TILEC Discussion Paper

Is Corporate Governance in China Related to Performance Persistence?

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ABSTRACT

This paper examines the relationship between performance persistence and corporate governance (proxied by board characteristics and shareholder structure). We document systematic differences in performance persistence across listed companies in China during 2001-2011, and empirically demonstrate that firms with higher corporate governance (especially for board characteristics) show higher performance persistence. The results are stronger for short horizons and for an accounting-based view. Overall, our empirical findings, although not being able to completely exclude other explanations, strongly suggest that a well-structured board with more independent directors, split positions for CEOs and the chairman as well as smaller boards favors performance persistence. In terms of the shareholder structure we find evidence that lower levels of State ownership and a non-concentrated blockholder structure is positively associated with performance persistence.

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1. Introduction

China's developing economy is one of the fastest growing (for more than three decades), yet most centrally controlled in the world. It is likely to overtake the United States ("the US") in the near future. Chinese firms however are increasingly transitioning from previous state owned enterprises to modern firms (see Conyon and He, 2011). Within this transition process the question of how an appropriate governance structure should look like and how this translates into performance and its persistence gains is importance. In recent times, the presumed benefits of an "ideal" corporate governance structure have become one of the most contentious issues in academia, especially in relation to emerging markets in Asia where institutional settings are quite different from other parts of the arguably more "developed" world. For the US market Gompers, Ishii, and Metrick (2003) study the impact of corporate governance on firm performance during the 1990s. They find evidence that stock returns of firms with strong shareholder rights outperform, on a risk-adjusted basis, returns of firms with weak shareholder rights by 8.5%/year during this decade. On the policy domain, corporate governance proponents have prominently cited this result as evidence that good governance (as measured by Gompers, Ishii, and Metrick's index) has a positive impact on corporate performance. There are however several shortcomings in general, and in particular for China. First, their index is based on defense mechanisms in M&A takeovers, which is clearly not the important issue for the Chinese market. Secondly, the performance and governance relationship do depend on whether or not one takes into account the endogenous nature of the relationship between governance and (stock market) performance and the chosen instrument to bridge the endoogeneity problem. In the context of China Cheung at. al. (2010) study the impact of corporate governance on performance, but there is no evidence of performance persistence, which is the point of reference most commonly favored by investors.

We find that different aspects of corporate governance are reflected unequally in explaining performance persistence. Board characteristics are more important in explaining

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performance persistence compared to the shareholder structure. Furthermore, our results are stronger for accounting-based measures with shorter time horizon compared to market-based and longer time horizons. Overall, the data provide support for the idea that a *well*-structured board with more independent directors, split positions for CEOs and the chairman as well as smaller boards favors performance persistence. In terms of the shareholder structure we find evidence that lower levels of State ownership and a non-concentrated blockholder structure is positively associated with performance persistence.

This paper is organized as follows. Hypotheses are presented in section 2. In section 3 we introduce the data and outline the empirical models. Section 4 provides multivariate tests. Concluding remarks follow in the last section.

2. Corporate Governance and Performance Persistence

In contrast to the oft-cited paper by Gompers, Ishii, and Metrick (2003) studying the impact of corporate governance on firm performance, we study how different aspects of corporate governance are related to performance persistence.

2.1. Board Characteristics

China operates a two-tier board system consisting of a main board of directors and a supervisory board. Traditionally, the state has huge influence on the appointment of board and supervisory board members. To improve economic efficiency and due to shareholder pressure China has moved towards a free-enterprise system and orientated its corporate governance structures to Anglo-Saxon systems. An important example of this is the Code of Corporate Governance issued by the China Securities Regulatory Commission. This code requires firms to add independent directors to the main board of directors. The expectation is that one-third of the board should comprise independent directors (see Conyon and He, 2011). It is frequently argued that independent outside directors have more incentives to effectively monitor the CEO because they are less subject to CEO influence and have reputations to protect in the labor market (Fama and Jensen, 1983; Weisbach, 1988; Core et al., 1999;

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Hermalin and Weisbach, 1998, 2003, and Bhagat and Black, 2002). Inside directors, on the other hand, are more loyal to the CEO and the CEO can exert larger influence over them by controlling such factors as their career opportunities. Furthermore, those directors are more likely to be state-appointed bureaucrats being ineffective in monitoring management (Fan et al., 2007). Unfortunately, it is impossible to obtain information on the levels of director remuneration, but we are able to ascertain whether remuneration is indeed received. In this context Gneezy and Rustichini (2000) and Adams and Ferreira (2008) show that individuals commonly perform better when paid more rather than less, but they may also perform better if they are not paid at all rather than paid only a small amount.

In addition, previous research argues that board effectiveness is influenced by the size of the board. Yermack (1996) argues that large boards are less effective than small boards, because they may suffer from free-riding problems in decision-making and control thereby diluting monitoring capabilities. Similarly boards that combine the posts of CEO and chairperson vest more power with the CEO, and may suffer greater agency costs (Jensen, 1993). However, following the argumentation of Brickley, Coles, and Jarrell (1997) a separation could also induce costs that could possible outweigh its benefits, e.g. large firms could grant both titles to attract good-performing CEOs.

Finally, we use board activity (board monitoring), as proxied by the number of board meetings. Vafeas (1999) argues that a higher number is followed by poor performance and those poorly performing firms that increase the number of board meetings improve their performance in subsequent years.

In sum, we expect that a higher independence and monitoring efforts affect stock performance persistence, as stated in the five testable hypotheses.

Hypothesis 1. *Board Size decreases the probability of performance persistence.*

Hypothesis 2. *Board Independence increases the probability of performance persistence.*

Hypothesis 3. *Percentage of Non-Paid Directors increases the probability of performance persistence.*

Hypothesis 4. *Combining the posts of CEO and chairperson decreases the probability of performance persistence.*

Hypothesis 5. *Number of Board Meetings decreases the probability of performance persistence.*

2.2. Shareholder Structure

The Level of ownership concentration has important consequences on the monitoring of a company's management. Agency theory predicts that when ownership is dispersed, individual owners have weak incentives to invest in monitoring and to exert influence over key corporate decisions (Jensen and Meckling, 1976). This incentive problem may be reduced by concentrated share ownership. It is widely believed that large shareholders' monitoring activities can be very effective in solving agency problems that arise from the separation of ownership and control (see, for example, the seminal work of Shleifer and Vishny, 1986). A high equity stake in the company provides block-holders and controlling shareholders with strong incentives to supervise managerial activities (Jensen and Warner, 1988). As a result, concentrated ownership often indicates that shareholders are able to better guard their interests in their firms. Core et al. (1999) and Shivdasani (1993) thus hypothesize that large share stakes by outside shareholders will mitigate potential CEO entrenchment. Set against the beneficial effects of concentrated ownership are the costs associated with entrenchment and private benefits of control of a single large shareholder. Large shareholders may expropriate minority shareholders, or promote their own objectives over those of other shareholders. This may occur via tunneling or other rent extraction strategies (La Porta et al., 2000; Wang and Xiao, 2011). Johnson et al. (2000) use the term 'tunneling' to describe the

transfer of resources away from firms for the benefits of their controlling shareholders. The tunneling of firm value by controlling shareholders, including activities ranging from outright theft and loan guarantees to selling assets or products below market prices, has thus become a centerpiece of recent corporate finance and drawn widespread attention.

The problem of expropriation by controlling shareholders is extremely severe in Chinese stock markets because of a more primitive disclosure system and in general weak corporate governance mechanisms (Ding et al., 2007). With increasing State ownership in a company the higher is the likelihood that the top management team are bureaucrats and managerial quality may be lower than in privately controlled firms (Firth et al., 2007). Furthermore, State "controlled" firms might pursue political or multiple objectives, such as employment growth, rather than profit maximization.

In contrast a higher stock ownership of board members is expected to better align the interests of management with its shareholders. Consequently, an increasing ownership of management is as expected to be positively correlated with better contemporaneous and subsequent operating performance (see Bhagat, Carey, and Elson, 1999).

In sum, we expect that the distribution of ownership rights affect stock performance persistence, as stated in the four testable hypotheses.

Hypothesis 6. *Higher State ownership decreases the probability of performance persistence.*

Hypothesis 7. *Higher executive management ownership increases the probability of performance persistence.*

Hypothesis 8. *Concentrated ownership increases the probability of performance persistence.*

Hypothesis 9. *Dominating ownership decreases the probability of performance persistence.*

3. Data

3.1. Data Source

Our study uses data on publically traded Chinese firms listed on the domestic exchanges from January 1, 2001 – December 31, 2010. We combined three separate data sets. First, the corporate governance data were supplied by the China Listed Firm's Corporate Governance Research Database. Second, the financial performance data were obtained from the China Stock Market Trading Database (CSMAR) and (third) accounting data were taken from China Stock Market Financial Statement Database (CSMAR). Together these data sets account for almost all firms listed on the Shanghai and Shenzhen Stock Exchanges. The data sets have been used in previous research (Kato and Long, 2006b; Chen et al., 2010a, 2010b; Conyon and He, 2011). It is important to comment on the quality of corporate governance data. CSMAR data are collected directly from public firms' annual financial reports as published in Securities Time, Shanghai Securities Daily, China Securities Daily, and other major newspapers designated by CSRC. The combined data set consisted of 988 unique publicly traded firms on the two domestic Chinese exchanges for the years 2001 to 2011. In our empirical work below, we estimate panel data models using firm fixed effects and two-dimensional clustered standard errors (see Petersen, 2009). This required the firms to have at least two (six) consecutive years of data for one (three) year performance persistence. Overall, the selection procedure resulted in a final sample of 988 (580) unique firms with 5,102 (2,138) firm-year observations. The panel data set has multiple time-series observations per firm (i.e. it is unbalanced) reflecting the fact that firms join or leave the stock exchanges. For variable summary statistics see Table 1.

– Insert Table 1 about here –

4. Multivariate Tests

4.1. Regression Models

We estimate the following fixed-effects panel data model, controlling for firm size and leverage, ownership structure and boardroom governance: The independent variable of interest is the performance persistence of the firms, defined in two ways. First, Return on Assets (net profits divided by the book value of assets) as an accounting-based measure. Second, we use a market-based measure (see Cumming et al, 2012): 1 (3)-year CAPM alphas and prior 1 (3)-year alphas (lagged 1 (3) years so that there is no overlap in measurement).

Our dataset is structured as a panel that has 580 stocks with performance statistics with at least 2-successive periods of 3-year alphas over the years 2001-2010. One limiting factor is the requirement of a rather long return series of six consecutive years. To determine whether performance persistence lasts for short- or medium-term horizons we, we conducted a further calculation that includes the 1-year alpha in addition to the 3-year alpha and the 1 (3)-year ROAs. This reduces the required time span and consequently increases our sample size to 580 stocks. The basic structure of our regression equations are:

$$ROA_{t+1} = \beta_0 + \beta_1 \cdot ROA_t + \sum_i \beta_i \cdot CG_i + \sum_j \gamma_j \cdot Controls_j + \varepsilon \qquad (1)$$

$$CAPM\ Alpha_{t+1} = \beta_0 + \beta_1 \cdot CAPM\ Alpha_t + \sum_i \beta_i \cdot CG_i + \sum_j \gamma_j \cdot Controls_j + \varepsilon \qquad (2)$$

Positive coefficients on β_i imply performance persistence attributable to different aspects of corporate governance as alphas / ROAs interacted with corporate governance proxies positively predicting future alphas and the β_1 coefficient is the sole determinant of the degree of return persistence that cannot be explained by corporate governance proxies. By contrast, insignificant coefficients on β_i imply no evidence of performance persistence. Negative and

significant coefficients for β_i imply the company performance has negative performance persistence. The regression estimates for equation (1) and (2) appear in Table 2 and 3.

4.2. Regression Results

Tables 2 and 3 presents the regression results for equation (1) and (2) with two Panels (A and B are related to 1-year-ROAs (alphas) and 3-year-ROAs (alphas)) respectively and 11 regression models in total. Models (1) – (10) show the results for the corporate governance proxies separately whereas model (11) shows results for simultaneous inclusion of all variables.

Panel A of Table 2 provides strong statistical support for Hypotheses 1 to 4. We find as predicted that larger boards and simultaneous position of CEO and chairman reduces statistical significantly performance persistence. Whereas more non-paid directors and board independency increase performance persistence significantly. Admittedly we find no support for our Hypothesis 5 that more board meetings decrease the probability of performance persistence. Board impedance and joint position of CEO and chairman are also significant in the full model. Admittedly we find only support for our hypotheses on non-paid directors and joint position of CEO and chairman when focusing on three year alphas (see Panel B of Table 2).

The results for the shareholder structure are less obvious. First of we find evidence that a higher State ownership reduces performance persistence (also remains significant in the full model), which is clearly support for our Hypothesis 6 for one year ROAs. Interestingly, we find mixed evidence for the owner ship structure concentration (Hypothesis 7). For shorter time horizons we find that the higher the percentage of equity is held by big blockholders the higher is the performance persistence (also significant in the full model), but for longer time horizon the relationship reverses (see Table 2). Finally, we find support for our Hypothesis 9

that a dominating role of blockholders might raise concerns about tunneling, which harms other shareholders and reduces performance persistence.

Focusing on a market based view on performance persistence, we find by far weaker results and support for our hypotheses (see Table 3). In the short term we find analogous to the accounting-based view that a joint position of CEO and chairman reduces performance persistence (support for Hypotheses 3 and 4). The latter is the only significant variable in the full model. For the 3-year alphas we find only one significant influence on performance persistence, namely the percentage of shares owned by executives.

– Insert Tables 2 and 3 about here –

5. Conclusion

In this paper we investigate association of corporate governance and performance persistence. We test our hypotheses, based on several proxy variables for listed Chinese companies spanning the years 2001-2010. We find the board characteristics are more important in explaining performance persistence compared to the shareholder structure. Furthermore, our results are stronger for accounting-based measures with shorter time horizon compared to market-based and longer time horizons. Overall, the data provide support for the idea that a *well*-structured board with more independent directors, split positions for CEOs and the chairman as well as smaller boards favors performance persistence. In terms of the shareholder structure we find evidence that lower levels of State ownership and a non-concentrated blockholder structure is positively associated with performance persistence.

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Table 1. Definitions of Variables and Summary Statistics

This table defines the main variables used in the paper—see Appendix for detailed description. Summary statistics are also provided for each variable. The data are for the period January 1, 2001 – December 31, 2010.

Panel A: 1-Year

Variable	n	Mean	S.D.	Min	0.25	Median	0.75	Max
Alpha	5,102	-0.00041	0.03406	-0.11658	-0.0195	-0.00256	0.0164	0.34183
Number of Directors	5,102	9.54332	2.19121	3	9	9	11	19
% Independent Directors	5,102	0.32416	0.09876	0	0.33333	0.33333	0.36364	0.71429
% Non-Paid Directors	5,102	0.29673	0.21538	0	0.11111	0.30769	0.44444	1
Chairman Equal to General Manager	5,102	0.1421	0.34919	0	0	0	0	1
Number of Board Meetings	5,102	8.28165	3.41791	2	6	8	10	36
Shares Legal Entities	5,102	0.03469	0.10097	0	0	0	0	0.70546
% Shares State-Owned	5,102	0.26223	0.2534	0	0	0.24056	0.49267	0.89783
% Shares Executives	5,102	0.00685	0.04477	0	0	0	0	0.75378
% Shares Largest Shareholder	5,102	38.50031	16.38498	0.39	25.86	36.44	51	86.42
Herfindahl Ten Largest Shareholder	5,102	0.47104	0.27128	0.00015	0.23325	0.42365	0.71936	0.98762
Market Value	5,102	0.00964	0.0701	0.00022	0.00138	0.00231	0.00448	2.54825
Leverage	5,102	0.53461	1.09907	0.00814	0.34439	0.48612	0.62327	55.40864
ROA	5,102	0.03458	0.17219	-4.15791	0.0157	0.04319	0.07458	2.34011

Panel B: 3-Years

Variable	n	Mean	S.D.	Min	0.25	Median	0.75	Max
Alpha	2,138	0.00093	0.03179	-0.07513	-0.01582	-0.00063	0.01627	0.11165
Number of Directors	2,138	9.58746	2.19415	5	9	9	11	16
% Independent Directors	2,138	0.30082	0.11357	0	0.28571	0.33333	0.36364	0.5
% Non-Paid Directors	2,138	0.32325	0.22442	0	0.125	0.33333	0.46667	0.88889
Chairman Equal to General Manager	2,138	0.12862	0.33486	0	0	0	0	1
Number of Board Meetings	2,138	8.03976	3.30352	3	6	7	10	20
Shares Legal Entities	2,138	0.05602	0.12235	0	0	0	0.03586	0.59162
% Shares State-Owned	2,138	0.30255	0.24422	0	0	0.31401	0.5144	0.75272
% Shares Executives	2,138	0.00018	0.00068	0	0	0	0	0.00556
% Shares Largest Shareholder	2,138	38.5192	16.4449	7.02	25.96	36.5	51.531	75.84
Herfindahl Ten Largest Shareholder	2,138	0.49194	0.27745	0.0528	0.23984	0.45307	0.75259	0.97445
Market Value	2,138	0.00434	0.00716	0.00045	0.00137	0.00226	0.00416	0.05215
Leverage	2,138	0.49943	0.19329	0.07792	0.37234	0.50472	0.62347	1.15812
ROA	2,138	0.10198	0.16255	-0.73423	0.0435	0.11256	0.17831	0.48589

Table 2. Multivariate Regressions for Return on Assets

This table presents different models to estimate performance persistence with panel regressions. The dependent variable for Panel A and B is the 1-year ROA (3-year ROA) for each company for each year (winsorized at 99%). Explanatory variables include the 1 (3)-year ROA (lagged by 1 (3) years), the interaction between lagged alpha and fund governance variables (Number of Directors, % Independent Directors, % Non-Paid Directors, Chairman Equal to General Manager, Number of Board Meetings, % Shares Legal Entities, % Shares State-Owned, % Shares Executives, % Shares Largest Shareholder, Herfindahl Ten Largest Shareholder), Leverage and Market Value. Variables are as defined in Appendix A. Select variables excluded in different regression to check for collinearity. Regressions are presented for the full model (m11), as well as separately for different governance variables. Data source: CSMAR (China Stock Market Financial Statement Database), CSMAR (China Stock Market Trading Database) and China Listed Firm's Corporate Governance Research Database. Sample period: January 1, 2001 – December 31, 2010. *, **, *** Significant at the 10%, 5% and 1% levels, respectively. T-statistics are in parentheses.

Panel A: 1-Year ROA	m11	m1	m2	m3	m4	m5	m6	m7	m8	m9	m10
1-Year Lagged ROA	0.419***	0.590***	0.546***	0.100*	0.223***	0.245***	0.174***	0.214***	0.199***	0.328***	0.276***
	(3.92)	(6.8)	(14.33)	(2.42)	(13.38)	(7.39)	(10.28)	(11.86)	(12.21)	(13.00)	(11.50)
1-Year Lagged ROA x Number of Directors	-0.023	-0.046***									
	(-1.83)	(-4.59)									
1-Year Lagged ROA x % Independent Directors	0.789***		0.667***								
	(3.97)		(3.56)								
1-Year Lagged ROA x % Non-Paid Directors	0.201*			0.189*							
	(2.14)			(2.56)							
1-Year Lagged ROA x Chairman Equal to General Manager	-0.289***				-0.301***						
	(-5.54)				(-6.31)						
1-Year Lagged ROA x Number of Board Meetings	-0.002					-0.005					
	(-0.59)					(-1.61)					
1-Year Lagged ROA x % Shares Legal Entities	1.360***						0.967***				
	(6.82)						(4.99)				
1-Year Lagged ROA x % Shares State-Owned	0.544***							-0.160*			
	(4.51)							(-1.99)			
1-Year Lagged ROA x % Shares Executives	0.033								-0.42		
	(0.03)								(-0.34)		
1-Year Lagged ROA x % Shares Largest Shareholder	-0.017***									-0.006***	
	(-7.03)									(-6.69)	
1-Year Lagged ROA x Herfindahl Ten Largest Shareholder	0.831***										-0.299***
	(4.53)										(-4.39)
Leverage	0.020***	0.023***	0.018***	0.022***	0.023***	0.022***	0.023***	0.022***	0.023***	0.019***	0.021***
	(7.40)	(8.81)	(6.82)	(8.24)	(8.71)	(8.46)	(8.84)	(8.2)8	(8.51)	(7.1)	(7.74)
Market Value	-0.076	-0.076	-0.055	-0.07	-0.065	-0.079	-0.076	-0.086	-0.081	-0.074	-0.076
	(-0.58)	(-0.58)	(-0.42)	(-0.53)	(-0.49)	(-0.60)	(-0.57)	(-0.64)	(-0.61)	(-0.56)	(-0.57)
Constant	0.020***	0.013***	0.017***	0.013***	0.012***	0.011***	0.012***	0.013***	0.012***	0.017***	0.015***
	(6.69)	(4.48)	(5.85)	(4.41)	(4.01)	(3.78)	(4.12)	(4.22)	(3.85)	(5.66)	(4.88)
N	5,102	5,102	5,102	5,102	5,102	5,102	5,102	5,102	5,102	5,102	5,102
r2	0.096	0.061	0.079	0.058	0.066	0.057	0.062	0.058	0.057	0.067	0.061

(*continued*)

Table 2. Multivariate Regressions for Return on Assets—*Continued*

Panel B: 3-Year ROA	m11	m1	m2	m3	m4	m5	m6	m7	m8	m9	m10
3-Year Lagged ROA	0.008	-0.209*	0.290***	-0.252***	-0.127***	-0.055	-0.120***	-0.162***	-0.127***	0.03	0.029
	(0.07)	(-2.20)	-5.7	(-5.99)	(-4.29)	(-1.08)	(-3.68)	(-4.77)	(-4.34)	-0.55	-0.65
3-Year Lagged ROA x Number of Directors	0.003	0.009									
	(0.25)	(0.25)									
3-Year Lagged ROA x % Independent Directors	0.468		0.468								
	(1.78)		(1.78)								
3-Year Lagged ROA x % Non-Paid Directors	0.335***			0.333***							
	(4.1)			(4.07)							
3-Year Lagged ROA x Chairman Equal to General Manager	-0.005				-0.015						
	(-0.09)				(-0.24)						
3-Year Lagged ROA x Number of Board Meetings	-0.011*					-0.009					
	(-2.22)					(-1.74)					
3-Year Lagged ROA x % Shares Legal Entities	-0.211						-0.087				
	(-1.38)						(-0.59)				
3-Year Lagged ROA x % Shares State-Owned	0.481***							0.191			
	(4.2)							(1.94)			
3-Year Lagged ROA x % Shares Executives	-18.505								-8.619		
	(-0.65)								(-0.30)		
3-Year Lagged ROA x % Shares Largest Shareholder	-0.003									-0.005***	
	(-1.19)									(-3.35)	
3-Year Lagged ROA x Herfindahl Ten Largest Shareholder	-0.439**										-0.421***
	(-2.81)										(-4.56)
Leverage	0.111***	0.131***	0.143***	0.128***	0.129***	0.135***	0.127***	0.131***	0.128***	0.119***	0.118***
	(3.48)	(4.11)	(4.65)	(4.05)	(4.06)	(4.23)	(3.97)	(4.12)	(4.05)	(3.74)	(3.74)
Market Value	-2.212***	-2.212***	-1.766**	-2.072**	-2.182***	-1.972**	-2.208***	-2.153***	-2.171***	-2.390***	-2.351***
	(3.50)	(-3.50)	(-2.88)	(-3.30)	(-3.45)	(-3.07)	(-3.49)	(-3.41)	(-3.42)	(-3.78)	(-3.74)
Constant	0.046*	0.042*	0.038*	0.046**	0.044*	0.039*	0.044*	0.039*	0.044*	0.056**	0.056**
	(2.57)	(2.37)	(2.23)	(2.6)	(2.49)	(2.21)	(2.52)	(2.22)	(2.49)	(3.11)	(3.17)
N	2,138	2,138	2,138	2,138	2,138	2,138	2,138	2,138	2,138	2,138	2,138
r2	0.079	0.048	0.104	0.058	0.047	0.049	0.048	0.05	0.048	0.054	0.06

Table 3. Multivariate Regressions for "Alpha"

This table presents different models to estimate performance persistence with panel regressions. The dependent variable for Panel A and B is the 1-year alpha (3-year alpha) for each company for each year (winsorized at 99%). Explanatory variables include the 1 (3)-year alpha (lagged by 1 (3) years), the interaction between lagged alpha and fund governance variables (Number of Directors, % Independent Directors, % Non-Paid Directors, Chairman Equal to General Manager, Number of Board Meetings, % Shares Legal Entities, % Shares State-Owned, % Shares Executives, % Shares Largest Shareholder, Herfindahl Ten Largest Shareholder), Leverage and Market Value. Variables are as defined in Appendix A. Select variables excluded in different regression to check for collinearity. Regressions are presented for the full model (m11), as well as separately for different governance variables. Data source: CSMAR (China Stock Market Financial Statement Database), CSMAR (China Stock Market Trading Database) and China Listed Firm's Corporate Governance Research Database. Sample period: January 1, 2001 – December 31, 2010. *, **, *** Significant at the 10%, 5% and 1% levels, respectively. T-statistics are in parentheses.

Panel A: 1-Year Alpha	m11	m1	m2	m3	m4	m5	m6	m7	m8	m9	m10
1-Year Lagged Alpha	-0.133	-0.199**	0.015	-0.154***	-0.074***	-0.092*	-0.089***	-0.120***	-0.091***	-0.153***	-0.114***
	(-0.94)	(-2.77)	-0.18	(-5.92)	(-4.40)	(-2.29)	(-5.50)	(-5.55)	(-5.70)	(-3.83)	(-3.54)
1-Year Lagged Alpha x Number of Directors	0.007	0.011									
	(0.84)	(1.51)									
1-Year Lagged Alpha x % Independent Directors	-0.17		-0.31								
	(-0.67)		(-1.32)								
1-Year Lagged Alpha x % Non-Paid Directors	0.168			0.230**							
	(1.94)			(2.92)							
1-Year Lagged Alpha x Chairman Equal to General Manager	-0.137**				-0.150**						
	(-2.86)				(-3.20)						
1-Year Lagged Alpha x Number of Board Meetings	-0.001					0					
	(-0.31)					(-0.05)					
1-Year Lagged Alpha x % Shares Legal Entities	-0.343						-0.285				
	(-1.54)						(-1.33)				
1-Year Lagged Alpha x % Shares State-Owned	-0.001							0.121			
	(-0.01)							(1.8)			
1-Year Lagged Alpha x % Shares Executives	-0.339								-0.443		
	(-0.73)								(-0.99)		
1-Year Lagged Alpha x % Shares Largest Shareholder	0.002									0.002	
	(1.05)									(1.62)	
1-Year Lagged Alpha x Herfindahl Ten Largest Shareholder	-0.071										0.043
	(-0.75)										(0.73)
Leverage	-0.012	-0.011	-0.011	-0.011	-0.012	-0.011	-0.011	-0.011	-0.012	-0.011	-0.011
	(-0.6)1	(-0.62)	(-0.6)	(-0.6)	(-0.6)	(-0.59)	(-0.6)	(-0.56)	(-0.59)	(-0.57)	(-0.58)
Market Value	-0.222***	-0.223***	-0.223***	-0.222***	-0.222***	-0.223***	-0.223***	-0.223***	-0.223***	-0.224***	-0.223***
	(-7.68)	(-7.67)	(-7.68)	(-7.64)	(-7.66)	(-7.66)	(-7.68)	(-7.67)	(-7.67)	(-7.69)	(-7.67)
Constant	-0.001	0.001*	0.001*	0.001*	0.001*	0.001*	0.001*	0.001*	0.001*	0.001*	0.001*
	(-1.20)	(2.27)	(2.27)	(2.35)	(2.36)	(2.3)	(2.27)	(2.329)	(2.32)	(2.28)	(2.31)
N	5,102	5,102	5,102	5,102	5,102	5,102	5,102	5,102	5,102	5,102	5,102
r2	0.014	0.023	0.023	0.024	0.025	0.022	0.023	0.023	0.023	0.023	0.022

(*continued*)

Table 4. Multivariate Regressions for "Alpha"—*Continued*

Panel B: 3-Year Alpha	m11	m1	m2	m3	m4	m5	m6	m7	m8	m9	m10
	b/t	b/t	b/t	b/t	b/t	b/t	b/t	b/t	b/t	b/t	b/t
3-Year Lagged Alpha	0.2	-0.048	0.033	-0.157**	-0.130***	-0.111	-0.122***	-0.132**	-0.101***	-0.124	-0.105
	-0.8	(-0.36)	(0.25)	(-3.07)	(-4.10)	(-1.40)	(-3.88)	(-2.79)	(-3.31)	(-1.71)	(-1.75)
3-Year Lagged Alpha x Number of Directors	-0.016	-0.008									
	(-1.14)	(-0.55)									
3-Year Lagged Alpha x % Independent Directors	-0.517		-0.456								
	(-1.20)		(-1.17)								
3-Year Lagged Alpha x % Non-Paid Directors	0.113			0.127							
	(0.73)			-0.89							
3-Year Lagged Alpha x Chairman Equal to General Manager	0.107				0.08						
	(1.18)				(0.91)						
3-Year Lagged Alpha x Number of Board Meetings	-0.001					-0.001					
	(-0.09)					(-0.13)					
3-Year Lagged Alpha x % Shares Legal Entities	-0.054						0.049				
	(-0.17)						(0.17)				
3-Year Lagged Alpha x % Shares State-Owned	0.069							0.041			
	(0.42)							(0.32)			
3-Year Lagged Alpha x % Shares Executives	-107.559**								-97.598**		
	(-2.94)								(-2.72)		
3-Year Lagged Alpha x % Shares Largest Shareholder	0.000									0.000	
	(0.03)									-0.06	
3-Year Lagged Alpha x Herfindahl Ten Largest Shareholder	-0.059										-0.033
	(-0.33)										(-0.30)
Leverage	-0.012	-0.011	-0.011	-0.011	-0.012	-0.011	-0.011	-0.011	-0.012	-0.011	-0.011
	(-1.31)	(-1.21)	(-1.15)	(-1.17)	(-1.25)	(-1.20)	(-1.19)	(-1.19)	(-1.24)	(-1.20)	(-1.20)
Market Value	-0.752***	-0.752***	-0.745***	-0.748***	-0.741***	-0.748***	-0.752***	-0.749***	-0.707***	-0.752***	-0.754***
	(-3.61)	(-3.62)	(-3.59)	(-3.60)	(-3.56)	(-3.56)	(-3.62)	(-3.60)	(-3.40)	(-3.62)	(-3.63)
Constant	0.004	0,007	0.006	0.006	0.007	0.006	0.006	0.006	0.007	0.006	0.006
	(0.8)	(1.36)	(1.28)	(1.3)	(1.38)	(1.34)	(1.34)	(1.33)	(1.36)	(1.34	(1.34)
N	2,138	2,138	2,138	2,138	2,138	2,138	2,138	2,138	2,138	2,138	2,138
r2	0.02	0.02	0.021	0.02	0.02	0.02	0.02	0.02	0.025	0.02	0.02

Appendix A

Table A: Variable Definitions
This table gives a detailed description of the data gathering process and the calculation method for all variables.

Variable	Variable ID	Description and Calculation
Stock Data:		
Monthly Return	Mretwd	Monthly returns of all A-shares listed on Shanghai and Shenzhen stock exchanges
Market Value	Msmvttl	Market values of all A-shares listed on Shanghai and Shenzen stock exchanges
Market Data:		
Monthly Equally Weighted Market Return	Mretwdeq	Monthly equally weighted market return with cash dividends reinvested
Risk-Free Rate	Nrrdata	CSMAR risk-free rate
Balance Sheet:		
Leverage	A002000000/ A001000000	Total liabilities/Total assets
Income Statement:		
Return on Assets	B001000000/ A001000000	Total profits/Total assets
Governance:		
Number of Directors	Y1101a	Total number of directors (including board chairman) in the company's board of directors
% Independent Directors	Y1101b/Y1101a	The ratio of independent directors to total directors in percent
% Non-Paid Directors	Y1601b/Y1101a	The ratio of non-paid directors to total directors in percent. Including number of directors (independent directors excluded), supervisors (independent supervisors excluded) and executives who inly receive allowance
Chairman Equal to General Manager	Y1001b	Whether the board chairman and the general manager is the same person
Number of Board Meetings	A0101b	Number of board meeting per year
% Shares Legal Entities	Nshrlpn/Nshrttl	Percentage share of legal entities
% Shares State-Owned	Nshrglea/Nshrttl	Percentage share of state-owned entities
% Shares Executives	Nshrsms/Nshrttl	Percentage of shares owned by executives
% Shares Largest Shareholder	S0301b	Percentage of ten largest shareholder voting rights
Herfindahl Ten Largest Shareholder	S0301b	Herfindahl index for the ten largest shareholder