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AUTHORS	Hyung-Suk Choi

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Hyung-Suk Choi (Korea)

Culture and chief executive officer forced turnover

Abstract

Using a large sample of 809 chief executive officers (CEOs) at *Fortune* Global 500 firms, the author finds that the accounting performance of the firm is the main driver of the CEO forced turnover. By examining 517 CEO turnovers it is shown that the hazard of forced turnover is significantly reduced as the firm's accounting performance improved but the hazard is not significantly affected by the firm's stock performance nor by the CEO overconfidence. Also, by examining the cultural factors measured by the worldwide governance indicators, it is found find that the hazard of the forced turnover is significantly higher in the country with higher control of corruption. Lastly, by examining the interactions between these factors and the national culture, it is found that the board would be affected by the dominant culture of their home country when they interpret the subjective and intangible factors such as CEO overconfidence.

Keywords: overconfidence, CEO turnover, corporate governance, cultural factors.
JEL Classification: G35, C23.

Introduction

Overconfident chief executive officers (CEOs) would have a higher likelihood of forced turnover because they overestimate their own skills and information acquisition abilities, consequently overinvesting in projects that reduce the firm value. This behavior by CEOs will prod boards of directors to remove such individuals and seek a new CEO who will maximize the firm value. Also, considering the significant differences across countries in culture, investor protections, and corporate governance practices reported by researchers such as La Porta, Lopez-de-Silanes, Shleifer, and Vishny (1998, 1999, 2000), Stulz and Williamson (2003), Doidge, Karolyi, and Stulz (2007) and Aggarwal, Erel, Stulz, and Willamson (2010), it is not clear whether the retention of overconfident CEOs is the same in different countries.

CEOs are responsible not only for the accounting performance of the firm but also for the firm's stock performance. One additional factor influencing the disciplining of CEOs through termination is the extent of legal protections provided to minority investors by the mechanisms of corporate governance as reported in Defond and Hung (2004). Another country factor offered by the extensive literature on cross-cultural psychology[1] is the country's culture, which influences how overconfidence is perceived within a society and how individuals select from among choices. Consequently, national culture can affect how boards decide whether to retain or terminate an overconfident CEO.

We show that the accounting performance is the more influential determinant of CEO forced turnover than the stock performance or the overconfidence of CEO itself. More interestingly, we find the hazard of overconfident CEO forced turnover is significantly higher in the country with higher control of corruption, higher government effectiveness, higher regulatory quality, higher rule of law, and higher voice and accountability. This provides evidence that the national culture can affect how boards react to the overconfident CEO. We did not find any evidence that the board would react differently to the accounting performance or stock performance in different culture.

The rest of this paper is organized as follows. In the following section, we describe our data and a description of how we measure overconfidence (Section 1). We present and discuss our sample summary characteristics in Section 2. Section 3 examines the relation between CEO forced turnover and overconfidence with our multivariate analysis. We provide a brief summary and discussion of our results in the final section.

1. Data

Fortune magazine provides an annual ranking of the 500 largest companies of the world based on revenue. We begin our sample construction by compiling these annual lists over the years 2000-2006. From these annual lists, we create a dataset of all non-bank firms that appear at least once in this list and the countries in which these firms are headquartered. Because of the political issues associated with the disciplining of CEOs in state-owned enterprises, we exclude such firms from our sample.

For a firm in our dataset, we include all of the firm's CEOs over our sample period. During the years when a firm is not in the *Fortune* Global 500 list or is on the list during 2000-03 when CEO information was not included, the names of the CEOs are hand collected from a variety of sources. The biographical data of all the CEOs such as their date of birth, nationality, and tenure with a firm are also

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[1] See, for example, Teigen, Brun, and Sloic (1988), Goszczynska, Tyszka, and Slovic (1991), Whitcomb, Onkal, Curley, and Benson (1995), and Weber and Hsee (2000).

hand collected from various sources such as Mergent Online, individual corporate web sites, financial statements, and other online sources.

Country-level characteristics are obtained from several sources. The stock market capitalization in each country is collected from the World Federation of Exchanges[1] and the worldwide governance indicators (WGI) are collected from the World Bank[2]. The WGI consist of six composite indicators of broad dimensions of governance covering 215 countries since 1996: Voice and Accountability, Political Stability and Absence of Violence/ Terrorism, Government Effectiveness, Regulatory Quality, Rule of Law, and Control of Corruption. These indicators are based on several hundred variables obtained from 31 different data sources, capturing governance perceptions as reported by survey respondents, nongovernmental organizations, commercial business information providers, and public sector organizations worldwide.

We obtain firm-level accounting data from the Compustat Global and Compustat North America databases. We measure the size of a firm as the log of assets at the beginning of the year and the accounting rate of return as EBIT divided by the total assets. We convert accounting data other than ratios to US$ using the exchange rates obtained from the Compustat Global database. Items measured at a specific time, such as assets, are also converted from local currency to US$ based on the exchange rate at that time. Items measured over a year, such as sales, are converted from local currency to US$ based on the 12-month average exchange rate over that year. Also, the stock market performance of the firm is market-adjusted. The market returns for each country are benchmarked by the MSCI country index. All stock market data are obtained from Datastream.

We measure the level of overconfidence based on how the market perceives the confidence level of a CEO prior to turnover. Our proxy for the market's perception is based on the *Factiva* database, which contains articles from global news sources. For each CEO of a firm, we record the number of articles related to the firm in Factiva during 1996-2006, but prior to the year of the individual's departure as CEO, that refer to the CEO using the terms (a) "confident" or "confidence," (b) "optimistic" or "optimism," (c) "not confident," (d) "not optimistic," and (e) "reliable," "cautious," "conservative," "practical," "frugal," or "steady." We then compare the number of articles that portray a CEO as confident and optimistic to the number of articles that portray him as not confident, not optimistic, reliable, cautious, conservative, practical, frugal, or steady. That is, we classify a CEO as overconfident if $a + b > c + d + e$[3].

We adopt the following strategy to decide whether the turnover of the CEO is forced or voluntary. We review the news releases surrounding our sample of turnover announcements. We categorize the turnover as voluntary if any one of the following reasons is stated: a) the CEO retired; b) the CEO was an interim CEO and this was known at the start of his/her tenure; c) the company was acquired by another company; d) the CEO continued on as chairman; or e) the CEO resigned to become CEO of another company. We categorize the turnover as "forced" if any of the following is mentioned surrounding the turnover announcement: a) accounting/financial scandal; b) poor performance of the firm; c) management conflicts; or d) rumors that the CEO was removed by the board. In the following section, we present our sample summary characteristics and empirical findings regarding CEO turnover and overconfidence.

Table 1. Sample distributions across countries

Country	Firms	CEOs	Forced turnovers	Voluntary turnovers
Australia	9	16	4	5
Austria	1	1	0	0
Belgium	4	8	3	1
Brazil	3	5	1	1
Canada	14	27	3	9
China	8	10	0	4
Denmark	2	2	0	0
Finland	3	5	0	1
France	35	47	3	11
Germany	31	43	6	7
India	4	9	1	4
Ireland	1	1	0	0
Italy	9	18	5	3
Japan	63	99	3	48
Netherlands	12	22	2	10
Norway	2	4	1	1
Russia	3	3	0	0
Singapore	1	2	0	1
South Korea	7	16	4	2
Spain	5	7	0	1
Sweden	6	9	2	1
Switzerland	11	18	6	2
Taiwan	2	2	0	0
Thailand	1	1	0	0
UK	38	62	13	17
USA	226	372	49	127
Total	501	809	106	256

Source: Datastream, *Fortune* Global 500, and author's estimations.

[1] http://www.world-exchanges.org.

[2] http://data.worldbank.org/data-catalog/worldwide-governance-indicators.

[3] This process to identify overconfident CEO is consistent with the previous literature such as Malmendier and Tate (2008), Ferris et al. (2013), Choi et al. (2013).

Table 1 reports the sample distribution across countries. Not surprisingly, we obtain nearly half of our sample firms (45.1%) from the U.S. as we examine only the CEOs in the largest firms globally. British firms and Japanese firms contribute over 20% of the sample. Clearly, our sample is largely drawn from the developed markets of the U.S., U.K., and the rest of Europe. Similarly, the largest number of forced turnovers occur in the U.S. with 49, representing 46.2% of this type of turnover. U.K., Germany, and Switzerland account for another 25 forced turnovers, representing 23.6% of the total forced turnover sample.

Table 2. The average Worldwide Governance Indicators over the sample period

Country	Control of corruption	Government effectiveness	Political stability	Regulatory quality	Rule of law	Voice and accountability
Australia	1.90	1.74	1.07	1.51	1.74	1.47
Austria	2.02	1.90	1.08	1.52	1.84	1.38
Belgium	1.37	1.85	0.98	1.21	1.27	1.40
Brazil	-0.02	-0.03	-0.10	0.27	-0.35	0.28
Canada	2.10	1.94	1.01	1.53	1.69	1.57
China	-0.40	-0.08	-0.38	-0.28	-0.44	-1.43
Denmark	2.43	2.09	1.28	1.76	1.87	1.61
Finland	2.46	2.11	1.54	1.74	1.94	1.61
France	1.34	1.63	0.62	1.02	1.38	1.23
Germany	1.96	1.74	1.03	1.44	1.62	1.37
India	-0.38	-0.10	-1.12	-0.33	0.18	0.34
Ireland	1.54	1.67	1.35	1.70	1.55	1.40
Italy	0.51	0.74	0.76	0.89	0.70	1.05
Japan	1.10	1.19	1.09	0.84	1.27	0.97
Netherlands	2.17	2.02	1.30	1.85	1.72	1.60
Norway	2.20	1.96	1.34	1.32	1.90	1.57
Russia	-0.88	-0.55	-1.17	-0.34	-0.95	-0.52
Singapore	2.26	2.06	1.04	2.01	1.45	0.05
South Korea	0.36	0.75	0.36	0.62	0.83	0.63
Spain	1.28	1.62	0.16	1.26	1.26	1.26
Sweden	2.27	1.99	1.33	1.44	1.81	1.58
Switzerland	2.14	2.00	1.35	1.67	1.91	1.49
Taiwan	0.69	0.91	0.68	1.06	0.83	0.82
Thailand	-0.16	0.27	0.02	0.29	0.35	0.20
UK	2.09	1.85	0.65	1.84	1.66	1.33
USA	1.66	1.73	0.50	1.63	1.52	1.31

Source: World Bank and author's estimations.

Table 2 reports the average Worldwide Governance Indicators over our sample period. Finland is the country with the highest scores in the dimensions of Control of corruption, Government effectiveness, Political stability, and Rule of Law. On the other hand, Russia and China got the lowest scores in most dimensions. It is noteworthy that Singapore got the highest score in Regulatory quality but the poor score of 0.05 (24^{th}) in Voice and accountability. U.S. did not receive high scores in each dimension either.

Table 3. Descriptive statistics

Variable	Mean	Median	Standard deviation	1st percentile	99th percentile
Market adjusted return (%)	3.44	0.47	39.01	-85.62	137.70
Accounting rate of return (%)	9.52	7.93	7.95	-7.71	35.00
Overconfident CEO	0.71	1.00	0.45	0.00	1.00
Firm size	9.56	9.66	1.44	4.71	12.25
Current ratio	129.36	119.11	60.87	34.03	340.98
Debt ratio	65.45	64.51	18.49	23.62	118.65
Country market capitalization	15.48	15.59	1.20	12.09	16.79
Control of corruption	1.52	1.53	0.52	-0.64	2.35
Government effectiveness	1.55	1.57	0.39	-0.09	2.12
Political stability and absence of violence/terrorism	0.39	0.21	0.54	-0.99	1.55

Table 3 (cont.). Descriptive statistics

Variable	Mean	Median	Standard deviation	1st percentile	99th percentile
Regulatory quality	1.42	1.59	0.39	-0.21	1.80
Rule of law	1.41	1.53	0.39	-0.49	1.93
Voice and accountability	1.23	1.28	0.40	-1.48	1.70

Source: Datastream, *Fortune* Global 500, World Bank, and author's estimations.

2. Sample characteristics and the preliminary results for the CEO forced turnover

Table 3 presents the characteristics of variables examined in this study. The stock performance of our sample firms, which are globally operated, outperformed their stock market performance on average. The average market adjusted return of our sample firm is 3.44%. The average accounting performance of 9.52% is relatively high as well. It is noteworthy that more than 70 percent of CEOs in our sample is considered to be overconfident. This would reveal that the large and globally operated firms prefer the overconfident CEOs to lead their firm.

CEOs are responsible for the firm's accounting performance as well as their stock performance. In addition, overconfidence of CEO would be a critical factor for the likelihood of forced turnover as overconfident CEOs will overinvest in projects that reduce firm value because they tend to overestimate their own skills and information acquisition abilities. In Table 4, we report the relation between the performance of sample firms and the CEO overconfidence with the hazard to be fired.

Table 4. Cox proportional hazards model for forced turnover

	Model 1		Model 2		Model 3		Model 4	
	Coeff. (p-value)	Hazard ratio	Coeff. (p-value)	Hazard ratio	Coeff. (p-value)	Hazard ratio	Coeff. (p-value)	Hazard ratio
Market adjusted return	-0.007	0.993					-0.006	0.994
	(0.134)						(0.229)	
Accounting rate of return			-5.601	0.004			-5.200	0.006
			(0.013)				(0.021)	
Overconfident CEO					0.009	1.009	-0.081	0.922
					(0.979)		(0.808)	
CEO age as of turnover	-0.039	0.962	-0.043	0.958	-0.039	0.962	-0.043	0.957
	(0.041)		(0.029)		(0.044)		(0.028)	
Firm size	0.153	1.165	0.220	1.246	0.144	1.155	0.234	1.263
	(0.215)		(0.086)		(0.248)		(0.080)	
Current ratio	0.0003	1.000	0.001	1.001	-0.001	0.999	0.001	1.001
	(0.943)		(0.816)		(0.816)		(0.749)	
Debt ratio	0.009	1.009	0.003	1.003	0.008	1.008	0.005	1.005
	(0.398)		(0.779)		(0.487)		(0.632)	
Country market capitalization	-0.104	0.901	-0.100	0.905	-0.088	0.916	-0.113	0.893
	(0.492)		(0.515)		(0.562)		(0.461)	
Control of corruption	2.964	19.377	3.089	21.966	2.984	19.759	3.059	21.306
	(0.000)		(0.000)		(0.000)		(0.000)	
Government effectiveness	0.119	1.126	0.207	1.230	0.165	1.180	0.189	1.208
	(0.917)		(0.850)		(0.885)		(0.864)	
Political stability and absence of violence/terrorism	0.438	1.550	0.508	1.661	0.474	1.607	0.477	1.611
	(0.234)		(0.178)		(0.197)		(0.213)	
Regulatory quality	0.078	1.081	0.244	1.277	-0.044	0.957	0.329	1.390
	(0.942)		(0.824)		(0.968)		(0.767)	
Rule of law	-4.087	0.017	-4.853	0.008	-3.964	0.019	-4.887	0.008
	(0.000)		(0.000)		(0.000)		(0.000)	
Voice and accountability	0.152	1.164	0.451	1.570	0.068	1.071	0.479	1.615
	(0.758)		(0.390)		(0.893)		(0.350)	
Number of forced turnovers	62		62		62		62	
Number of censored observations	455		455		455		455	

Source: Datastream, *Fortune* Global 500, World Bank, and author's estimations.

Table 4 presents that both stock performance and accounting performance is negatively related with the hazard of CEO forced turnover. That is, as the likelihood of getting fired would be reduced as the firm performs better. In terms of the statistical significance, however, we would conclude that the accounting performance rather than the stock performance is more critical to get the CEO fired. Overconfidence of CEO itself does not seem to be a significant factor for the hazard of forced turnover according to Table 4. However, since this result shows the general relation between the overconfidence of CEO and the likelihood of getting fired after controlling the related variables, we need more sophisticated analysis to examine whether different culture would respond differently to the crucial factors for CEO forced turnover.

3. Culture and CEO forced turnover

In this section, we report how the hazard of CEO forced turnover would be affected by the national culture. Market performance, accounting performance, and the CEO personality such as overconfidence would be main factors to determine the hazard of forced turnover. However, the board of directors in countries with different culture would react differently to these main factors as the stock performance and the accounting performance would be considered objective and tangible factors but the overconfidence of CEO would be considered subjective and intangible factors. We examine the relative effect of various cultural measures on the hazard of CEO forced turnover by adding the interaction terms to the basic model described in the previous section.

First, we report the effect of the lagged market performance on the CEO forced turnover depending on the national culture in Table 5. The lagged market performance is measured as the market adjusted return of the firm's stock in the previous year of CEO turnover[1]. We discussed that the stock performance of the firm would be negatively related with the hazard of CEO forced turnover but we failed to find the statistical significance as reported in Table 4. When we added the interaction term with this lagged stock returns with each of cultural measures in Table 5, we failed to find any statistically significant relation. We interpret this result as evidence that there is no distinguishable cultural effect regarding how the board would react to the solid and objective measures like the firm's stock performance when they decide to fire the CEO. Especially, the board in a country with the higher measure of "Rule of law" would be very strict against the poor performance of the firm but there is no statistical significance for the interaction term.

Table 5. The effect of the lagged market performance on the CEO forced turnover depending upon the national culture

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
Market adjusted return (MAR)	-0.025	-0.030	-0.016	-0.030	-0.019	-0.002
	(0.134)	(0.186)	(0.035)	(0.167)	(0.302)	(0.900)
Accounting rate of return (ARR)	-5.132	-4.973	-4.689	-4.976	-5.015	-5.246
	(0.022)	(0.026)	(0.033)	(0.026)	(0.025)	(0.021)
Overconfident CEO (OC)	-0.115	-0.098	-0.092	-0.097	-0.098	-0.070
	(0.729)	(0.769)	(0.784)	(0.772)	(0.768)	(0.835)
CEO age as of turnover	-0.044	-0.044	-0.044	-0.044	-0.044	-0.043
	(0.025)	(0.025)	(0.028)	(0.025)	(0.027)	(0.030)
Firm size	0.232	0.228	0.227	0.230	0.229	0.238
	(0.076)	(0.081)	(0.078)	(0.080)	(0.082)	(0.078)
Current ratio	0.001	0.001	0.001	0.001	0.001	0.001
	(0.718)	(0.719)	(0.866)	(0.719)	(0.738)	(0.754)
Debt ratio	0.005	0.005	0.005	0.005	0.005	0.006
	(0.645)	(0.658)	(0.641)	(0.639)	(0.663)	(0.606)
Country market capitalization	-0.145	-0.149	-0.149	-0.150	-0.137	-0.108
	(0.358)	(0.344)	(0.333)	(0.341)	(0.382)	(0.487)
Control of corruption (WGI 1)	3.205	3.162	3.101	3.179	3.141	3.033
	(0.0001)	(0.0001)	(0.0001)	(0.0001)	(0.0001)	(0.0002)
MAR * WGI 1	0.012					
	(0.217)					
Government effectiveness (WGI 2)	0.104	0.123	0.178	0.100	0.129	0.227
	(0.925)	(0.911)	(0.872)	(0.928)	(0.907)	(0.838)

[1] We measured the lagged market performance with various measurement periods from one year to five years but the results remain qualitatively the same.

Table 5 (cont.). The effect of the lagged market performance on the CEO forced turnover depending upon the national culture

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
MAR * WGI 2		0.015				
		(0.269)				
Political stability and absence of violence/terrorism (WGI 3)	0.422	0.422	0.414	0.416	0.440	0.493
	(0.278)	(0.277)	(0.287)	(0.285)	(0.256)	(0.200)
MAR * WGI 3			0.019			
			(0.147)			
Regulatory quality (WGI 4)	0.431	0.417	0.319	0.453	0.378	0.326
	(0.696)	(0.704)	(0.772)	(0.681)	(0.732)	(0.770)
MAR * WGI 4				0.016		
				(0.245)		
Rule of law (WGI 5)	-5.140	-5.113	-4.938	-5.132	-5.060	-4.814
	(1.8E-5)	(1.8E-5)	(2.8E-5)	(1.7E-5)	(2.3E-5)	(7.0E-5)
MAR * WGI 5					0.009	
					(0.451)	
Voice and accountability (WGI 6)	0.631	0.634	0.512	0.638	0.590	0.397
	(0.254)	(0.251)	(0.329)	(0.245)	(0.278)	(0.490)
MAR * WGI 6						-0.003
						(0.742)
Number of forced turnovers	62	62	62	62	62	62
Number of censored observations	455	455	455	455	455	455

Source: Datastream, *Fortune* Global 500, World Bank, and author's estimations.

Table 6. The effect of the lagged accounting performance on the CEO forced turnover depending upon the national culture

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
Market adjusted return (MAR)	-0.006	-0.006	-0.006	-0.006	-0.006	-0.006
	(0.225)	(0.219)	(0.209)	(0.221)	(0.222)	(0.193)
Accounting rate of return (ARR)	-0.868	-1.442	-4.499	-1.281	-3.215	0.190
	(0.857)	(0.785)	(0.082)	(0.822)	(0.454)	(0.972)
Overconfident CEO (OC)	-0.063	-0.073	-0.080	-0.075	-0.077	-0.038
	(0.851)	(0.827)	(0.810)	(0.823)	(0.817)	(0.910)
CEO age as of turnover	-0.041	-0.042	-0.043	-0.042	-0.042	-0.041
	(0.040)	(0.037)	(0.030)	(0.037)	(0.034)	(0.041)
Firm size	0.258	0.253	0.241	0.255	0.248	0.269
	(0.062)	(0.066)	(0.075)	(0.066)	(0.071)	(0.054)
Current ratio	0.001	0.001	0.001	0.001	0.001	0.001
	(0.764)	(0.752)	(0.722)	(0.762)	(0.747)	(0.744)
Debt ratio	0.006	0.006	0.005	0.006	0.006	0.007
	(0.548)	(0.570)	(0.612)	(0.572)	(0.596)	(0.513)
Country market capitalization	-0.074	-0.083	-0.100	-0.082	-0.093	-0.072
	(0.645)	(0.605)	(0.521)	(0.609)	(0.558)	(0.649)
Control of corruption (WGI 1)	3.038	2.861	3.004	2.844	2.914	2.861
	(0.0001)	(0.0007)	(0.0002)	(0.0008)	(0.0006)	(0.0005)
ARR * WGI 1	-2.975					
	(0.303)					
Government effectiveness (WGI 2)	0.445	0.572	0.294	0.368	0.325	0.479
	(0.692)	(0.634)	(0.792)	(0.744)	(0.773)	(0.671)
ARR * WGI 2		-2.651				
		(0.430)				
Political stability and absence of violence/terrorism (WGI 3)	0.511	0.504	0.672	0.509	0.489	0.539
	(0.184)	(0.190)	(0.192)	(0.185)	(0.203)	(0.161)

Table 6 (cont.). The effect of the lagged accounting performance on the CEO forced turnover depending upon the national culture

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
ARR * WGI 3			-1.927			
			(0.573)			
Regulatory quality (WGI 4)	0.197	0.263	0.339	0.549	0.275	0.228
	(0.866)	(0.819)	(0.765)	(0.640)	(0.809)	(0.844)
ARR * WGI 4				-3.014		
				(0.452)		
Rule of law (WGI 5)	-4.362	-4.468	-4.865	-4.523	-4.454	-4.419
	(7.5E-4)	(6.0E-4)	(4.1E-5)	(4.1E-4)	(1.9E-3)	(5.0E-4)
ARR * WGI 5					-1.642	
					(0.585)	
Voice and accountability (WGI 6)	0.273	0.307	0.453	0.309	0.348	0.496
	(0.609)	(0.573)	(0.377)	(0.573)	(0.531)	(0.355)
ARR * WGI 6						-4.667
						(0.260)
Number of forced turnovers	62	62	62	62	62	62
Number of censored observations	455	455	455	455	455	455

Source: Datastream, *Fortune* Global 500, World Bank, and author's estimations.

In addition, we report the effect of the lagged accounting performance on the CEO forced turnover depending on the national culture in Table 6. The lagged accounting performance is measured as the firm's EBIT divided by the total asset in the previous year of CEO turnover[1]. In Table 4, we discussed that it would not be likely for the CEO would be fired when the firm is performing well in terms of accounting performance. Although the statistical significance is not observed, all the coefficients of the interaction terms reveals the negative relation between the accounting performance and the hazard of CEO forced turnover when we added the interaction term with this lagged accounting rate of returns with each of cultural measures in Table 6. We interpret this result as evidence that the stronger the level of governance the less patient the board regarding the firm's accounting performance.

Lastly, we examined the effect of the CEO overconfidence and the hazard of forced turnover depending on the national culture. Relative to the stock performance and the accounting performance, the CEO overconfidence would be considered to be a subjective measure. Therefore, this factor would be highly affected by the national culture. Except "Political stability and absence of violence/ terrorism" the coefficient of the interaction terms between the CEO overconfidence and the cultural measure is statistically significantly positive at least five percent level. For example, in a country with higher control of corruption, the hazard of overconfident CEO to be fired is more than 38 times[2]. Also, in a country with higher government effectiveness and with higher regulatory quality, the hazard of overconfident CEO to be fired is more than 158 times and 116 times, respectively. It is noteworthy that the coefficient of CEO overconfidence is not statistically significant in Table 4 but the most interaction terms are significant in Table 7. From this we suggest that the board would not be sensitive to such an intangible factor as overconfidence when they fire the CEO but this sensitivity would vary depending upon the natural culture.

Table 7. The effect of the overconfidence of CEO on the CEO forced turnover depending upon the national culture

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
Market adjusted return (MAR)	-0.008	-0.008	-0.006	-0.008	-0.007	-0.006
	(0.103)	(0.100)	(0.216)	(0.106)	(0.132)	(0.196)
Accounting rate of return (ARR)	-6.813	-7.281	-5.226	-6.804	-6.496	-5.948
	(0.006)	(0.003)	(0.021)	(0.007)	(0.008)	(0.012)
Overconfident CEO (OC)	-5.784	-8.223	-0.263	-6.965	-3.354	-1.848
	(0.000)	(0.000)	(0.529)	(0.000)	(0.025)	(0.052)

[1] We measured the lagged accounting performance as the average ratio between the firm's EBIT and total asset with various measurement periods from one year to five years but the results remain qualitatively the same.
[2] The hazard ratio is 38.43 which is calculated by $e^{3.679}$.

Table 7 (cont.). The effect of the overconfidence of CEO on the CEO forced turnover depending upon the national culture

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
CEO age as of turnover	-0.036	-0.037	-0.041	-0.039	-0.037	-0.041
	(0.082)	(0.077)	(0.041)	(0.054)	(0.070)	(0.042)
Firm size	0.304	0.331	0.236	0.317	0.294	0.289
	(0.036)	(0.025)	(0.079)	(0.032)	(0.039)	(0.039)
Current ratio	0.002	0.001	0.001	0.002	0.001	0.002
	(0.583)	(0.770)	(0.768)	(0.634)	(0.764)	(0.669)
Debt ratio	0.016	0.018	0.005	0.017	0.010	0.009
	(0.151)	(0.107)	(0.617)	(0.127)	(0.347)	(0.390)
Country market capitalization	0.012	0.025	-0.098	-0.075	-0.017	-0.090
	(0.943)	(0.880)	(0.528)	(0.634)	(0.917)	(0.570)
Control of corruption (WGI 1)	-0.284	2.528	3.012	2.541	2.729	2.999
	(0.8189)	(0.0028)	(0.0002)	(0.0031)	(0.0014)	(0.0003)
OC * WGI 1	3.649					
	(0.0002)					
Government effectiveness (WGI 2)	0.856	-3.325	0.228	0.738	0.603	0.317
	(0.467)	(0.030)	(0.836)	(0.531)	(0.595)	(0.775)
OC * WGI 2		5.066				
		(0.0002)				
Political stability and absence of violence/terrorism (WGI 3)	0.427	0.395	0.199	0.479	0.554	0.528
	(0.286)	(0.338)	(0.721)	(0.225)	(0.154)	(0.169)
OC * WGI 3			0.399			
			(0.494)			
Regulatory quality (WGI 4)	0.728	0.752	0.379	-2.133	0.435	0.596
	(0.520)	(0.515)	(0.735)	(0.080)	(0.711)	(0.610)
OC * WGI 4				4.760		
				(0.0003)		
Rule of law (WGI 5)	-3.893	-3.004	-4.906	-4.597	-6.096	-4.976
	(3.7E-3)	(3.7E-2)	(3.7E-5)	(1.6E-4)	(2.0E-6)	(4.4E-5)
OC * WGI 5					2.332	
					(0.019)	
Voice and accountability (WGI 6)	0.838	0.594	0.475	0.872	0.516	-0.486
	(0.176)	(0.318)	(0.357)	(0.172)	(0.382)	(0.452)
OC * WGI 6						1.449
						(0.041)
Number of forced turnovers	62	62	62	62	62	62
Number of censored observations	455	455	455	455	455	455

Source: Datastream, *Fortune* Global 500, World Bank, and author's estimations.

Conclusion

In this paper, we examined the relation between the hazard of CEO forced turnover and a number of factors such as the firm's stock performance, the accounting performance, and the overconfidence of CEO. We find that hazard of forced turnover would be increased as the firm performs poor and as the CEO is more overconfident. However, the statistical significant is observe only for the accounting performance, which suggests that the board would make a decision to fire the CEO in general based on the objective and tangible factors, not on the subjective and intangible factors such as the overconfidence. Interestingly, the sensitivity of the CEO overconfidence to the hazard of forced turnover varies depending upon the national culture, which suggests that the board would be affected by the dominant culture of their home country when they interpret the subjective and intangible factors.

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