Does Corporate Reputation Translate into Higher Market Value?

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Abstract

A positive corporate reputation connotes management's commitment to ethical accounting and principled business practices. A good reputation is dependent on ethical behavior related to factors such as treatment of employees, care of the environment, and honest financial reporting. Corporate scandals at the beginning of the millennium have increased attention on the subject of corporate reputation, a long-established concern of management. Past research examines whether a firm with a high reputation experiences a measurable economic benefit, but results are mixed. This study seeks to resolve the issue by taking a new, more comprehensive approach to determine whether high-reputation firms experience an economic benefit, by looking distinctively at firms' market value of equity, and related financial performance and risk level. Used as a proxy for reputation is a publicly available measure, namely, inclusion on the list of "America's Most Admired Companies" published annually by *Fortune* magazine. These firms are compared to a sample of control firms (matched on size and industry). Results indicate that high-reputation firms show an average market value premium of $1.3 billion. Results also indicate that high-reputation firms experience superior financial performance and lower cost of capital. These findings support impression management theory, in that businesses, which can effectively direct reputation management activities, including especially ethical behavior, will receive tangible economic and other benefits, in this case, an increase in the wealth of the corporate stockholders.

Key words: Corporate Reputation, Financial Markets, Corporate Social Responsibility, Ethics

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Introduction

As a result of corporate scandals at the beginning of the millennium, the importance of a positive corporate reputation has never been greater. When a business firm loses its reputation, there is a loss of trust, which is fundamental to business activities involving the firm's customers, suppliers, lenders, investors, and others. A positive corporate reputation connotes management's commitment to ethical accounting and principled business practices. A key factor in corporate reputation is corporate social responsibility, such as taking care of the environment. Other factors include wise use of assets, financial soundness, and investment value, all of which are based on honest financial reporting. These measures of financial performance are unreliable and meaningless without ethical accounting practices.

A positive corporate reputation is only possible with ethical behavior and the trust that builds with a firm's stakeholders. Firms that operate ethically in the long-term are expected to build a better reputation and achieve better performance, as a result of better relationships with customers, suppliers, lenders, investors, and others. Yet, research has reported mixed results regarding the economic effects of corporate reputation, that is, whether firms do or do not receive measurable economic benefits.

This study will update prior research and offer a definitive, more comprehensive analysis than previously done regarding the economic effects of corporate reputation. This study has two research objectives: (1) To investigate whether firms with a better reputation have higher market values and (2) To explore the nature of any market-value premium, that is, whether the more reputable firms' market premiums arise from superior financial performance (i.e. greater profitability and efficiency), or from lower cost of capital (lower risk), or both. If there is a

benefit associated with corporate reputation, then management would do well to carry out operations in a way that enhances a positive reputation.

This study provides an important incremental addition to the research literature by investigating whether a market-value premium is associated with corporate reputation. This study compares high-reputation firms to a sample of control firms, matched by size and industry. The findings indicate that high-reputation firms benefit from an average market value premium of $1.3 billion. In addition, results indicate that high-reputation firms experience superior financial performance and a lower cost of capital (lower risk). High-reputation firms are more profitable on several dimensions such as industry-adjusted return on sales and return on assets. High reputation firms have lower risk, as they experience less volatility in sales and net income, have less likelihood of bankruptcy, and have lower stock price volatility. The benefits associated with a corporate reputation provide an incentive for managers to engage in behaviors leading to or maintaining a positive corporate reputation.

Prior Research and Motivation for the Study

Corporate reputation is a subject of extensive coverage by writers in business professional journals and by academic scholars in the research literature. Traditional financial theories pertaining to the efficient markets suggest that corporate reputation would not be useful to estimating future market valuation or deriving a current market-value premium, as information regarding reputation would already be taken into account by the markets (Dimand and Ben-El-Mechaiekh 2005, Cunningham, L.A. 1994). If so, then managers would not expect that improving or maintaining a positive corporate reputation would lead to a market-value premium for the company.

Contrary to the above, opinions that reputation matters, are plentiful, perhaps most exemplified by Warren Buffet's successful investment approach (Buffet and Clark 2002): Seek out excellent (i.e., positive reputation) businesses that are undervalued and hold them for the long-term. By doing so, Buffet has achieved abnormally high returns on investments due to a market-value premium accruing to those 'excellent' businesses. Theoretical support for a business seeking a higher reputation is provided by impression management theory (Carter 2006). Impression management theory suggests that businesses direct reputation management activities towards their stakeholders, in order to receive tangible economic and other benefits. In this study, we argue that one of these benefits is a market value premium, which benefits the corporation by improving the wealth of its stockholders.

In addition to impression management theory, there are other theoretical supports why a corporation seeks a positive reputation. For example, agency theory and Posner's signaling theory indicate that managers might seek or maintain a positive corporate reputation, if this results in economic benefits for the company (cf., Martí and Balboa 2003, Padilla 2003, Posner 2000). Basdeo et al. (2006) draw on signaling theory to find that reputation is influenced both by a firm's own actions and by its rivals' actions. In addition, Riahi-Belkaoui (2003) examines the role of reputation to explain relative market value for multinational firms. He finds that internalization theory supports higher valuation when corporate reputation is high. According to Roberts and Dowling (2002), current strategy theory indicates that superior performance results from advantages possessed by a firm in relation to its competitors; in their study, results indicate that firms with superior reputations are better able to maintain superior profitability over time.

Other past research studies pertaining to corporate reputation include Becchetti et al. (2007), Desai et al. (2007), Barnett et al. (2006), Chun (2005), Chalmers and Godfrey (2004),

Sacconi (2004), Cox et al. (2004), Harrington (2003), Weaver et al. (1999a, 1999b), Cohen (1995), Fombrun and Shanley (1990), Keim (1978), and Caroll (1973). A brief review of these studies is provided below.

The issue of corporate reputation, as it is built on various characteristics (e.g. environmental responsibility, good human resources practices, and honest financial reporting), is increasingly important to corporate business practices in countries around the world. Reputation has become more important in recent years, following Enron and other financial scandals, resulting investor losses, and ruined reputations of involved companies. According to Becchetti et al. (2007), there has been very little empirical research on its impact and relevance in the capital market. Desai et al. (2007) identified reputational penalties to top corporate managers at firms that violate financial reporting standards. As a result of these reputational penalties, there was higher management turnover and poorer employment prospects for the displaced managers.

Barnett et al. (2006) indicate that the concept of corporate reputation has gained importance in recent years. Their research reviews, analyzes, and evaluates prior definitional statements of corporate reputation. They distinguish corporate reputation from corporate identity, corporate image, and corporate reputation capital. Chun (2005) observes that the interest in corporate reputation encompasses a wide range of academic disciplines. She develops a construct for evaluating corporate reputation.

Chalmers and Godfrey (2004) find that discretionary reporting, with regard to deriviatives, is positively related to the magnitude of reputation costs confronting managers and firms. Sacconi (2004) offers a definition of corporate social responsibility (CSR) in terms of an economic theory of self-regulation based on the concepts of social contract, reputation and reciprocal conformism. Cox et al. (2004) examine institutional investor preferences for

reputation built on corporate social performance. Their research found that long-term institutional investment was positively related to social performance. Findings by Cox et al. support earlier studies by Johnson and Greening (1999) and Graves and Waddock (1994).

Harrington (2003) points out that as far back as the 1960s, socially conscious investors joined together to promote stocks of companies with a reputation for not polluting, good employment practices, and not exploiting the third world. Following Enron and other financial scandals in the early 2000s, both socially responsible investors and profit-oriented investors have found some common ground, as both are evaluating a company's social conscience. Harrington concludes that unethical companies drain shareholder value. Taking steps to build a reputation based on social responsibility was once regarded as harmful to financial performance. According to Harrington, there is evidence this is no longer the case. From 1990 to 1998, the Domini 400 Social Index, which measures the impact of social screening on financial performance, returned 18.54 %, which exceeded the S&P 500 return of 16.95 % (Harrington 2003). Becchetti et al. (2007) used the Domini 400 Social Index to evaluate the market reaction to corporate entry and exit from the Index, a benchmark for reputation built on corporate social responsibility.

Weaver et al. (1999a) evaluate why corporations establish formal programs to manage ethics. Control theory is used to delineate the scope and orientation of ethics programs. Also discussed are research and policy implications. Weaver et al. (1999b) examined corporate responses to expectations for socially responsible behaviors. Analysis of survey and archival data were used, leading to implications for social performance research, practice, and public policy. Earlier, Cohen (1995) develops a conceptual framework for studying moral climate. She suggests key themes from organizational climate theory for describing and diagnosing moral climate. Herremans et al. (1993) examine the relationship of corporate social responsibility reputation and

economic performance. Fombrun and Shanley (1990) consider management strategies for building corporate reputations.

Related to reputation, Keim (1978) and Caroll (1973) offer foundational work on the study of social responsibility. Keim (1978) observed that the constraints within which business operates are changing. Caroll (1973) noted that the social environment would require adoption of more contemporary and encompassing definitions regarding corporate efficiency and productivity. Subsequent years have proved out the expectations of these earlier works.

A number of research studies have focused on the list of 'Most Admired Companies' featured annually in *Fortune* magazine (2005). The Most Admired list is widely regarded as the penultimate measure of corporate reputation (Fisher 2007). A few representative studies concerning the Most Admired list include: Anderson and Smith (2006), Damodaran (2003), and Antunovich and Laster (1999).

Anderson and Smith (2006) examine stock performance of the companies on Fortune's Most Admired list. They found that a portfolio of these stocks outperformed the market by a substantial and statistically significant margin. This was unexpected, as they anticipated that a company's well-known virtues are already incorporated into the price of the company's stock.

Damodaran (2003) observes that conventional wisdom suggests that an investor should buy stocks of companies with a reputation for good products and good management, and the investment returns will come. This is a message oft repeated by investment experts such as Warren Buffet (2007). This is only logical, as a well-run company should be worth more than a poorly run company. Yet, this is not a simple matter, as the investor must determine what are the well-run companies and whether they are price appropriately to provide an above-average return on investment. Damodaran' (2003) research considers different dimensions of excellence such as

financial results and corporate social responsibility. He concludes that companies that are well-managed and well run should be worth more than companies without these characteristics; however, results indicate that such companies are not necessarily good investments (as the stock price may be bid up too high).

Antunovich and Laster (1999) examine the challenge that investors face in selecting investments that are 'good' companies, but which may or may not be good investments. They evaluate the relationship between corporate reputation (based on Fortune's Most Admired List) and investment attractiveness. They answer the question whether investing in high-reputation companies, regardless of the price, is a sound idea. Their results indicate that the most admired firms are good investments and that their stock prices were not bid up too high.

The current study will attempt to build on the prior literature by offering a unique analysis of corporate reputation, using a modified Ohlson (1995) model to determine if high-reputation firms enjoy a market-value premium. Further, the current study will examine whether this market-value premium, if it exists, results from financial performance or lower risk, or both. The results will provide a current and unique analysis of the value of corporate reputation, which will provide important implications for management behavior.

Research Questions

The first research question is stated as follows: Do firms with a better reputation have higher market value? High reputation is proposed to be a value-relevant intangible asset, specifically, a "structural asset" as described by Lev (2001). Used as a proxy for reputation is a publicly available measure, namely, inclusion on the list of "America's Most Admired Companies" published annually by *Fortune* magazine (2005). The Most Admired list includes 582 firms. These firms will be matched to a sample of control firms (matched on size and

industry). Using a modified Ohlson (1995) model, cross-sectional tests (comparing list firms to their control firms) will be used to determine if high-reputation firms enjoy a market-value premium.

Prior studies have examined the economic consequences of individual firm attributes associated with reputation-related factors, such as ethical behavior (McAnally et al. 2006), firm reputation and corporate governance characteristics (Fukami et al. 1997), customer satisfaction ratings (Ittner and Larcker 1998), workplace quality (Ballou et al. 2003), and firm environmental reputation (Clarkson et al. 2007, 2004). Results of the current study will show whether high-reputation firms have higher market value than control firms, after accounting for concurrent financial performance, macro-economic conditions, and other documented value-relevant intangible assets (Hand 2002, Amir et al. 2003). Therefore, the first hypothesis is stated as follows:

Hypothesis 1: High-reputation firms have higher market value of equity.

The second research question is as follows: If a market value premium exists, is the premium related to superior financial performance (i.e. greater profitability and efficiency), or to a lower cost of capital (lower risk) or both? To answer this research question, two hypotheses are stated as follows:

Hypothesis 2: High-reputation firms have superior financial performance.

Hypothesis 3: High-reputation firms are less risky.

To test Hypothesis 2, that high-reputation firms have superior financial performance, calculations will be made of a number of accounting-based performance measures (e.g. ROA) and test the statistical difference between mean and median measures for list and control firms. To test Hypothesis 3, that high-reputation firms are less risky, we use several common

accounting-based and market-based risk measures (e.g. liquidity: current ratio and leverage: long-term debt to assets) are evaluated.

Data and Methodology

For testing our hypotheses, we use an external measure to identify firms with high reputation, namely the list of America's Most Admired Companies, published annually by *Fortune* magazine. This list was also used by Roberts and Dowling (2002). Each year, the March issue of *Fortune* magazine identifies "America's Most Admired Companies." These are touted as firms that have outperformed their peers in the hierarchy of American business. The magazine staff along with survey partner, Hay Group (2007), a firm specializing in global human resources and organizational consulting, aquires ratings of corporate excellence for the 1,000 largest U.S. companies (ranked by revenue) and the 25 largest U.S. subsidiaries of foreign-owned companies.

Ratings are obtained from several thousand top executives, outside directors, and securities analysts. These experts were asked to rate firms in their own industry or economic sector, comparing firms to competitors with respect to eight key attributes of reputation: ability to attract and retain talented employees, quality of management, social responsibility, innovation, quality of products or services, wise use of assets, financial soundness, and investment value. All of these factors are related directly or indirectly to ethics. For example, a firm is only able to attract and retain employees by treating them fairly and ethically. In the long-term, no one would work for an unethical employer they did not trust. For a number of years, social responsibility, particularly ethical care of the environment has received focused attention (Fisher 2007).

The financial performance attributes (wise use of assets, financial soundness, and investment value) are only meaningful if the reported accounting information is derived from reliable and ethical accounting practices. Determining the meaning of the attributes within a

specific industry is left to the respondents. A reputation score is calculated for each firm and the firms are ranked according to their score in 65 industries. Each year, firms are normally selected for inclusion on the list based on firm practices and data available during the preceding two years (Fortune 2005). Thus, being on the list results from a good reputation score, which is dependent on ethical behavior related to factors such as treatment of employees, care of the environment, and honest accounting practices.

Our sample begins with 582 firms on the *Fortune's* 23rd annual *Most Admired* list (Fortune 2005). Using Compustat data (year, total assets and three-digit SIC code), we matched each firm to a firm not on the *Fortune's Most Admired* list (hereafter referred to as 'control firms'). Because *Fortune* publishes their *Most Admired* list in March each year, the data used to compile the list is taken from the financial statements available during the prior year. For example, *Fortune* compiled its 2005 list during the prior year using the most current data available at that time. We identified control firms consistent with the *Fortune* methodology and were able to match 542 firms.

We gathered Compustat and CRSP data for all our list and control firms from 2002 to 2004. We are primarily interested in whether high reputation firms have a higher market value of equity and not whether higher reputation score per se increases market value. Thus, we include in our sample the list firms and the control firms for the entire three-year period [1]. We use the following modified Ohlson (1995) model as our primary test of Hypothesis 1:

$$MVE_{i,t} = ASSETS_{i,t} + LIABS_{i,t} + AB\_EARN_{i,t} + REPU_i + CONTROLS_{i,t} + \varepsilon_{i,t}, \quad (1)$$

[1] The 2005 list was available at the time we began this study but 2005 financial and market data were not. Thus our terminal year is 2004. Because our empirical models require some lagged data, our final time-series is three years—2002 through 2004. This period is arbitrary so we also conducted our statistical tests on the four years covered by the Most Admired list and none of our results are qualitatively different.

where $MVE_{i,t}$ is the market value of company *i*'s equity at the end of year *t*; *ASSETS* and *LIABS* are the book value of total assets and liabilities respectively; *AB_EARN* is abnormal earnings measured as actual earnings for year *t* less a 10 percent charge for the cost of equity capital.[2] $REPU_i$ is an indicator variable set equal to '1' if the firm is on the *Fortune*'s *Most Admired* list for 2005 and zero otherwise. A positive coefficient on $REPU_i$ will provide evidence that the market assigns a market premium to high reputation firms. *CONTROLS* is a vector of control variables, some of which are discreet indicator variables. To control for macro-economic conditions that affect the market value of equity, we include year indicator variables (where the earliest year in the time-series is omitted). We also control for other types of intangible assets (apart from the intangible created by reputation building behavior) that may increase firm value (Kallapur and Kwan 2004, Hand 2002, Lev 2001, Ghosh 2000). In particular, we include the following variables: *MKT_SHARE,* a proxy for market dominance and brand name (calculated as annual sales scaled by cumulative sales in the firm's four-digit SIC industry group), and *INDUSTRY*, a proxy for other industry-specific structural assets (a vector of binary indicator variables based on the firm's two-digit SIC code).

Amir et al. (2003) argue that readers cannot always gauge the value of intangible assets solely from the financial statements. Further, signaling reputation is often problematic for business firms. While investors may value reputable behavior, financial statements and annual reports may not be able to reliably convey a firm's reputation position. This suggests that an external signal of firm reputation, such as inclusion on the *Most Admired* list, could provide value-relevant information to the market. If the overall reputation assigned to firms in the *Most*

[2] Abarbanell and Bernard (2000) report consistent results for abnormal earnings calculated with discount rates ranging from nine to 15 percent. Their calculations hold rates constant across time and firms. As a robustness test, we also calculate abnormal earnings using rates from 8 percent to 12 percent and our findings are qualitatively unchanged.

Admired list provides a value-relevant signal, firms with higher score should have larger market value than firms with relatively lower score. To test this we estimate the following model on the list firms only:

$$MVE_{i,t} = ASSETS_{i,t} + LIABS_{i,t} + AB\_EARN_{i,t} + SCORE_{i,t} + CONTROLS_{i,t} + \varepsilon_{i,t}, \quad (2)$$

where $SCORE_{i,t}$ is the overall score (ranging from 2.18 to 9.36) for the listed firms obtained from *Most Admired* list. In this specification, listed firms are compared from each other, which allows us to test whether the overall score itself is a value-relevant signal to the market.

To address Hypothesis 2, high reputation firms have superior financial performance, we calculate a number of accounting-based performance measures and test the statistical difference between mean and median measures for list and control firms. Our tests include measures of profitability, growth, and efficiency. In particular, our profitability measures are sales divided by total assets, cost of sales margin (cost of sales divided by sales), return on total assets (net income divided by total assets), and return on equity (net income divided by total equity). Our growth measures are year-over-year changes in sales, cost of sales margin and net income. Our efficiency variables include inventory turnover (cost of sales divided by ending inventory), accounts receivable turnover (sales divided by ending accounting receivable), and accounts payable turnover (cost of sales divided by ending accounts payable).

To address potential concerns that our matched sample may miss important financial characteristics that actually explain a market premium to reputable firms, we create an annual industry benchmark for each performance measure above. Thus, the industry benchmark is a second, broader test of Hypothesis 2. Using the methodology in Fama and French (1997) to identify industry membership, we define the industry benchmark as the median of each performance measure calculated using all firms in the industry for which Compustat data are available that year. Then, we subtract each industry benchmark from the firm's performance

measure. Thus, our industry-adjusted variables measure how much the list firm's performance differs from all other firms in their industry. If list firms have superior performance, their mean industry-adjusted variables will be significantly different from zero and in the hypothesized direction. For example, we expect that the industry-adjusted mean ROA (cost of sales margin) will be significantly positive (negative) for list firms.

To address Hypothesis 3, that reputable firms are less risky, we evaluate several common accounting-based and market-based risk measures. While it is difficult to accurately measure a firm's riskiness or cost of capital with any one metric (Easton 2003), collectively our risk measures provide a composite picture of firms' overall riskiness. We evaluate balance-sheet measures of liquidity (current ratio) and leverage (long-term debt to assets) as well as a credit score measured as follows (Altman 2000):

$$Z = 1.2X_1 + 1.4X_2 + 3.3X_3 + 0.6X_4 + X_5 \qquad (4)$$

where X_1 is working capital to total assets, X_2 is retained earnings to total assets, X_3 is earnings before interest and taxes to total assets, X_4 is total equity to total debt, and X_5 is sales to total assets. This ratio is commonly used to predict bankruptcy and cost of debt issuances (Grice and Ingram 2001) and increases with the overall risk of the firm.

We also estimate risk metrics that consider the volatility of firms' operations (Froot *et al* 1993). In particular, we measure the riskiness of income statement and cash flow measures as the standard deviation of the prior eight quarters' sales, operating income and cash from operations. Because standard deviation is not scale-free, we first scale each performance measure by assets and then calculate the standard deviation of the resulting scaled variables.

Finally, we assess two market-based risk measures estimated using monthly CRSP returns over the preceding two years. These risk metrics are the stock price volatility defined as the standard deviation of the monthly logged price relatives (Grinblatt and Titman 2002) and the

Fama-French (1997) three-factor systematic market beta calculated as the sum of ($\beta_{m,t} + \beta_{m,t-1}$) estimated from the following model:

$$r_{i,t} - r_{f,t} = \alpha + \beta_{m,t}(r_{m,t} - r_{f,t}) + \beta_{m,t-1}(r_{m,t-1} - r_{f,t-1}) + \beta_{s,t}(\pi_{s,t}) + \beta_{s,t-1}(\pi_{s,t-1}) + \beta_{v,t}(\pi_{v,t}) + \beta_{v,t-1}(\pi_{v,t-1}) \quad (5)$$

where $r_{i,t}$ is the firm's stock return during month *t*, $r_{f,t}$ is the risk-free rate, $r_{m,t}$ is the value-weighted market return for month t, $\pi_{s,t}$ is the excess return for firm size during month t, and $\pi_{v,t}$ is the excess return for financial distress (i.e. market to book value) during month t.

Consistent with our performance measures, we also calculate industry-adjusted risk measures except for our market betas. These measures are regression coefficients, which already account for the 'mean' effect by market and size segment.

Analysis and results

Sample description

Table 1, Panel A shows the industry membership of our sample firms (as reported in 2003). Sample firms represent a broad cross-section of firms with the largest proportion in the industrial machinery and financial services industries.

[Insert Table 1 here]

Table 1, Panel B reports descriptive statistics and compares the list and control firms. Recall that to create the list published in March of any given year, Hay Group compiles information about the firm from the annual report two years prior. Thus, the time lag between Hay analysis and list-publication is between 15 and 21 months. For parity with the Hay methodology, panel B includes data from the annual report from two years (i.e., 2003) prior to the firm's inclusion on the list (i.e., 2005). Consistent with our matching on total assets, mean assets do not differ significantly across the list and control firms. However, the median list firm is somewhat larger than its match. As well, mean and median market value of equity is

significantly greater for the list firms despite the fact that total assets are statistically equal. On average, list firms have higher market share: 25.12 percent for list firms compared with 14.94 percent of control firms. In addition, list firms have higher return on assets providing initial evidence about superior performance of reputable firms. Percentage of loss firms and return on equity are statistically indistinguishable.

Tests of Hypothesis 1

Table 2 presents regression results for Model 1. We estimate this model for each of the 582 list firms and the control firms from 2002 through 2004. Consistent with prior research that uses the Ohlson (1995) model, the coefficients on *ASSETS* and *LIABS* are strongly positive and negative respectively, and both exceed unity (in absolute value). The coefficient on abnormal earnings is 1.41., which is in the range published in prior studies that use the Ohlson model (1995, 1999). The coefficient on REPU is significantly positive (1,342.93, $p < 0.02$), which we interpret as list firms enjoying an average market premium of about $ 1.3 billion (our dependent measure, market value of equity, is measured in millions). The control variables that capture other types of intangible assets (*MKT_SHARE*) are also significant consistent with prior work on the value-relevance of intangibles (Kallapur and Kwan, 2004). Given that we control for these other intangible assets, we conclude that reputable firm behavior creates a valuable intangible asset that is distinct from their industry peers.

[Insert Table 2 here]

A potential criticism of our Model 1 specification is that our matched firms provide a less-than perfect control condition. Thus, we estimate models for a sample that includes only list firms from 2002 to 2004. This time-series design regress market value of list firms on the overall reputation score (*SCORE*) assigned by Fortune magazine. Recall that the range of the score is

from 2.18 to 9.36. The benefit of estimating the market value of equity model this way is that it allows us to abstract away from firm-specific differences between the list firms and the matched control firms. Moreover, this design permits us to test the construct validity of the *Most Admired* list itself. That is, we can directly test whether the overall scores assigned to each list firm provides a value-relevant signal.

Table 3 reports regression results for Model 2. Consistent with Model 1 results, the variables in Model 2 have coefficients of the predicted signs. In particular, the coefficient on SCORE is strongly positive (2,615.24, $p < 0.001$), indicating for each reputation point increase firms can increase their market value by 2.6 million.

[Insert Table 3 here]

Taken together our regression results provide strong evidence that firms with higher reputation are more valuable to stockholders. Next we explore whether these firms have superior past financial performance (that predicts superior future performance), whether they are less risky, or both.

Tests of Hypothesis 2

To test Hypothesis 2 that the list firms outperform other firms, we compare the means and medians for three important dimensions of performance: profitability, growth, and operational efficiency. Table 4 reports the mean and median performance measures for list and control firms for 2002 through 2004. We use t-tests (Wilcoxon signed-rank tests) to compare the mean (median) performance measures across the two groups. A t-test is used to assess whether the median-adjusted performance measures (i.e. each firm's performance measure less its industry benchmarks) is statistically different from zero. Table 4 shows that list firms are more

profitable than control firms. List firms have higher industry-adjusted sales to total assets, return on assets, and return on equity.

[Insert Table 4 here]

Contrary to our expectation that reputable firms may enjoy internally generated cost savings, we find that list firms' cost of sales (as a percentage of sales) is slightly higher than for the control firms (0.68 for list firms versus 0.66 for control firms). We find that list firms exhibit stronger growth in sales and operating income. These indicate the list firms manage market expansion, presumably by engaging in more positive relations with customers, better than firms not on the list. Again, contrary to what we expected, list firms' cost of sales margin grew slightly faster than that of control firms. A potential explanation is that reputable firms price their products (services) lower than industry competitors to gain and/or retain their market share. Lastly, list firms exhibit more operational efficiency; both inventory turnover and accounts receivable turnover are better than the industry benchmark and better than the control firms. Interestingly, list firms seem to settle their accounts payable more quickly than control firms (25.7 days compared to 32.7 for control firms). One interpretation is that reputable firms engender trust and continued good relations with suppliers by promptly paying their bills.

Industry-adjusted variables (reported in the last two columns of Table 4) show that most of the performance characteristics have means and/or medians that exceed zero statistically (except cost of sales margin, which is negative as expected). Thus, list firms' financial performance is better than the average firm in their respective industries. This provides additional evidence in support of Hypothesis 2.

Tests of Hypothesis 3

To test Hypothesis 3 that the list firms are less risky than the control firms, we compare mean risk measures of the list firms to the control firms as well as to the industry benchmarks. These measures are shown in Table 5. First, we consider the balance sheet risk metrics. Compared to the control firms, list firms have a lower current ratio (1.612 compared to 1.853). In addition, list firms have lower current ratio than their industry benchmarks (mean industry-adjusted current ratio is -0.127). Thus, we conclude that list firms are less liquid. One potential explanation is that they maintain lower levels of current assets because of their operational efficiencies (documented in Table 4). List firms are less levered on average—mean and median long-term debt to assets is lower for list firms. Altman Z-scores, which represent a composite risk measure, are significantly greater for list firms (3.441 compared to 2.958). Firms with higher Altman Z-scores are predicted to have less likelihood of bankruptcy. Thus, our balance-sheet risk measures together indicate that list firms are less risky than non-list firms but the evidence is mixed.

[Insert Table 5 here]

Second, we compare the volatility of sales, earnings, and cash flows and find that list firms experience less volatility than control firms in sales and net income (median only for net income), which we interpret as list firms being less risky, consistent with Froot *et al* (1993). All of the industry-adjusted variables indicate that list firms experience less volatility. Thus, we conclude that list firms exhibit more stable operating results as measured by income statement and cash flow numbers.

Lastly, we compare market-based risk metrics. List firms have lower stock-price volatility than control firms as well as lower Fama-French three-factor betas. Thus, both total market risk and systematic risk are lower for reputable firms as compared to peer firms.

While each of the risk measures reported in Table 5 alone would be insufficient to unequivocally conclude that the list firms are less risky, collectively they present strong evidence that list firms are less risky than the average firm in their respective industries as well as less risky than a matched sample of firms. Taken together our results support our third hypothesis.

Our cross-sectional regression results (Model 1) show that firms with higher reputation have higher market value of equity after controlling for current performance and other value-relevant intangible assets suggested by prior research. In addition, our time-series regression results (Model 2) suggest that the overall reputation score assigned by *Fortune* captures a value-relevant dimension. Our univariate tests show that list firms have superior financial performance and that this manifests in greater profitability, growth, and operating efficiency. Lastly, tests of various risk measures suggest list firms are less risky.

Additional tests

Waddock and Graves (1997) present evidence consistent with social and financial performance being jointly determined. In addition, Brown and Perry (1994) suggest that there exists a financial performance halo in *Fortune*'s index of firm reputation due to the importance of financial information, such as accounting profitability and risk, to the magazine's ranking. That is, it could be that firms that perform better financially are perceived as more trustworthy and having higher reputation ex ante, but do not perform better ex post. To shed some light on this issue, we examine financial performance and risk measures after a firm's inclusion on the *Most Admired* list.

Table 6 reports the sample medians for our profitability, growth, and efficiency variables calculated for one quarter after the firm is included on the *America's Most Admired* list.[3] Each

[3] These tests examine medians as opposed to means because our sample includes a few extremely influential observations that skew the mean and impede our understanding of overall trends.

variable reported in Table 6 represents the firm-specific difference between the list firm and its industry benchmark, as measured by annual industry median. Positive measures therefore imply that the list firm outperformed the average firm in the industry that year. This design is more rigorous than a t-test of means, because it accounts for industry specific changes in performance that controls for performance being a leading indicator of higher reputation (as Damodaran 2003 suggests). The table confirms that list firms continue to outperform their industry peers in the quarter following the match. Taken together, our evidence suggests that reputable firms have superior performance in both the short and longer run.

[Insert Table 6 here]

Summary and Conclusions

Development of a positive corporate reputation connotes management's commitment to ethical accounting and principled business practices. A good reputation is dependent on ethical behavior related to factors such as treatment of employees, care of the environment, and honest financial reporting. The contribution of the current study is to ascertain whether there are economic effects associated with corporate reputation, and thereby ethical behavior. This study is important because prior research shows mixed results. The current study offers the most comprehensive effort to date, by including an analysis to determine if a market value premium is associated with reputation, and an evaluation of whether the market value premium, if it exists, is derived from superior financial performance or lower risk.

Regarding Research Question 1, whether firms with a better reputation have higher market value, the results indicate that indeed high-reputation firms do enjoy a market value premium. High-reputation firms show an average market value premium of $1.3 billion. We conclude that reputable firm behavior creates a valuable intangible asset that is distinct from

industry peers. Therefore, results support impression management theory, in that those businesses, which can effectively direct reputation management activities, will receive tangible economic and other benefits, in this case, an increase in the wealth of the corporate stockholders. These results complement earlier work that shows the positive benefits associated with a positive corporate reputation (e.g. Anderson and Smith 2006, Cox et al. 2004, Harrington 2003, Roberts and Dowling 2002, etc.).

Regarding Research Question 2 addresses whether a market-value premium of high-reputation firms, if such premium exists, is related to superior financial performance (i.e. greater profitability and efficiency), or from a lower cost of capital (lower risk), or both. Results indicate that high-reputation firms experience superior financial performance and a lower cost of capital (lower risk). High-reputation firms are more profitable on several dimensions such as industry-adjusted sales to total assets and return on assets. High reputation firms have lower risk, as they experience less volatility in sales and net income, have less likelihood of bankruptcy, and have lower stock price volatility. Managers would do well to consider the benefits associated with corporate reputation, as an incentive for engaging in ethically responsible behavior leading to or maintaining a positive corporate reputation.

Findings of this study make an important incremental contribution to the research literature on corporate reputation, by identifying a specific economic benefit, a market value premium, associated with high-reputation firms. Further, this study shows that this market-value premium is derived from superior financial performance and lower cost of capital. Future research might address other economic benefits or possibly non-economic benefits. For example, other benefits might include the company's image in the local community, the ability to create

working relationships with other companies, and the ability to attract and retain superior employees.

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TABLE 1
Demographics and descriptive statistics of financial variables for firms on Fortune's American's Most Admired list in 2005 and the sample of control firms

Panel A: Industry representation for sample firms

Industry description	Two-digit SIC	Percent of sample
Oil and gas extraction	13	2.21%
Building construction general contractors and builders	15	1.77%
Food and kindred products	20	4.33%
Furniture and fixture	25	1.77%
Paper and allied products	26	2.12%
Printing, publishing, and allied industries	27	2.39%
Chemicals and allied products	28	4.59%
Petroleum refining and related industries	29	1.77%
Primary metal industries	33	1.59%
Fabricated metal products	34	1.41%
Industrial and commercial machinery	35	5.48%
Electronic equipment and components	36	2.98%
Transportation equipment	37	3.89%
Measuring, analyzing, and controlling instruments	38	3.00%
Motor freight transportation and warehousing	42	1.94%
Transportation by air	45	2.03%
Communications	48	3.00%
Electric, gas and sanitary services	49	4.24%
Wholesale trade-durable goods	50	3.62%
Wholesale trade – nondurable goods	51	2.83%
General merchandise stores	53	1.94%
Food stores	54	1.59%
Apparel and miscellaneous retail	56 & 59	4.74%
Depository institutions	60	4.42%
Other non-depository financial services	61-63	7.16%
Business services	73	5.30%
Other	various	8.44%

TABLE 1 (continued)

Panel B: Means, medians and lower and upper quartile statistics for sample firms

	582 List firm years				552 Control firm years			
	Mean	**Lower quartile**	**Median**	**Upper quartile**	**Mean**	**Lower quartile**	**Median**	**Upper quartile**
Total assets	37,656.23	1,731.80	7,295.34	24,405.00	26,835.10	1423.00	4634.96	18020.01
Return on assets (ROA)	4.22%*	1.29%	3.74%	7.12%	2.00%	0.53%	2.50%	5.64%
Return on Equity (ROE)	22.39%	1.50%	15.60%	27.29%	29.78%	-0.28%	11.49%	23.18%
Percent of firms with loss	8.39%	N.A.	N.A.	N.A.	9.54%	N.A.	N.A.	N.A.
Total sales	14,771.72*	2,744.37	6,057.50	15,119.00	9515.13	1123.52	2999.59	8897.00
Book value of equity	6,521.23*	840.00	2,270.00	6,320.00	4,242.00	533.46	1483.43	4353.46
Market value of equity	18,149.22*	2,152.96	6,029.91	16,075.79	9,129.30	894.99	2868.065	7,290.28
Market share	25.12%*	5.85%	13.11%	35.29%	14.93%	3.00%	8.06%	16.22%
Abnormal earnings	575.47*	1.33	145.24	601.94	280.20	-32.55	44.25	266.43

Notes to Table 1:
The table reports the means, lower quartile, median and upper quartile separately for 582 firms on the *Most Admired* list for 2005 with some observations leaving the sample due to missing data and 552 control firms matched on asset size and industry for each of the following variables:
Total assets (Compustat #6), in millions of dollars.
Return on assets = Net income (Compustat #172) / Common equity (Compustat #11), in percent.
Return on assets = Net income (Compustat #172) / Total assets (Compustat #6), in percent.
Percent of firms with loss = 1 if Net income (Compustat #172) is negative; zero otherwise.
Total sales (Compustat #12), in millions of dollars.
Book value of equity = Total assets (Compustat #6) – Total liabilities (Compustat # 181), in millions of dollars.
Market value of equity = Price per share (Compustat # 199) × Shares outstanding (Compustat # 25), in millions of dollars.
Market share = Total sales (Compustat #12) / ∑ Total sales (Compustat #12) for all firms in four digit SIC code, in millions of dollars.

* Mean for list firms is significantly different than mean for control firms at p = 0.05 or better using a one-tailed student t-test.

TABLE 2
Ordinary least-squares regressions of market value of equity models

Model 1:

$$MVE_{i,t} = ASSETS_{i,t} + LIABS_{i,t} + AB\_EARN_{i,t} + REPU_i + MKT\_SHARE_{i,t} + Year_t + Industry_j + \varepsilon_{i,t},$$

		Complete time-series 2002 to 2004 N=2,580[a]	
	Pred Sign	Parameter estimate	student t-statistic
Intercept		-986.66	-0.32
ASSETS	+	2.58	68.87*
LIABS	–	-2.62	-66.06*
ABNORM_EARN	+	1.41	13.13*
REPU	+	1342.93	2.32*
MKT_SHARE	+	49.23	3.33*
Year	+/-	Suppressed	
Industry	+/-	Suppressed	
Adj-R^2		80%	

Notes to Table 2:

[a] This regression includes time-series observations from 2002 through 2004 for the 582 unique firms on the *Most Admired* list for 2005 and 552 control firms matched on asset size and industry membership (with some firm-year observations leaving the sample due to missing data).

Variable definitions (measured at fiscal year end):

MVE, market value of equity = Price per share (Compustat # 199) × Shares outstanding (Compustat # 25), in millions of dollars.

ASSETS, total assets (Compustat #6), in millions of dollars.

LIABS, total liabilities (Compustat #181), in millions of dollars.

REPU, indicator variable = 1 if firm is on the America's Most Admired Companies list in 2005, 0 otherwise

ABNORM_EARN, abnormal earnings = Net income (Compustat #172) – 0.10 × prior year's equity (Compustat #11), in millions of dollars.

MKT_SHARE, market share = Total sales (Compustat #12) / ∑ Total sales (Compustat #12) for all firms in four-digit SIC code, in percent.

Year, year indicator variable = 1 if observation is from that year, and 0 otherwise.

Industry, industry indicator variable = 1 if firm is in two-digit SIC code, and 0 otherwise.

* Co-efficient is significantly different than zero at p = 0.05 or better using a two-tailed student t-test.

TABLE 3
Ordinary least-squares regressions of market value of equity models

Model 2:

$$MVE_{i,t} = ASSETS_{i,t} + LIABS_{i,t} + AB\_EARN_{i,t} + SCORE_i + MKT\_SHARE_{i,t} + Year_t + Industry_j + \varepsilon_{i,t}$$

	Model 2 (N=1,516) [a]		
	Pred Sign	Parameter estimate	student t-statistic
Intercept		-17,561.00	-3.43*
ASSETS	+	2.53	50.61*
LIABS	–	-2.57	-48.14*
ABNORM_EARN	+	1.21	9.17*
SCORE	+	2615.24	5.43*
MKT_SHARE	+	63.24	2.87*
Year	+/-	Suppressed	
Industry	+/-	Suppressed	
Adj-R^2		81.07%	

Notes to Table 3:

[a] These regressions includes time-series observations from 2002 through 2004 for the 582 unique firms on the *Most Admired* list for 2005 (with some firm-year observations leaving the sample due to missing data).

Variable definitions (measured at fiscal year end):

MVE, Market value of equity = Price per share (Compustat # 199) × Shares outstanding (Compustat # 25), in millions of dollars.

ASSETS, total assets (Compustat #6), in millions of dollars.

LIABS, total liabilities (Compustat #181), in millions of dollars.

ABNORM_EARN, abnormal earnings = Net income (Compustat #172) – 0.10 × prior year's equity (Compustat #11), in millions of dollars.

SCORE, overall reputation score assigned to *America's Most Admired Companies* by Fortune magazine.

MKT_SHARE, Market share = Total sales (Compustat #12) / ∑ Total sales (Compustat #12) for all firms in four-digit SIC code, in percent.

Year, year indicator variable = 1 if observation is from that year, and 0 otherwise.

Industry, industry indicator variable = 1 if firm is in two-digit SIC code, and 0 otherwise.

* Co-efficient is significantly different than zero at p = 0.05 or better using a one-tailed student t-test.

TABLE 4
Descriptive statistics for profitability, growth and efficiency measures

	List firms [a] unadjusted variables		Control firms [b] unadjusted variables		List firms [a] industry-adjusted variables	
	Mean	**Median**	**Mean**	**Median**	**Mean**	**Median**
Profitability variables						
Sales to total assets	1.322*	1.007*	1.052	0.893	0.044†	0.028†
Cost of sales margin	0.680*	0.721*	0.660	0.707	-0.014†	-0.001†
Return on assets	0.035*	0.043*	0.030	0.037	0.023 †	0.012†
Return on equity	0.070*	0.152*	0.242	0.122	0.071	0.039†
Growth variables						
Sales	2.227*	0.100	0.187	0.000	21.232†	0.043
Cost of sales margin	0.118*	0.001*	0.042	0.000	0.049	-0.004†
Net income	-0.999	0.050*	0.434	0.000	1.731	0.144†
Efficiency variables						
Inventory turnover	19.399*	7.808*	32.121	7.696	13.141†	0.178†
Acc. receivable turnover	20.214*	7.788*	13.470	6.620	2.786†	0.035
Acc. payable turnover	14.047*	9.093*	11.118	8.187	1.665†	0.107†

Notes to Table 4:

[a] This column includes 582 firms on the *Most Admired* list for 2002-2004 with some firm-year observations leaving the sample due to missing data.

[b] This column includes 552 control firm (matched on asset size and industry membership with 582 firms on *the Most Admired* list for 2002-2004 with some firm-year observations leaving the sample due to missing data).

Unadjusted variables are defined as follows:

Sales to total assets = Sales (Compustat #12) / Total assets (Compustat #6). For banks, sales are measured as BankCompustat # 116.

Cost of sales margin = Cost of sales (Compustat #41) / Sales (Compustat #12), not calculated for banks.

Return on assets = Net income (Compustat #172) / Total assets (Compustat #6).

Return on equity = Net income (Compustat #172) / Common equity (Compusat #11).

Sales growth = $(\text{Sales}_{t} - \text{Sales}_{t-1}) / \text{Sales}_{t-1.}$

Cost of sales margin growth = $(\text{Cost of sales margin}_{t} - \text{Cost of sales margin}_{t-1}) / \text{Cost of sales margin}_{t-1.}$

Net Income (Compustat #172) is in millions of dollars.

Inventory turnover = Cost of sales (Compustat #41) / Inventory (Compustat #3), not calculated for firms without inventory.

Accounts receivable turnover = Sales (Compustat #12)) / Accounts receivable (Compustat #2).

Accounts payable turnover = Cost of sales (Compustat #41) / Accounts payable (Compustat #70).

Industry-adjusted variables are defined as the unadjusted variable (defined above) less the median calculated by year, across all firms in the Compustat database in the list firm's four-digit SIC code.

* Mean (or median) for list firms is significantly different than mean (or median) for control firms at p = 0.05 or better using a two-tailed student t-test (Wilcoxon signed-rank test).

† Mean (or median) is significantly different than zero in the predicted direction at p = 0.05 or better using a one-tailed student t-test (median test).

Table 5
Descriptive statistics for financial statement and market risk measures

	List firms [a] unadjusted variables		Control firms [b] unadjusted variables		List firms [a] industry-adjusted variables	
	Mean	**Median**	**Mean**	**Median**	**Mean**	**Median**
Balance sheet measures						
Current ratio	1.612	1.409	1.853	1.483	-0.027	-0.104†
Debt to assets	0.222*	0.203*	0.226	0.213	-0.048†	0.029†
Altman Z-score	3.441*	2.830*	2.958	2.509	0.705†	0.063†
Variability of performance						
Std. dev. of sales	0.035*	0.020*	0.039	0.022	-0.007†	-0.010†
Std. dev. of net income	0.013	0.005*	0.013	0.008	-0.009†	-0.007†
Std. dev. of cash from operations	0.024	0.019	0.024	0.020	-0.008†	-0.007†
Market-based measures						
Stock price volatility	0.19*	0.15*	0.21	0.17	-0.01†	-0.03†

Notes to Table 5:

[a] This column includes 582 firms on the *Most Admired* list for 2002-2004 with some firm-year observations leaving the sample due to missing data.

[b] This column includes 552 control firm (matched on asset size and industry membership with 582 firms on the *Most Admired* list for 2002-2004 with some firm-year observations leaving the sample due to missing data).

Unadjusted variables are defined as follows:

Current ratio = Total current assets (Compustat #4) / Total current liabilities (Compustat #5).

Debt to assets = Total long-term debt (Compustat #9) / Total assets (Compustat #6).

Altman Z-score = (1.2 × X1) + (1.4 × X2) + (3.3 × X3) + (0.6 × X4) + (0.999 × X5).

X1 = [Total current assets (Compustat #4) – Total current liabilities (Compustat #5)] / Total assets (Compustat #6).

X2 = Retained earnings (Compustat #36)/ Total assets (Compustat #6).

X3 = EarningsB4inttax / Total assets (Compustat #6), with EarningsB4inttax = Income before extraordinary items (Compustat #18) + Interest expense (Compustat #15).

X4 = [Price per share (Compustat #199) × Shares outstanding (Compustat #25)] / Total liabilities (Compustat #181).

X5 = Sales (Compustat #12) / Total assets (Compustat #6).

Std. dev. of sales = Sales (Quarterly_Compustat #2) / Total assets (Quarterly_Compustat #44).

Std. dev. of net income = Income before ext. (Quarterly_Compustat #8) / Total assets (Quarterly_Compustat #44).

Std. dev. of cash from operations = Net operating cash flow (Quarterly_Compustat #108) / Total assets (Quarterly_Compustat #44).

Stock price volatility = standard deviation of the natural logarithm of monthly CRSP price relatives (P_t/P_{t-1}) calculated over prior 24 months.

Industry-adjusted variables are defined as the unadjusted variable (defined above) less median measure for variable calculated by year, across all firms in the list firm's four-digit SIC code.

* Mean (or median) for list firms is significantly different than mean (or median) for control firms at p = 0.05 or better using a two-tailed student t-test (Wilcoxon signed-rank test).

† Mean (or median) is significantly different than zero in the predicted direction at p = 0.05 or better using a one-tailed student t-test (median test).

TABLE 6
Descriptive statistics for profitability, growth and efficiency measures
One quarter after firms appear on *Most Admired* list

	One quarter after appearing on Most Admired list
Profitability variables	
Sales to total assets	0.052 *
Cost of sales margin	-0.006
Return on assets	0. 013*
Return on equity	0. 036*
Growth variables	
Sales	0.214*
Cost of sales margin	-0.002**
Net income	0.536*
Efficiency variables	
Inventory turnover	0.131*
Acc. receivable turnover	-0.007
Acc. payable turnover	0.731*

Notes to Table 6:
All variables are industry-adjusted. Thus each variable is defined as the unadjusted variable (defined below) less the median calculated by year, across all firms in the Compustat database in the list firm's four-digit SIC code.
Sales to total assets = Sales (Compustat #12) / Total assets (Compustat #6). For banks, sales are measured as BankCompustat # 116.
Cost of sales margin = Cost of sales (Compustat #41) / Sales (Compustat #12), not calculated for banks.
Return on assets = Net income (Compustat #172) / Total assets (Compustat #6).
Return on equity = Net income (Compustat #172) / Common equity (Compusat #11).
Sales growth = (Sales $_{t}$ – Sales $_{t-1}$) / Sales $_{t-1}$.
Cost of sales margin growth = (Cost of sales margin $_{t}$ – Cost of sales margin $_{t-1}$) / Cost of sales margin $_{t-1.}$
Net Income (Compustat #172) is in millions of dollars.
Inventory turnover = Cost of sales (Compustat #41) / Inventory (Compustat #3), not calculated for firms without inventory.
Accounts receivable turnover = Sales (Compustat #12)) / Accounts receivable (Compustat #2).
Accounts payable turnover = Cost of sales (Compustat #41) / Accounts payable (Compustat #70).
* (**) Mean (or median) is significantly different than zero in the predicted direction at p = 0.05 (0.10) or better using median test.