CORPORATE GOVERNANCE AND CORPORATE REPUTATION: EVIDENCE FROM AMERICA'S MOST ADMIRED COMPANIES OF 2006

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Abstract

Prior research suggests strong corporate governance enhances firm performance, and strong firm performance leads to high corporate reputation. Using a sample of highly reputable firms from *Fortune*'s 2006 America's Most Admired Companies list and a corresponding matched sample of firms, we examine the association between corporate governance (as of February 2005) and subsequent corporate reputation ratings (as of March 2006). Results indicate a positive and significant relationship between corporate governance and subsequent reputation ratings. Our findings suggest that firms with stronger corporate governance mechanisms will receive higher reputation ratings from the public.

Key words: Corporate governance, reputation ratings, America's Most Admired Companies of 2006.

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1. INTRODUCTION

Notorious business scandals such as Enron and WorldCom propelled corporate governance as an important research topic. Prior studies document that strong corporate governance leads to enhanced firm performance. In the strategy research field, corporate reputation also has received much attention. Evidence suggests that it is the firm's own performance that drives its reputation. Since it usually takes some time to develop a superior reputation, there may exist a significant association between corporate governance and subsequent corporate reputation. However, no single study has as yet examined the above association.

The purpose of this study is to perform a direct examination of the association between corporate governance and subsequent corporate reputation. Our sample consists of firms included in the America's Most Admired Companies of 2006. Each firm on the list is given a reputation score ranging from 0 to 10 by *Fortune* magazine. Corporate governance is measured by *Gov-Score*, an index score created by Brown and Caylor (2006, 2008). Specifically, for each sample firm, this study collects a *Gov-Score* (as of February 2005) and a reputation score (as of March 2006). Regression analysis reveals a significant and positive relationship between Gov-Score and reputation score for sample firms. To enhance our initial results, we next collect a corresponding matched sample of firms, and modify our regression model by using a dichotomous reputation variable. Further regression analysis reports a significant and positive association between corporate governance and the dichotomous reputation variable. Our overall results suggest that firms with strong corporate governance will receive high corporate reputation ratings from the public.

Managers interested in strong corporate governance mechanisms should benefit from our research. In addition, analysts conducting research on firm reputation and on the association between corporate governance and reputation will benefit from this study. Moreover, results from this study can

increase individual investors' confidence in investing companies with superior reputation.

The remainder of the paper is organized as follows. Section 2 reviews prior research and develops the hypothesis. Section 3 describes the research design, including measurement of primary variables, sample selection and descriptive statistics and empirical specification. Section 4 reports the results of regression analysis, and Section 5 presents the conclusion.

2. LITERATURE REVIEW AND HYPOTHESIS DEVELOPMENT

Brown and Caylor (2008) suggest that strong corporate governance creates a system of greater controls over managerial actions, and then the enhanced control over managerial actions should reduce principal-agency problems. Reduced principal-agency problems improve a firm's operating performance. Relying on data from Institutional Shareholder Services (ISS), Brown and Caylor (2008) create a firm-specific corporate governance index, known as Gov-Score. Unlike other governance indexes, Gov-Score is based on both internal and external factors. Using return on assets (ROA) and return on equity (ROE) to measure a firm's operating performance, Brown and Caylor (2008) document a significant and positive relationship between Gov-Score and firm operating performance. Empirical results support the notion that better-governed firms have better performance.

Does better performance lead to superior corporate reputation? Reputation is defined by Fombrun (1996, p.72) as "a perceptual representation of a company's past actions and future prospects that describe the firm's overall appeal to all its key constituents when compared to other leading rivals." Roberts and Dowling (2002) suggest that corporate reputation is a general organizational attribute that reflects the extent to which external stakeholders view the company as "good" or "bad." According to

Dowling (2001), the main drivers of reputation creation are embedded inside the firm. That is, the company's own performance drives its reputation.

If better-governed firms have better performance, which drives its corporate reputation, then better-governed firms also should possess superior reputation. Since it takes some time for a company to establish a superior corporate reputation, we posit that better-governed firms have better subsequent reputation. The hypothesis is as follows:

Ha: Better-governed firms have better subsequent corporate reputation.

3. RESEARCH DESIGN

3.1 Measurement of the Primary Variables

Institutional Shareholder Services (ISS) developed a tool to measure the strength of corporate governance. The ratings are based on eight categories: (1) board structure and composition, (2) audit issues, (3) charter and bylaw provisions, (4) laws of the state of incorporation, (5) executive and director compensation, (6) qualitative factors, (7) director and officer stock ownership, and (8) director education. The eight categories encompass 61 variables. ISS gathers data from public resources, and companies can also provide ISS with updates or corrections that may cause ISS to recalculate the ratings.

Based on the ratings from ISS, Brown and Caylor (2006 & 2008) created a summary score, known as Gov-Score, to measure the strength of corporate governance. They selected 51 variables, and coded each of 51 variables either 0 or 1 depending on whether or not ISS considers the firm's governance to be minimally acceptable. Brown and Caylor (2006 & 2008) then summed those 51 binary variables to create a firm-specific summary score. Thus, a Gov-Score ranges from 0 to 51.

Gov-Scores are generously provided by Brown and Caylor (2006 & 2008). Interested users can freely download the data from their website. The data file[1] contains Gov-Score for 2,538 firms as of February 1, 2003, 2,749 firms as of February 1, 2004 and 3,258 firms as of February 1, 2005.

Fortune magazine publishes annually a list of most-admired American companies since 1983. Firms on this list are selected by many executives, directors, and securities analysts based on eight key areas. These areas are financial soundness, ability to attract and retain talented employees, quality of management, social responsibility, innovation, quality of products or service, wise use of assets, and investment value. Firms selected on this list are considered to possess superior reputation. For each firm selected on the list, a reputation summary score is given. The score ranges 0 to 10, with higher scores denoting superior corporate reputation.

3.2 Sample Selection and Descriptive Statistics

This study first obtained two files. One file[2] contains 3,258 firms with their firm-specific Gov-Score as of February 1, 2005, while the other file[3] contains the list of firms selected on the America's Most Admired Companies of 2006 with their reputation score. Then, this study matches these two files. Firms with both Gov-Score and reputation score total 197. Data are collected from Research Insight. Twenty one firms with missing data are excluded. The final sample consists of 176 firms with complete data. Panel A of Table 1 reports the sample selection of this study. Panel B of Table 1 reports the industry distribution of the sample. For instance, 70 firms are in the manufacturing

[1] http://robinson.gsu.edu/accountancy/gov_score.html
[2] http://robinson.gsu.edu/accountancy/gov_score.html
[3] http://money.cnn.com/magazines/fortune/mostadmired/2006/index.html

industry, while only one firm is in the public administration industry.

Table 1: Sample Selection and Firm Industry Distribution

Panel A: sample selection

	Sample Size
2005 Gov-Score List	3,258
Not listed on America's Most Admired List of 2006	-3,061
Firms missing data on Compustat	-21
Final Sample	176

Panel B: Industry Distribution

SIC Division (first 2 digits)	Division Description	Number of Firms
01-09	Agriculture, Forestry and Fishing	0
10-14	Mining	6
15-17	Construction	8
20-39	Manufacturing	70
40-49	Transportation, Communication, Electric, Gas and Sanitary	24
50-51	Wholesale	8
52-59	Retail	20
60-67	Finance, Insurance, and Real Estate	20
70-89	Services	19
91-99	Public Administration	1
	Total	176

For each sample firm, a matched firm with the closest firm size[4] (measured by total assets) within the same industry[5] is selected. We use a dichotomous reputation variable, *REPU*, to distinguish the sample firms from the matched firms. If a firm is selected on the America's Most Admired Company of 2006 List, then the value of REPU is equal to "1." Otherwise, the value is "0." Table 2 presents selected descriptive statistics for sample and matched firms (Panel A) along with tests for mean differences between the two samples (Panel B).

Table 2: Descriptive Statistics

Panel A: Descriptive Statistics for Sample and Matched Firms

	Sample Firms (n=176)			Matched Firm (n=176)		
	Mean	Std. Dev.	Median	Mean	Std. Dev.	Median
Rep-Score	6.99	0.64	7.06	N/A	N/A	N/A
Gov-Score	34.11	3.93	34.00	31.20	4.29	31.00
Sales	22966.8	42262.4	10172.6	7942.2	17875.8	2890.5
Assets	55728.4	174713.8	11670.0	14736.8	44179.7	3841.3
Liabilities	43911.1	160381.6	5958.5	11210.2	41351.2	1925.7
Income	2068.4	4174.5	764.2	472.2	1333.8	155.0
LEV	0.58	0.19	0.57	0.58	0.19	0.59
ROE	17.35	17.46	15.99	10.68	35.92	12.84
MTB	3.48	2.75	2.70	2.78	2.15	2.25

[4] Wang and Smith (2008) use the America's Most Admired Companies of 2005 list and match their sample firms based on total assets. Their results indicate that the total assets of sample firms are significantly larger than those of matched firms. They report the mean value of total assets for sample firms is $37,656.23, while the mean value of total assets for matched firms is $26,835.10.

[5] Industry is measured by 2-digit SIC code.

Panel B: Paired Difference in Means

	T-test (p-value)	Wilcoxon Test (p-value)
Gov-Score	<0.0001	<0.0001
Sales	<0.0001	<0.0001
Assets	0.0027	<0.0001
Liabilities	0.0092	<0.0001
Income	<0.0001	<0.0001
LEV	0.9936	0.9737
ROE	0.0272	0.0002
MTB	0.0074	0.0013

Variables definition:

Rep-Score = reputation score (as of March 2006) assigned to firms selected on the Most Admired Company of 2006 list;
Gov-Score = corporate governance index score (as of Feb. 2005), created by Brown and Caylor (2006, 2008);
Sales = net revenue (Compustat Item #12) of firm i in 2005;
Assets = total assets (Compustat Item #6) of firm i in 2005;
Liabilities = total liabilities (Compustat Item #9 + Compustat Item #34) of firm i in 2005;
Income = income before extraordinary items (Compustat Item #18) of firm i in 2005;
LEV = leverage ratio [total liabilities (Compustat Item #9 + Compustat Item #34) / total assets (Compustat Item #6)] of firm i in 2005;
ROE = return on equity ratio [income before extraordinary items – available for common equity (Compustat Item #237) / common shareholders' interest in the company (Compustat Item #60)] of firm i in 2005;
MTB = market to book ratio {[common shares outstanding (Compustat Item #25) × stock price – fiscal year-end (Compustat Item #199] / total common equity (Compustat Item #60)} of firm i in 2005.

The mean corporate governance score for sample firms in Table 2 (34.11) is significantly higher than the mean corporate governance score for matched firms (31.20) ($p_{t\text{-test}}$ <0.0001,

$p_{Wilcoxon}$ <0.0001). This result suggests that sample firms have stronger corporate governance mechanisms than matched firms. This result provides initial support for our hypothesis of a positive relationship between corporate governance and reputation. Additional results in Table 2 indicate that significant differences exist between sample and matched firms on other variables: sales, assets, liabilities, income, return on equity, and the market-to-book ratio. The above evidence is not surprising, since firms selected on the America's Most Admired Company list are usually larger firms, relative to their peers. There is no significant difference between sample and matched firms on the leverage ratio. In addition, descriptive statistics on reputation score are reported for reputation sample firms. The mean score for sample firms is 6.99.

The Pearson correlation matrix in Table 3 also provides initial support for a positive association between corporate governance and reputation.

Table 3: Pearson Correlations among the Variables

	Rep-Score	Gov-Score	Assets	LEV	ROE	MTB
Gov-Score	0.1512					
(p-value)	0.0452					
Assets	0.0559	0.1923				
(p-value)	0.4614	0.0003				
LEV	-0.1464	0.1108	0.2958			
(p-value)	0.0526	0.0377	<0.0001			
ROE	0.0708	0.1662	-0.0069	-0.0038		
(p-value)	0.3505	0.0018	0.898	0.4767		
MTB	0.1617	0.1263	-0.0757	0.1143	0.2841	
(p-value)	0.0321	0.0178	0.1564	0.0321	<0.0001	
REPU	N/A	0.3343	0.1592	0.0004	0.1178	0.1426
(p-value)	N/A	<0.0001	0.0027	0.9936	0.0272	0.0074

Variables definition:

Rep-Score = reputation score (as of March 2006) assigned to firms selected on the Most Admired Company of 2006 list;
Gov-Score = corporate governance index score (as of Feb. 2005), created by Brown and Caylor (2006, 2008);
Assets = total assets (Compustat Item #6) of firm i in 2005;
LEV = leverage ratio [total liabilities (Compustat Item #9 + Compustat Item #34) / total assets (Compustat Item #6)] of firm i in 2005;
ROE = return on equity ratio [income before extraordinary items – available for common equity (Compustat Item #237) / common shareholders' interest in the company (Compustat Item #60)] of firm i in 2005;
MTB = market to book ratio {[common shares outstanding (Compustat Item #25) × stock price – fiscal year-end (Compustat Item #199] / total common equity (Compustat Item #60)} of firm i in 2005.
REPU = a reputation indicator variable for firm i. If firm i is selected on the America's Most Admired Company of 2006 List, then the value of $REPU_i$ is equal to "1". Otherwise, the value is "0".

Corporate governance is positively (0.3343) and significantly ($p < 0.0001$) correlated with the dichotomous reputation variable, *REPU*. It is also positively (0.1512; $p=0.0452$) correlated with reputation score, *Rep-Score.* Both correlations lend additional support for the positive association between corporate governance and reputation.

3.3 Empirical Specification

We first run our regression analysis using only our sample of reputation firms. Because each of the firms in our reputation sample has a reputation score, we use that reputation score (i.e., *Rep-Score*) as the dependent variable in our regression. The independent variable of interest in our regression is the corporate governance score, *Gov-Score*. Four control variables are included to control for firm size (assets), return on equity (ROE), leverage ratio (LEV), and the market-to-book ratio (MTB). Our regression model is as follows:

$$\text{Rep-Score} = \alpha_0 + \alpha_1\text{Gov-Score} + \alpha_2\text{Assets} + \alpha_3\text{ROE} + \alpha_4\text{LEV} + \alpha_5\text{MTB} + \varepsilon \quad \text{[Equation 1]}$$

where
Rep-Score = reputation score (as of March 2006) assigned to firms selected on the Most Admired Company of 2006 list;
Gov-Score = corporate governance index score (as of Feb. 2005), created by Brown and Caylor (2006, 2008);
Assets = total assets (Compustat Item #6) of firm i in 2005;
ROE = return on equity ratio [income before extraordinary items – available for common equity (Compustat Item #237) / common shareholders' interest in the company (Compustat Item #60)] of firm i in 2005;
LEV = leverage ratio [total liabilities (Compustat Item #9 + Compustat Item #34) / total assets (Compustat Item #6)] of firm i in 2005;
MTB = market to book ratio {[common shares outstanding (Compustat Item #25) × stock price – fiscal year-end (Compustat Item #199] / total common equity (Compustat Item #60)} of firm i in 2005.

Next, we use the total combined sample of both highly reputable and matched firms. In this regression, we use the dichotomous indicator variable *REPU* to differentiate between reputation sample firms (*REPU* = 1) and matched sample firms (*REPU* = 0). This analysis supplements our initial regression model and should support the initial regression results. In this regression model, we still include control variables for size, return on equity, leverage and the market-to-book ratio. Our second, modified regression model is presented below:

$$\text{Gov-Score} = \alpha_0 + \alpha_1\text{REPU} + \alpha_2\text{Assets} + \alpha_3\text{ROE} + \alpha_4\text{LEV} + \alpha_5\text{MTB} + \varepsilon \quad \text{[Equation 2]}$$

where
Gov-Score = corporate governance index score (as of Feb. 2005), created by Brown and Caylor (2006, 2008);
REPU = a reputation indicator variable for firm i. If firm i is selected on the America's Most Admired Company of 2006 List, then the value of REPU_i is equal to "1". Otherwise, the value is "0".
Assets = total assets (Compustat Item #6) of firm i in 2005;

ROE = return on equity ratio [income before extraordinary items – available for common equity (Compustat Item #237) / common shareholders' interest in the company (Compustat Item #60)] of firm i in 2005;
LEV = leverage ratio [total liabilities (Compustat Item #9 + Compustat Item #34) / total assets (Compustat Item #6)] of firm i in 2005;
MTB = market to book ratio {[common shares outstanding (Compustat Item #25) × stock price – fiscal year-end (Compustat Item #199] / total common equity (Compustat Item #60)} of firm i in 2005.

4. RESULTS

This study predicts that corporate governance has a significant and positive impact on future corporate reputation ratings. To test the hypothesis, this study runs the regression models (Equation 1 and 2). If the hypothesis is true, this study expects a significant and positive relation between corporate governance score (Gov-Score) and reputation score (Rep-Score) for sample firms only (n=176). Table 4, Panel A, reports the results of regression analysis for sample firms. As shown in Panel A, α_1 is 0.0230, which is significant at p = 0.0594. Thus, the hypothesis is supported. Additional results in Panel A indicate that reputation scores (Rep-Score) are positively correlated with assets and the market-to-book ratio, and negatively correlated with the leverage ratio at a significant level for sample firms.

Panel B reports the regression analysis for the total combined sample of both highly reputable and matched firms. As shown in Panel B, α_1 is 2.5411, which is significant at p <0.0001. This result suggests that firms with stronger corporate governance mechanisms are more likely to be selected on the Most Admired list in the following year, indicating a positive association between corporate governance and reputation. Thus, our hypothesis is supported.

Table 4: Regression Analysis

Panel A: sample firms only (n=176)
Model: Rep-Score = $\alpha_0 + \alpha_1$Gov-Score + α_2Assets + α_3ROE + α_4LEV + α_5MTB + ε [Equation 1]
Results: (Adjusted $R^2 = 0.0641$)

Variable	Parameter Estimate	Standard Error	t Value	Pr > l t l
Intercept	6.4573	0.4291	15.05	<0.0001
Gov-Score	0.0230	0.0121	1.90	0.0594***
Assets	5.05E-07	2.92E-07	1.72	0.0864***
ROE	0.0013	0.0033	0.40	0.6877
LEV	-0.7327	0.2619	-2.80	0.0057***
MTB	0.0464	0.0210	2.21	0.0285**

Panel B: sample firms and matched firms (n=352)
Model: Gov-Score = $\alpha_0 + \alpha_1$REPU + α_2Assets + α_3ROE + α_4LEV + α_5MTB + ε [Equation 2]
Results: (Adjusted $R^2 = 0.1448$)

Variable	Parameter Estimate	Standard Error	t Value	Pr > l t l
Intercept	29.74167	0.76027	39.12	<0.0001
REPU	2.5411	0.44297	5.74	<0.0001*
Assets	4.38E-06	1.79E-06	2.45	0.0149**
ROE	0.01851	0.00795	2.33	0.0205**
LEV	1.63109	1.20592	1.35	0.1774
MTB	0.09122	0.09256	0.99	0.3251

* Significant at 0.01, two-tailed test; **Significant at 0.05, two-tailed test; ***Significant at 0.1, two-tailed test;

Variables Definition:
REPU = a reputation indicator variable for firm i. If firm i is selected on the America's Most Admired Company of 2006 List, then the value of $REPU_i$ is equal to "1". Otherwise, the value is "0".

Rep-Score = reputation score (as of March 2006) assigned to firms selected on the Most Admired Company of 2006 list;
Gov-Score = corporate governance index score (as of Feb. 2005), created by Brown and Caylor (2006, 2008);
Assets = total assets (Compustat Item #6) of firm i in 2005;
LEV = leverage ratio [total liabilities (Compustat Item #9 + Compustat Item #34) / total assets (Compustat Item #6)] of firm i in 2005;
ROE = return on equity ratio [income before extraordinary items – available for common equity (Compustat Item #237) / common shareholders' interest in the company (Compustat Item #60)] of firm i in 2005;
MTB = market to book ratio {[common shares outstanding (Compustat Item #25) × stock price – fiscal year-end (Compustat Item #199] / total common equity (Compustat Item #60)} of firm i in 2005.

5. CONCLUSION

The purpose of this study is to perform a direct examination of the association between corporate governance (as of February 2005) and subsequent corporate reputation (as of March 2006). Regression analysis reveals a significant and positive association between corporate governance and subsequent reputation ratings for firms listed on the America's Most Admired Companies of 2006. Our results suggest that firms with strong corporate governance mechanisms receive good corporate reputation from the public.

There are several limitations of this study. First, due to the limited availability of *Gov-Score* data, we only investigate one period (2005) in our study. Future work can examine other time periods. Second, the matching procedures may not be perfect, since firms selected on the Most Admired list are usually much larger firms. Last, the quality of *Gov-Score* data remains unknown.

The results of this study should interest those managers desiring strong corporate governance mechanisms and analysts who conduct research on firm reputation. These results can also

increase the confidence of investors in companies with superior reputations.

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