An International Study of the Value Implications of CEO External-Directorships

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We study the effect of CEO external-directorships on performance using non-US firms. We find that CEOs serving on four or more external-directorships have a detrimental effect on firm value and performance and more powerful CEOs are busier. Firms with busy CEOs trade at a 10% discount relative to the mean and their ROAs suffer 28% relative to the mean, suggesting economic significance. Our results are robust to matching and instrumental variable regressions that control for endogeneity. The evidence suggests that shareholders in countries with poor democracy, higher bureaucracy, and higher corruption should find ways to discourage excessive external-directorships of CEOs.

INTRODUCTION

Much attention in the literature has been given to identifying the ideal director to serve on the board of a corporation. All firms seek to hire the best independent directors with significant experiences managing firms and who are also able to adequately detect CEO malfeasance. Not surprisingly, a Spencer Stuart survey (Spencer Stuart board index, 2003) identifies active CEOs as the ideal candidates for director positions in other firms. CEOs have experience managing companies and can theoretically provide great advice to directors. In addition, CEOs themselves have experience working with boards of directors and can help provide some advice to boards for more efficient meetings. Finally, CEOs are likely well aware of ways that a CEO can extract perquisites from a firm.

One of the issues that firms face when selecting talented or qualified candidates is that there are more director positions than CEOs. Each company has one CEO and multiple directors serving on its board. To populate boards of directors with CEOs, each CEO would need to serve on multiple boards. The shortage of available CEOs and the suitability of their talent or qualifications are essential factors for selecting appropriate directors. This situation leads to another question. Does the "sender" of a CEO, the firm that sends a CEO to a board of another firm, benefit or suffer from sending a CEO to become an external director? The answer to this question is complicated. On the one hand, it takes time and professional experience to be a good director. A high number of external-directorships for the CEO will reduce the available time to be allocated to each position. The National Association of Corporate Directors guidelines relating to director professionalism and conduct (NACD, 1996) recommend that directors spend at least 160 hours for each board in which the person serves. CEOs who hold four external-

directorships should be spending at least 640 hours of work for these directorships – work that could have been spent in the firm where the CEO is the manager. Because CEOs of non-US firms have greater ability to accept external-directorships due to greater agency costs and lower analyst coverage of European firms (Aggarwal et al, 2011; Jegadeesh & Kim, 2006), we predict that external CEO directorships will be value and performance decreasing for our final sample.

Alternatively, the sender firm could benefit from sending the CEO to become a director in other firms that have high quality corporate governance or valuable business practices. Recent literature has shown significant benefits of CEO social networking (Carpenter & Westphal, 2001; Tsai & Ghoshal, 1998; Booth & Deli, 1996; Rosenstein & Wyatt, 1994).

We are the first to test the performance and value implications of external-directorships for CEOs using a large non-US firm sample across 22 countries. The new international setting, which offers some interesting country variations, is our main contribution to the extant literature because prior research is limited to large US firms. Moreover, we expand on the metrics of previous studies by using two different proxies for external CEO directorships. First, external-directorships, which is a continuous busy CEO variable, capture the total number of outside board positions and executive's responsibilities. Second, the busy CEO indicator is a dummy that proxies for CEOs who sits on four or more outside boards. Another contribution to the literature is that we determine the specific number of external-directorships of the CEO that is associated with a diminishing performance and market value in an international sample of companies from 2003 to 2008. Particularly, we test for the threshold number of CEO external-directorships that will lead to a reduction in firm value.

Consistent with our prediction, we find that external-directorships and the busy CEO indicator are detrimental to firm value and performance. Our results show that four external-directorships of the chief executive is the threshold number for diminishing firm performance and market value. We find that external-directorships are associated with significant negative effect on firm value and performance. Additionally, we provide evidence that firms with more powerful CEOs, indicating poor governance, tend to have busier top managers. However, the overall corporate governance has at most ambiguous effect on CEO busyness. We also show that firms in countries with worse democratic accountability, lower bureaucracy quality, and more corruption are correlated with more external-directorships for the CEO.

Our results are also economically significant. On average, we find that firms with busy CEOs serving on four or more external boards trade at about 10% discount relative to the mean value of Tobin's q. In addition, return on assets (ROA) for a firm with a busy CEO who sits on four or more outside boards suffers 28% relative to the mean ROA value.

If external-directorships are not randomly offered, CEOs of good firms are generally more likely to be offered external board position than CEOs of poor firms (Kaplan & Reishus, 1990). The potential endogeneity in the relationship between firm value and CEO external-directorships could lead us to observe a positive relationship between the sender's firm value and CEO external-directorships even though external-directorships are associated with a deterioration of the sender's firm performance. Alternatively, if we observe a negative relationship between firm value and external-directorships, it is unlikely that endogeneity explains the results. Rather, the observed negative relationship between firm value and external-directorships could be explained by the negative consequences of external-directorships to the sender firm.

We address potential endogeneity concerns in our sample in three ways. First, we test whether firm value and performance changes in response to changes in external-directorships. Here, we find that an increase by one or more of the external-directorships of the CEO is associated with a significant loss in firm value and performance. Second, we use a propensity-score matched sample that pairs each busy CEO with a non-busy CEO, which controls for selection on observable characteristics. The results with the propensity-score matched sample indicate that the busy CEO indicator exerts significantly negative pressure on firm value and performance. Third, we estimate two-stage least squares regressions. In the first stage, we estimate director busyness against determinants of director busyness and compute the predicted values. The instrumental variable (IV) is the number of publicly traded firms in the country of the sender firm. In the second stage, we regress Tobin's q and ROA against the predicted values of

director busyness and the control variables. Our results confirm that CEO busyness has a detrimental effect on firm value and performance.

The remainder of this paper is organized as follows. In the next two sections, we present the literature, hypotheses, data, and summary statistics. After we report univariate and the multivariate regression results in section four, we present robustness tests in section five. Lastly, we conclude in section six.

LITERATURE AND HYPOTHESES

If CEOs act in the interest of shareholders, then CEOs will only accept external-directorships when these positions benefit the firm. Given that there is a cost to accepting external-directorships, it is not clear whether external-directorships are related to a higher firm value for the sender firm. Additional directorships probably have smaller benefits (insofar the marginal certification benefit of external-directorships likely falls with each additional directorship). Alternatively, the cost of additional external-directorships does not fall with additional directorships. Therefore, if there is a positive effect of external-directorships to the CEO, multiple external-directorships may not be beneficial. Thus, CEOs acting in the interest of shareholders can be willing to accept external-directorships up to the point in which the marginal benefit of external-directorships equals the marginal cost of these directorships. Accepting too many outside directorships could lead to lower firm value because CEOs don't have sufficient time to monitor the management of firms during times of crisis.[1] Busier CEOs who serve on several boards are likely to be distracted from maximizing shareholder value, and thus the relation between CEO external-directorships and firm value could be negative or irrelevant.

However, CEOs have personal incentives to take external-directorships because of the compensation benefits that come with these directorships. It is therefore likely that CEOs in firms with poor corporate governance will accept external-directorships even if this means that the sender firm will suffer. Aggarwal, Erel, Ferreira, and Matos (2011) argue that US firms have higher corporate governance scores than foreign firms. Based on the above, we expect that CEO busyness is negatively related to non-US firm value and performance.

On the one hand multiple external-directorships for the CEO will limit the amount of time for every board membership and could harm firm performance. A recent Spencer Stuart report points to an increase from 27 percent in 2006 to 74 percent in 2016 for the S&P 500 firms imposing limits on the number of outside directorships that a given director can accept.[2] The pervasiveness of outside directorship restrictions suggests a recognition that external board directorships are demanding. Falato, Kadyrzhanova, and Lel (2014) find a substanitial positive stock market reaction to deaths of CEOs in firms with interlocking independent directors. This evidence is consistent with the view that CEO busyness through interlocking directors damages the quality of board monitoring. Core, Holthausen and Larcker (1999) find that executive compensation is higher when firms have more busy directors. Similarly, Fich and Shivdasani (2006) find that firms with busy directors trade at a value discount and exhibit lower turnover to performance relations than firms without busy directors. Some theoretical and empirical evidence in support of this view is provided in Holmstrom and Milgrom (1991). Therefore, we formulate the first hypothesis, as follows:

H1: CEO busyness is negatively associated with firm performance and market value.

On the other hand, the firm of the CEO could benefit from the outside board directorships if it could learn how to improve its governance or business practices. For example, some research finds that intrafirm networks (such as those created through external-directorships) can lead to greater innovation or new future business (Tsai & Ghoshal, 1998; Mace, 1986; Rosenstein & Wyatt, 1994; Loderer & Peyer, 2002). Managers can also learn new skills when sitting on boards in other firms (Bacon & Brown, 1974; Booth & Deli, 1996; Carpenter & Westphal, 2001). Finally, it is possible that CEO external-directorships could be a signal to the market that the CEO is a good manager. Studies that provide evidence consistent with this "certification" hypothesis include Kaplan and Reishus (1990), Gilson (1990), Shivdasani (1993), Brickley, Coles, and Linck (1999), and Ferris, Jagannathan, and Pritchard (2003). Perry and Peyer (2005) examine the stock price reaction to US senders of CEOs of 324 announcements of CEO appointments as

directors to a "receiving" firm that appoints the CEO as a director and find that external-directorships are not detrimental to the sender's firm value. Specifically, Ferris, Jagannathan and Pritchard (2003) find that firms with busy directors do not fare worse than firms without busy directors after fraud lawsuits. In addition, Loderer and Peyer (2002) find a positive relationship between firm value and director busyness. Similarly, Field, Lowry and Mkrtchyan (2013) find that busy directors contribute positively to firm value in all but the most established firms. Based on the above, we state the second hypothesis:

H2: CEO busyness is positively associated with firm performance and market value.

DATA

Our initial sample of non-US firms comes from the RiskMetrics corporate governance quotient database to compare cross-country differences. As reported in the breakdown of Table 1, our final sample includes 7030 firm-year observations from 22 different countries covering the period from 2003 to 2008. The countries with the most available data are Japan and the United Kingdom, representing about 35.86 percent and 17.81 percent of the entire sample, respectively. The broad corporate governance sample allows us to study the effects of changes in busy CEO over time on changes in firm value and performance. Using panel data, we can more efficiently investigate the combination of annual changes and cross-sectional differences of firms across countries.

TABLE 1
FINAL SAMPLE OF FIRMS

	Year							
Country	2003	2004	2005	2006	2007	2008	Total	Percent
Australia	45	48	74	72	69	50	358	5.09%
Austria	1	2	2	3	10	19	37	0.53%
Belgium	4	3	11	17	17	19	71	1.01%
Canada	54	54	53	64	68	98	391	5.56%
Denmark	2	1	12	12	13	23	63	0.90%
Finland	14	2	20	21	21	23	101	1.44%
France	52	47	54	61	62	58	334	4.75%
Germany	0	12	37	56	63	71	239	3.40%
Greece	13	14	25	22	26	22	122	1.74%
Hong Kong	26	34	73	72	72	67	344	4.89%
Ireland	8	8	9	10	9	11	55	0.78%
Italy	24	13	26	36	33	42	174	2.48%
Japan	358	374	418	429	431	511	2,521	35.86%
Netherlands	4	5	26	25	26	31	117	1.66%
New Zealand	8	9	12	13	13	13	68	0.97%
Norway	0	0	9	12	13	21	55	0.78%
Portugal	3	4	7	6	7	9	36	0.51%
Singapore	29	30	43	43	42	53	240	3.41%
Spain	12	5	22	32	35	33	139	1.98%
Sweden	28	0	27	31	23	37	146	2.08%
Switzerland	2	11	36	38	38	42	167	2.38%
United Kingdom	96	108	276	283	281	208	1,252	17.81%
Total	783	784	1,272	1,358	1,372	1,461	7,030	100.00%

This table summarizes the number of firms per country and year for the entire sample.

After identifying firms with busy CEOs using the corporate governance quotient database developed by RiskMetrics, we hand-check each company in the sample to find the exact number of external-directorships for each CEO. We use Thomson Worldscope, Businessweek and other sources to verify the external-directorships of the CEOs in the sample. We then match corporate governance, financial, and country-level economic data. Given that Riskmetrics changed its calculation methodology, the corporate governance quotient (CGQ) was replaced with the Governance Risk Indicator (GRId) in July 2010. Because of data unavailability for 2009, we end the sample in 2008 to use a common and consistent governance measure for the study (Borisova, Brockman, Salas, & Zagorchev, 2012; Bruno & Claessens, 2010).

External-directorships take a value of one for each additional position of the CEO on the boards of other firms in a given year, ranging from zero to 14. The busiest CEO in our dataset serves on 14 outside boards at a specific point in time. The busy CEO indicator takes a value of one when the CEO sits on the boards of four or more other firms in a given year, and zero otherwise.

Following Borisova, Brockman, Salas, and Zagorchev (2012) and Bruno and Claessens (2010), we construct four subcomponents of corporate governance: committee independence, board independence, CEO power, and board entrenchment, which are described in the appendix. For example, Weisbach (1988) shows that firms with boards that consist of at least 60% outsiders are associated with higher probability of CEO replacement after poor performance than firms with boards consisting of up to 40% outsiders. In all regression models, higher values of the corporate governance metrics and the subcomponents indicate that the firms have better governance mechanisms. Further, we collect country-level data from the World Bank's World Development Indicators (WDI) Database and the International Country Risk Guide (ICRG). A complete description of all the variables can be found in the Appendix.

Table 2 reports descriptive statistics of all variables for the entire sample of firms. Based on the table, the average firm has a Tobin's q value of about 1.7 and an ROA of 4.71%. In general, Tobin's q is a forward-looking measure of all operations in a company, while ROA captures only the dimension of the firm's accounting performance (Yang and Zhao, 2014). The value of external-directorships, on average, is 0.21. Because we have 213 CEO observations with at least one external-directorship out of 1699 unique firms in our full sample, the data implies that approximately one in eight CEOs serves on outside board. Given that the busy CEO indicator has a mean of 3 percent, we have 182 busy CEOs with four or more external-directorships in the final sample. The director's stock ownership dummy has an average value of 0.49, suggesting that approximately half of all directors own stocks in their firms. As board size dummy has a mean score of 1.88, the average board of directors includes between 6 and 12 members. Committee independence and board independence have average values of 0.67 and 0.28, respectively. CEO power, board entrenchment, and CEO turnover have average values of 0.94, 1.32, and 0.13, respectively. The firms in our sample have a mean amount of common equity equal to 3.54 billion dollars. The average asset growth rate is 14.90 percent and the mean cash ratio is 0.46. Table 2 illustrates that the average firm pays 84 cents of dividends per share.

The country level variables show that, on average, the logarithm of GDP constant USD is 27.91, the annual GDP growth is 2.35%, and the logarithm of stock market capitalization is 4.7. The mean values of the bureaucracy quality index, democratic accountability index, corruption index, and the rule of law index are 3.83, 5.31, 3.96, and 1.53, respectively. Lastly, the civil-law dummy has an average value of 0.62.

TABLE 2
SUMMARY STATISTICS

Variable	N. obs.	Mean	Median	Std. Dev.	5th Percentile	95th Percentile
Tobin's Q	6850	1.70	1.32	1.81	0.78	3.64
ROA	7030	4.71	4.36	8.91	-4.44	16.18
External-directorships	7030	0.21	0.00	0.96	0.00	2.00
Busy CEO indicator	7030	0.03	0.00	0.16	0.00	0.00
Director's stock ownership dummy	7030	0.49	0.00	0.50	0.00	1.00
Board size	7030	1.88	2.00	1.03	0.00	4.00
Committee independence	7030	0.67	0.00	1.04	0.00	3.00
Board independence	7030	0.28	0.00	0.45	0.00	1.00
CEO power	7030	0.94	1.00	0.82	0.00	2.00
Board entrenchment	7030	1.32	1.00	0.56	1.00	2.00
Firm Size	7030	7.07	7.06	1.46	4.66	9.57
Asset growth	7030	14.90	9.35	98.40	-15.00	54.57
Cash ratio	7030	0.46	0.20	1.02	0.02	1.54
Dividend per share	7030	0.84	0.15	4.77	0.00	2.09
Log (GDP constant USD)	7030	27.91	28.15	1.28	25.63	29.28
GDP growth	7030	2.35	2.40	1.78	-0.70	6.38
Log (Stock market cap.)	7030	4.70	4.66	0.50	3.91	5.77
Bureaucracy quality index	7030	3.83	4.00	0.40	3.00	4.00
Democratic accountability index	7030	5.31	6.00	1.02	2.50	6.00
Corruption index	7030	3.96	4.00	0.80	3.00	5.00
Rule of law index	7030	1.53	1.45	0.30	1.10	1.91
Civil law dummy	7030	0.62	1.00	0.49	0.00	1.00

This table reports summary statistics of all companies in the final sample. All the variables are described in the Appendix.

RESULTS

Below we present our results. Table 3 presents a univariate analysis of non-busy CEOs and busy CEOs who sit on outside boards. Panel A tests whether the mean values of non-busy CEOs are significantly different from the mean values of busy CEOs with at least one external-directorship. Panel B tests differences in the mean values of non-busy CEOs from the mean values of the busy CEOs indicator. The average Tobin's q of busy CEOs (1.38) is significantly lower than the average Tobin's q of non-busy CEOs (1.71). The tests show that the mean ROA of busy CEOs (3.39%) is significantly lower than the mean ROA of non-busy CEOs (4.75%).

Next in Panel C, we test how a given number or range of external-directorships affects Tobin's q and ROA. For one and three outside directorships the differences in mean logarithm of Tobin's q is insignificant across subsamples. For two directorships, we see a small spike upward in both the logarithm of Tobin's q and ROA, although only the increase in Tobin's q is significant. This result supports the initial positive influence of outside board positions for the firm. However, if the CEO holds four or more directorships the negative effect starts to kick in and destroy firm value and performance. Shareholders lose wealth especially when the chief executive serves on four or more external corporate boards. As

documented in the univariate analysis of Panel C, six outside board positions for the CEO significantly hurt the market value of the firm. Furthermore, the dummy for four, five and six external-directorships is associated with a significant negative pressure on firm value as well as performance.

TABLE 3
UNIVARIATE ANALYSIS OF NON-BUSY CEOS AND BUSY CEOS

Panel A: Univariate statistics for non-Busy CEOs and Busy CEOs with at least one outside directorships

	Non-busy CEOs		CEOs with 1+ directorships		*P*-value for difference of means
Variable	**N.**	**Mean**	**N.**	**Mean**	**test**
Tobin's Q	6,434	1.707	416	1.547	0.083*
Log (Tobin's Q)	6,434	0.371	416	0.318	0.034**
ROA	6,587	4.755	443	4.054	0.109

Panel B: Univariate statistics for non-Busy CEOs and the busy CEO indicator

	Non-busy CEOs		CEOs with 4+ directorships		*P*-value for difference of means
Variable	**N**	**Mean**	**N**	**Mean**	**test**
Tobin's Q	6,681	1.705	169	1.376	0.020**
Log (Tobin's Q)	6,681	0.371	169	0.224	<0.001***
ROA	6,848	4.746	182	3.394	0.043**
Busy CEO indicator	6,848	0.000	182	1.00	<0.001***
Director's stock ownership dummy	6,848	0.495	182	0.363	<0.001***
Board size	6,848	1.866	182	2.225	<0.001***
Committee independence	6,848	0.668	182	0.582	0.273
Board independence	6,848	0.282	182	0.368	0.011**
CEO power	6,848	0.936	182	1.126	0.002***
Board entrenchment	6,848	1.324	182	1.242	0.051***
Firm size	6,848	7.043	182	8.067	<0.001***
Asset growth	6,848	15.013	182	10.700	0.560
Cash ratio	6,848	0.463	182	0.315	0.053*
Dividend per share	6,848	0.845	182	0.682	0.649
Log (GDP constant USD)	6,848	27.927	182	27.380	<0.001***
GDP growth	6,848	2.346	182	2.578	0.084*
Log (Stock market cap.)	6,848	4.697	182	4.722	0.519
Bureaucracy quality index	6,848	3.834	182	3.503	<0.001***
Democratic accountability index	6,848	5.317	182	4.904	<0.001***
Corruption index	6,848	3.952	182	4.102	<0.013**
Rule of law index	6,848	1.526	182	1.481	0.040**
Civil law dummy	6,848	0.615	182	0.637	0.537

Panel C: Univariate Analysis of the means of Log (Tobin's q) and ROA

Variable	Mean		*P*-value for difference of means to CEOs with no outside directorships
	Log (Tobin's q)	N.	
CEOs with no outside directorships	0.371	6,434	
CEOs with one outside directorship	0.298	85	0.177
CEOs with two outside directorships	0.493	67	0.046**
CEOs with three outside directorships	0.380	95	0.854
CEOs with four outside directorships	0.279	64	0.138
CEOs with five outside directorships	0.278	44	0.215
CEOs with six outside directorships	0.058	37	<0.001***
CEOs with four, five or six outside directorships	0.222	145	<0.001***
CEOs with seven through 14 outside directorships	0.233	24	0.175

Variable	Mean		*P*-value for difference of means to CEOs with no outside directorships
	ROA	N.	
CEOs with no outside directorships	4.755	6,587	
CEOs with one outside directorship	4.248	90	0.583
CEOs with two outside directorships	5.556	72	0.439
CEOs with three outside directorships	4.001	99	0.407
CEOs with four outside directorships	4.133	66	0.563
CEOs with five outside directorships	3.296	50	0.239
CEOs with six outside directorships	2.598	41	0.116
CEOs with four, five or six outside directorships	3.465	157	0.067*
CEOs with seven through 14 outside directorships	2.942	25	0.300

Panel A reports univariate tests using means from the non-busy CEOs and busy CEOs with at least one outside directorship. Panel B reports univariate tests using means from the non-busy CEOs and busy CEOs with four plus outside directorship for all variables. Panel C reports tests of the means of Log (Tobin's q) and ROA for non-busy CEOs and busy CEOs. The Appendix defines all variables. *, **, and *** indicate statistical significance at the 10%, 5%, and 1% levels, respectively.

The first set of results is related to drivers of external-directorships. In other words, we test, in a multiple regression setting, what firm and country level characteristics are associated with more external-directorships. We predict that larger firms are more likely to receive offers for directorships than smaller firms. The relationship between governance quality and external-directorships is conditional on the value implications of external-directorships. If external-directorships are good for the sender firm, then we should observe that firms with better governance should have more "busy CEOs" than firms with poor corporate governance. Alternatively, if external-directorships are bad for the sender firm, then we should see a negative relationship between external-directorships and corporate governance quality. Results of the analysis of determinants of external-directorships are presented in Table 4.

TABLE 4
MULTIPLE REGRESSION ANALYSIS OF CEO BUSYNESS AND FIRM CHARACTERISTICS

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
	External-directorships	External-directorships	External-directorships	Busy CEO indicator	Busy CEO indicator	Busy CEO indicator
Director's stock ownership dummy	-0.031	-0.0031	0.086	-0.0020	0.020	0.23
	(-0.36)	(-0.036)	(0.85)	(-0.017)	(0.16)	(1.61)
Board size	0.017	-0.0021	0.013	0.055	0.035	0.045
	(0.38)	(-0.044)	(0.24)	(0.92)	(0.57)	(0.64)
Committee independence	-0.062	-0.055	-0.039	-0.058	-0.038	-0.016
	(-1.52)	(-1.31)	(-0.80)	(-1.12)	(-0.66)	(-0.26)
Board independence	0.28**	0.32***	0.19	0.23	0.29*	0.14
	(2.46)	(2.79)	(1.64)	(1.53)	(1.86)	(0.87)
CEO power	-0.12**	-0.12*	-0.23***	-0.078	-0.083	-0.24**
	(-1.96)	(-1.91)	(-3.45)	(-0.86)	(-0.90)	(-2.38)
Board entrenchment	-0.028	-0.056	-0.034	-0.011	-0.043	0.041
	(-0.44)	(-0.89)	(-0.51)	(-0.13)	(-0.47)	(0.43)
Firm size	0.17***	0.18***	0.17***	0.17***	0.17***	0.17***
	(6.04)	(5.01)	(4.70)	(4.47)	(3.53)	(3.41)
Asset growth	0.00020***	0.00016***	0.00024***	-0.0021	-0.0024	-0.0027
	(4.55)	(3.01)	(4.25)	(-1.19)	(-1.27)	(-1.46)
Cash ratio	-0.036	-0.0048	0.0029	-0.039	0.0047	0.014
	(-1.01)	(-0.15)	(0.11)	(-0.86)	(0.13)	(0.45)
Dividend per share	-0.037*	-0.042*	-0.076*	-0.033	-0.056	-0.15**
	(-1.78)	(-1.75)	(-1.80)	(-1.39)	(-1.60)	(-2.39)
Log (GDP constant USD)	-0.037	-0.041	-2.49**	0.013	0.050	-2.05
	(-0.79)	(-0.79)	(-2.40)	(0.19)	(0.63)	(-1.43)
GDP growth	-0.048***	-0.10***	-0.13***	-0.041*	-0.092**	-0.093**
	(-2.82)	(-2.92)	(-3.70)	(-1.88)	(-2.11)	(-2.15)
Log (Stock market cap.)	-0.51***	-0.49***	0.74**	-0.40***	-0.49***	0.10
	(-5.04)	(-3.95)	(2.47)	(-2.84)	(-2.69)	(0.25)
Rule of law index	1.37***	1.50***	-0.10	1.07***	1.38***	-0.19
	(5.69)	(5.87)	(-0.20)	(2.72)	(3.37)	(-0.26)
Bureaucracy quality index	-1.32***	-1.43***	0.33	-1.11***	-1.32***	-2.69***
	(-9.46)	(-9.67)	(0.66)	(-5.47)	(-5.90)	(-5.03)
Democratic accountability index	-0.22***	-0.19***	-0.12	-0.25***	-0.25***	0.074
	(-4.29)	(-3.47)	(-0.73)	(-3.39)	(-3.05)	(0.28)
Corruption index	0.058	0.028	-0.26***	0.18*	0.14	-0.15
	(0.91)	(0.43)	(-3.18)	(1.83)	(1.33)	(-1.28)
Year fixed effects	No	Yes	Yes	No	Yes	Yes
Industry fixed	No	Yes	Yes	No	Yes	Yes
Country fixed	No	No	Yes	No	No	Yes
Observations	7,030	7,030	7,030	7,030	6,213	5,784
Pseudo R-squared	0.11	0.14	0.18	0.15	0.20	0.27

This table reports Ordered Probit and Probit regression results with firm random effects. The dependent variables are external-directorships and the busy CEO indicator. We use Ordered Probit models for External-directorships and Probit models for the busy CEO indicator. The independent variables included in the regression models are described in the Appendix. The values in the parentheses are t-statistics, which are based on standard errors that are clustered by firms. *, **, and *** indicate statistical significance at the 10%, 5%, and 1% levels, respectively.

For the analysis of the determinants of busy CEOs, we estimate ordered probit (Models 1 through 3) with external-directorships as the dependent variable and probit (Models 4 through 6) with the busy CEO indicator as the dependent variable. Throughout our multiple regression analysis, we adjust standard errors of the coefficients of the regressions for possible firm-level clustering. In Models 1 and 4, we do not include industry, country, and yearly fixed effects. In Models 2 and 5, we include yearly and industry fixed effects. Finally, in Models 3 and 6, we include yearly, industry, and country fixed effects. Firms with low values on CEO power, which reflect poor corporate governance quality, are associated with more busy CEOs. Given that the other governance measures are mostly insignificant, the overall corporate governance has ambiguous effect on CEO busyness. In addition, larger firms represented with higher total equity are also related to more busy CEOs. Countries with higher bureaucracy (i.e., lower bureaucracy index values) in Model 6, worse democratic accountability in Models 2 and 5, and higher corruption in Model 3 have significantly higher CEO busyness.

Our results show that firms with busy CEOs are associated with higher CEO power, higher bureaucracy and corruption. Next, we estimate regressions using Tobin's q and ROA as dependent variables measuring firm value and performance, respectively. Tobin's q can also be interpreted as a market assessment of firm value, whereas ROA is an accounting/financial measure of firm performance. If busy CEOs are bad (good) for the firm, they are likely to be bad (good) for the firm's market value and performance. The dependent variable in odd numbered Models (Models 1, 3 and 5) is Tobin's q and the dependent variable in even numbered Models (Models 2, 4 and 6) is ROA. Results of this second set of models are provided in Table 5.

TABLE 5
MULTIPLE REGRESSION ANALYSIS OF FIRM PERFORMANCE, CEO BUSYNESS AND CORPORATE GOVERNANCE

	Model 1 Tobin's Q	Model 2 ROA	Model 3 Tobin's Q	Model 4 ROA	Model 5 Tobin's Q	Model 6 ROA
External-directorships	-0.0073*	-0.35***				
	(-1.77)	(-3.24)				
Busy CEO indicator			-0.036*	-1.57***	-0.047**	-1.27*
			(-1.66)	(-3.34)	(-2.04)	(-1.84)
CEO turnover					-0.056**	-1.57**
					(-2.33)	(-2.34)
Director's stock ownership dummy	0.0043	-0.073	0.0044	-0.075	-0.0052	0.56
	(0.37)	(-0.28)	(0.37)	(-0.28)	(-0.21)	(1.16)
Board size	0.0041	-0.062	0.0042	-0.059	0.034**	-0.49
	(0.65)	(-0.43)	(0.65)	(-0.40)	(1.99)	(-1.20)
Committee independence	0.0084	0.34	0.0085	0.34	-0.0045	-0.13
	(1.24)	(1.39)	(1.24)	(1.39)	(-0.44)	(-0.35)
Board independence	0.015	0.31	0.015	0.30	0.030	-0.075
	(0.98)	(0.78)	(0.98)	(0.76)	(1.39)	(-0.11)
CEO power	-0.036***	-0.38**	-0.036***	-0.37**	-0.030**	0.095
	(-4.60)	(-2.08)	(-4.59)	(-2.03)	(-2.51)	(0.30)
Firm size	-0.067***	1.85***	-0.067***	1.84***	-0.084***	1.83***
	(-7.62)	(6.25)	(-7.65)	(6.23)	(-6.42)	(4.51)
Asset growth	-0.00013***	0.00011	-0.00013***	0.000068	-0.00050***	0.0050
	(-11.5)	(0.054)	(-11.6)	(0.034)	(-3.52)	(0.59)
Cash ratio	0.011	0.73**	0.011	0.73**	-0.022	0.75
	(0.82)	(2.17)	(0.82)	(2.17)	(-1.56)	(1.43)
Dividend per share	-0.00029	0.065**	-0.00029	0.065**	0.0044	0.46***
	(-0.14)	(2.49)	(-0.13)	(2.50)	(0.48)	(3.60)

Log (GDP constant USD)	0.33	-5.02	0.33	-4.90		
	(1.39)	(-1.35)	(1.39)	(-1.31)		
GDP growth	-0.0052	-0.0071	-0.0049	0.0067	0.0018	0.096
	(-1.08)	(-0.066)	(-1.02)	(0.062)	(0.17)	(0.32)
Log (Stock market cap.)	0.055	-2.87***	0.053	-2.96***	0.26***	-0.22
	(1.20)	(-2.62)	(1.15)	(-2.70)	(4.69)	(-0.19)
Rule of law index	-0.22***	-0.22	-0.22***	-0.16		
	(-2.97)	(-0.11)	(-2.95)	(-0.081)		
Bureaucracy quality index	-0.15**	0.96	-0.15**	0.95		
	(-2.33)	(0.46)	(-2.35)	(0.46)		
Democratic accountability index	-0.021	-0.85	-0.020	-0.81		
	(-0.81)	(-1.24)	(-0.78)	(-1.18)		
Corruption index	-0.0028	-0.29	-0.0020	-0.25	0.021	0.044
	(-0.26)	(-1.14)	(-0.18)	(-1.00)	(1.24)	(0.11)
Civil law dummy					0.21***	-1.00
					(3.95)	(-0.88)
Observations	6,850	7,030	6,850	7,030	1,689	1,720
R-squared	0.22	0.09	0.22	0.09	0.23	0.15

This table reports OLS regression results with firm random effects. The dependent variables are logarithm of Tobin's q and ROA. The main explanatory variables are external-directorships and the busy CEO indicator. All models include yearly, industry, and country fixed effects. The independent variables included in the regression models are described in the Appendix. The values in the parentheses are t-statistics, which are based on standard errors that are clustered by firms. *, **, and *** indicate statistical significance at the 10%, 5%, and 1% levels, respectively.

Models 1 and 2 of Table 5 show that the coefficients on our external-directorships variable are negative and significant for Tobin's q and ROA, but the significance of the first coefficient is marginal. These initial findings indicate that busy CEOs are generally associated with lower firm value and performance.[3] As we look at the coefficients on our control variables, CEO power is negatively related to both firm value and performance in all models. The result implies that less powerful CEOs fail to enhance firm value. This evidence is consistent with Yang and Zhao (2014) who show that in the presence of CEO/chair duality, a firm experiences higher performance and market value than a firm with a non-dual CEO. Larger firms have lower firm value and better profitability, which could be associated with the Fama and French (1992) small firm return premium. High asset growth is negatively related to Tobin's q, perhaps because growth in assets could lead to higher denominators in Tobin's q. Dividend paying firms and firms with more cash have higher ROAs. Finally, better rule of law and lower bureaucracy are linked to smaller values of Tobin's q, suggesting that contract enforcement, strict rule of law with more lawsuits, violence, and less adaptive policies in the nation suppress market values.

In Models 3 and 4, we find that the coefficients on the busy CEO indicator are negative and significantly related to firm value and performance, but the significance on Tobin's q is marginal.[4] We control for CEO turnover and legal origin of the country but exclude four country level variables in Models 5 and 6. Our motivation for adding CEO turnover is that new CEOs who are likely to have fewer external-directorships and may replace CEOs of firms that performed poorly in the previous years. The coefficients on the busy CEO indicator are significantly negative in Models 5 and 6, but the significance is marginal in Model 6 with ROA.[5] After we control for yearly, industry, and country fixed effects, the coefficients on the busy CEO variables are significantly negative. Even though the regression results vary across models, our findings suggest that CEO busyness is detrimental to both firm value and performance.[6] In untabulated analysis, we also show that our results remain consistent (though with somewhat lower statistical significance) when we include firm level fixed effects. This is to be expected given that CEO busyness doesn't change frequently in our time-series.

Economic Significance

We use this subsection to discuss the economic significance of the empirical findings. Looking at our final sample of firms with busy CEO indicator in Panel B of Table 3, the average of the logarithm of Tobin's q is 0.22 and the average of ROA is 3.39%. Based on the first four regressions with the entire sample in Table 5, we can see that firms with busy CEOs have somewhere between 0.73% and 3.63% lower market values and their ROAs suffer from 35% to 157%. The larger negative effects are observed with the busy CEO indicator. These results imply that firms with busy CEOs, on average, impair their market value by 10.0% (=.022/.22) and worsen their profitability by 28.3% (=0.96/3.39), which is substantial. Since the standard deviation of the logarithm of Tobin's q is 0.49, the average increase of 0.022 in logarithm of Tobin's q represents 0.0449 (=0.022/0.49) of the standard deviation of the logarithm of Tobin's q. As the standard deviation of ROA is 8.91%, the average increase of 0.96 in ROA represents 0.1077 (=0.96/8.91) of the standard deviation of ROA.

According to analysis, we find that the adverse effect of busy CEO on firm value is 10.0% based on the average and 4.49% based on the standard deviation. We show that busy CEOs exacerbate firm profitability by 28.3% based on the average and 10.77% based on the standard deviation.

ROBUSTNESS TESTS

As endogeneity is a common issue in most of the corporate finance literature, we employ different tests to mitigate this concern for our study. For example, it is possible that firms with low market value or poorly performing firms can only hire CEOs who are too busy. We propose three separate ways to address this potential endogeneity concern. First, we test whether changes in the busy CEO variable lead to changes in Tobin's q and changes in ROA. Our dependent variables in this analysis are the change in Tobin's q and the change in ROA. Second, we use a propensity-score matched sample that compares each busy CEO with a non-busy CEO. Given that matching reduces existing differences between busy and non-busy CEOs, the pairing process controls for selection on observable characteristics and heterogeneous impacts. Since the matching is performed with replacement, the same CEO can be matched more than once.

Third, we estimate instrumental variable regressions. For this approach, we need an instrumental variable that is related to CEO busyness but not to firm value and performance. We propose that the number of public firms in the country is such a variable. Boards have multiple directors and so the supply of CEOs for director positions is limited. Countries with more companies have more CEOs but the CEO supply constraints are multiplied. In other words, when we add one more firm, we get one more CEO who can serve as a director, but we now need to find many more CEOs to fill in director vacancies. Finally, foreign directors are not very common around the world. Therefore, we expect to find more busy CEOs in countries with more publicly traded companies. Furthermore, the number of companies in a country is not likely related to firm value and performance (the US would have the worst performance and value in the world!).

First, we present results of our analysis of changes in Tobin's q and changes in ROA in Table 6. The idea of this analysis is that we can test whether Tobin's q and ROA change after the number of external-directorships changes. Because it make take some time for the effect of external-directorships to accrue, we estimate changes from *t-2* to *t+2* in both Tobin's q and ROA. Consistent with our results in Table 5, we find that positive changes in external-directorships (i.e., CEOs take more outside directorships) are associated with negative changes in both Tobin's q and ROA. In other words, firms have lower values and worse performances after their CEOs become busier. Consistent with Weisbach (1988), we find that more outsiders on the board are linked to enhanced firm performance because of better monitoring of the CEO.

TABLE 6
MULTIPLE REGRESSION ANALYSIS OF CHANGES IN FIRM PERFORMANCE AND CHANGES IN EXTERNAL-DIRECTORSHIPS

	Model 1 Change in Tobin's	Model 2 Change in ROA	Model 3 Change in Tobin's Q	Model 4 Change in ROA
Change in External-directorship	-0.015*** (-2.71)	-0.31** (-2.10)	-0.014*** (-2.66)	-0.33** (-2.19)
Change in Director's stock ownership dummy	0.048*** (4.06)	1.17*** (3.33)	0.056*** (4.78)	1.28*** (3.68)
Board size	0.026*** (3.26)	0.31 (1.64)	0.020*** (2.67)	0.22 (1.23)
Committee independence	-0.0040 (-0.40)	-0.57* (-1.76)	-0.0067 (-0.73)	-0.54* (-1.94)
Board independence	0.036 (1.39)	2.14*** (3.13)	0.055** (2.30)	2.19*** (3.27)
CEO power	-0.017 (-1.31)	-0.92*** (-2.62)	-0.025** (-2.06)	-1.14*** (-3.57)
Change in Firm size	-0.11*** (-4.28)	-1.25* (-1.73)	-0.11*** (-4.33)	-1.45** (-2.00)
Change in Asset growth	0.00025* (1.80)	-0.0053 (-0.96)	0.00025* (1.81)	-0.0053 (-0.95)
Change in Cash ratio	0.030*** (2.75)	-0.48 (-1.44)	0.030*** (2.74)	-0.45 (-1.37)
Change in Dividend per share	-0.0019 (-0.61)	0.10 (1.18)	-0.0014 (-0.47)	0.12 (1.27)
Change in Log (GDP constant USD)	6.11*** (2.98)	-74.6 (-1.53)	3.21*** (4.37)	-10.5 (-0.72)
Change in GDP growth	0.023*** (2.88)	0.41** (2.23)	0.030*** (5.29)	0.18 (1.30)
Change in Log (Stock market cap.)	0.53*** (7.75)	20.4*** (11.4)	0.52*** (8.17)	19.0*** (11.1)
Change in Rule of law index	-2.06*** (-13.4)	-17.2*** (-4.10)	-1.90*** (-13.2)	-16.4*** (-4.25)
Change in Bureaucracy quality index	-0.13 (-0.75)	2.33 (1.02)	-0.15 (-0.85)	2.47 (1.07)
Change in Democratic accountability index	0.33*** (7.41)	3.24*** (2.84)	0.26*** (6.48)	2.82*** (2.61)
Change in Corruption index	0.17*** (8.23)	0.81 (1.31)	0.15*** (8.17)	0.51 (0.96)
Civil law dummy			0.0093 (0.42)	-1.50** (-2.39)
Industry fixed effects	Yes	Yes	Yes	Yes
Country fixed effects	Yes	Yes	No	No
Observations	4,452	4,671	4,452	4,671
R-squared	0.18	0.06	0.16	0.05

This table reports changes-in-changes regression results with firm random effects. The dependent variables are two-year changes in logarithm of Tobin's q and two-year changes in ROA. The main explanatory variable is the one-year change in external-directorships and the other variables in changes. The independent variables included in the regression models are described in the Appendix. The values in the parentheses are t-statistics, which are based on standard errors that are clustered by firms. *, **, and *** indicate statistical significance at the 10%, 5%, and 1% levels, respectively.

Second, we use a propensity-score matched sample that combines busy CEOs and closely matched non-busy CEOs. We run separate propensity-score matching models for the logarithm of Tobin's q and ROA, and each specification is significant at one percent. The probit model employed in the matching of busy CEOs and non-busy CEOs incorporates the following variables: firm size, cash ratio, pre-tax margin, CEO power, logarithm of GDP in constant USD, and logarithm of the stock market capitalization. Given that the estimations for Tobin's q and ROA with the matched samples are frequency-weighted, we cannot include firm fixed effects in the regression models. After including industry, country, and yearly fixed effects, Table 7 reports that the busy CEO indicator exerts significantly negative pressure on firm value and performance across the models. However, the busy CEO indicator is marginally significant for Tobin's q in Model 1. After we control for the legal origin of the country in Models 3 and 4, we still find that the busy CEO indicator significantly hurts Tobin's q and ROA. The evidence from the propensity-score matched sample supports the earlier findings of Table 5.

TABLE 7
MULTIPLE REGRESSION ANALYSIS OF FIRM PERFORMANCE AND THE BUSY CEO INDICATOR USING A PROPENSITY SCORE MATCHED SAMPLE

	Model 1 Tobin's Q	Model 2 ROA	Model 3 Tobin's Q	Model 4 ROA
Busy CEO indicator	-0.14* (-1.93)	-2.13** (-2.08)	-0.10** (-2.00)	-1.48** (-2.08)
Director's stock ownership dummy	0.026 (0.35)	-0.051 (-0.038)	-0.038 (-0.64)	-0.28 (-0.32)
Board size	0.034 (0.94)	0.64 (1.32)	0.016 (0.50)	0.57 (1.02)
Committee independence	0.036 (1.21)	-0.18 (-0.37)	0.033 (1.22)	-0.29 (-0.70)
Board independence	0.020 (0.23)	1.92 (1.04)	0.00040 (0.0048)	2.15 (1.11)
CEO power	-0.053 (-1.31)	-0.98 (-1.48)	-0.021 (-0.55)	-0.92 (-1.37)
Firm size	-0.024 (-0.97)	0.43 (1.03)	-0.015 (-0.64)	0.37 (0.97)
Asset growth	-0.00013 (-0.13)	0.0030 (0.25)	0.00013 (0.12)	0.0058 (0.48)
Cash ratio	0.065 (1.23)	0.28 (0.52)	0.057 (1.30)	0.30 (0.65)
Dividend per share	-0.0036 (-0.63)	0.15** (2.30)	-0.0042 (-0.68)	0.19** (2.01)
Log (GDP constant USD)	0.62 (0.63)	-4.09 (-0.27)	0.0071 (0.21)	-0.21 (-0.44)
GDP growth	0.029 (0.93)	0.37 (0.82)	0.0037 (0.14)	0.12 (0.32)
Log (Stock market cap.)	-0.038 (-0.17)	-7.06** (-2.06)	0.13 (1.56)	0.14 (0.12)
Rule of law index	0.52 (1.22)	6.62 (0.83)	-0.0054 (-0.045)	-0.25 (-0.15)
Bureaucracy quality index	-0.071 (-0.41)	-17.1 (-0.52)		
Democratic accountability index	0.15 (1.28)	1.63 (0.76)	0.070* (1.82)	-1.28* (-1.77)

Corruption index	-0.0074 (-0.15)	1.17 (1.31)	0.020 (0.52)	1.47** (2.20)
Civil law dummy			0.037 (0.42)	-0.58 (-0.51)
Year dummies	Yes	Yes	Yes	Yes
Industry dummies	Yes	Yes	Yes	Yes
Country dummies	Yes	Yes	No	No
Observations	338	364	338	364
R-squared	0.52	0.30	0.48	0.27

This table reports OLS with propensity score (PS) matched sample regression results with frequency-weighting and firm random effects. The dependent variables are logarithm of Tobin's q and changes in ROA. Some of the firm-level data are from the RiskMetrics and Thomson Worldscope. The main explanatory variable is the busy CEO indicator. The busy CEO indicator takes a value of one when the CEO sits on the boards of four or more other firms in a given year, and zero otherwise. The independent variables included in the regression models are described in the Appendix. The values in the parentheses are t-statistics, which are based on standard errors that are clustered by firms. *, **, and *** indicate statistical significance at the 10%, 5%, and 1% levels, respectively.

Third, we present instrumental variable analysis. In such analysis, we must first estimate regressions of determinants of external-directorships. In this first stage, we need an instrumental variable that explains busy CEO but not firm value and performance. As discussed, the instrument we use is the number of public companies in a country during a given year. We expect that countries with more publicly traded companies are associated with more busy CEOs. In the first step of the first stage, we estimate a probit model of external-directorships against the number of public firms and all other independent variables and calculate the predicted values of external-directorships. In the second step of the first stage, we run a regression of the number of public firms against external-directorships and all other independent variables and calculate the residuals. Theoretically, for the number of public firms per country and year to be a valid instrument, it should only affect the dependent variable in the second stage (firm value/performance) through its effect on the instrumented external-directorships variable. Thus, the residuals for the number of public firms per country and year should not be statistically significant in the second stage regressions (firm value/performance). By performing this test, we can eliminate the possibility that other factors besides the number of publicly traded firms can impact firm value/performance via CEO busyness.

We present results of the first stage and six second stages in Table 8 below. Consistent with our expectations, we find that countries with more public companies have more busy CEOs. The coefficient on our instrumental variable, the number of public companies in the country, is positive and significant for external-directorships. Then, in the second stages of Models 1 and 2, we find significant and negative coefficients of the predicted external-directorships for both Tobin's q and ROA, our dependent variables in the second stage regressions. After controlling for firm fixed effects, the second stages of Models 3 and 4 show significant and negative coefficients of the predicted external-directorships for both Tobin's q and ROA. The coefficients of the residual variable are insignificant for Tobin's q (Stage two of Model 3) and marginally significant at 10% for ROA (Stage two of Model 4). Since the coefficients on the residuals are not statistically significant in the second stage, the number of publicly traded firms per country and year satisfies the exclusion condition, which means that our instrumental variable affects firm value/performance only through CEO busyness. Further, the second stages of Models 5 and 6 show significant and negative coefficients of the predicted busy CEO indicator for both Tobin's q and ROA. As expected higher CEO turnover is negatively related with firm value and performance. Therefore, our instrumental variable approach confirms the results we obtained in Table 5. In general, our results are robust to different endogeneity tests and econometric models.

TABLE 8
INSTRUMENTAL VARIABLES ANALYSIS OF FIRM PERFORMANCE, CEO BUSYNESS AND CORPORATE GOVERNANCE

	First Stage of Models 1&2	Second Stage of Model 1	Second Stage of Model 2	Second Stage of Model 3	Second Stage of Model 4	Second Stage of Model 5	Second Stage of Model 6
	Busy CEO	Tobin's Q	ROA	Tobin's Q	ROA	Tobin's Q	ROA
Busy CEO predicted		-0.72***	-9.53***	-0.79***	-8.24**	-0.33***	-6.41**
		(-6.44)	(-3.07)	(-6.24)	(-2.48)	(-2.70)	(-2.00)
Number of public firms per country	0.096**						
	(2.17)						
CEO turnover						-0.086**	-3.28***
						(-2.31)	(-2.92)
Director's stock ownership dummy	0.089	0.0062	-0.036	0.038	3.48*	-0.0040	1.02
	(0.87)	(0.52)	(-0.13)	(0.41)	(1.74)	(-0.12)	(1.29)
Board size	0.029	0.0058	-0.033	-0.0021	-0.21	0.041*	0.15
	(0.57)	(0.91)	(-0.22)	(-0.17)	(-0.75)	(1.91)	(0.26)
Committee independence	-0.051	0.0046	0.32	-0.0043	-0.20	-0.010	0.12
	(-1.02)	(0.66)	(1.26)	(-0.29)	(-0.55)	(-0.81)	(0.23)
Board independence	0.19	0.027*	0.48	0.028	2.35**	0.081**	0.80
	(1.46)	(1.70)	(1.18)	(0.63)	(2.41)	(2.27)	(0.71)
CEO power	-0.24***	-0.052***	-0.57***	-0.048***	-0.10	-0.040**	-0.79
	(-3.52)	(-6.02)	(-2.70)	(-3.66)	(-0.35)	(-2.14)	(-1.53)
Firm Size	0.18***	-0.054***	1.96***	-0.12***	2.69***	-0.066***	2.16***
	(5.00)	(-5.97)	(6.19)	(-6.19)	(4.41)	(-4.52)	(4.35)
Asset growth	0.00042**	-0.000056***	0.0010	-0.000043**	0.00031	-0.00054***	-0.0045
	(3.74)	(-3.11)	(0.54)	(-2.21)	(0.22)	(-2.70)	(-0.45)
Cash ratio	0.0020	0.010	0.72**	0.0080	0.80**	-0.033**	0.36
	(0.080)	(0.78)	(2.14)	(0.53)	(2.04)	(-2.52)	(0.74)
Dividend per share	-0.075	-0.0012	0.052*	-6.7e-06	0.11**	0.0037	0.57***
	(-1.63)	(-0.55)	(1.91)	(-0.0025)	(2.43)	(0.38)	(3.44)
Log (GDP constant USD)	-2.54**	0.056	-8.40**	6.18	599*	1.81	228
	(-2.35)	(0.24)	(-2.15)	(0.40)	(1.83)	(0.35)	(1.49)
GDP growth	-0.13***	-0.020***	-0.17	-0.038	-1.87**	0.039	2.26
	(-3.70)	(-3.40)	(-1.20)	(-0.89)	(-2.05)	(0.75)	(1.48)
Log (Stock market cap.)	0.87***	0.14***	-1.86	0.72	55.9*	-0.88	-108
	(2.79)	(2.82)	(-1.47)	(0.50)	(1.82)	(-0.39)	(-1.55)
Rule of law index	-0.42	-0.34***	-1.99	-1.21	-84.3*	-0.063	-18.8**
	(-0.72)	(-4.53)	(-0.94)	(-0.57)	(-1.89)	(-0.23)	(-2.37)
Bureaucracy quality index	0.14	-0.23***	-0.14	0.39	60.4*	-2.25	-147
	(0.27)	(-3.56)	(-0.068)	(0.25)	(1.86)	(-0.70)	(-1.48)
Democratic accountability index	-0.26	-0.11***	-2.10***	0.055	15.9	-0.16	-7.42**
	(-1.41)	(-4.01)	(-2.93)	(0.12)	(1.63)	(-1.59)	(-2.43)
Corruption index	-0.35***	-0.060***	-1.00**	-0.19	-13.9**	0.17	13.1
	(-3.95)	(-3.92)	(-2.47)	(-0.58)	(-2.01)	(0.57)	(1.48)
Number of public firms per country residual				Yes	Yes	Yes	Yes
Firm fixed effects	No	No	No	Yes	Yes	No	No
Country dummies	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	6,941	6,764	6,941	6,764	6,941	1,187	1,206
[Pseudo] R-squared	0.27	0.23	0.09	0.41	0.07	0.27	0.20

This table reports two-stage least squares regression models. The dependent variables are logarithm of Tobin's q and ROA. The main explanatory variables are external-directorships (Stage 2 of Models 1-4) and the busy CEO indicator (Stage 2 of Models 5-6). All models include year and industry fixed effects. The independent variables included in the regression models are described in the Appendix. The instrumental variable in each model is the number of public firms per country. The values in the parentheses are t-statistics, which are based on standard errors that are clustered by firms. *, **, and *** indicate statistical significance at the 10%, 5%, and 1% levels, respectively.

CONCLUSION

We test whether CEO busyness, when top executives take more external-directorships, affect both firm value and performance using a relatively large sample of non-US firms. Consistent with existing literature (Falato, Kadyrzhanova, & Lel, 2014), we find that more external-directorships and higher values of the busy CEO indicator reduce Tobin's q and ROA. As a specific threshold, we determine that CEOs who serve on four or more outside boards can destroy firm value and worsen performance. We argue that the busy CEO specification, sample size and composition can explain the results given that the firms in our sample are smaller and generally reside in nations with different norms and institutions than US firms. We show that more powerful CEOs are linked with busier executives. Our results are robust to changes-in-changes models, propensity score matching models, and instrumental variable tests that reduce the likelihood of endogeneity. Overall, we conclude that shareholders in countries with poor democracy, higher bureaucracy, and higher corruption should find ways to discourage CEOs from taking too many external-directorships.

ENDNOTES

1. Companies Crack Down on Number Of Directorships Members Can Hold, Wall Street Journal, Jan 23, 2001.
2. The Spencer Stuart US Board Index of 2016 indicates that 305 firms in the S&P 500 place a numerical restriction on the outside directorships. Based on the report, 5 percent of firms limit additional directorships at two, 36 percent at three, 40 percent at four, and 19 percent at five or six.
3. In untabulated results, we test for non-linearities of the continuous busy CEO variable. We estimate the multivariate regression with both external-directorships and external-directorships squared, but we don't find significant coefficient for external-directorships squared. This result confirms that there are no non-linearities of external-directorships. Moreover, we test busy CEO 1-2-3 dummy that takes a value that of one when the CEO sits on the boards of only one, two or three external firms in a given year, and zero otherwise. However, we don't find any significant relationship between the busy CEO 1-2-3 dummy and firm value/performance, although the two coefficients are still negative.
4. In untabulated results, we remove Japanese firms from the sample and re-run the tests. We find that the results have the same significance with ROA but are weak with Tobin's q.
5. The number of firm-year observations is reduced in the last two models because we have limited CEO turnover data only for the 16 EU countries in our sample.
6. In untabulated tests, we find that the main results hold after we control for board entrenchment.

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APPENDIX

VARIABLE DEFINITIONS

Variable	Definition
Corporate governance characteristics	
External-directorships	A continuous busy CEO variable takes a value of one for each additional position that the CEO holds on the boards of other firms in a given year. It ranges from zero to 14, depending on the number of outside positions that the CEO holds during the year. Data come from RiskMetrics.
Busy CEO indicator	Busy CEO 4 plus dummy takes a value of one when the CEO sits on the boards of four or more other firms in a given year, and zero otherwise.
Board entrenchment	Board entrenchment takes values ranging from zero to four, where one point is assigned to a firm for each of the following governance practices: 1) no poison pills, 2) an annually-elected board, 3) a majority vote requirement for mergers, and 4) a majority vote requirement for charter/bylaw amendments.
Board independence	Board independence takes a value of one if a majority of independent outsiders controls the board.
Board size	Board size takes values ranging from zero to four. Zero is assigned for less than six members on the board of directors and an additional point is assigned for a higher number of members present on the board: 1 point for 6 to 8 members, 2 points for 9 to 12 members, 3 points for 13 to 15 members, and 4 points for more than 15 members on the board.
CEO power	CEO power takes values ranging from zero to three, where one point is assigned to a firm for each of the following governance practices: 1) the separation of the CEO and the chairman, 2) board independence, and 3) the presence of a former CEO on the current board.
CEO turnover	CEO turnover is a binary dummy variable. It equals one when a new CEO is hired for the period, and zero otherwise. We calculate the hire date of the chief executive using the number of years in this CEO role.
Committee independence	Committee independence takes values ranging from zero to three, where a point is assigned for each of the following committees that is entirely composed of independent members: 1) nomination, 2) compensation, and 3) audit.
Director's stock ownership dummy	Director's stock ownership dummy takes a value of one for all directors with more than one year of service who own stock.

Firm characteristics	
Asset growth	Asset growth is the percentage growth in total assets calculated as the change in the assets in the current period divided by the previous period's total assets.
Cash ratio	Cash / Total current liabilities is the cash used for normal operations of the firm divided by total current liabilities.
Dividend per share	Dividend per share represents the amount of dividend per share.
Number of public firms per country	The variable represents the total number of public firms per year for each country in the dataset.
ROA	ROA is the return on assets calculated as [net income / total assets].
Firm size	Firm size is the logarithm of the total equity of the firm.
Tobin's Q	Tobin's q is calculated as the logarithm of (Tobin's q). Tobin's q is (total asset minus the book value of common stock plus the market value of common stock) / total asset. The market value of common stock is calculated as the number of common shares outstanding times the stock price at the end of the year.
Country characteristics	
Bureaucracy quality index	The bureaucracy quality index by International Country Risk Guide (ICRG) represents institutional strength and bureaucratic quality that is associated with less policy revisions when governments are replaced. Higher values of the index indicate a relatively autonomous bureaucracy from political pressure.
Democratic accountability index	The democratic accountability index by ICRG measures both fairness of elections and the responsiveness of the government to its citizen. Higher values of the index indicate better democratic accountability.
Corruption index	The corruption index by ICRG assesses the degree of corruption within the political system, where higher values indicate less corruption.
Civil law dummy	Civil law dummy takes a value of one if a firm is located in a civil-law country, and zero if a firm is located in a common-law country.
Rule of law index	The rule of law index reflects the quality of contract enforcement, property rights, the police, the courts, and the probability of crime and violence. The index ranges between -2.5 and 2.5, where higher values indicate better country-level governance practices.
Log (GDP constant USD)	Logarithm of GDP constant USD is based on 2000 constant USD and is from the WDI database.
GDP growth	GDP growth is annual percentage growth rate of GDP based on constant 2000 USD and is from the WDI database.
Log (Stock Market Cap.)	Log (Stock market cap.) is the logarithm of the stock market capitalization scaled by GDP.