exam scores, which we obtain from netbig.com's "Chinese University Rankings 2008." We classify a Chinese university as top tier (and assign a value of one) if the percentile of the average entrance exam score of the freshman students attending the university is between 100, the maximum, and 98; second tier (and assign a value of two) if the percentile is equal to or lower than 98 and larger than 85; third tier (and assign a value of three) if the percentile is equal to or lower than 85 and larger than 70; and fourth tier (and assign a value of four) if the percentile is equal to or lower than 70. If a director does not disclose her Chinese university, we consider the university she attended as fifth tier. Source: Manual Collection.
Block	Fraction of shares held by the largest shareholder. Winsorized at the 1% and 99% levels. Source: CSMAR database.
Board Political Connection	Fraction of politically connected directors on the board. A director is defined as politically connected if he or she is a current or former government bureaucrat following Fan, Wong, and Zhang (2007) and Calomiris, Fisman, and Wang (2010). Winsorized at the 1% and 99% levels. Source: Manual collection.
Board Size	The number of directors. Winsorized at the 1% and 99% levels. Source: CSMAR database.

Variable	Definition and Data Source
Busy Directors	Fraction of directors who sit on the boards of two or more publicly traded firms. Winsorized at the 1% and 99% levels. Source: Manual collection and CSMAR database.
CAR	The sum of the abnormal returns, defined as the difference between the daily stock return and the market return, starting from two days before the announcement of an international merger or acquisition to five days after. The daily market return is the value-weighted A-share market index return (including dividends). Winsorized at the 1% and 99% levels. Source: CSMAR database.
CEO Age	The difference between the current year and the CEO's year of birth. Winsorized at the 1% and 99% levels. Source: Manual collection and CSMAR database.
CEO Tenure	One plus the difference between the current year and the year when the CEO joined the firm. Winsorized at the 1% and 99% levels. Source: Manual collection.
CEO Turnover	A dummy equal to one if there is a CEO turnover event in a given year. Since we use a lead, the sample period for this variable is 2000 to 2010. Source: Manual collection and CSMAR database.
Director Age	The difference between the current year and the director's year of birth. Winsorized at the 1% and 99% levels. Source: Manual collection and CSMAR database.
Directors with Foreign Experience Dummy	A dummy variable equal to one if at least one director has foreign working experience, foreign education, or both, and zero otherwise. Source: Manual collection.
Dummy for B/H-share	A dummy variable equal to one if a firm has B and/or H shares in addition to A shares. Source: CSMAR database.
Earnings Management	Kothari, Leone, and Wesley's (2005) measure of discretionary accruals, constructed as the residual of the following model estimated for each industry and year: $TA_{it} = \beta_0 + \beta_1(1/AT_{it-1}) + \beta_2(\Delta REV_{it} - \Delta AR_{it}) + \beta_3PPE_{it} + \beta_4ROA_{it} + \varepsilon_{it}$, where TA_{it} is net income minus cash flows from operating activities, scaled by lagged total assets; AT_{it-1} is lagged total assets; $\Delta REV_{it} - \Delta AR_{it}$ is the change in sales minus the change in accounts receivable, scaled by lagged assets; PPE_{it} is property, plant, and equipment, scaled by lagged assets; and ROA_{it} is the return on assets. Winsorized at the 1% and 99% levels. Source: CSMAR database.
Executive Compensation	The natural logarithm of average compensation (salary, bonus, and other cash payments) of the top three executives. Information on executive compensation is available starting in 2002. Winsorized at the 1% and 99% levels. Source: CSMAR.
Female Directors	The proportion of female directors. Winsorized at the 1% and 99% levels. Source: CSMAR database.

Variable	Definition and Data Source
Foreign Directors	The proportion of directors that are foreign nationals. Winsorized at the 1% and 99% levels. Source: Manual collection.
Foreign Experience	The fraction of directors with foreign experience. Calculated as the number of directors that have either foreign working experience, foreign education, or both, scaled by the total number of directors. Winsorized at the 1% and 99% levels. Source: Manual collection and CSMAR database.
Foreign M&A	A dummy equal to one if at least one of the merger and acquisition transactions announced by the firm in a given year involves a foreign sellers, and zero if the merger and acquisition transactions announced by the firm in a given year involve no foreign sellers. Source: Manual collection and CSMAR database.
Foreign Ownership	Fraction of shares held by foreign investors. Winsorized at the 1% and 99% levels. Source: Manual collection.
Foreign Private Placement	A dummy equal to one if at least one of the private placements filed by the firm in a given year is targeted at foreign investors, and zero if none of these private placements are targeted at foreign investors. Source: Manual collection and CSMAR database.
Foreign Sales	Foreign sales as a fraction of total sales. Winsorized at the 1% and 99% levels. Source: Manual collection and CSMAR database.
Fraction of Foreign M&A	The value of foreign merger and acquisition transactions divided by the total value of mergers and acquisitions in a given year. Source: Manual collection and CSMAR database.
Free Cash Flow	The net income plus depreciation minus cash paid to acquire fixed assets, intangible assets, and other long-term assets, scaled by total assets. Winsorized at the 1% and 99% levels. Source: CSMAR database.
High CG Ranking	A dummy variable equal to one if at least one director obtained his/her foreign experience from a country with the highest La Porta et al. (1998) anti-director rights index, and zero otherwise. Source: La Porta et al. (1998).
High MP Ranking	A dummy variable that equals one if at least one director obtained his/her foreign experience from one of the top three countries according to Bloom et al.'s (2012) monitoring management score, and zero otherwise. Source: Bloom et al. (2012).
Leverage	Total liabilities divided by total assets. Winsorized at the 1% and 99% levels. Source: CSMAR database.
MTB	Market-to-book ratio. Constructed as the sum of the market value of equity and book value of total liabilities, scaled by the book value of total assets. We censor this variable if it is above 10 or below zero. Source: CCER and CSMAR databases.
Non-Independent Directors	Proportion of directors who are also employees of the firm. Winsorized at the 1% and 99% levels. Source: CSMAR database.

Variable	Definition and Data Source
Post M&A Performance	A firm's return over the 24 months after the announcement of an international merger and acquisition minus the market return during the same period. Winsorized at the 1% and 99%. Source: CSMAR database.
ROA	Operating income divided by total assets. Winsorized at the 1% and 99% levels. Source: CSMAR database.
ROE	Net income divided by total equity. Since we use a lead, the sample period for this variable is 1999 to 2010. We censor this variable if it is above two or below negative two. Source: CSMAR database.
Size	Natural log of total assets. Winsorized at the 1% and 99% levels. Source: CSMAR database.
State	A dummy variable equal to one if a firm is government controlled or owned, and zero otherwise. State ownership includes central and provincial government ownership. Source: CCER database.
Stock Volatility	The standard deviation of a firm's daily stock returns. This variable is set to missing if the number of trading days is less than 50 in a given year. Winsorized at the 1% and 99% levels. Source: CSMAR database.
Tenure	One plus the difference between the current year and the year when an individual joined the firm's board of directors. Source: Manual collection and CSMAR database.
TFP	The firm's total factor productivity, defined as in Schoar (2002). For all firms in an industry-year, we regress the natural logarithm of sales on the natural logarithm of total assets, the natural logarithm of the total number of employees, and the natural logarithm of cash payments for raw materials and service. The firm's TFP is computed as the residual of this regression. Winsorized at the 1% and 99% levels.
Young IPO Firm	A dummy variable equal to one if the difference between the current year and the IPO year is less than four, and zero otherwise. Source: CSMAR database.

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Supporting Information

Additional Supporting Information may be found in the online version of this article at the publisher's website:

Appendix S1: Internet Appendix.