

The Option Value of a Bureaucrat as Successor CEO: Theory and Evidence^{*}

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Abstract

This paper derives an option value theory of hiring a government official (bureaucrat) as successor chief executive officer (CEO). The empirical findings in 2,454 CEO turnover cases in Chinese companies support the theoretical predictions. Firms that appoint bureaucrat CEOs have positive abnormal announcement stock returns. These returns are larger for firms with less prior political connections. Bureaucrat firms have lower long-term returns, larger variance and skewness of long-term returns. They obtain more subsidies and loans but face increased rent-seeking of management. In contrast to private firms, state-owned enterprises with bureaucrat successor CEOs massively underperform in the long run.

Keywords: Bureaucrat, corporate political connections, CEO successions in China

JEL Classifications: G32, G34, M13

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1. Introduction

In this paper we provide an option value theory of hiring a government official (bureaucrat) as successor chief executive officer (CEO) and conduct an empirical analysis to test the implications of the model. If a firm hires a former bureaucrat as new CEO, the firm can possibly benefit from the new CEO's political connections for its business making. However, investors typically have less information about the management skills and objectives of a bureaucrat and thus face higher uncertainty about both potential downsides and upsides. Our simple model of management appointments in monopolistic markets shows that these two effects give rise to an option value. This embedded option value of a bureaucrat as new CEO generates the following set of implications.

Bureaucrat firms have positive abnormal announcement stock returns.¹ The announcement returns are higher for firms with less prior government connections (e.g. non state-owned enterprises, departing CEO is not a bureaucrat or incoming bureaucrat is an external hire). Compared to non-bureaucrat firms, our model derives the following implications for bureaucrat firms after the CEO turnover. On average bureaucrat firms have lower long term stock returns. They have higher cross-sectional variance and skewness of long term stock returns. Furthermore, bureaucrat firms obtain more loans and subsidies but face more rent seeking of management than non-bureaucrat firms.

In order to test this rich set of predictions of the model and quantify the tradeoffs of the appointment of a politically connected CEO, we use a hand collected dataset with detailed information about departing and incoming CEOs in 2,454 turnover cases in firms listed on the Shanghai and Shenzhen Stock Exchanges from 2001 to 2010. China is a particularly interesting case to test our theory since connections and relationships are said to be an inherent part of conducting businesses. In our sample, bureaucrats account for 14.71% of successor CEOs. Since state-owned enterprises (SOEs), i.e. firms with government as the controlling shareholder, might be different than Non-SOEs, our empirical analysis also controls for the different nature of firms. There are 1,497 CEO successions in SOEs and bureaucrats account for 15.36% of new CEOs.

¹ As short-hand notation, a firm that hires a bureaucrat (or non-bureaucrat) as successor CEO is called a bureaucrat (or non-bureaucrat) firm.

Regarding the CEO transitions in the remaining 957 Non-SOEs, 13.38% of new CEO positions are filled with bureaucrats.

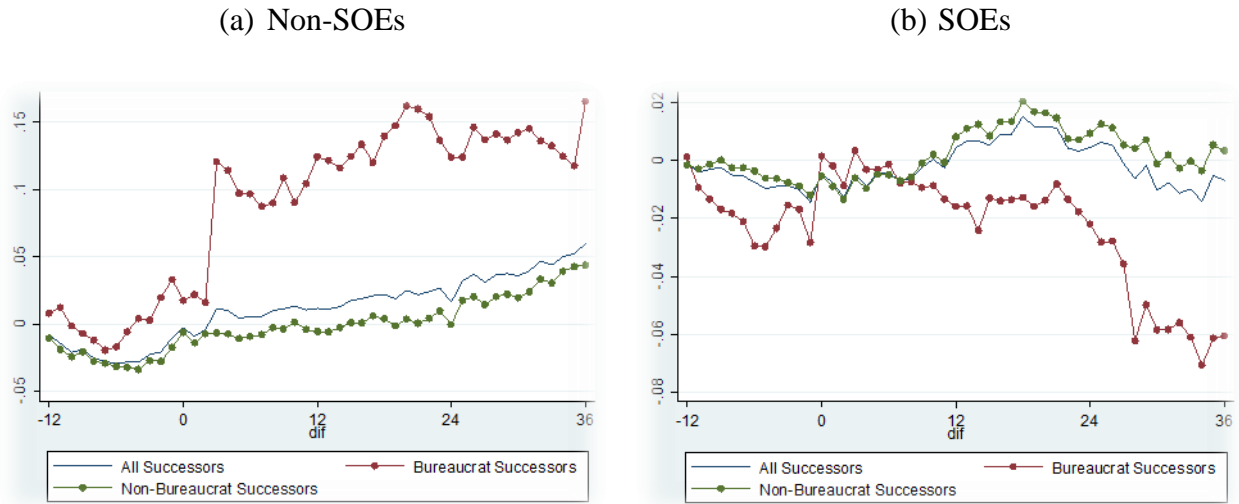
We provide several novel and nuanced empirical findings that are all consistent with our option value theory and thus add a number of new insights to the existing literature which we review below. We document that stock markets react positively when the appointment of a bureaucrat CEO is announced. The average cumulative abnormal returns (CAR) for the three days event window (-1, +1) is 1.49%. The CAR is 2.31% in the subsample if a bureaucrat is announced to replace a departing non-bureaucrat CEO. It is 3.07% if the bureaucrat CEO is an external hire. It is 4.49% if the departing CEO is a non-bureaucrat and replaced by a bureaucrat who is an external hire. Also, the CAR is 4.10% if Non-SOEs appoint bureaucrat CEOs. On the other hand, if SOEs appoint bureaucrat CEOs the CAR is zero.

These results suggest that the option value reflected in the stock returns is larger for firms with less or no prior government relationships. The abnormal announcement returns for hiring non-bureaucrat CEOs are zero. Furthermore, the differences in announcement returns between the bureaucrat and non-bureaucrat firms are statistically significant in all mentioned cases. Interestingly and perhaps surprisingly, these nuanced stock price reactions indicate that the Chinese stock markets incorporate information about CEO turnovers in a way that is consistent with a rational pricing model despite the large fraction of retail investors. Contrary to causal perception, Carpenter, Lu and Whitelaw (2019) document similar findings regarding price informativeness and state (p.2) “stock prices have become as informative about future profits in China as they are in the US since 2004. China’s stock market no longer deserves its reputation as a casino.”

Our model also makes clear predictions about long term stock returns. We document that the average cumulative abnormal returns for the event window from month 4 to month 36 after the transition for bureaucrat firms are lower than non-bureaucrat firms in the full sample, the subsamples of only SOEs as well as the subsample of only Non-SOEs. Similar results hold for raw returns. These observations about long term returns are also consistent with our option value theory that predicts a higher probability of an ex post decline in the stock price of bureaucrat firms when uncertainty resolves.

Figure 1 highlights some of the main empirical findings of this paper. The two graphs depict the monthly average cumulative abnormal returns (CAR) beginning 12 months before until 36 months after CEO succession for the four types of firms. Graph 1a shows the large announcement returns of Non-SOEs which hire a bureaucrat CEO while the announcement returns of Non-SOEs with a new non-bureaucrat CEO is around zero. The positive stock market reaction for bureaucrat Non-SOEs extends into three months after the turnover. The CAR (0,3)-months is 8.92%. The pattern for SOEs is different. Graph 1b shows that there is no significant difference in short-run returns between SOEs with bureaucrat and non-bureaucrat CEOs. But SOEs with bureaucrats CEOs massively underperform in the long run. The CAR for month 4 to month 36 after the CEO turnover is -7.09%. The CAR (4,36)-months for SOEs with non-bureaucrat successor CEOs is around zero.

Figure 1



Graph 1(a) displays the monthly average cumulative abnormal returns (CAR) beginning 12 months before until 36 months after CEO successions for all Non-SOEs (blue line), Non-SOEs with bureaucrat successors (red line) and Non-SOEs with non-bureaucrat successors (green line). Graph 1(b) illustrates the CAR for all SOEs with CEO successions (blue line), SOEs with bureaucrat successors (red line) and SOEs with non-bureaucrat successors (green line). The succession occurs at month 0. Abnormal returns are adjusted using equally weighted market returns.

Furthermore, our theory predicts higher cross sectional variance and skewness of long term returns for bureaucrat firms. The standard deviation of the cumulative abnormal returns over the

event window (4, 36) months for bureaucrat firms is 0.6630 and larger than the standard deviation of 0.5491 for non-bureaucrat firms. Using Bartlett's test the differences in variances is significant at the 1-percent level. Bureaucrat firms exhibit larger stock return skewness than non-bureaucrat firms (4.5051 versus 1.0548). The differences in variance and skewness also hold within subsamples of SOEs and Non-SOEs. Overall, these empirical results are consistent with all implications of the embedded option value story of hiring a bureaucrat as successor CEO.

We also test if there is further support for our theory by analyzing changes in loans, government subsidies and rent seeking after the appointment of a bureaucrat CEO. We show that bureaucrat firms experience an increase in long term loans and government subsidies while this is not the case for non-bureaucrat firms and the difference in difference is significant. We also show that the loan increase is much stronger for Non-SOEs while SOEs experience stronger increase in subsidies. On the other hand bureaucrat firms face increased rent-seeking behavior of management. Again there are subtle differences. Managers in Non-SOEs use “related party transactions” while managers in SOEs use “other receivables” to possibly tunnel resources out of the firm.² In addition, the profitability of SOEs with bureaucrat CEOs deteriorates and its sales growth rate is negative in subsequent years.

This paper contributes to various strands of the literatures on corporate political connection and CEO turnover. Previous studies typically focus on either the benefits or the costs of political connections separately. The main contributions of our paper are fourfold. First, it analyzes the benefits and costs of political connections using one single dataset. Second, it provides an economic mechanism that links short term and long term stock price behavior and generates testable implications that are supported by the empirical findings. Third, these theoretical and empirical insights provide a better understanding of the channels through which political connections affect stock and operating performances. Forth, the empirical results show that Chinese stock markets incorporate CEO relevant information in a way that is consistent with a rational pricing model despite the large fraction of retail investors which is perhaps surprising.

² Jiang et al. (2010) document the widespread use of corporate loan guarantees by controlling shareholders to extract benefits from minority shareholders in Chinese listed firms. Reporting of such loans is typically included in the accounting category “other receivables.”

The most related paper is Fan et al. (2007) who analyze how political connections affect post-IPO performance of Chinese firms. They find that firms with politically connected CEOs in place underperform firms that are not managed by politically connected CEOs. Such firms display weaker post-IPO financial performance. The paper does not analyze CEO transitions and the financial and economic consequences of turnovers. We provide novel and nuanced empirical results on costs and benefits of CEO appointments, and are thus able to highlight the tradeoffs and mechanisms through which a bureaucrat successor CEO may influence short term and long term stock performances. Furthermore, Fan et al. (2007) document that firms with existing bureaucrat CEOs have lower first day IPO stock return. We focus on CEO turnover and show that the stock market reacts positively to the appointment of a bureaucrat CEO in Non-SOEs. This abnormal announcement return is strongest if the bureaucrat is an external hire and the departing CEO is a non-bureaucrat. Our empirical results regarding long run stock performance reveal subtle details. SOEs with a bureaucrat successor exhibit particular negative performances while shareholders in Non-SOEs benefit from the appointment of a bureaucrat successor CEO. In addition, our results regarding the volatility and skewness of long term stock returns are novel.

Cao et al. (2017) analyze whether political connections become entrenched in a sample of listed non-SOEs in China if the expected political capital fails to materialize and show that politically connected CEOs have a lower probability of turnover and cause a weaker turnover-performance sensitivity than non-politically connected CEOs. On the other hand Li et al. (2008) show that politically connected firms are favored in bank funding allocations. Fan et al. (2008) take 23 corruption scandals as a natural experiment and investigate the leverage and debt maturity of bribers and connected firms. Their study focuses on how detected corruptions change financial conditions.

Using non-Chinese data, Huson et al. (2004) document positive announcement effect of CEO succession but it is not about political connections. In terms of the benefits of political connections, Agrawal and Knoeber (2001), Johnson and Mitton (2003), Charumilind et al. (2004), Khwaja and Mian (2005), Morck et al. (2005), Faccio (2006), Claessens et al. (2008), Kim et al. (2012), Goldman et al. (2013) and Amore and Bannedsen (2013) show that politically connected firms receive preferential access to financial resources and favorable regulatory treatment such as tax exemptions, government contracts, government grants, and favorably

drafted legislation. Faccio et al. (2006) show that politically connected firms are more likely to be bailed out during financial distress by the government. These papers do not analyze potential costs of political connections and are not about CEO turnover.

In terms of the costs of political connections, Chaney et al. (2011) show that politically connected firms have poorer accounting qualities. Shleifer and Vishny (1989, 1994), Rajan and Zingales (2003), and Piotroski and Zhang (2014) analyze the role of government relationships and rent-seeking behavior. These papers mainly focus on the costs of political connections and are not about CEO turnover. Our paper contributes to that literature by offering novel and nuanced evidences for a clear tradeoff between political benefits on the one hand and management skills and rent-seeking on the other hand based on a unique dataset. We show that after the appointment of a bureaucrat CEO, long term loans and government subsidies increase in general. The loan increase is much stronger for Non-SOEs while SOEs experience stronger increase in subsidies. On the other hand bureaucrat firms face increased rent-seeking behavior of management. After the CEO turnover, managers in Non-SOEs use “related party transactions” while managers in SOEs use “other receivables” to possibly tunnel resources out of the firm.

Finally, our paper has implications for the literature on managerial successions (Denis and Denis, 1995; Huson et al., 2004; Perez and Gonzalez, 2006). We document novel nuanced results. For example, SOEs with a bureaucrat successor CEO have particularly negative operating and stock performances while this is not the case for Non-SOEs with a bureaucrat successor CEO. Although their long run stock performance is weaker than other Non-SOEs with non-bureaucrat CEOs, the overall effect is positive and large because of the strong announcement returns.

The remainder of the paper is organized as follows. Section 2 presents an option value theory of hiring a politically connected manager and derives the testing hypotheses. Section 3 describes the data and provides summary statistics of CEOs appointments. Section 4 analyzes stock price behaviors. Section 5 analyzes changes in loans and subsidies. Section 6 analyzes changes in rent seeking. Section 7 discusses the underperformance of SOEs with bureaucrat successor CEO. Section 8 uses the Split-Share Structure Reform in 2005 to conduct a robustness test. Section 9 concludes.

2. Model and Testing Hypotheses

In this section we develop a simple theoretical model to formalize the tradeoffs between benefits and costs of hiring a politically connected manager and its implications for stock returns. We consider a contract model where a monopolistic firm produces one product. The demand for the product is given by the (inverse) demand function $p = \max[\theta - q, 0]$, where q denotes the quantity, p the market price, and θ is a random variable that can be interpreted as a demand parameter. In stage 1, the firm decides whether to hire a bureaucrat (B) or non-bureaucrat (N) as manager. In stage 2, the incoming manager chooses the quantity $q \geq 0$ to produce. In stage 3, the demand state θ realizes. The profit of the firm is $\pi = p(\theta) \cdot q - C(q) - \gamma + s$ where s is government subsidies and γ is a parameter that captures rent-seeking behavior of the manager. The type i of a manager is characterized by the vector $(\theta_i, s_i, \gamma_i)$, where $i=B, N$. We assume that θ_i is private information of the manager.

In order to derive comparative static results with simple closed form solutions, we assume that $\gamma_i = s_i$ and normalize the production cost to $C(q)=0$.³ Also, we assume that $\theta_B = \theta_N + \varepsilon$ where θ_N has distribution $F(\theta_N)$ and ε is an independent random variable with $E[\varepsilon]=0$ and $Var(\varepsilon)=\sigma^2$. This assumption states that ex ante a bureaucrat firm faces a demand that is a mean-preserving spread of the demand of a non-bureaucrat firm. If the political connection turns out to be valuable, sales is high. But sales are low if the bureaucrat has inferior management skills and his connections are not valuable. The ceteris paribus assumption here is that both bureaucrat and non-bureaucrat CEOs generate the same expected sales. This highlights the mechanism and comparative statics results regarding the embedded option value, but it is not crucial for the qualitative results which we discuss below. All proofs are given in Appendix B.

Proposition 1

Suppose θ is uniformly distributed on the interval $[X-d, X+d]$ with $0 < d \leq \frac{1}{2}X$. The realized profit is $\pi^ = \frac{1}{4}\theta^2$. The expected profit (value of the firm) is $E[\pi^*] = \frac{1}{4}X^2 + \frac{1}{12}d^2$ and the variance of profit is $Var[\pi^*] = \frac{1}{48}X^2d^2 + \frac{1}{18}d^4$.*

³ All results hold if variable production cost is linear.

Proposition 1 shows that a mean-preserving spread of θ (i.e. the higher uncertainty about the sales that comes with a bureaucrat) generates an option value of $\frac{1}{12}d^2$. Note, $E[\pi_B^*] - E[\pi_N^*] = \frac{1}{4}X^2 + \frac{1}{12}d^2 - \frac{1}{4}X^2 = \frac{1}{12}d^2$. Realized profit and thus stock price is more volatile.

Corollary 1.1

The embedded option value is $\frac{1}{12}d^2$ and increases in d , the uncertainty about potential upsides and downsides.

Proposition 2

If a firm hires a bureaucrat, the probability that the stock price drops (ex post) is larger than 0.5 and that probability increases in d .

Proposition 3

The induced distribution of profits of a bureaucrat firm exhibits positive skewness of $E[\pi^] - \pi^{*Median} = \frac{1}{12}d^2$ and the skewness coefficient is $\varsigma = d / \sqrt{\frac{1}{3}X^2 + \frac{8}{9}d^2}$.*

Under the given assumptions, the embedded option value is the same as skewness. The following numerical example illustrates Propositions 1 to 3. Suppose $\theta \sim u[50,150]$. The market value of a firm with a non-bureaucrat CEO ($d=0$) is $E[\pi^*] = \frac{1}{4} \cdot 100^2 = 2,500$. A firm with a bureaucrat CEO has a market value of $E[\pi^*] = \frac{1}{4} \cdot 100^2 + \frac{1}{12}50^2 = 2,708.33$. The embedded option value is $\frac{1}{12}d^2 = 208.33$. At announcement the market value (stock price) increases by 8.33%. At $t=1$, in order to justify the market value of 2,708.33, realized demand must be $\theta = \sqrt{4 \cdot 2708.33} = 104.08$. (At this demand $\pi^* = \frac{1}{4}\theta^2 = 2,708.33$.) The probability that the share price drops is $prob(\theta < 104.08) = \frac{104.08 - 50}{100} = 0.5408$. The higher the upside potentials and downside risks, the larger the option value and the higher the probability that the share price drops when

demand realizes.⁴ Since mean profit of $E[\pi^*] = 2,708.33$ is larger than median profit of $\pi^{Median}(\theta = 100) = 2,500$ there is positive skewness of $\frac{1}{12}d^2 = 208.33$ and the skewness coefficient is $\varsigma = 0.67$. Note, the skewness of the fundamental variable θ is zero since demand has a uniform distribution.

To summarize, our model generates seven testing hypotheses. Note, hypothesis H2 below is part of the model if we assume that the uncertainty and potential benefits a bureaucrat brings in to a firm is smaller when the firm already has political connections, i.e. d is smaller.

H1: The announcement to appoint a bureaucrat CEO leads to positive abnormal announcement returns.

H2: The abnormal announcement returns (option value) are higher for bureaucrat firms with less prior political connections.

H3: Bureaucrat firms are more likely to have declining long-run returns than non-bureaucrat firms.

H4: The variance of long run returns of bureaucrat firms is larger than non-bureaucrat firms.

H5: The skewness of long run returns of bureaucrat firms is positive and larger than non-bureaucrat firms.

H6: Bureaucrat firms obtain more loans and subsidies than non-bureaucrat firms.

H7: There is more rent-seeking of management in bureaucrat firms than non-bureaucrat firms.

This set of hypotheses can help differentiate our model from alternative explanations. One competing story is that bureaucrats have better information and cherry picks better firms to work for. A new bureaucrat CEO is a signal to outside investors that the firm is more profitable than expected which gives rise to positive announcement returns. This story is consistent with hypothesis H1 but not with hypotheses H2 to H5. Another competing story is that Chinese

⁴ The maximum uncertainty-induced market value (for $d=100$) is $E[\pi^*] = \frac{1}{27d}(X + d)^3 = 2,962$ or 18.52% and ex post the stock price drops with 55.6%. Note, for $d > 0.5X$ the expected profit is given by the above modified formula.

investors are irrational and overestimate the benefits of political connections which imply positive announcement returns. Overreactions lead to a stock price decline in the long run. This story is consistent with hypotheses H1 and H3 but has no implications for variance and skewness of long term returns as well as loans and rent seeking. Hypotheses H4 to H7 help distinguish our theory from purely irrational overreactions. Furthermore, in order to be consistent with hypothesis H2, Chinese investors are supposed to overreact in a very nuanced and rational way.

The driver of our model is the convexity-induced option value. Technically, the price function is convex (i.e. $p = \max[\theta - q, 0]$) and we make a set of simplifying assumptions to derive explicit solutions. But the option value effect is not an artifact of the specific functional form of the model. It is consistent with option-pricing logic. More generally, even absent of the convex profit function, the equity of a leverage firm can be interpreted as a call option and it is well known that the option value increases in the variance of the underlying cash flows, *ceteris paribus*. In our model, the variance of (endogenous) profit is driven by the higher uncertainty about the potential downsides and upsides that come with the appointment of a bureaucrat CEO.

A main assumption of our theoretical analysis is that there are more uncertainties about the type of bureaucrat CEO than in the case of a non-bureaucrat CEO. It is easier to observe the previous performance of a CEO candidate with business experience. Investors and the board can examine the manager's track record and typically have an opportunity to evaluate his or her management skills and style. In other words, investors can better anticipate the implications for corporate financial policy and investment decisions when hiring a non-bureaucrat successor CEO (Bertrand and Schoar, 2003; Dittmar and Duchin, 2015).⁵

In contrast, there is typically less information available about the abilities of a government officials or military officer to run a company or take advantage of political connections. In China's case, information about bureaucrats is even harder to come by as officials may report information selectively to avoid the scrutiny from their own government branch or other government agencies. The lack of information also means that investors have a more diverse

⁵ Bertrand and Schoar (2003) find that manager fixed effects matter for a wide range of corporate decisions. For example, they show that on average managers holding an MBA degree follow more aggressive strategies. Dittmar and Duchin (2015) show that professional experiences affect financial policy. See also Malmendier and Tate (2005) and Malmendier et al. (2011).

range of view about the abilities of the new bureaucrat CEO. Therefore, it is likely that there is more disagreement among investors (and analysts) about the benefits and costs. Diether et al. (2002), document that high dispersion among analyst opinions about a firm induces skewness in returns and is a predictor of lower long term stock returns.⁶

3. Data and Descriptive Statistics

Our sample consists of all non-financial firms listed on the Shanghai and Shenzhen Stock Exchanges from 1998 to 2013. Financial and management information are obtained from the Chinese Stock Market and Accounting Research (CSMAR) database. As our tests require firm data three years before and after the CEO transition, we restrict our sample to CEO successions that occurred between 2001 and 2010 and to appointing firms with information for three consecutive years after the CEO succession.

We use China Corporate Governance Research Database (CCGRD) developed by the GTA Information Technology Co. to identify CEO turnover. From this dataset, we construct our turnover sample, which consists of 2,454 CEO successions that satisfy the following conditions: (1) The incumbent and successor held his or her position for at least one year. (2) As our tests require firm data before and after the CEO succession, the financial information for the firms had to be available around the time of the CEO transition. (3) The succession are not directly related to a merger, acquisition or spin-off.

Information about the CEO such as name, gender, age, tenure, professional background, and working experience was manually collected from company annual reports. Following Fan et al. (2007), working experience was used to construct bureaucrat CEO backgrounds, including whether they were current or former government officials or military officers. If the incoming CEO is a current or former bureaucrat, the CEO is classified as a bureaucrat successor CEO. We do not consider successor CEOs who previously worked for a state-owned enterprise (SOE) as having bureaucrat experience.

Following the literature on CEO turnover (Adams et al., 2005), we also consider the educational, occupational, industrial, and professional characteristics of both the departing and incoming CEO. Furthermore, we designate a successor CEO as an outsider if the incoming CEO

⁶ Pan et al. (2015) show that stock volatility decreases as investors gradually learn about the abilities of the CEO.

has been working for the firms for one year or less at the time of the appointment. Other successors are classified as insiders (Huson et al., 2004). The CCGRD database provides the reasons for each succession, whether it is voluntary or forced. The voluntary group includes cases for which the stated reasons are retirement and health. Otherwise, the departure of the leaving CEO is considered as forced.

The Table in Appendix A provides the definitions of all CEO specific and firm specific variables as well as financial and operating performance measures used in the empirical analysis. Panel A of Table 1 shows that there are 2,454 CEO transitions in our sample. Between 2001 and 2010, new CEO hires average about 245 a year. This number is quite stable over time. The percentage of bureaucrats is also fairly evenly distributed across years with a mean of 14.71%. Panel B of Table 1 documents the industry distribution of firms. Bureaucrat successions are unevenly distributed across industries. While all industries contain firms that appoint bureaucrat CEOs, the industries with the largest percentage of firms that hire bureaucrat successor CEOs are Utilities and Transportation. Panel C shows that that there are 1,497 successions in SOEs and 15.36% are filled by a bureaucrat while 13.68% of the 957 CEO successions in private firms are filled by a bureaucrat.

[Insert Table 1 here]

Table 2 reports the univariate comparisons of the characteristics of incoming bureaucrat and non-bureaucrat CEOs. The bureaucrat successor CEOs tend to be older, have less overseas experience, and possess fewer professional skills at the time of the appointment than their non-bureaucrat counterpart. 55.1% of the new CEOs in firms that hire bureaucrats were external hires. In contrast, 38.2% of new CEOs in firms that hire non-bureaucrats are external hires. In terms of corporate governance and financial variables, firms appointing a bureaucrat as CEO are more likely to be state-owned and have less foreign ownership.

[Insert Table 2 here]

4. Stock Price Behaviors

In this section we conduct an empirical test of hypotheses H1 to H5, and analyze whether firms with a bureaucrat as successor CEO have positive abnormal announcement returns (H1 and H2), on average lower long-term returns (H3) and larger cross-sectional variance and skewness of long-term returns (H4 and H5).

4.1. Short Term Price Reactions

The hypothesis H1 states that the announcement to appoint a bureaucrat as new CEO leads to positive abnormal announcement returns. The hypothesis H2 states that the announcement returns are larger for firms with less prior government connections. In order to test these predictions we conduct an event study. We use the exact announcement date of the CEO appointment as the event day. Abnormal announcement returns are calculated based on a market model using the equal-weighted market index. The estimation window of the market model is $[-250, -21]$. We exclude those CEO appointment announcements with less than 100 observations in the estimation window. This leaves us with a total of 2,292 announcements, including 338 announcements of appointments of bureaucrat CEOs and 1,954 of appointments of non-bureaucrat CEOs. We estimate the average cumulative abnormal returns (CARs) over event windows $(-1, 1)$ and $(-2, 2)$, where day 0 is the announcement date.

Panel A in Table 3 shows that there is a significant difference in mean abnormal returns between the announcements of bureaucrat and non-bureaucrat CEO appointments. The average CAR in the event day window $(-1, 1)$ is 1.49% for the former and an average of zero for the latter. The difference between the two groups is 1.42% and statistically significant. Similar results are obtained when we use CAR over the event window $(-2, +2)$. When we restrict announcements to cases where the departing CEO is a non-bureaucrat, we find a larger mean difference of 2.25%. This suggests that the market expects greater benefits when firms recruit a bureaucrat CEO to replace a non-bureaucrat CEO. We also document that the market takes an even more positive view on hiring a bureaucrat CEO externally. In the sample of external hires, the mean difference between the bureaucrat successor and non-bureaucrat successor is 3.08%. When we focus on the subsample of Non-SOEs, the mean difference is even more pronounced (4.31%). A subsample test with the highest mean difference in CAR (4.58%) between the

bureaucrat and non-bureaucrat firms is if the new CEO is an external hire and replaces a departing non-bureaucrat CEO.

In the subsample in which a bureaucrat is hired into a SOE or into a firm where the departing CEO is (already) a bureaucrat, the average CAR is around zero each and is not statistically different from the non-bureaucrat group. This suggests that the stock market considers a bureaucrat as successor CEO as less valuable for firms that already have ties with the government and brings in less potential benefits. These findings are consistent with hypothesis H2 in that announcement returns are nuanced and reflect information about prior government connections of hiring firms.

[Insert Table 3 here].

Panel B of Table 3 presents multivariate regression results. It shows that a bureaucrat successor CEO has a positive and significant effect on abnormal announcement returns even after controlling for financial and governance variables. Columns 3 and 4 show that a SOE that hires a bureaucrat successor CEO has negative and significant effect on abnormal announcement returns. While stock market investors consider a bureaucrat CEO be valuable for Non-SOEs. Furthermore, the abnormal announcement returns of appointing a bureaucrat is higher for firms which has more shares owned by the largest (non-government) shareholder of the firm. These empirical results are consistent with our rational pricing model.

4.2. Long Term Stock Performance

According to hypothesis H3, firms appointing bureaucrat CEOs are more likely to have declining long term returns. To examine long term stock performance, we adopt a standard event-time estimate of long term abnormal stock returns of firms following a CEO succession (Nini et al., 2012). We measure performance by comparing the stock return of succession firms to the equal-weighted market return.⁷ A CEO succession occurs at month 0. Figure 2 plots the event-time average cumulative abnormal returns (CAR) for the pooled sample of SOEs and Non-SOEs beginning 12 months before until 36 months after a CEO succession. Figure 1 in Section 1 shows the subsample results.

⁷ We also estimate the (simple) buy and hold returns, and obtain very similar results.

Panel A.I of Table 4 reports the performance of firms for three sub-periods (in months), the pre-event window (-12, -1), the event window (0, 3) and post-event window (4, 36). The abnormal return for month (0, 3) is consistent with the short term price reactions in the previous section. It is 4.77% for bureaucrat firms versus 0.54% for non-bureaucrat firms. The average cumulative abnormal returns for month (4, 36) of bureaucrat firms is -4.99% and smaller than the 0.87% for non-bureaucrat firms. Columns (1) to (4) in Panel B show that the underperformance of bureaucrat firms in month (4, 36) is statistically significant even after controlling for CEO and firm-specific characteristics. This is consistent with Hypothesis H3 which predicts a higher probability of an ex post decline in the stock price.⁸

Figure 2

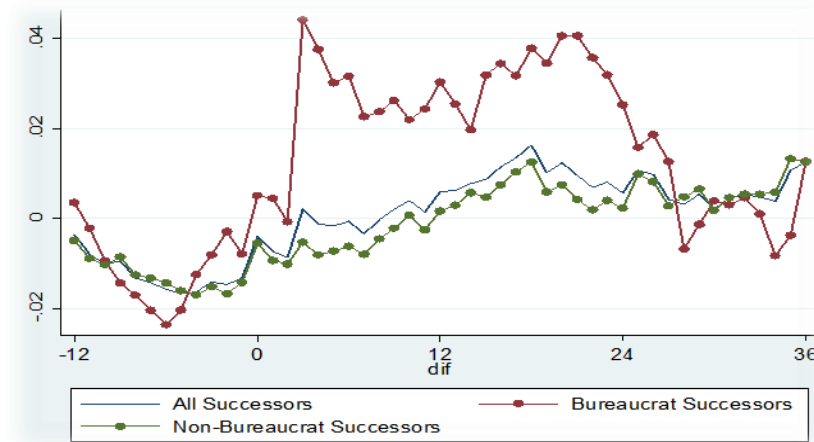


Figure 2 displays the monthly cumulative average abnormal returns beginning 12 months before until 36 months after CEO successions for all firms with successions (blue line), firms with bureaucrat successors (red line) and firms with non-bureaucrat successors (green line). The succession occurs at month 0. Abnormal returns are adjusted using equal weighted market return.

Panel C.I of Table 4 shows that the standard deviation of the cumulative abnormal returns over the event window month (4, 36) for bureaucrat firms is 0.6630 and larger than the standard deviation of 0.5491 for non-bureaucrat firms. Using Bartlett's test the differences in variances is significant at the 1-percent level. Furthermore, bureaucrat firms exhibit larger skewness of long

⁸ The results for raw returns of a buy and hold strategy are qualitatively similar.

term stock returns than non-bureaucrat firms (4.5051 versus 1.0548). These observations are consistent with hypotheses H4 and H5.

[Insert Table 4 here]

4.3. Stock Performance of SOEs versus Non-SOEs

In the full sample analysis we do not distinguish between SOEs and Non-SOEs. Table 4 reports the average effects across all firms. In this section we conduct subsample analyses. The results are qualitatively similar. For both the subsamples with only SOEs and only Non-SOEs, bureaucrat firms have lower long term abnormal returns in the month (4, 36) than non-bureaucrat firms and this is consistent with hypothesis H3.

Furthermore, the subsample analysis reveals some interesting and subtle patterns. Figure 1b illustrates that SOEs with bureaucrat successor CEO massively underperformed SOEs with non-bureaucrat CEOs in month (4, 36). Panel A.II in Table 4 quantifies this and shows that the average cumulative abnormal return is -7.09% for SOEs. The performance patterns are different when a Non-SOE hires a bureaucrat CEO. After the positive announcement returns the long run performance does not decline significantly for Non-SOEs (Figure 1a). Panel A.III in Table 4 shows that Non-SOEs have an average cumulative abnormal return of -0.97% in months (4, 36). Given the large announcement returns in months (0, 3) of 8.92% the overall effect is positive for shareholders in Non-SOEs. The regression results in Panel B of Table 4 shows that these results also hold after controlling for other CEO and firm-specific characteristics.

Panel C.II of Table 4 shows that the standard deviations as well as skewness of abnormal stock returns over the period (4, 36)-month for SOEs that hire a bureaucrat CEO are larger than SOEs that hire a non-bureaucrat CEO. Panel C.III reports similar results for the subsample of Non-SOEs. These results provide further evidence for the hypotheses H4 and H5 of the embedded option value theory.

5. Changes in Loans and Subsidies

A potential benefit of hiring a bureaucrat as CEO is that political connections can help the firm obtain more loans and subsidies or other favorable treatment from the government. In China,

government support is particularly important. Since the Open Door policy was announced in 1978, Chinese authorities have used subsidies extensively to promote domestic businesses and help them become more productive and competitive through industrial upgrades and restructuring. Government subsidies come in many forms, including government mandates, subsidies for purchasing products made by local firms, financial help, and tax exemptions.⁹

In order to test Hypothesis H6, we extract loan information from annual financial reports and classify loans into short-term and long-term (maturity over one year) loans. Government grants or “government subsidy revenue” are reported as non-operating revenue in the corporate annual reports. We explore the changes in the ratio of total loans to total assets (*Loan size*), long-term minus short-term loans scaled by the total assets (*Long structure*) and the ratio of government subsidy revenue to total sales (*Subsidy*) around the time of CEO succession. Following Huson et al. (2004), we use the changes in *Loan size*, *Loan structure* and *Subsidy* from year -1 to year +3 to measure changes in favorable government treatment following a CEO succession. To control for industry and time effects, we use the *unadjusted* measure, *industry-adjusted* measure (adjusted by subtracting industry level median) and *control-group-adjusted* measure (adjusted by subtracting the median for a control group matched by industry, prior ROA performance and size) for each variable.¹⁰

Panel A of Table 5 reports the mean and median changes in *Loan size* around CEO successions from year -1 to year +3. We observe that the size of outstanding bank loans does not exhibit significant changes around the time of CEO succession. Moreover, there is no evidence of changes in loan size for either group of appointments. However, when loans are classified by maturity, bureaucrat firms experience a significant increase in long-term bank loans and that

⁹ Sun and Tong (2003) show that government implemented various policies, such as interest rate cut, debt-equity swap and write-off debt to reduce SOEs’ financial burden. Allen et al. (2005) show that the majority of external financing is extended by state-owned banks in China and an informal financing sector has emerged. The shadow banking system provides loans to some borrowers who have limited access to bank finance (Dang et al, 2014). Dang et al (2018) provide a comprehensive set of Chinese shadow banking statistics.

¹⁰ Each sample firm is matched to comparison firms from the same industry with ROA within $\pm 20\%$ and closest in the size in the year prior to the turnover.

there is no similar effect for non-bureaucrat firms.¹¹ The difference is about 2% and significant. This result is consistent with hypothesis H6. We also find that there is a significant link between government subsidy revenue and the CEO appointed. The results indicate that the increase in *Subsidy* is more pronounced for bureaucrat firms than that for non-bureaucrat firms. When using the industry and control-group-adjusted ratios, we obtain similar results.

Panel B of Table 5 shows the results for subsample analyses and reveals interesting and nuanced differences between SOEs and Non-SOEs. Both types of firms receive more long term loans and subsidies after hiring a bureaucrat CEO. But SOEs experience a larger increase in subsidies, while Non-SOEs experience larger increase in long term loans.

Panel C in Table 5 reports multivariate regressions results for changes in *Loan structure* and *Subsidy* and they are consistent with the findings in the previous two panels.¹² Bureaucrat firms obtain more long term loans (for all three measures) and after controlling for other CEO and firm-specific characteristics. Similarly, bureaucrat firms obtain more subsidies (for all three measures) after controlling for other CEO and firm-specific characteristics. Columns 4 and 5 show that the increases in long term loans are stronger and statistically more significant for Non-SOEs than SOEs. Columns 9 and 10 show that the increases in subsidies are statistically more significant for SOEs than Non-SOEs. Overall, these findings suggest that firms with bureaucrat CEOs receive more favorable treatment from government than those that appoint non-bureaucrats which is consistent with hypothesis H6 of the model.

[Insert Table 5 here]

6. Changes in Rent Seeking

Hypothesis H7 states that rent-seeking behavior on the part of the management increases for bureaucrat firms. In an environment with weak investor protections such as China, controlling shareholders in poorly governed firms may tunnel corporate financial resources out of the firm through a variety of financial arrangements (Jian and Wong, 2010; Peng et al., 2011).

¹¹ In unreported findings, we show that differences in long-term loans between bureaucrat and non-bureaucrat appointing firms are largest in the Utilities and Transportation industries.

¹² We also use the differences in the three-year average values after CEO successions minus the value in year -1 as dependent variables. Similar results are obtained.

The tunneling activity includes related party transaction, loan guarantee, investment and acquisition, change in equity or assets. These are corporate activities that are most likely to give rise to self-dealing transactions conducted by the controlling shareholders. For example, Jiang et al. (2010) document a widespread use of corporate loans by controlling shareholders to extract benefits from Chinese listed firms. Jian and Wong (2010) show that minority shareholders experience significant value loss when companies undertake related part transactions.

We first use abnormal related-party transactions to measure the extent of rent-seeking activities (Jian and Wong, 2010). We collect all related-party transactions from CSMAR, and construct the variable *RPT* (related-party transactions), defined as the total amount of transactions to related parties scaled by the firm's sales. To determine abnormal related-party transactions, we run a set of ordinary least squares (OLS) year-by-year regression models with *RPT* as the dependent variable. Our explanatory variables are those associated with industry and firm characteristics, including the natural log of total assets (*Size*), the ratio of market value to book value (*Tobin's Q*), and the ratio of total debt to total assets (*Leverage*). The residuals obtained from these regressions are used to proxy for abnormal related-party transactions (*AB_RPT*). We construct a second indicator *Other receivables*, defined as the ratio of total other receivables to market value of equity, to proxy the extent of tunneling (Jiang et al., 2010).

Panel A of Table 6 provides mean and median changes of the two proxies for rents seeking around CEO successions from year -1 to year +3. We employ unadjusted, industry-adjusted, and control-group-adjusted measures for both variables. For the use of other receivables, we find a reduction in this ratio for the full sample and the subsample of firms that appoint non-bureaucrat CEOs. This is probably a consequence of a government mandate that firm's reduce other receivables. To protect the interests of minority shareholders, the Chinese Security Regulatory Commission (CSRC) required that corporate insiders repay any "other receivables" they might owe by the end of 2006 (Jiang et al., 2010). Despite CSRC restrictions, however, firms appointing bureaucrat CEOs increased in their use of other receivables so that they had around 2% larger changes in other receivables than firms with non-bureaucrat CEOs, a difference that is large and statistically significant. Similar results are obtained when we examine changes in related-party transactions across bureaucrat and non-bureaucrat firms. The results are robust under industry-adjusted and control-group-adjusted specifications.

Panel B of Table 6 shows the results for subsample analyses and reveals interesting and nuanced differences between SOEs and Non-SOEs. It shows that appointment of a bureaucrat CEO is associated with a larger increase in the use of other receivables in SOEs. The appointment of a bureaucrat CEO is associated with a larger increase in the use of part-related transactions in Non-SOEs. These results suggest that bureaucrat firms face more rent-seeking of management, in both Non-SOEs and SOEs but they use different methods to possibly tunnel resources out of the firm.

Panel C of Table 6 reports multivariate regressions of changes in rent-seeking activities around the period of CEO transition (year -1 to year +3) and they are consistent with the descriptive results. In addition, we also show that the change in the use of other receivables is significantly higher when the departing CEO is also a bureaucrat. Columns 4 and 5 show that for SOEs there is a significant increase in the use of other receivables, while a substantial increase in the related-party transactions is observed for Non-SOEs (Column 9 and 10). Overall, our results suggest that it is easier for corporate insiders to engage in rent-seeking behavior and tunnel financial resources out of the firm in the presence of a CEO with government connection and experience. This is consistent with hypothesis H7 of the model.

[Insert Table 6 here]

7. The Underperformance of Bureaucrat-SOEs

Section 4.3 shows that SOEs that hire a bureaucrat as new CEO massively underperform in the long run. Anecdotal evidence suggests that there are politics involved and power struggle within the SOE when a new bureaucrat takes on the CEO position. In this section we analyze a potential link between the decline in long term stock performance and operating performance. We use two operating performance measures, namely sales growth and return on assets (ROA) where ROA is defined as the ratio of EBIT over the book value of asset. Following Denis and Denis (1995), and Huson et al. (2004), we consider changes of these performance variables during the CEO

transition period (year -1 to year +3). For each variable, we provide the unadjusted, industry-adjusted (by subtracting industry level median), and control-group-adjusted measures.¹³

Panel A of Table 7 shows a clear worsening of operating efficiency for firms that appoint bureaucrat CEOs. These firms display declines in terms of sales growth rate and negative ROA. In contrast, the control-group-adjusted figures for non-bureaucrat successor sample are positive, suggesting an operating efficiency improvement in firms that appoint non-bureaucrat CEOs. The differences between the two groups are economically large and statistically significant. Panel B of Table 7 shows that the negative sales growth and negative ROA are mainly driven by the underperformance of bureaucrat SOEs.

Panel C of Table 7 reports results of a multivariate regression where the dependent variables are the change in sales growth (Columns 1-3) and ROA (Columns 6-8) over the period from year -1 to year +3, using unadjusted, industry adjusted and control group adjusted measures, respectively. The OLS regression analysis shows that for the whole sample the underperformance of firms with bureaucrat successor CEOs remains significant after controlling for CEO-specific and firm-specific factors, as well as governance variables. In Columns 4 and 5 (Column 9 and 10), we examine the relationship between bureaucrat CEO successor and the changes in control-group-adjusted sales growth (ROA) for the subsamples of Non-SOEs and SOEs. Again, it shows that the underperformance is driven by bureaucrat SOEs. For Non-SOEs that hire bureaucrat CEOs, there are no statistically significant negative effects on sales growth and ROA.

[Insert Table 7 here]

¹³ Following the literature, ROA is winsorized at 2.5% and 97.5% when calculating the means and test statistics. Industry adjusted ROA is measured by the ROA minus the median of the corresponding ratio in the same industry. Control-group-adjusted ROA is defined as the unadjusted ROA adjusted by subtracting the performance of its control firm. Though not reported in the paper we show there are no significant differences between the two successor groups in terms of changes in book asset, capital expenditure and leverage ratio. This suggests that the underperformance of bureaucrat firms are not driven by different financial strategies or restructuring activities.

8. Split-Share Structure Reform in 2005

In this section we control for a special event and show that the results are robust. Economic reforms in China include the “corporatization” of state-owned enterprises (SOEs), where SOEs could issue shares to the public. These shares are listed on the Shanghai and Shenzhen stock exchanges. A unique feature is that existing shareholders were prohibited from selling their shares during an initial public offering (IPO). Ownership diversification worked through the issuance of new shares (Megginson and Netter, 2001, Djankov and Murrell, 2002).

From the beginning, the split share structure was supposed to secure the state’s influence on corporate decision makings. The Chinese government only allows SOEs to partially privatize by issuing minority exchange-listed “tradable” shares to institutional and individual investors. Most government-owned shares and shares issued to other investors before IPO were unavailable for trading in secondary markets and they are priced at the book value. These features created potential incentive problems as managers and controlling shareholders, especially those with close relationships to government, might pursue political and social objectives or engage in a variety of party related transactions to benefit themselves rather than maximizing shareholder value as they gained little benefit from increases in market value (Li et al., 2011).

In April 2005, the Chinese government launched the split-share structure reform that aimed at converting non-tradable shares in SOEs to exchange-listed tradable shares. In the post-reform period, market performance has become a performance measure which was not the case before the reform. In such an environment, the impact of the reform on market values exacerbated incentives of managers to engage in “helping hand” transactions (Liao et al. 2014; Firth et al. 2010). Therefore, the hypothesis is that the benefits of hiring a bureaucrat successor CEO in SOEs are stronger or the costs are smaller after the reform.

The analysis focuses on SOEs since this reform did not affect Non-SOEs in terms of tradable shares. We split our sample period into two sub-periods, namely pre-reform (2001–2004) and post-reform (2006–2010) periods. We exclude observations in 2005, the year where the reform is implemented. Table 8 presents results that are consistent with the theory although most of the observations are not statically significant. When a SOE announces a bureaucrat as new CEO the stock price declines on average by -0.2% (in the pre-reform period) while it increases by +0.2% (in the post reform period). But compared to the announcement returns of a

non-bureaucrat CEO, announcement returns of bureaucrat firms are 0.1% (pre-reform) and 0.3% lower (post-reform). In terms of long run stock performance, bureaucrat SOEs underperform non-bureaucrat SOE in both periods. It is particularly low in the post reform period.

In the pre-reform period the change in ROA of bureaucrat firms is -1.7% versus +1.7% for non-bureaucrat firms and the difference is statistically different. In the post reform period the change of ROA in bureaucrat firms is +0.7% versus +1.9% for non-bureaucrat firms and the difference is not statistically significant. For changes in loans, subsidies and party related transaction the differences between pre-reform and post reform behavior are not statistically significant. For changes in other receivables (a measure of tunneling), it declines significantly for bureaucrat firms after the reform period from +0.43% to -1.6%. And the change of other receivables in bureaucrat firms (-0.16%) is not statistically different from non-bureaucrat firms (-2.8%) after the reform period while it was significantly higher in the pre-reform period. These results suggest that there is less tunneling after the reform period by bureaucrat CEOs.

[Insert Table 8 here]

9. Concluding Remarks

This paper provides an option value theory of hiring a bureaucrat as successor CEO and conducts and empirical test using 2,454 CEO turnover cases in Chinese firms. The empirical findings support all implications of the embedded option value model. The abnormal announcement stock returns for firms that appoint bureaucrats as new CEOs are positive in general. Announcement returns are particularly large for firms with less prior political connections, i.e. for non-state-owned enterprises and for firms that replace a leaving non-bureaucrat CEO by a bureaucrat recruited from outside the company. Bureaucrat firms have lower long term returns, higher cross-sectional variance and skewness of long term stock returns than non-bureaucrat firms. Interestingly and contrary to causal perception, these nuanced stock price reactions indicate that the Chinese stock markets incorporate information about CEO turnovers in a way that is consistent with a rational pricing model despite the large fraction of retail investors.

In addition, we document and quantify clear tradeoffs as well as nuanced differences between state-owned enterprises (SOEs) and Non-SOEs. After the CEO succession, bureaucrat

firms receive more long term loans and subsidies in general. Bureaucrat SOEs experience a larger increase in subsidies, while bureaucrat Non-SOEs experience larger increase in long term loans. Bureaucrat firms face more rent-seeking of management. This is indicated by an increased use of related-party transactions in Non-SOEs and an increased use of other-receivables in SOEs.

Our paper shows that political connections tend to be valuable for Non-SOEs but improving the corporate governance structure is essential so that the benefits of such connections are not expropriated by corporate insiders but extend to all shareholders. In contrast, SOEs that appoint bureaucrats as successor CEOs exhibit both a massive stock and operating underperformance in the long run.

The modernization of large SOEs in the coming years might alter the ownership structures in China's industrial sectors. Thus, the issues of management style and corporate governance will become increasingly important for institutional shareholders and in CEO hiring decisions. Our theoretical analysis provides a better understanding of the channels through which political connections affect short term and long term stock behavior as well as operating performances. The large sample empirical analysis provides relevant insights for corporate decision making about senior managerial successions in Chinese firms.

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Table 1. Distribution of CEO succession from 2001 to 2010

This table reports summary statistics of our sample consisting of 2,454 successor CEOs during the period 2001–2010. If the successor is a current or former official in government or an army officer, he or she is classified as a bureaucrat successor. The rest are non-bureaucrat successors. Panel A reports the year distribution of CEO successions in our sample. Panel B reports the sample frequency distribution by industry. The industry classification is based on the CSRC industry classification. The financial industry is excluded. Panel C reports successions in state-owner enterprises (SOEs) where the government is the controlling shareholder and non-SOEs.

Panel A: Year distribution of CEO successions

Year	Number	Bureaucrat	Non-bureaucrat	% Bureaucrats
2001	233	33	200	14.16%
2002	249	39	210	15.66%
2003	237	38	199	16.03%
2004	228	36	192	15.79%
2005	249	23	226	9.24%
2006	236	39	197	16.53%
2007	277	45	232	16.25%
2008	245	34	211	13.88%
2009	261	41	220	15.71%
2010	239	33	206	13.81%
Total	2,454	361	2,093	14.71%

Panel B: Industry distribution of CEO successions

Industry	Total	Bureaucrat	Non-bureaucrat	% Bureaucrats
Agriculture, forestry, animal husbandry and fishery	59	15	44	25.42%
Mining	40	9	31	22.50%
Manufacturing	1,433	141	1,292	9.84%
Utilities	84	26	58	30.95%
Construction	48	8	40	16.67%
Transportation	101	32	69	31.68%
Information technology	150	15	135	10.00%
Wholesale and retail trade	158	33	125	20.89%
Real estate	125	31	94	24.80%
Social service	59	14	45	23.73%
Communication and culture	21	5	16	23.81%
Comprehensive	176	32	144	18.18%
Total	2,454	361	2,093	14.71%

Panel C: SOEs versus non-SOEs

	Total	Bureaucrat	Non-bureaucrat	% Bureaucrats
SOEs	1,497	230	1,267	15.36%
Non-SOEs	957	131	826	13.68%
Total	2,454	361	2,093	14.71%

Table 2. Summary statistics

This table reports the descriptive statistics of key variables for a sample of 2,454 CEO successions between 2001 and 2010. Columns 1 and 2 show means and medians for the whole sample. Columns 3 and 4 show means and medians for appointments of bureaucrat CEOs, while columns 5 and 6 give values for appointments of non-bureaucrat CEOs. Columns 7 and 8 present the difference. Medians are not reported for indicator variable. The firm information is measured at the beginning of the appointment year. Two-sample t-tests (Wilcoxon-Mann-Whitney tests) are conducted to see if there is significant difference between the means (medians) of firms with and without bureaucrat CEO appointment. The definitions of all variables are presented in Appendix A. Statistical significance at the 1%, 5%, and 10% level is indicated by ***, **, and *, respectively.

	All		Bureaucrat		Non-Bureaucrat		Difference	
	Mean	Median	Mean	Median	Mean	Median	Mean	Median
Incoming CEO								
Oversea	0.105	-	0.069	-	0.111	-	-0.042**	-
Profession	0.671	-	0.615	-	0.680	-	-0.065**	-
Age	44.3	44.000	46.6	46.000	43.9	43.000	2.723**	3.000***
Education	3.357	3.000	3.319	3.000	3.364	3.000	-0.046	0.000
Outsider	0.407	-	0.551	-	0.382	-	0.169***	-
Gender	0.048	-	0.042	-	0.050	-	-0.008	-
Outgoing CEO								
Oversea	0.083	-	0.061	-	0.087	-	-0.026	-
Profession	0.711	-	0.734	-	0.706	-	0.028	-
Age	47.5	47.000	48.0	47.000	47.4	47.000	0.573	0.000
Tenure	3.370	3.000	3.458	2.900	3.354	3.000	0.104	-0.100
Education	3.228	3.000	3.213	3.000	3.230	3.000	-0.017	0.000
Stay	0.511	-	0.455	-	0.521	-	-0.066**	-
Bureaucrat	0.178	-	0.341	-	0.150	-	0.190***	-
Gender	0.042	-	0.039	-	0.042	-	-0.004	-
Forced	0.380	-	0.380	-	0.380	-	0.000	-
Governance variables								
SOE	0.613	-	0.659	-	0.605	-	0.054**	-
Top1share	0.405	0.384	0.389	0.367	0.408	0.387	-0.019**	-0.020
Independent	0.276	0.333	0.275	0.333	0.276	0.333	-0.001	0.000
Dual	0.147	-	0.154	-	0.146	-	0.009	-
Board_size	9.398	9.000	9.309	9.000	9.414	9.000	-0.105	0.000
Foreign	0.036	-	0.026	-	0.038	-	-0.012**	-
Lis_dur	7.846	8.000	8.136	8.000	7.796	8.000	0.339	0.000
Financial variables								
ROA	0.037	0.045	0.040	0.046	0.036	0.045	0.004	0.001
Sale_growth	0.263	0.096	0.320	0.110	0.253	0.092	0.067	0.018
Leverage	0.514	0.508	0.515	0.486	0.514	0.511	0.002	-0.025
Tobins'Q	2.452	1.984	2.452	1.998	2.452	1.981	0.000	0.017
Lnasset	21.13	21.03	21.12	21.03	21.14	21.03	-0.017	-0.002

Table 3. Short term price reaction

This table reports short-run market reaction of the announcement of CEO appointments during the 2001-2010 sample period. CEO appointment announcements with less than 100 observations in the estimation window are excluded. Abnormal returns are predicting errors in the market model based on the equal-weighted return of all stocks listed in the Shanghai and Shenzhen stock exchanges. The estimation window is the interval [-250, -21] from the announcement date. We estimate the mean values of cumulative abnormal returns over the event window [-1, 1] and [-2, 2], where day 0 is the announcement date. Statistical significance at the 1%, 5%, and 10% level is indicated by ***, **, and *, respectively. Panel A reports the univariate comparison. M is the mean value, sd is the standard error. N is the number of observations. Panel B reports regression results. The dependent variable is cumulative abnormal returns over the event window [-1, 1]. Column 1 and 2 focuses on personal characteristics explanatory variables. A variety of governance and financial variables are included in Columns 3-4. The regression contains year and industry fixed effects. The definitions of the variables are presented in the Appendix A.

Panel A: Univariate comparison

		All	Type of successor		Difference	t-value
			Bureaucrat	Non-bureaucrat		
All successions (-1, 1)	M	0.0027	0.0149	0.0006	0.0142	1.7815*
	sd	0.0028	0.0182	0.0011	0.0080	
	N	[2,292]	[338]	[1,954]		
All successions (-2, 2)	M	0.0022	0.0155	-0.0001	0.0155	1.8179*
	sd	0.0030	0.0186	0.0015	0.0085	
	N	[2,292]	[338]	[1,954]		
Departing CEO is a bureaucrat (-1, 1)	M	0.0001	-0.0008	0.0005	-0.0013	-0.2396
	sd	0.0024	0.0042	0.0029	0.0052	
	N	[407]	[117]	[290]		
Departing CEO is a non-bureaucrat (-1, 1)	M	0.0033	0.0231	0.0006	0.0225	2.1236**
	sd	0.0034	0.0278	0.0012	0.0106	
	N	[1,885]	[221]	[1,661]		
Successions in SOEs (-1, 1)	M	0.0021	-0.0009	0.0027	-0.0036	1.0469
	sd	0.0013	0.0471	0.0013	0.0034	
	N	[1,434]	[222]	[1,212]		
Successions in non-SOEs (-1, 1)	M	0.0035	0.0410	-0.0021	0.0431	2.2549**
	sd	0.0064	0.0482	0.0017	0.0191	
	N	[857]	[116]	[741]		
Internal succession (-1, 1)	M	0.0004	-0.0048	0.0010	-0.0058	-1.4791
	sd	0.0012	0.0037	0.0013	0.0040	
	N	[1381]	[151]	[1,230]		
External succession (-1, 1)	M	0.0062	0.0307	-0.0001	0.0308	1.8106*
	sd	0.0069	0.0328	0.0018	0.0170	
	N	[911]	[187]	[724]		
External succession & Departing CEO is non-bureaucrat (-1, 1)	M	0.0069	0.0449	-0.0010	0.0458	2.0442**
	sd	0.0085	0.0486	0.0020	0.0224	
	N	[738]	[126]	[632]		

Panel B: Regression results

	(1)	(2)	(3)	(4)
Incoming CEO				
Bureaucrat	0.0150* (0.0084)	0.0159* (0.0085)	0.0169* (0.0099)	0.0175* (0.0099)
Oversea	-0.0001 (0.0145)	-0.0021 (0.0146)	-0.0059 (0.0171)	-0.0061 (0.0171)
Profession	0.0090 (0.0064)	0.0096 (0.0066)	0.0113 (0.0077)	0.0116 (0.0077)
Age	-0.0005 (0.0005)	-0.0005 (0.0005)	-0.0005 (0.0006)	-0.0005 (0.0006)
Education	-0.0068* (0.0035)	-0.0069* (0.0036)	-0.0032 (0.0042)	-0.0030 (0.0042)
Outsider	0.0060 (0.0060)	0.0073 (0.0061)	0.0033 (0.0071)	0.0015 (0.0071)
Gender	-0.0053 (0.0136)	-0.0061 (0.0136)	-0.0071 (0.0157)	-0.0054 (0.0158)
Industry_exp	0.0129 (0.0143)	0.0131 (0.0143)	0.0126 (0.0169)	0.0125 (0.0169)
Outgoing CEO				
Oversea		0.0048 (0.0151)	0.0040 (0.0175)	0.0040 (0.0175)
Profession		-0.0140** (0.0069)	-0.0107 (0.0080)	-0.0116 (0.0080)
Age		0.0001 (0.0005)	-0.0001 (0.0005)	-0.0001 (0.0005)
Tenure		0.0044*** (0.0014)	0.0044*** (0.0017)	0.0046*** (0.0017)
Education		-0.0033 (0.0035)	-0.0028 (0.0041)	-0.0028 (0.0041)
Stay		-0.0004 (0.0066)	-0.0076 (0.0077)	-0.0064 (0.0077)
Bureaucrat_dep		-0.0062 (0.0108)	-0.0097 (0.0126)	-0.0093 (0.0126)
Stay*Bureaucrat_dep		-0.0019 (0.0150)	-0.0002 (0.0173)	-0.0009 (0.0173)
Force		-0.0085 (0.0144)	-0.0082 (0.0165)	-0.0081 (0.0165)
Gender		0.0016 (0.0061)	-0.0002 (0.0071)	-0.0005 (0.0072)
Governance Variable				
SOE			-0.0129* (0.0075)	-0.0131* (0.0075)
Top1			0.0690*** (0.0215)	0.0691*** (0.0225)
Independent			-0.0009 (0.0530)	0.0042 (0.0531)
Dual			0.0135 (0.0099)	0.0129 (0.0100)
Board_size			0.0001 (0.0015)	0.0001 (0.0015)
Foreign			0.0362 (0.0336)	0.0342 (0.0342)
List_dur			0.0006 (0.0010)	0.0004 (0.0011)
Financial variables				
ROA				-0.1224** (0.0484)
Leverage				-0.0211 (0.0175)
Tobin's Q				0.0035 (0.0031)
Lnasset				0.0037 (0.0043)
Constant	0.0012 (0.0325)	0.0145 (0.0426)	-0.0105 (0.0517)	-0.0893 (0.0972)
Observations	2,290	2,289	2,255	2,251
R-squared	0.0177	0.0211	0.0250	0.0283

Table 4. Long term stock performance

This table reports the long-run cumulative abnormal return around CEO succession events of firms that appoint a bureaucrat versus non-bureaucrat successor CEOs. Month 0 is the month of CEO succession. SOEs are firms with government as the controlling shareholder. Month 0 is the month of CEO succession. The market-adjusted monthly return is measured as the difference between the stock return and the equal-weighted return of all stocks listed on the Shanghai and Shenzhen stock exchanges. Statistical significance at the 1%, 5%, and 10% level is indicated by ***, **, and *, respectively. Panel A reports summary statistics of the cumulative abnormal return for month (-12,1), (0,3) and (4,36) following a CEO succession event. Panel B reports regression results. The dependent variable is cumulative abnormal return for holding periods month (4, 36). Columns (1) to (4) report the regression results for the full sample. Incoming and outgoing CEOs personal characteristics and governance and financial variables are included. Industry and Year dummies are also included. Column 5 and 6 report the regression results in Non-SOEs and SOEs, respectively. Standard errors corrected for heteroskedasticity and clustered at firm level, are reported in parentheses. ***, ** and * indicate statistical significance at the 1%, 5% and 10% levels, respectively. Panel C reports summary statistics of the standard deviation and skewness of cumulative abnormal returns for holding periods (4,36).

Panel A: Buy-and hold market adjusted abnormal returns

		Type of successor			
		All	Bureaucrat	Non-bureaucrat	Difference
I. All successions					t-statistics
Month (-12, -1)	-0.0133 (0.0082)	-0.0079 (0.0198)	-0.0142 (0.0088)	-0.0063 (0.0231)	0.2750
Month (0, 3)	0.0117 (0.0078)	0.0477 (0.0406)	0.0054 (0.0056)	0.0423 (0.0216)	1.9543*
Month (4, 36)	0 (0.0116)	-0.0499 (0.0274)	0.0087 (0.0127)	-0.05856 (0.0365)	-1.7954*
II. Successions in SOEs					
Month (-12, -1)	-0.0148 (0.0093)	-0.0297 (0.0214)	-0.0121 (0.0102)	-0.0176 (0.0258)	-0.6809
Month (0, 3)	0.0087 (0.0076)	0.0248 (0.0328)	0.0058 (0.0067)	-0.0190 (0.0211)	0.9005
Month (4, 36)	-0.0111 (0.0145)	-0.0709 (0.0333)	0.0002 (0.0160)	0.0711 (0.0396)	1.7955*
III. Successions in non-SOEs					
Month (-12, -1)	-0.0106 (0.0156)	0.0312 (0.0398)	-0.0176 (0.0169)	0.0487 (0.0444)	1.0978
Month (0, 3)	0.0168 (0.0162)	0.0892 (0.0975)	0.0048 (0.0099)	0.0844 (0.0465)	1.8153*
Month (4, 36)	0.0203 (0.0191)	-0.0097 (0.0485)	0.0247 (0.0207)	0.0344 (0.0566)	-0.6078

Panel B: Regression results of cumulative abnormal returns for holding period month (4, 36)

	All Firms				Non-SOE	SOE
	(1)	(2)	(3)	(4)	(5)	(6)
Bureaucrat	-0.0617** (0.0312)	-0.0560* (0.0323)	-0.0586* (0.0344)	-0.0559* (0.0329)	-0.0320 (0.0583)	-0.0684* (0.0398)
Incoming CEO characteristics	yes	yes	yes	yes	yes	yes
Outgoing CEO characteristics	no	yes	yes	yes	yes	yes
Governance variables	no	no	yes	yes	yes	yes
Finance variables	no	no	no	yes	yes	yes
Constant	0.0588 (0.1586)	0.0670 (0.1869)	-0.0494 (0.2168)	0.9908*** (0.2718)	-0.1132 (0.5055)	1.4133*** (0.3605)
Observations	2,185	2,147	1,941	1,941	748	1,193
R-squared	0.0170	0.0260	0.0321	0.0984	0.1251	0.1262

Panel C: Standard deviation and skewness of cumulative abnormal returns for holding period month (4, 36)

	Type of successors			
	All	Bureaucrat	Non-bureaucrat	Difference
I. All successions				
Standard deviation	0.5681	0.6630	0.5491	0.1139***
Skewness	1.8977	4.5051	1.0548	
II. Successions in SOEs				
Standard deviation	0.5657	0.6928	0.5367	0.1561***
Skewness	2.3395	5.5796	0.9331	
III. Successions in non-SOEs				
Standard deviation	0.5675	0.6014	0.5623	0.0391
Skewness	1.2977	1.3902	1.2784	

Table 5. Changes in loans and subsidies

This table reports the changes in loans and subsidies after CEO successions. Panel A reports the mean and median changes in the ratio of total loans to total assets (*Loan size*), the difference between long-term loan and short-term loan, scaled by total assets (*Long structure*) and the ratio of government subsidy revenue to total sales (*Subsidy*) around the time of CEO succession during the period from year -1 to year +3. Panel B reports the mean changes in loan structure and subsidies after CEO successions for the subsample with only SOEs and only Non-SOEs. Three measures are reported. In Panel A and B, (1), (2) and (3) represent the unadjusted, industry-adjusted, and control-group-adjusted measure. Two-sample t-tests (Wilcoxon-Mann-Whitney tests) are conducted. Panel C reports regression results about the changes of loan structure and government subsidies. The dependent variables in column 1, 2 and 3 (6, 7 and 8) are the changes in *Long-short (Subsidy)* during the period from year -1 to year +3, measured using the unadjusted, industry-adjusted and control-group-adjusted policy variables, respectively. Column 4 and 5 (Column 9 and 10) report the regression results of control-group adjusted *Long-short (Subsidy)* in Non-SOEs and SOEs, respectively. Incoming and outgoing CEOs personal characteristics and governance and financial variables are included. Industry and Year dummies are also included. Standard errors corrected for heteroskedasticity and clustered at firm level, are reported in parentheses. ***, ** and * indicate statistical significance at the 1%, 5% and 10% levels, respectively.

Panel A: Univariate comparison

		All successors		Bureaucrat successors		Non-bureaucrat successors		Difference	
		Mean	Median	Mean	Median	Mean	Median	Mean	Median
Loan size									
(t=3)-(t=-1)	(1)	-0.0095	-0.0083	-0.0051	-0.0129	-0.0103	-0.0073	0.0052	-0.0056
	(2)	0.0257	0.0287	0.0275	0.0274	0.0254	0.0291	0.0020	-0.0017
	(3)	-0.0274	-0.0239	-0.0223	-0.0225	-0.0283	-0.0241	0.0060	0.0016
(3-year average after) -(t=-1)	(1)	-0.0023	-0.0016	0.0018	-0.0038	-0.0031	-0.0016	0.0049	-0.0022
	(2)	0.0225	0.0243	0.0238	0.0203	0.0222	0.0261	0.0016	-0.0058
	(3)	-0.0240	-0.0198	-0.0186	-0.0206	-0.0249	-0.0195	0.0063	-0.0010
Loan structure									
(t=3)-(t=-1)	(1)	0.0344	0.0156	0.0524	0.0420	0.0313	0.0120	0.0211**	0.0300***
	(2)	-0.0072	-0.0172	0.0044	-0.0046	-0.0092	-0.0180	0.0136*	0.0134*
	(3)	0.0109	0.0007	0.0267	0.0195	0.0081	-0.0026	0.0186**	0.0222**
(3-year average after) -(t=-1)	(1)	0.0213	0.0093	0.0357	0.0270	0.0188	0.0077	0.0169**	0.0193**
	(2)	-0.0096	-0.0174	0.0003	-0.0060	-0.0113	-0.0193	0.0116*	0.0132*
	(3)	0.0088	0.0001	0.0222	0.0208	0.0064	-0.0041	0.0157**	0.0249 ***
Subsidy									
(t=3)-(t=-1)	(1)	0.0033	0.0005	0.0049	0.0010	0.0030	0.0004	0.0019***	0.000***
	(2)	0.0018	-0.0001	0.0035	0.0002	0.0015	-0.0001	0.0019***	0.0003***
	(3)	0.0018	-0.0003	0.0036	0.0000	0.0015	-0.0005	0.0021***	0.0004***
(3-year average after) -(t=-1)	(1)	0.0036	0.0007	0.0046	0.0009	0.0034	0.0007	0.0013**	0.0002*
	(2)	0.0021	0.0000	0.0032	0.0002	0.0019	0.0000	0.0013**	0.0002**
	(3)	0.0023	0.0000	0.0036	0.0000	0.0021	0.0000	0.0014**	0.0000

Panel B: SOEs versus Non-SOEs

	Bureaucrat successor			Non-bureaucrat successor			Difference		
	(1)	(2)	(3)	(1)	(2)	(3)	(1)	(2)	(3)
Changes in Loan structure from year -1 to year +3									
Non-SOE	0.0837	0.0266	0.0555	0.0279	-0.0174	0.0042	0.0558***	0.044**	0.0513***
SOE	0.0471	0.0077	0.0250	0.0222	-0.0117	0.0015	0.0250	0.0193	0.0235*
NonSOE-SOE	0.0366**	0.0189	0.0305*	0.0058	-0.0057	0.0028			
Changes in subsidies from year -1 to year +3									
Non-SOE	0.0049	0.0032	0.0037	0.0032	0.0018	0.0016	0.0017	0.0014	0.0021*
SOE	0.0049	0.0036	0.0035	0.0031	0.0015	0.0015	0.0018**	0.0021***	0.0020**
NonSOE-SOE	0.0000	-0.0005	0.0002	0.0002	0.0003	0.0001			

Panel C: Regression results

	Loan structure					Subsidy				
	(1)	(2)	(3)	Non-SOE (4)	SOE (5)	(6)	(7)	(8)	Non-SOE (9)	SOE (10)
Bureaucrat	0.0289*** (0.0096)	0.0252*** (0.0096)	0.0288*** (0.0098)	0.0503*** (0.0183)	0.0194* (0.0116)	0.0022*** (0.0007)	0.0021*** (0.0007)	0.0024*** (0.0009)	0.0028* (0.0016)	0.0022** (0.0010)
Incoming CEO characteristics	yes	yes	yes	yes	yes	Yes	yes	yes	yes	yes
Outgoing CEO characteristics	yes	yes	yes	yes	yes	Yes	yes	yes	yes	yes
Governance and Finance variables	yes	yes	yes	yes	yes	Yes	yes	yes	yes	yes
Constant	0.2920*** (0.0678)	0.2519*** (0.0704)	0.3593*** (0.0695)	0.2069* (0.1229)	0.3604*** (0.0870)	-0.0041 (0.0046)	-0.0036 (0.0046)	-0.0042 (0.0053)	-0.0179** (0.0086)	-0.0024 (0.0072)
Observations	2,327	2,327	2,327	896	1,431	1,877	1,877	1,877	750	1,127
R-squared	0.1159	0.0635	0.0968	0.1287	0.0730	0.1121	0.0574	0.0680	0.0748	0.0874

Table 6. Changes in rent-seeking

This table reports the changes in rent seeking behaviors after CEO successions. Panel A reports mean and median changes in other receivables and related-party transactions during the period from year -1 to year +3 where year 0 is the year of CEO turnover. *Other receivables* is the firm's other receivables deflated by lagged market value of the equity. *Related-party transactions* is a measure of abnormal related-party transactions, computed as in Jian and Wong (2010). Panel B reports the mean changes in other receivables and related-party transactions after CEO successions across SOEs and Non-SOEs. In Panels A and B, (1), (2) and (3) represent the unadjusted, industry-adjusted, and control-group-adjusted measure. Two-sample t-tests (Wilcoxon-Mann-Whitney tests) are conducted. Panel C reports regression results about the changes of other receivables and related-party transactions. The dependent variables in column 1, 2 and 3 (6, 7 and 8) are the changes in other receivables (related-party transactions) during the period from year -1 to year +3, measured using the unadjusted, industry-adjusted and control-group-adjusted policy variables, respectively. Column 4 and 5 (Column 9 and 10) report the regression results of control-group adjusted other receivables (related-party transactions) in Non-SOEs and SOEs, respectively. Incoming and outgoing CEOs personal characteristics and governance and financial variables are included. Industry and Year dummies are also included. Standard errors corrected for heteroskedasticity and clustered at firm level, are reported in parentheses. ***, ** and * indicate statistical significance at the 1%, 5% and 10% levels, respectively.

Panel A: Rent-seeking around time of CEO succession

		All successors		Bureaucrat successors		Non-bureaucrat successors		Difference	
		Mean	Median	Mean	Median	Mean	Median	Mean	Median
Other receivables	(1)	-0.0118	-0.0013	0.0065	0.0005	-0.0152	-0.0016	0.0217***	0.0021**
	(2)	-0.0042	0.0037	0.0109	0.0017	-0.0070	0.0043	0.0179**	-0.0026
	(3)	-0.0114	-0.0015	0.0051	0.0016	-0.0145	-0.0023	0.0196***	0.0039*
Related-party transactions	(1)	0.1707	0.0799	0.4566	0.1373	0.1247	0.0663	0.3319***	0.0710**
	(2)	0.0911	-0.0083	0.3665	0.0998	0.0468	-0.0238	0.3198***	0.1235***
	(3)	0.1558	0.0315	0.4044	0.0680	0.1158	0.0220	0.2886***	0.0460*

Panel B: SOEs versus non-SOEs

	Bureaucrat successor			Non-bureaucrat successor			Difference		
	(1)	(2)	(3)	(1)	(2)	(3)	(1)	(2)	(3)
Changes in Other receivables from year -1 to year +3									
Non-SOE	-0.0048	0.0062	-0.0046	-0.0194	-0.0099	-0.0175	0.0147	0.0161	0.0129
SOE	0.0124	0.0134	0.0103	-0.0126	-0.0052	-0.0126	0.025***	0.0186**	0.0228***
NonSOE-SOE	-0.0172	-0.0071	-0.0149	-0.0068	-0.0046	-0.0050			
Changes in Related-party transactions from year -1 to year +3									
Non-SOE	0.9070	0.7922	0.8521	0.2095	0.1146	0.1847	0.6975***	0.6776***	0.6675***
SOE	0.2284	0.1508	0.1776	0.0734	0.0057	0.0742	0.1550	0.1451	0.1034
NonSOE-SOE	0.6786	0.6414**	0.675**	0.1361**	0.1089	0.1105			

Panel C: Regression results

	Other receivables					Related-party transactions				
	(1)	(2)	(3)	Non-SOE (4)	SOE (5)	(6)	(7)	(8)	Non-SOE (9)	SOE (10)
Bureaucrat	0.0167** (0.0075)	0.0151** (0.0075)	0.0147** (0.0071)	0.0090 (0.0126)	0.0174** (0.0085)	0.2400** (0.1106)	0.2425** (0.1082)	0.2463** (0.1096)	0.6088*** (0.2218)	0.0733 (0.1172)
Incoming CEO characteristics	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes
Outgoing CEO characteristics	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes
Governance and Finance variables	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes
Constant	-0.1301** (0.0611)	-0.1294** (0.0606)	-0.1156** (0.0524)	-0.1822* (0.0966)	-0.0567 (0.0629)	-0.4596 (0.6919)	-0.4571 (0.6829)	-0.5027 (0.6799)	-2.0951 (1.5877)	0.3927 (0.6851)
Observations	2,169	2,169	2,169	823	1,346	1,598	1,598	1,598	603	995
R-squared	0.218	0.128	0.153	0.237	0.121	0.0482	0.0405	0.0705	0.0872	0.0777

Table 7. Changes in operating performances

This table reports the changes in operating performances after CEO successions. Panel A reports the mean and median changes in sales growth and return on assets (ROA) around the time of CEO succession during the period from year -1 to year +3. Panel B reports the mean changes in sales growth and ROA after CEO successions in the subsamples with only SOEs and with Non-SOEs. In Panels A and B, (1), (2) and (3) represent the unadjusted, industry-adjusted, and control-group-adjusted measure. Two-sample t-tests (Wilcoxon-Mann-Whitney tests) are conducted. Panel C reports regression results of the changes in sales growth and ROA. The dependent variables in columns 1, 2 and 3 (columns 6, 7 and 8) are the changes in sales growth (ROA) during the period from year -1 to year +3, measured using the unadjusted, industry-adjusted and control-group-adjusted policy variables, respectively. Columns 4 and 5 (columns 9 and 10) report the regression results of control-group adjusted sales growth (ROA) in Non-SOEs and SOEs, respectively. Incoming and outgoing CEOs personal characteristics and governance and financial variables are included. Industry and Year dummies are also included. Standard errors corrected for heteroskedasticity and clustered at firm level, are reported in parentheses. ***, ** and * indicate statistical significance at the 1%, 5% and 10% levels, respectively.

Panel A: Univariate comparison

		All successors		Bureaucrat successors		Non-bureaucrat successors		Difference	
		Mean	Median	Mean	Median	Mean	Median	Mean	Median
Sales growth	(1)	0.0030	-0.0024	-0.0255	0.0024	0.0080	-0.0025	-0.0335*	0.0049
	(2)	-0.0068	-0.0151	-0.0382	-0.0251	-0.0013	-0.0130	-0.0369*	-0.0120*
	(3)	0.0491	0.0083	-0.0281	-0.0037	0.0624	0.0123	-0.0905*	-0.0160*
ROA	(1)	0.0019	-0.0001	-0.0129	-0.0068	0.0044	0.0012	-0.0173***	-0.0080***
	(2)	0.0018	-0.0032	-0.0128	-0.0098	0.0043	-0.0015	-0.0171***	-0.0083***
	(3)	0.0206	0.0121	0.0051	0.0030	0.0232	0.0139	-0.0181***	-0.0109***

Panel B: SOEs versus non-SOEs

	Bureaucrat successor			Non-bureaucrat successor			Difference		
	(1)	(2)	(3)	(1)	(2)	(3)	(1)	(2)	(3)
Changes in Sales growth from year -1 to year +3									
Non-SOE	0.0533	0.0239	0.074166	0.0436	0.034	0.062	0.0097	-0.0099	0.0122
SOE	-0.044	-0.05	-0.03004	0.0307	0.022	0.0484	-0.0749	-0.0723	-0.0785*
NonSOE-SOE	0.0975	0.0738	0.1042	0.0130	0.0115	0.0136			
Changes in ROA from year -1 to year +3									
Non-SOE	-0.004	-0.004	0.0218	0.0098	0.0104	0.0314	-0.0134	-0.0142	-0.0096
SOE	-0.018	-0.018	-0.0037	0.0010	0.0004	0.0180	-0.0188***	-0.018***	-0.022***
NonSOE-SOE	0.0141	0.0139	0.0255*	0.0088*	0.010**	0.013***			

Panel C: Regression analysis

	Sales growth					ROA				
	(1)	(2)	(3)	Non-SOE (4)	SOE (5)	(6)	(7)	(8)	Non-SOE (9)	SOE (10)
Bureaucrat	-0.0688* (0.0418)	-0.0647 (0.0415)	-0.0671* (0.0400)	-0.0131 (0.0785)	-0.0920** (0.0455)	-0.0119** (0.0054)	-0.0115** (0.0050)	-0.0100** (0.0046)	-0.0061 (0.0101)	-0.0146*** (0.0047)
Incoming CEO characteristics	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes
Outgoing CEO characteristics	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes
Governance and Finance variables	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes
Constant	2.550*** (0.3360)	2.388*** (0.3374)	2.395*** (0.3210)	2.7755*** (0.5566)	1.9533*** (0.4106)	-0.0516 (0.0369)	-0.0278 (0.0355)	0.0202 (0.0337)	0.0081 (0.0613)	0.0028 (0.0407)
Observations	2,338	2,338	2,338	897	1,441	2,355	2,355	2,355	909	1,446
R-squared	0.0825	0.0752	0.0755	0.1128	0.0777	0.4001	0.4154	0.4610	0.5142	0.4267

Table 8. The Effects of the split share structure reform in 2005 on SOEs

This table presents the mean changes in the variables of interest before and after the reform in SOEs. *Before* indicates the pre-reform period (2001–2004). *After* indicates post-reform period (2006–2010). The variables (3) to (7) are measured based on the control-group adjusted method. Two-sample t-tests are conducted for significant differences between the means of firms appointing bureaucrat successors and those appointing non-bureaucrat successors. ***, **, and * indicate statistical significance at the 1%, 5%, and 10% levels, respectively.

	Bureaucrat		Non-bureaucrat		Difference
	Mean	Std.	Mean	Std.	
1. Market reactions, CAR day [-1, 1]					
Before	-0.002	0.003	-0.001	0.002	-0.001
After	0.002	0.006	0.004	0.002	-0.003
After-Before	0.004	0.008	0.005*	0.003	
2. Buy-and hold market adjusted abnormal returns, Month (4, 36)					
Before	-0.001	0.093	0.102	0.037	-0.103
After	-0.081	0.047	0.019	0.022	-0.101*
After-Before	-0.08	0.115	-0.083	0.052	
3. Changes in ROA from year -1 to year +3					
Before	-0.017	0.007	0.017	0.004	-0.034***
After	0.007	0.007	0.019	0.003	-0.012
After-Before	0.023**	0.010	0.002	0.005	
4. Changes in <i>loan structure</i> from year -1 to year +3					
Before	0.040	0.015	0.015	0.007	0.025
After	0.018	0.016	-0.008	0.006	0.026
After-Before	-0.021	0.022	-0.022**	0.010	
5. Changes in <i>subsidies</i> from year -1 to year +3					
Before	0.002	0.001	0.002	0.000	0.001
After	0.003	0.001	0.001	0.000	0.002*
After-Before	0.001	0.002	0.000	0.001	
6. Changes in <i>other receivables</i> from year -1 to year +3					
Before	0.043	0.011	0.011	0.005	0.032***
After	-0.016	0.010	-0.028	0.004	0.012
After-Before	-0.060***	0.015***	-0.039***	0.006	
7. Changes in <i>AB_RPT</i> from year -1 to year +3					
Before	0.153	0.229	-0.018	0.076	0.171
After	0.186	0.115	0.104	0.042	0.082
After-Before	0.033	0.236	0.122	0.085	

Appendix A: Definitions of Variables

Personal variables	Definitions
Oversea	A dummy variable that equals 1 if the executive has overseas education or overseas work experience; 0 otherwise.
Profession	A dummy variable that equals 1 if the executive has worked in a formal profession such as professor, scholar, lawyer, accountant, engineer, or economist; 0 otherwise.
Age	The age of the CEO when appointed.
Tenure	Years of departing CEO in current CEO position.
Education	Scored 5, 4, 3, 2, or 1, depending on whether the independent director's highest academic achievement, respectively, is a PhD degree, master's degree, bachelor's degree, some post-tertiary schooling, or secondary education or less.
Stay	A dummy variable that equals 1 if the departing CEO stays on in the same company.
Bureaucrat	A dummy variable that equals 1 if the CEO used to be a government official or military officer; 0 otherwise.
Bureaucrat_dep	A dummy variable that equals 1 if the departing CEO used to be a government official or military officer and has remained in the same company.
Gender	A dummy variable that equals 1 if the CEO is a woman; 0 otherwise.
Force	A dummy variable that equals 1 if the departing CEO has been forced out (i.e. not for reasons such as retirement and health); 0 otherwise.
Outsider	A dummy variable that equals 1 if the incoming CEO has been working for the firm for less than a year at the time of their appointment; 0 otherwise.
Firm-level variables	
Dual	A dummy variable that equals 1 if the CEO also serves as the chairman of the board; 0 otherwise.
Top1	The percentage of shares owned by the largest shareholder who is non-government.
SOE	A dummy variable that equals 1 if the controlling shareholder is the government (i.e. the firm is a state-owned enterprise); 0 otherwise.
Foreign	The percentage of shares owned by foreign investors.
Board_size	The number of directors on the board.
Independent	The percentage of independent directors on the board.
Board_hold	The percentage of shares owned by board members.

ROA	The ratio of EBIT over total assets.
Leverage	The ratio of total liabilities over total assets.
TobinQ	Market-to-book ratio, the sum of market value of equity and total liabilities, divided by total assets.
Other_receivables	The total other receivables scaled by the lagged market value of equity.

Appendix B: Proofs

Proof of Proposition 1

A manager who faces demand θ , maximizes $\pi = (\theta - q)\theta$ and chooses $q^*(\theta) = \frac{1}{2}\theta$ and generates $\pi^* = \frac{1}{4}\theta^2$. For θ uniformly distributed on $[X-d, X+d]$ with $0 \leq d \leq \frac{1}{2}X$ and $f(\theta) = \frac{1}{2d}$, the expected profit is given by:

$$E[\pi^*] = \int_{X-d}^{X+d} \frac{1}{4}\theta^2 f(\theta) dx = \frac{1}{4} \int_{X-d}^{X+d} \theta^2 \cdot \frac{1}{2d} dx = \frac{1}{8d} \int_{X-d}^{X+d} \theta^2 dx = \frac{1}{8d} \left[\frac{1}{3}(X+d)^3 - \frac{1}{3}(X-d)^3 \right]$$

$$\Leftrightarrow E[\pi^*] = \frac{1}{24d} [(X+d)(X^2 + 2Xd + d^2) - (X-d)(X^2 - 2Xd + d^2)]$$

$$\Leftrightarrow E[\pi^*] = \frac{1}{4}X^2 + \frac{1}{12}d^2.^{14}$$

The variance of profit is given by:

$$Var[\pi^*] = \int_{X-d}^{X+d} \left(\frac{1}{4}\theta^2 - E[\pi^*] \right)^2 f(\theta) dx = \int_{X-d}^{X+d} \left(\frac{1}{16}\theta^4 - \frac{1}{2}\theta^2 E[\pi^*] + E[\pi^*]^2 \right) \cdot \frac{1}{2d} dx$$

$$\Leftrightarrow Var[\pi^*] = \frac{1}{2d} \left[\frac{1}{80}\theta^5 - \frac{1}{6}\theta^3 E[\pi^*] + E[\pi^*]^2 \theta \right]_{X-d}^{X+d}$$

$$\Leftrightarrow Var[\pi^*] = \frac{1}{2d} \left(\frac{1}{80}(10X^4d + 10X^2d^3 + 2d^5) - \frac{1}{6}(6X^2d + 2d^3) \left(\frac{1}{4}X^2 + \frac{1}{12}d^2 \right) + \left(\frac{1}{4}X^2 + \frac{1}{12}d^2 \right)^2 2d \right)$$

$$\Leftrightarrow Var[\pi^*] = \frac{1}{2d} \left(\frac{1}{24}X^2d^3 + \frac{1}{9}d^5 \right). \textbf{QED}$$

Proof of Corollary 1.1

Both types of CEO face the mean demand X . So $\Delta = E[\pi_B^*] - E[\pi_N^*] = \frac{1}{4}X^2 + \frac{1}{12}d^2 - \frac{1}{4}X^2 = \frac{1}{12}d^2$.

The option value of uncertainty is $\frac{1}{12}d^2$. **QED**

¹⁴ Note $E(\theta) = X$ and $Var(\theta) = d^2/3$.

Proof of Proposition 2

The expected profit (market value at $t=0$) is $E[\pi^*] = \frac{1}{4}X^2 + \frac{1}{12}d^2$. The price (at $t=1$) decreases if the realized profit associated with demand θ is $\pi^* = \frac{1}{4}\theta^2 < \frac{1}{4}X^2 + \frac{1}{12}d^2$, i.e. $\theta^2 < X^2 + \frac{1}{3}d^2$ or $\theta < \sqrt{X^2 + \frac{1}{3}d^2}$. The $\text{prob}(\text{price drops}) = \text{prob}\left(\theta < \sqrt{X^2 + \frac{1}{3}d^2}\right) = \frac{\sqrt{X^2 + \frac{1}{3}d^2} - (X-d)}{2d} = \frac{\sqrt{X^2 + \frac{1}{3}d^2}}{2d} - \frac{X}{2d} + \frac{1}{2}$. For $d \rightarrow 0$, $\text{prob}(\text{price drops}) \rightarrow 0.5$ from above and $\text{prob}(\text{price drops})$ increases in d . **QED**

Proof of Proposition 3

Since $E[\pi^*] - \pi^{*Median} = \frac{1}{4}X^2 + \frac{1}{12}d^2 - \frac{1}{4}X^2 = \frac{1}{12}d^2 > 0$, the profit distribution $F(\pi^*)$ exhibits right (positive) skewness. The skewness coefficient is

$$\zeta = \frac{3(E[\pi^*] - \pi^{*Median})}{\sigma_{\pi^*}}$$

$$\zeta = \frac{\frac{1}{4}d^2}{\sqrt{\frac{1}{48}X^2d^2 + \frac{1}{18}d^4}} = \frac{d}{4 \cdot \sqrt{\frac{1}{48}X^2 + \frac{1}{18}d^2}} = \frac{d}{\sqrt{\frac{1}{3}X^2 + \frac{8}{9}d^2}}$$

where $\frac{d\zeta}{dd} > 0$.

Note, $\text{skewness}(\pi^*) = E[\pi(\theta) - E[\pi^*]]^3 = \int_{X-d}^{X+d} (\frac{1}{4}\theta^2 - E[\pi^*])^3 f(\theta) dx$

$$= \int_{X-d}^{X+d} (\frac{1}{16}\theta^4 - \frac{1}{2}\theta^2 E[\pi^*] + E[\pi^*]^2)(\frac{1}{4}\theta^2 - E[\pi^*]) \cdot \frac{1}{2d} dx$$

$$= \int_{X-d}^{X+d} (\frac{1}{64}\theta^6 - \frac{1}{8}\theta^4 E[\pi^*] + \frac{1}{4}\theta^2 E[\pi^*]^2 - \frac{1}{16}\theta^4 E[\pi^*] + \frac{1}{2}\theta^2 E[\pi^*]^2 - E[\pi^*]^3) \cdot \frac{1}{2d} dx$$

$$= \int_{X-d}^{X+d} (\frac{1}{64}\theta^6 - \frac{3}{16}\theta^4 E[\pi^*] + \frac{3}{4}\theta^2 E[\pi^*]^2 - E[\pi^*]^3) \cdot \frac{1}{2d} dx$$

$$= \frac{1}{2d} \left[\frac{1}{448}\theta^7 - \frac{3}{80}\theta^5 E[\pi^*] + \frac{1}{4}\theta^3 E[\pi^*]^2 - \theta E[\pi^*]^3 \right]_{X-d}^{X+d}$$

$$= \frac{d^2}{60480} (2835X^4 + 1953d^2X^2 + 16d^4) \quad \mathbf{QED}$$