

The Differential Benefits of Reputed Generalists CEOs over Tenure

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Abstract

Purpose - The purpose of this study was to explore how CEO general human capital, one of the most critical issues in recent research, affects compensation schemes.

Design/methodology/approach - This study collected the CEOs of S&P500 companies from 2001 to 2009 and contains 4,155 CEO-firm-year observations and 704 different CEOs.

Findings - First, only contingent bonus is affected by general human capital and reputation. Second, the career concerns of CEOs are relevant, especially when explaining CEO tenure. Third, we offer an alternative view of what determines the level of cash compensation schemes and the factors that affect the running of a firm. Fourth, we also suggest that the increase in general human capital can be explained by the increase in its relative importance in managing a modern firm. Overall, the results of this study do not only contribute to academics but also important to boards and shareholders.

Research implications or Originality - This study intends to fill the gap in the extant literature by examining the relationship between general human capital and compensation schemes. First, we add to the compensation literature by arguing that a cash compensation scheme is efficient for generalist CEOs. We break down CEO cash compensation schemes into fixed and contingent bonus compensation and investigate whether general human capital differentially affects CEO cash compensation schemes, and thus, the sensitivity to unequal pay for human capital. Second, we contribute to the reputation literature by arguing that CEO perceived reputation also affects CEO compensation schemes.

Keywords: Cash Compensation, CEOs, General Human Capital, Reputation

JEL Classifications: G21, G32, J24

I. Introduction

Compensation schemes have been the subject of a long debate in the academic literature. Previous literature on accounting, management, and finance focused on compensation contracts in the moral hazard context to explain the determination of chief executive officers' (CEOs) compensation schemes that are contingent on firm performance. In a recent theoretical study, Baker and Hall (2004) showed that the best measure of incentives depends on how CEO actions and paradigms influence firm performance. A modified agency model allows CEO incentives to vary with the type of CEO decisions and CEO human capital¹⁾(Holmstrom,1979). These considerations make it easy to develop modified versions of the determinants of compensation

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schemes that are consistent with various empirical studies. Due to the importance of CEO human capital, it is surprising that little research has been conducted about the effect of the specificity of human capital on compensation schemes during CEO tenure. Our study investigates whether general managerial human capital affects compensation schemes and whether reputed CEOs with general human capital earn more bonus compensation.

As little empirical evidence exists on the effect of reputed CEO human capital on CEO compensation and firm performance (Graham et al. 2012; Custodio et al. 2013), the model in the current study provides insights into compensation schemes by including CEO general human capital and reputation as exogenous factors separately. The study aims to determine whether CEO general human capital with outside opportunities and reputation is associated with contingent compensation. Recent literature shows that the demand for CEO abilities in the executive job market has been moving from specialists, with high specific human capital, to generalists, with higher general human capital (Custodio et al. 2013; Murphy and Zabochnik, 2007; Frydman and Saks, 2010). As a business becomes more complex, volatile, and global, general human capital becomes more valuable than specific human capital. CEO general human capital—the accumulated education and experiences of people (Becker, 1993)—is an important signal for shareholders. The education and experiences gained, which are proxies for general human capital, allow individuals to accumulate a stock of skills and knowledge that constitute a valuable competitive advantage for their organization due to the transferability of these skills and knowledge (Barney, 1991). Thus, this study examines how CEO general human capital and another perceived general ability, CEO reputation, influence a CEO's compensation during his or her time in office by using education and experience as proxies for CEO general human capital. Unlike previous research, the present study comprehensively explains the overall aspects of CEO general human capital and reputation using manually collected data of CEOs who worked in S&P 500 firms from 2001 to 2009.

The human capital theory indicates that human capital is a critical factor in explaining how people develop their abilities and accumulate their experiences for professional growth and the development of an entity (Schultz 1961; Becker 1962). Murphy and Zabochnik (2007) and Frydman (2010) proved that CEO human capital is tenure invariant for firms and suggested that firms pay premiums on managerial human capital depending on the firm outcomes. This theory implies that generalist CEOs with higher general human capital have professional knowledge, experience, and expertise that contribute to firm performance. It suggests that CEOs with superior general human capital earn more total compensation (Custodio et al., 2013).

A CEO can possess two specificities of human capital, either general or firm-specific human capital (Becker, 1962). The general human capital comprises the characteristics of CEOs' overall managerial positions and professional profiles in the firms that they previously worked for. These characteristics include the CEO's education, experience in various positions, and reputation in previous employment (Becker 1962; Harris and Helfat 1997; Custodio et al., 2013). Recent studies have shown that, since the 1990s, the demand for CEO human capital has been shifting towards general human capital (Murphy and Zabochnik, 2007; Frydman and Saks, 2010; Koo, 2019). Therefore, to attract generalist CEOs, some firms offer a higher total compensation package to potential CEOs in the executive market (Custodio et al., 2013).

In addition, CEO reputation, which is the market's perceived intangible general ability of a CEO, is another general human capital factor that affects CEO compensation (Rosen, 1982; Dewatripont et al. 1999). In economics, it is widely believed that employees' reputation impacts compensation contracting decisions between firms and their stakeholders (Fama, 1980;

Banerjee and Duflo, 2000) and contributes to firm value as well as its success and survival (Fuller and Jensen, 2002). Thus, reputed CEOs are likely to maintain their reputations in the executive market (Graham et al. 2006; Malmendier and Tate, 2009). This suggests that firms are likely to refer to CEO reputation when offering employment and compensation contract or when monitoring potential CEOs (and other managers/officers) in the market. However, only a few studies have empirically examined whether CEO reputation provides the sought-after benefits (Malmendier and Tate, 2005). One of the reasons for the small number of empirical studies about CEO reputation is the difficulty of measuring the reputations of CEOs. To overcome this challenge, we measure CEO reputation using proxies that are most often employed in previous studies, including the names of CEOs in prestigious business journals and media exposure (Milbourn, 2003; Francis et al. 2008; Malmendier and Tate, 2005). To test our hypotheses, we use lagged CEO press coverage as the main proxy for CEO reputation and measure it by the number and the tone of business-related articles that contain the CEO's name in three years before the year of focus.

The results are consistent with our prediction that CEO general human capital has a statistically significant effect on CEO contingent compensation after controlling firm-level characteristics. The results are also consistent with the human capital theory, suggesting that CEO general human capital explains increments in performance-based compensation schemes. The changes in return on assets (ROA) or changes in stock returns on current and previous periods' total assets are included as exogenous variables in the traditional pay-for-performance relationship. In almost all instances, the estimated coefficients reflect the predicted values, and, generally, the results are both statistically and economically significant. In summary, our tests support the hypothesis that CEOs respond to bonus compensation by utilizing their reputation and general human capital. We control for firm characteristics that may be systematically related to compensation, such as firm age, leverage, capital expenditures, R&D, growth, and size. To control for CEOs' other firm-specific incentives, we include CEO stock holdings in the cash compensation regression, and, again, the results are unaffected. All the results are robust after controlling for various proxies of CEO general human capital, including succession origin.

This study intends to fill the gap in the extant literature by examining the relationship between general human capital and compensation schemes. It makes two major contributions to the literature. First, we add to the compensation literature by arguing that a cash compensation scheme is efficient for generalist CEOs. We break down CEO cash compensation schemes into fixed and contingent bonus compensation and investigate whether general human capital differentially affects CEO cash compensation schemes, and thus, the sensitivity to unequal pay for human capital. The results show that the specificity of CEO human capital is associated with compensation schemes (fixed vs. contingent pay). Thus, this study complements those of Milbourn (2003), Rajgopal et al. (2006), Francis et al. (2008), and Custidio et al. (2013)²,

2) In a contemporaneous study, Custidio et al. (2013) also examined the role of general managerial skills in compensation. Our study differs from theirs in several ways. First, while Custidio et al. (2013) focus on CEOs' general managerial skills which is likely to total compensation, our study focuses on the compensation schemes of high general managerial human capital CEOs by assessing whether general human capital and reputation helps CEOs to get more bonus compensation related to future earnings. Although Custidio et al. (2013) also examined the compensation structure for high general managerial skills CEOs by proving that total compensation is higher for high general managerial skills CEOs during CEO tenure, they did not examine whether compensation schemes are different for general managerial human capital during CEO tenure, which is the key issue that our study addresses. Our study also significantly differs in terms of sample size, main independent variables, and general human capital measures, which may lead to different inferences. Therefore, our results complement those of Custidio et al. (2013).

who examined the relationship between a few proxies for managerially perceived CEO human capital and total compensation.

Second, we contribute to the reputation literature by arguing that CEO perceived reputation also affects CEO compensation schemes. The current study shows that CEO reputation increases pay-for-performance sensitivity by focusing on cash compensation. The results prove that CEO reputation is positively associated with contingent compensation (Milbourn, 2003). This suggests that, after they get job securities, because reputed generalist CEOs have marketability in the executive job market, they are likely to take risks and pursue contingent pay than non-reputed generalist CEOs. We also extend the study of Francis et al. (2008) by showing that reputation is another factor for compensation schemes.

The rest of the paper is organized as follows. In the next section, we review the related literature and develop hypotheses. Section 3 describes the data and introduces the measure of CEO general human capital. Section 4 presents the empirical results. Finally, Section 5 summarizes and provides concluding remarks.

II. Hypotheses and Literature Review

In The human capital related factors in the human capital theory refer to how human capital affects pay. The specificity of CEO human capital influences firm outcomes and compensation, at least to some extent (Hambrick and Mason, 1984; Hambrick, 2007; Murphy and Zabojnik, 2007; Custidio et al. 2013; Koo, 2019). However, less is known about the type of CEO human capital that carries an incentive premium in compensation schemes. Harris and Helfat (1997) proved that firms have to pay a premium to outsiders with high general skills or low firm-specific skills and bear the risk that their skills are not transferable to the new firm. They also proved that outside CEOs earn approximately 30% more cash compensation than internally promoted CEOs. Custodio et al. (2013) suggested that generalist CEOs with higher general human capital earn more total compensation over their tenure. One area that is less understood is the incentive characteristics of reputed CEOs with distinct general human capital. To fill this gap in the literature, the current study examines whether generalist CEOs with different reputations receive bonus incentive premiums for their opportunities in the executive labor market.

Generally, for shareholders' best interests, efficient compensation contracts should be tied to executive pay with firm performance. Equity compensation is an incentive to encourage risk-taking (Jensen and Meckling, 1976; Murphy, 1999; Hanlon et al., 2003; Wu and Tu, 2007). However, changes in CEO cash compensation are more sensitive to poor firm performance than good firm performance, proving that cash pay is the tool to reduce the costs of ex post settling up of CEO total pay (Leone et al. 2006). Moreover, most compensation studies about performance measurement (Balsam, 1998; Adut et al., 2003) considered only cash compensation. This may be because cash compensation is considered to be an ex post reward; thus, it is impacted by abilities or skills. Cash compensation also comprises performance contingent compensation (bonus pay) and secured, riskless fixed compensation (salary pay) (Core et al., 2003). However, the existing paradigm in considering the compensation implications of CEO general human capital and reputation has been to determine whether CEOs' innate general human capital and perceive reputation influence such compensation schemes. Thus, our study goes beyond this paradigm and examines whether a CEO is rewarded cash compensation for general human capital and reputation.

The human capital theory argues that firms should be willing to pay higher compensation schemes to attract strong human capital CEOs, who are likely to increase firm performance and value. For example, Murphy and Zabochnik (2007) found that a CEO perceived as having a higher human capital receives a higher total compensation. Spence (1973) also proved that compensation schemes are associated with human capital signals, such as professional background or education, which reflect their ability to manage an organization. As a result, the human capital theory predicts that executives are rewarded pay premiums for their superior human capital that are incremental to accumulated experience and education. Recent studies have also proposed that, over the past several decades, the demand for CEO abilities has been shifting from specialists to generalists (Murphy and Zabochnik, 2007; Frydman and Saks, 2010; Custodio et al., 2013). According to the upper echelon theory, as the business environment and firms' structure become more global and complex, general human capital becomes more valuable at the top echelons of decision making than specific human capital (Hambrick and Finkelstein, 1995). Custodio et al. (2013) tested the hypothesis that general human capital influences total compensation during a CEO's tenure. Although some studies have established that CEOs have different human capital, which affect firm differential performance and compensation schemes (e.g., Milbourn, 2003; Murphy and Zabochnik, 2006; Rajgopal et al., 2006; Francis et al., 2008; Custodio et al., 2013), surprisingly little is known about whether the differential relationship between CEO reputation and their general human capital affects CEOs' compensation schemes.

Smith and Watts (1992) argued that bonus plans can be affected by CEO decisions because bonuses are tied primarily to current firm profits because they give bonuses to CEOs to motivate them to make effective decisions that boost current accounting earnings. Dechow and Sloan (1991) argued that compensation plans can alleviate managerial inabilities by aligning CEO ability with bonus plans. Thus, generalist CEOs are likely to select high-value projects that are tied to bonus compensation. In other words, the general human capital accumulated through education and experience enables CEOs to identify valuable projects. These considerations indicate that generalist CEOs should be paid more performance contingent compensation as they bring transferable value and paradigms of general human capital to a firm's activities and decision-making. In addition, executive labor market dynamics and an increase in the demand for generalist CEOs make it easy for CEOs with various job experience and education to get a new job and move to another position. These have led to an increase in CEO bonus compensation for general human capital. Thus, we propose the following hypotheses:

- H1a:** CEO general human capital is positively related to higher bonus compensation (contingent compensation).
- H1b:** CEO general human capital positively influences higher bonus compensation (contingent compensation) than salary compensation (fixed compensation).

We now develop hypotheses related to bonus-based compensation over CEO tenure. Firms need to compensate generalist CEOs with bonus compensation than non-generalist CEOs after the CEO has influenced and used their human capital to develop the firm. Generalist CEOs also are likely to execute new strategies and take risky projects as their tenure increases. Based on a tenure horizon, we predict that the relationship between bonus compensation and CEO general human capital increases as CEO tenure increases. Thus, we propose the following hypothesis:

H1c: As CEO tenure increases, the effect of CEO general human capital on bonus compensation increases.

It has also been argued that CEO reputation is another facet of accumulated human capital that affects firm value (Gaines-Ross 2002). Another goal of this study is to use CEO reputation to distinguish the two specificities that explain the compensation schemes of generalist and non-generalist CEOs, CEOs build their reputations for financial incentives (Dewatripont et al., 1999). The symbolic image perspective from recent CEO reputation studies argues that CEO reputation does not improve firm performance but is a factor of CEO general human capital (Francis et al., 2008; Malmendier and Tate, 2005). However, this perspective argues that a reputed CEO is not only motivated by significant financial incentives for good performance but also significant financial penalties for poor performance in the long run. In addition, the literature that supports the ability perspective shows the long-run benefits of CEO reputation in the executive market (Milbourn et al., 2014). The ability perspective argues that reputed CEOs pressure firms to adopt performance-based bonus compensation, which increases pay-for-performance sensitivity. CEO reputation is positively associated with performance-based compensation (Milbourn 2003). Thus, the reputation perspective proves that the reputation of a CEO, which is a perceived factor of general human capital, affects cash compensation schemes.

Analysts recommend a company's stock based on the level of CEO reputation because a reputed CEO, that is, someone who is believed to have a high general human capital, will maintain good performance or turn around poor performance (Gaines-Ross 2002). A CEO with a low reputation will negatively influence good performance. The symbolic image perspective suggests that the reputation of a CEO will positively influence his or her bonus compensation because the reputation of a CEO is mainly the perceived image of the CEO by the business community (Malmendier and Tate 2005). The ability perspective argues that high CEO reputation has strong power and influences firms to adopt a performance-based compensation scheme. Both perspectives suggest that a CEO's reputation will increase his or her bonus compensation based on the confidence in the market because reputation is an intangible perceived general human capital. Thus, given the importance of CEO reputation as an intangible perceived general human capital, our next hypotheses are about the bonus benefits of reputation. Thus, we propose the following hypotheses:

H2a : CEO reputation is positively related to bonus compensation.

H2b : CEO reputation has a higher positive influence on bonus compensation than fixed compensation.

III. Research Design

1. Sample

The sample consists of the CEOs of S&P 500 companies from 2001 to 2009 and contains 4,155 CEO-firm-year observations and 704 different CEOs. The sample of this study is from multiple sources. The CEO compensation data are from the ExecuComp database. Annual total compensation is defined as the value of compensation package in a given year and is the

sum of the executive's salary, bonuses, long-term incentive plans, the grant-value of restricted stock awards, and the Black-Scholes value of granted options. Fixed compensation is defined as the CEO's salary, and contingent incentive is defined as the CEO's bonuses. To adjust for inflation, all monetary figures are converted to dollars, using the exchange rate of 2009. Regarding CEOs' total compensation, 48% is in cash and 43% is equity based. To construct the CEOs' general human capital, we manually collected data about CEO lifetime employment histories and educational backgrounds by searching through Google, Mergent-online, Hoover's, the Edgar system, NNDB databases, Business Week, and Bloomberg. Table 1 presents the distribution of the human capital measures and compensation.

Table 1. Sample and Descriptive Statistics

Sample selection criteria	Total				
Initial firm-year observations for years 2001-2009	4,500				
1. Less missing CEOs' biographical data	88				
2. Less data for firms with CEO change	206				
3. Less data form COMPUSTAT	51				
Final sample	4,155				
The sample consists of 4,155 CEOs in S&P 500 firms (2001- 2009 data). The compensation data were obtained from the Compustat and proxy statements. All variables are as defined in the Appendix. This table reports descriptive Statistics. Compensation amounts and sales are expressed in 2001 dollars. All other variables are defined as in appendix.					
<i>Panel A: General Human Capital</i>					
Variables	Mean	Std Dev.	25 th Pctl	Median	75 th Pctl
<i>GHCFactor</i>	0.000	1	-0.554	0.085	2.084
<i>FastTrackCEO</i>	46.752	5.546	41	46	54
<i>Reputation</i>	15.112	8.315	11	16	19
<i>Panel B: Compensation</i>					
Total compensation is the sum of salary, annual bonus, and our valuations for stock options, performance plans, phantom stock, and restricted stock. (\$ 1,000)					
Variable	Mean	Std Dev.	25 th Pctl	Median	75 th Pctl
<i>TotalComp</i>	10,000.266	16,679.663	2432.934	5321.074	11115.057
<i>SalaryComp</i>	871.061	396.849	620.000	875.290	1069.305
<i>BonusComp</i>	939.685	2752.879	0.000	262.38	1148.29
<i>In(TotalComp)</i>	8.516	1.442	7.80	8.58	9.32
<i>In(BonusComp)</i>	6.799	1.166	6.215	6.908	7.539
<i>In(SalaryComp)</i>	6.586	1.201	6.400	6.778	7.000
<i>SalaryRatio</i>	0.203	0.143	0.125	0.215	0.318
<i>BonusRatio</i>	0.277	0.219	0.173	0.284	0.406
<i>Panel C: Control Variable</i>					
	Mean	Std Dev.	25 th Pctl	Median	75 th Pctl
<i>CEOOwnership(%)</i>	0.076	0.089	0.007	0.035	0.0094
<i>Duality(%)</i>	61.5	14.6	45.5	60	72.7
<i>Tenure</i>	6.559	7.002	2	5	9
<i>G-index</i>	10.16	6.84	2	10	22
<i>OutsiderDirector(%)</i>	0.593	0.193	0.450	0.600	0.725
<i>Panel D: Firm Characteristics</i>					
	Mean	Std Dev.	25 th Pctl	Median	75 th Pctl
<i>ROA</i>	0.100	0.083	0.052	0.092	0.144
<i>Stock Return</i>	0.019	0.436	-0.231	0.015	0.220
<i>Tobin's Q</i>	2.055	1.277	1.226	1.646	2.417
<i>Size (\$ mil)</i>	22,046	41,584	4,846	9,323	19,092
<i>Leverage</i>	0.0593	0.217	-0.071	2.406	1.637
<i>R&D</i>	0.105	2.156	0.041	0.099	0.147
<i>Capex</i>	0.0476	0.050	0.017	0.0353	0.061
<i>Growth</i>	0.121	0.213	0.035	0.096	0.175
<i>FirmAge</i>	35.654	19.365	26	38	55

Table 2 presents CEO characteristics and compensation schemes by industry. We find significant variation across industries in terms of general managerial human capital and the differences in compensation schemes of high general human capital (generalists) CEOs and low general human capital (specialists) CEOs. The telecom service industry has the highest level of general CEO human capital, including reputation and education level. Moreover, it is the industry where CEOs get the highest average total pay (\$10.6 million) and salary (\$1.1million). Moreover, the telecom industry has the largest number of CEOs coming from outside firms. Thus, CEOs in the telecom industry are generalists. This result is likely attributable to the fact that this industry changed rapidly because of the deregulation of the telecommunication industry in the 2000s. The rapid increase in competition based on technological innovation has increased the demand for general human capital.

Table 2. CEO Compensation and Characteristics by Industry

This table presents CEO characteristics and compensation for the Global Industry Classification Standard (GICS). The sample comprises firm-year observations from S&P 500 firms during 2001–2009. All variables are winsorized at the 5th and 95th percentile values. The definitions of the variables and data sources are provided in the Appendix.

Industry	Salary (1,000\$)	Bonus (1,000\$)	Age	Reputation	Education Level (0-2)	Work Experience (years)	CEOs' Power	Tenure (years)	Outsider (%)	Industry Transfer (%)
Energy	959.789	2387.63	57.375	8.730	1.515	9.773	0.388	8.542	19.457	7.239
Materials	827.085	581.969	56.282	6.156	1.534	4.894	0.316	4.631	13.157	9.867
Business equipment	894.606	941.775	55.810	15.133	1.589	7.255	0.318	6.665	10.942	8.842
Consumer equipment	972.890	1080.010	55.466	17.181	1.473	8.894	0.329	7.240	24.567	19.942
Wholesale and retail	963.352	783.626	55.318	26.369	1.462	7.409	0.314	6.750	10.795	10.227
Health Care and drugs	937.853	623.233	55.125	9.469	1.766	7.376	0.320	6.299	25.510	21.428
Financials	774.888	1068.44	56.939	14.202	1.667	8.718	0.286	7.7	17.272	9.693
Information Technology	712.162	610.202	53.328	34.754	1.552	8.022	0.311	7.157	38.950	22.375
Telecommunicatio n Services	1105.01	832.309	54.769	40.461	1.846	8.384	0.288	6.923	46.153	30.769
Utilities	842.751	502.365	58.058	4.295	1.825	6.307	0.311	5.360	29.756	14.146

2. General Human Capital

Using the generalist methodology in the studies of Murphy and Zbojnik (2004, 2007) and Custodio et al, (2013) and our manually collected measures of CEO general human capital³⁾ and reputation, we test whether CEO general human capital and reputation affects cash compensation schemes separately. We have two main independent variables in our study—CEO general human capital and reputation. We manually collected data on lifetime career experience and education for CEO general human capital, which is hard to observe. Our proxies are based on two characteristics - lifetime career experience and educational background -which are commonly used as proxied for CEO human capital in a univariate analysis. For example, Murphy

3) It is also important to note that the general human capital measure we employ reflects only one specificity of managerial human capital; thus, it does not estimate other potential aspects of managerial human capital.

and Zbojnik(2008) argued that the decline in CEO tenure are a firm (as a proxy for the CEO's firm-specific skills) and the increase in the proportion of CEOs with masters degrees (as a proxy for CEO general human capital) in recent years are evidence of their conjecture that CEO general skills have become relatively more important than firm-specific skills. Frydman (2010) collected data on executives' biographical information, including education and career paths, to use as an index of executive general human capital. She argued that this index is positively related to the increasing importance of general human capital and used it to explain the increasing wage inequality among top managers within firms. The goal of the current study is to test whether the importance of general human capital and reputation influences compensation schemes more than CEO tenure does. To achieve this objective, we consider six proxies of CEO general human capital. Using the manually collected data, we examine whether the proxies for human capital are correlated with the other measures of general managerial ability used in the literature (Gabaix and Landier, 2008; Custidio et al., 2013) and compensation schemes. Custidio et al. (2013) proposed the general ability index (GAI) by using the following principal component analysis:

$$\text{GAI} = 0.231X_1 + 0.292X_2 + 0.274X_3 + 0.239X_4 + 0.155X_5 + 0.126X_6 \quad (1)$$

where X_1 is the number of years that the CEO has worked as a CEO; X_2 is the number of career paths pursued by the CEO in the past; X_3 is the number of firms in which the CEO has worked; X_4 is a dummy variable that is equal to one if the CEO has worked in multiple industries (2-digit SIC code) and zero otherwise; X_5 is the number of years that the CEO has worked as a BOD member; X_6 is the number of major areas that the CEO has studied during his or her career.

3. Reputation

Milbourn (2003), Rajgopal et al. (2006), and Francis et al. (2008) attempted to empirically use CEO reputation as a proxy for general human capital because CEO reputation captures CEOs' general social skills, relationships, and behaviors. Milbourn et al. (2003) found that the compensation of reputed CEOs has a better pay-for-performance sensitivity. Rajgopal et al. (2006) found that compensations of reputed CEOs are subject to lower relative performance evaluation. Similarly, Francis et al. (2008) found that more reputed CEOs are associated with poorer earnings quality, which is counter-intuitive. Because CEOs are likely to develop their reputation over several years, it is necessary to measure a CEO's reputation for a specific year based on data covering several years. Thus, to measure CEO reputation, we use the reputation of a CEO from year $t-3$ to year t to reflect the reputation of the CEO in year t . Due to the mixed results in the previous literature, we classify each comment made about a CEO in an article as favorable, neutral, or unfavorable (McDonald & Loughran, 2011). We capture CEO reputation by searching through data from LexisNexis, Factiva, Mergent Online, and Google search engine. We then estimate CEO reputation as how CEOs are assessed by the media, using the number of articles containing the CEO's name and company affiliation that appear in major newspapers in the U.S. and worldwide as well as newswires in a calendar year. The major newspapers in the U.S. considered in this study are Wall Street Journal (both week-day and Sunday editions), New York Times, Washington Post, and USA Today. The major international newspapers considered are the Financial Times, Asian Wall Street Journal, Wall

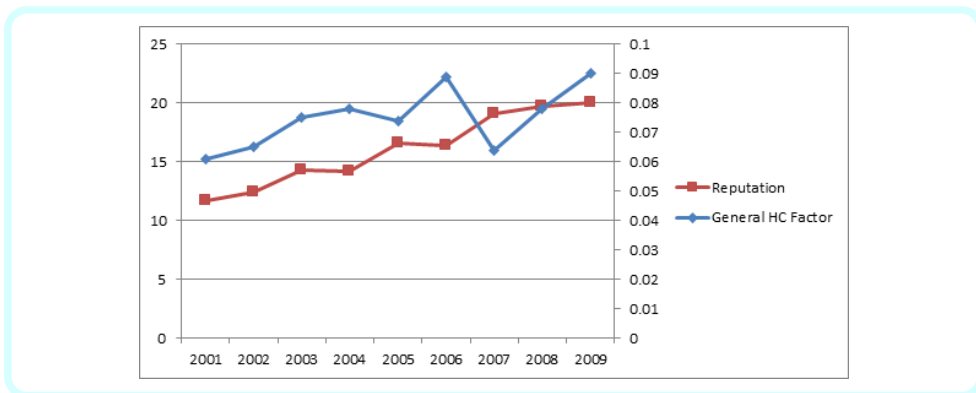
Street Journal Europe, and International Herald Tribune.

4. Control Variables

Rosen (1982) and Kremer (1993) proved that human capital is positively correlated with firm size. Rosen (1982) considered a hierarchical organizational structure in which labor productivity is improved at any given level. The reciprocity between the scale of economies and the loss of control associated with larger organizations determines an organization's size. Others have argued that CEOs exploit size to extract higher compensation (Bebchuk and Fried 2003; Baker and Hall 2004). Consistent with prior theory and empirical studies (Rosen 1982; Smith and Watts 1992), we control the size of a firm, expecting larger firms with greater growth opportunities and more complex operations to demand higher human capital managers with higher equilibrium wages. The average firm size in our sample is \$22.04 billion. Next, we control for market-adjusted stock returns, industry-adjusted Tobin's Q, and industry-adjusted ROA. We also control for Leverage, the ratio of R&D to sales, the ratio of capital expenditure to total assets, and Growth. Previous literature has shown that powerful CEOs or weak boards of directors or governance are likely to establish high compensation (Core et al., 1999). Following the literature, we measure CEO power (i.e., CEO age, tenure, duality, and CEO ownership) using the data from Execucomp and RiskMetrics⁴). Because compensation boards set CEO compensation schemes, we also control for corporate governance quality. We control for corporate governance quality, including the percentage of independent outside directors on the board and G-index, using RiskMetrics. Finally, because older firms tend to be more complicated, bigger, and thus provide more compensation, we also include Firm Age from COMPUSTAT.

Fig. 1. 다양한 경험을 가진 CEO의 일반적 능력의 변화

This figure presents the cross-sectional distribution of the changes in reputed generalist CEOs from 2001 to 2009. The sample consists of S&P 500 firms for which CEO profile data are available in our manually collected data. The definitions of the variables and data sources are provided in the Appendix.



⁴ Finkelstein and Hambrick (1988) find that tenure, a proxy for CEO power, is positively related to compensation. The CEO is more powerful when she is also the chairman of the board (Core et al., 1999)

Figure 1 shows that the qualifications of CEO general human capital appear to have evolved. Arguably, the evolution shows a movement from specific to general human capital. It also shows that the general human capital variables have increased over the sample period. Given the recent trend (Frydman and Jenter, 2010; Murphy and Zabojnik, 2007), general human capital is becoming a more important aspect in the CEO labor market than specific human capital. In the sample, our general human capital factor has been experiencing an increasing trend. This result is inconsistent with that of Custodio et al. (2013) possibly because our sample is different from theirs.

IV. Empirical Results

1. Main Results

To test our hypotheses (H1 and H2) about the relationship between general human capital and compensation schemes, we estimate the following regression,

$$\begin{aligned} & \text{Compensation}_t = \beta_0 + \beta_1 \text{GHCFactor}_t + \beta_2 \text{Reputation}_t + \beta_3 \text{CEOCharacteristics}_t \\ & + \beta_4 \text{Governance}_t + \beta_5 \text{Performance}_t + \beta_6 \text{FirmCharacteristics}_t + \sum_t \text{Year}_t \\ & + \sum_k \text{Industry}_k + \epsilon_t \end{aligned} \quad (2)$$

The dependent variable is the log of fixed or bonus compensation. *GHCFactor* is the general human capital factor based on the first factor in Equation (1). The coefficient of *GHCFactor* (β_1) captures the effect of general managerial human capital on compensation after controlling for governance and firm characteristics associated with CEO compensation. The coefficient of *Reputation* (β_2) captures the effects of CEO reputation in the business communities on compensation. The coefficient of the generalist skills factor in the studies of Francis et al. (2008) and Gopalan et al. (2014) confirms that more reputed CEOs are often not generalist CEOs. Reputation management can be related to executive compensation (Porac et al., 1999). Thus, we classify general human capital into innate human capital (general) and perceived human capital (reputation). We present detailed definitions of the control variables in the Appendix. As shown below, the reason for this difference is that the effect of CEO reputation and general human capital is significant in two distinctive compensation schemes instead of the total cash compensation. We include two dependent variables in this analysis—salary-based fixed compensation and bonus-based contingent compensation.

We test whether the dual differential aspects of CEO general human capital (accumulated ability and accumulated perception) influence current cash compensation schemes simultaneously. After obtaining the factor loadings using the data about general human capital, we show that the CEO general human capital factor delivers the pay premium for generalist CEOs, which are consistent with our fixed effect models, suggesting that measurement error is unlikely to affect our results. As expected, all the six variables of the general human capital components have positive loadings, being positively correlated with the index. Thus, higher levels of general human capital are reflected in a higher value of the factor.

In our hypotheses, we argue that CEO general human capital (H1) and reputation (H2) are both related to CEO performance contingent compensation schemes over CEO tenure based

on the human capital theory and reputation hypotheses. Table 3 indicates that the general human capital factor has a stronger effect (coefficient = 0.074) than CEO reputation (coefficient = 0.017), and both variables are positive and significant. The coefficient of the general human capital factor ranges from 0.074 to 0.088. The results support our prediction that generalist CEOs with higher general human capital earn bonus compensation (H1a). The coefficient (0.074) and t-statistics (2.32) of general human capital in Column 6 is greater than the coefficient (-0.053) and t-statistics (-0.053) of general human capital in Column 3. These results imply that generalist CEOs are likely to earn more bonus pay than salary pay, supporting H1b. The ability hypotheses about reputation management and bonus compensation (H2a and H2b) predict that CEO reputation is associated with bonus compensation because reputed CEOs prefer to receive bonus pay by going through various experiences. The results support our prediction that a CEO with a well-established reputation can better sustain the CEO position and bonus incentives than a CEO with a low reputation, which supports the reputation hypotheses (H2). This result holds because higher general human capital and high reputation are readily transferable across firms in competition and improve technology environments.

For the control variables, we find that bonus compensation is positively related to firm size, growth, and accounting performance (measured with ROA). CEOs who hold the chairman position are paid more contingent compensation than those who do not hold both positions, and older CEOs earn less contingent compensation than younger CEOs. CEOs who hold the CEO position in a firm for a long period are paid more fixed compensation than those who do so for a short period. Thus, the coefficients of our control variables are generally as expected. In summary, our results support the hypotheses that a generalist CEO with a high reputation is less risk-averse and thus influences more bonus compensation than a non-generalist CEO with less reputation over the tenure. Therefore, we conclude that both CEO reputation and the CEO general human capital factor are important determinants of CEO cash compensation schemes.

Table 3. General Human Capital and Reputation for Fixed and Incentive pay

Independent Variables	In(Salary)	In(Salary)	In(Salary)	In(Bonus)	In(Bonus)	In(Bonus)
	Coefficient (t-stat)	Coefficient (t-stat)	Coefficient (t-stat)	Coefficient (t-stat)	Coefficient (t-stat)	Coefficient (t-stat)
<i>GHCFactor</i>	-0.061 (-1.23)		-0.053 (-1.19)	0.088** (2.39)		0.074** (2.32)
<i>Reputation</i>		0.026 (1.55)	0.022 (1.41)		0.023** (2.15)	0.017* (1.78)
<i>Duality</i>	-0.014 (-1.50)	-0.017* (-1.84)	-0.019 (-1.58)	0.007 (1.04)	0.009** (1.99)	0.012 (1.63)
<i>Tenure</i>	0.005*** (2.76)	0.002*** (2.91)	0.008*** (2.93)	0.007*** (3.62)	0.011*** (3.03)	0.005*** (3.88)
<i>CEOOwnership</i>	0.072** (2.12)	0.041*** (2.99)	0.065*** (2.84)	-0.035** (-2.19)	-0.026* (-1.84)	-0.029** (-2.07)
<i>OutsideDirectors</i>	-0.192*** (-6.27)	-0.226*** (-5.65)	-0.185*** (-5.12)	0.106*** (3.09)	0.094*** (2.74)	0.100*** (2.85)
<i>G-index</i>	0.012 (1.01)	0.011 (0.84)	0.009 (1.34)	-0.015** (-2.46)	-0.019*** (-3.03)	-0.014*** (-2.88)
<i>ROA</i>	0.206*** (2.60)	0.129** (2.35)	0.213** (2.51)	0.071*** (2.94)	0.039*** (2.61)	0.072*** (2.88)
<i>ROA₋₁</i>	-0.032 (-0.82)	-0.042 (-1.05)	-0.035 (-0.99)	0.019 (0.95)	0.015 (1.06)	0.017 (1.14)
<i>Stock Return</i>	1.234***	1.458***	1.157***	-0.235***	-0.263***	-0.294***

	(3.13)	(3.61)	(3.05)	(-2.60)	(-3.05)	(-3.12)
<i>Stock Return</i> ₋₁	-0.251 (-1.55)	-0.285* (-1.83)	-0.256 (-1.61)	0.116 (1.34)	0.099 (1.41)	0.127 (1.39)
<i>Tobin's Q</i>	-0.025 (-0.92)	-0.033 (-1.24)	0.026 (-0.51)	0.015 (0.34)	0.020 (0.45)	0.017 (0.59)
<i>Size</i>	-0.141*** (-7.54)	-0.153*** (-8.63)	-0.133*** (-8.15)	0.107*** (11.02)	0.108*** (10.69)	0.095*** (9.41)
<i>Leverage</i>	-0.066 (-1.59)	-0.078** (-1.97)	-0.084* (-1.72)	0.035 (1.32)	0.022 (1.62)	0.021 (1.15)
<i>R&D</i>	-0.072 (-1.34)	-0.086 (-1.60)	-0.070 (-1.63)	0.059* (1.92)	0.054** (1.98)	0.067** (1.99)
<i>Capex</i>	-0.014 (-1.11)	-0.020 (-0.92)	-0.029 (-1.31)	0.052* (1.75)	0.046 (1.04)	0.071 (1.55)
<i>Growth</i>	-0.059 (-1.56)	-0.072* (-1.84)	-0.062* (-1.73)	0.021** (2.14)	0.017** (2.01)	0.025** (2.08)
<i>Firm Age</i>	0.001* (1.68)	0.003** (1.99)	0.002* (1.75)	-0.001 (-1.19)	-0.000 (-0.67)	-0.000 (-1.43)
Observations	4,155	4,155	4,155	4,155	4,155	4,155

Notes: The above table is based on a sample of CEOs' human capital that we derived from our manually collected data from COMPUSTAT and CRSP. All other variables are as defined in the Appendix. The firm and CEO fixed effects are not reported in the table. *, **, and *** denote statistical significance at the 10%, 5%, and 1% levels, respectively.

H1c relates bonus compensation to general human capital over a CEO's tenure. Because generalist CEOs get their job security in their current firms at the beginning of their tenure and CEO general human capital does not disappear in the job market with time, they are likely to demand higher bonus compensation over their CEO tenure. We predict that the relationship between CEO cash compensation and general human capital will be stronger across CEO tenure; the results are presented in Table 4. We choose two years as the breakpoint of the beginning period because two years is the 25th percentile of CEO tenure in our sample. In Column 1, the coefficient of GHCFactor in the early CEO tenure is 0.098, whereas, in Column 3, the coefficient of GHCFactor in the early CEO tenure is -0.145. These results imply that CEO general human capital is an important determinant of cash compensation in the early stages of CEO tenure.

Table 4. Reputed Generalist CEO on Compensation Schemes over CEO Tenure

Independent Variables	<u>ln(Salary)</u>		<u>ln(Bonus)</u>	
	Tenure<=2 (1)	2<Tenure (2)	Tenure<=2 (3)	2<Tenure (4)
<i>GHCFactor</i>	-0.145** (2.25)	-0.053 (1.60)	0.098*** (2.96)	0.127** (2.50)
<i>Reputation</i>	-0.040*** (-2.84)	-0.017 (-1.47)	0.038** (3.99)	0.064** (2.13)
<i>OutsideDirector</i>	-0.152*** (-2.77)	-0.194*** (-3.65)	0.105* (1.90)	0.132** (2.12)
<i>Duality</i>	-0.006 (-0.82)	-0.022 (-1.33)	0.044 (1.06)	0.027* (1.94)
<i>G-index</i>	-0.086* (-1.74)	-0.031* (-1.90)	-0.022** (-2.32)	-0.053** (-2.47)
<i>CEOOwnership</i>	-0.019	0.011	0.022	0.007

	(-1.45)	(1.62)	(1.43)	(1.30)
<i>ROA</i>	0.168**	0.095**	0.081***	0.052*
	(2.31)	(2.04)	(2.93)	(1.82)
<i>ROA</i> ₋₁	0.032	-0.045	0.059	0.094
	(1.05)	(-1.42)	(0.52)	(1.16)
<i>Stock Return</i>	1.568***	0.824***	0.526***	0.272**
	(3.93)	(2.57)	(2.95)	(2.51)
<i>Stock Return</i> ₋₁	0.312	-0.121	0.165	-0.055
	(1.35)	(-0.62)	(1.32)	(-1.04)
<i>Tobin's Q</i>	-0.003	-0.015	-0.009	0.025
	(-0.45)	(-1.30)	(-0.76)	(1.32)
<i>Leverage</i>	0.035	-0.057	-0.015	0.020
	(0.67)	(-1.05)	(-0.41)	(0.76)
<i>R&D</i>	0.079	-0.064*	-0.012	0.031*
	(1.12)	(-1.94)	(-0.02)	(1.68)
<i>Capex</i>	0.203*	-0.205	-0.120	0.185
	(1.72)	(-0.54)	(-1.27)	(1.35)
<i>Growth</i>	-0.010	-0.125**	0.085	0.019
	(-0.58)	(-2.20)	(0.94)	(1.35)
<i>Size</i>	-0.101***	-0.072***	0.035***	0.041***
	(-11.24)	(-8.61)	(7.94)	(6.73)
<i>Observations</i>	1423	2,732	1423	2,732

Notes: The above table is based on a sample of CEOs' human capital that we derived from our manually collected data from COMPUSTAT and CRSP. All other variables are as defined in the Appendix. All regressions include industry and year fixed effects. The firm and CEO fixed effects are not reported in the table. *, **, and *** denote statistical significance at the 10%, 5%, and 1% levels, respectively.

Our primary proposition is that CEO general human capital and reputation have differential effects because they relate to CEO cash compensation schemes over CEO tenure. We re-test our proposition by using total compensation. We control for the same variables (the coefficients are not shown) used in Table 3. In Table 5, our results are similar to those in Table 3. CEO general human capital and reputation are positively and significantly related to total compensation throughout a CEO's tenure. In addition, at the beginning of CEO tenure, CEOs with higher general human capital and reputation prefer less fixed compensation. It is only the impact of *GHCFactor* that strengthens over CEO tenure.

Table 5. CEO Reputation and General Human Capital on Total Compensation Schemes

Independent Variables	<u>ln(Cash)</u>	<u>ln(Cash)</u>	<u>ln(Cash)</u>	<u>ln(Total)</u>	<u>ln(Total)</u>	<u>ln(Total)</u>
	Tenure<=2 (1)	2<Tenure (2)	Coefficient (t-stat)	Tenure<=2 (1)	2<Tenure (2)	Coefficient (t-stat)
<i>GHCFactor</i>	-0.015 (-1.14)	0.035*** (2.93)	0.030*** (2.65)	0.045*** (4.65)	0.080*** (3.53)	0.072*** (3.25)
<i>Reputation</i>	0.010* (1.67)	0.029** (2.10)	0.018* (1.89)	0.052*** (3.84)	0.021* (1.92)	0.045** (2.14)
<i>Observations</i>	923	2,232	3,155	923	2,232	3,155

Notes: The above table is based on a sample of CEOs' human capital that we derived from our manually collected data from COMPUSTAT and CRSP. All other variables are as defined in the Appendix. All regressions include industry and year fixed effects. The firm and CEO fixed effects are not reported in the table. *, **, and *** denote statistical significance at the 10%, 5%, and 1% levels, respectively.

A different measure of the compensation of generalist CEOs with higher general human capital is defined as the ratio of fixed and contingent compensations to total compensation. We also control for the same variables (the coefficients are not presented) used in Table 3. The results support our main proposition, Table 7 presents the results of the regressions where the dependent variable is the compensation variable, and GHCFactor is the explanatory variable. These results also support our main argument.

Table 6. General Human Capital and Reputation for Compensation Ratio: Robustness Checks

Independent Variables	SalaryRatio	SalaryRatio	SalaryRatio	BonusRatio	BonusRatio	BonusRatio
	Tenure<=2 (1)	2<Tenure (2)	Coefficient (t-stat)	Tenure<=2 (1)	2<Tenure (2)	Coefficient (t-stat)
<i>GHCFactor</i>	-0.107** (-2.52)	0.030*** (2.91)	-0.045** (-1.97)	0.022* (1.75)	0.069*** (4.12)	0.060*** (2.94)
<i>Reputation</i>	0.007 (1.25)	0.045* (1.85)	0.022* (1.68)	0.047*** (3.03)	0.095*** (2.75)	0.090*** (3.03)
<i>Observations</i>	725	2,215	2,940	725	2,215	2,940

Notes: The above table is based on a sample of CEOs' human capital that we derived from our manually collected data from COMPUSTAT and CRSP. All other variables are as defined in the Appendix. All regressions include industry and year fixed effects. The firm and CEO fixed effects are not reported in the table. *, **, and *** denote statistical significance at the 10%, 5%, and 1% levels, respectively.

Table 7. Generalist CEOs on Cash Compensation Schemes

Independent Variables	ln(Salary)	ln(Salary)	ln(Salary)	ln(Bonus)	ln(Bonus)	ln(Bonus)
	Tenure<=2 (1)	2<Tenure (2)	Coefficient (t-stat)	Tenure<=2 (1)	2<Tenure (2)	Coefficient (t-stat)
<i>Generalist</i>	0.096 (1.16)	0.158** (2.45)	0.110** (2.20)	0.207*** (4.05)	0.385*** (5.50)	0.263*** (4.13)
<i>Reputation</i>	0.017 (1.35)	0.025* (1.82)	0.017 (1.52)	0.015** (2.04)	0.029** (2.43)	0.016** (2.16)
<i>Observations</i>	708	2,212	2,920	708	2,212	2,920

Notes: The above table is based on a sample of CEOs' human capital that we derived from our manually collected data from COMPUSTAT and CRSP. All other variables are as defined in the Appendix. All regressions include industry and year fixed effects. The firm and CEO fixed effects are not reported in the table. *, **, and *** denote statistical significance at the 10%, 5%, and 1% levels, respectively.

Overall, our results support the hypothesis that firms compensate generalist CEOs with more bonus-based compensation than specialist CEOs because of the adverse selection problems and unfamiliarity issue. In addition, our results support the hypothesis that generalist CEOs with high general human capital factor and reputation are less risk-averse and thus participate in more bonus-based compensation plans than specialist CEOs with less general human capital factor and low reputation. This is due to the marketability of reputed generalist CEOs in the labor market. Overall, our results suggest that both CEO reputation and general human capital explain different aspects of compensation schemes. In the next section, we present the results of some robustness checks.

2. Robustness Tests

It is plausible that the measure of the general human capital factor may capture CEO talent. Talented CEOs may have more marketability in the market. To check the talent hypothesis, we run untabulated additional tests using proxies for CEO talent by including Fast Track and Education Level. The results do not change even after using these variables. The general human capital factor is constructed using six proxies for the general human capital factor. We construct a factor of general human capital by following the study of Custidio et al. (2013). The test results are not affected by the new factor even if we drop one of the variables. Because including firm characteristics variables causes a significant loss of data, we do not include them in our reported results. The untabulated results reveal that our main findings about our hypotheses are robust. Consistent with prior empirical research, we control for many firm characteristics because it has been found in prior research that firm characteristics usually affect CEO general human capital and compensation schemes. The results of this study are robust to the inclusion of CEO fixed effects, which control for any time-invariant unobserved CEO heterogeneity. The fixed-effects methods solve “joint determination” problems in which an unobserved time-invariant variable determines CEO general human capital and compensation simultaneously.

V. Conclusion

This study focuses on the value of CEO general human capital and reputation, an issue that has not yet been investigated in detail in the literature. We examine the effect of CEO general human capital and reputation on cash compensation separately. As cash compensation schemes are adequate tools to increase CEO general human capital in a firm and due to the current upward trend of generalist CEOs, we also examine whether general human capital is a more important determinant of compensation schemes when CEOs are famous in business communities. Using a sample of S&P 500 firms from 2001 to 2009, we confirm that both the CEO general human capital factor and reputation are related to cash compensation schemes.

We decompose cash compensation into fixed salary and contingent bonus and find that only contingent bonus is affected by general human capital and reputation. This may explain why when prior studies did not separate cash compensation schemes, they did not detect any significant effect when they separated general human capital and reputation. Additionally, the study proves that the career concerns of CEOs are relevant, especially when explaining CEO tenure. Therefore, we offer an alternative view of what determines the level of cash compensation schemes and the factors that affect the running of a firm. We also suggest that the increase in general human capital can be explained by the increase in its relative importance in managing a modern firm. Overall, the results of this study do not only contribute to academics but also important to boards and shareholders.

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Appendix: Variables

Panel A: Main Variables	
Variable	Description
Reputation	The logarithm of the number of articles in the whole media (3*the number of articles with positive tone + the number of articles with neutral tone- the number of articles with negative tone) (as in McDonald and Loughran, 2011)
GHCFactor	First factor of applying principal components analysis to six proxies of general managerial human capital: ExperienceYears, NumberFirms, GeneralWork ExperienceDummy, CareerPath, BODExperience, and Education Areas.
TotalComp	Total compensation composed of cash plus long-term compensation. Stock option was valued using the Black-Scholes method. To adjust for inflation, compensation data were deflated to dollars using the 2009 CPI index (the U.S. Department of Labor)
CashComp	Salary plus bonus in thousand \$
Salary	Salary in thousand \$ (Execucomp salary).
Bonus	Bonus in thousand \$ (Execucomp bonus).
Panel B: Controls	
Variable	Description
Duality	Dummy variable which if CEO is also chair of the board, then 1 and zero otherwise.
Tenure	The logarithm of Number of years the CEO has been working for the current company as CEO
Stock Return	The stock return over fiscal year t.
ROA	Return on assets
Size	The logarithm of the total assets in millions as reported in Compustat.
Leverage	Market leverage (Total debt/(BV of assets - BV of equity + MV of equity))

Tobin's Q	Sum of total assets plus market value of equity minus book value of equity divided by total assets
Capex	Capital expenditures divided by total assets
Growth	The percentage change of sales over two years.
Firm Age	The natural log of the number of years listed in Compustat.
OutsideDirector	Percentage of independent directors who were not hired by CEO
G-index	Gompers, Ishii, and Metrick's (2003) governance index.
