Do Changes In Corporate Reputation Impact Subsequent Stock Price Performance?

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Abstract

This study of firm reputations finds that firms with improved reputations, as measured by Harris Interactive, provide higher average rates of return on the announcement date than those firms with diminished reputations. Somewhat surprisingly, firms with improved reputations earned an 8.3% return over the following year whereas firms with diminished returns earned a higher 15.4 % return. One can only speculate that firms with diminished reputations might be making management decisions that enhanced profitability at the expense of positive public perceptions of the firm. Sharpe and Treynor measures, based on median returns, were significantly greater for those firms with above average changes in reputation.

I. Introduction

This study looks at the relationship of changes in a firm's reputation and the subsequent stock price performance. A corporation's reputation reflects the public's perception of the ethical standards and behavior it exhibits while providing goods and services to its customers. Ethical behavior dictates that an organization treats others legally, fairly, and honestly. For businesses to be successful in the long-run, they must have the trust and confidence of their customers, employees, and owners, as well as the community and society within which they operate. Nearly everyone agrees that firms have a responsibility to provide safe products and services and to afford safe working conditions for employees. We also expect them to protect the environment and not pollute it. Laws and regulations exist to ensure minimum levels of compliance. When a company meets and exceeds our expectations, we generally deem them to be ethical and have a good reputation.

In this research we use a measure of corporate reputation called the Reputation Quotient^{sm} (RQ). The RQ is a comprehensive measuring method of corporate reputation that was created by Harris Interactive Inc. and Professor Fombrun (Fombrun & Shanley, 1990). They jointly developed this standardized assessment tool to capture the perceptions of corporate stakeholder groups such as consumers, investors, employees, and key influentials. It is created from data received by the Harris Poll Online which has a proprietary global database of over 4.2 million cooperative respondents. The instrument enables research on the drivers of a company's reputation as well as comparisons of reputation both within and across industries.

The methodology to evaluate companies and calculate the quotient is conducted in two phases. In the first phase, Harris Interactive conducts over 4,500 online and telephone interviews with respondents throughout the United States. People are asked to nominate the companies they believe to have the best and worst reputations. In the second phase, another 10,830 respondents are asked to provide detailed ratings of the 60 most frequently mentioned companies. On average, each of the companies is evaluated by approximately 445

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respondents. All ratings are weighted to be representative of the U.S. population. The business reputation model has the following six drivers of corporate reputation: emotional appeal, products and services, vision and leadership, workplace environment, financial performance, and social responsibility.

II. Literature Review

There is a growing body of literature that applies the RQ methodology to firms in various countries around the world (Gardberg, 2006). The value of the Reputation Quotient is that it provides an objective, credible way to quantify the different levels of positive or negative public perception of companies that are a part of our everyday life.

In a study of the relationship between reputations and financial success, it was found that a company's reputation for financial success can adversely affect its overall reputation (Porritt, 2005). The author reports that firms perceived as making large profits at the expense of customers can have their reputations adversely affected. The author called this phenomenon "The Bottom-Line Backlash Effect". This could possibly explain why companies with poor reputations are sometimes more profitable than other companies with better reputations.

The most relevant research done on the topic of the investment performance of firms with good and bad reputations as measured by the Reputation Quotient is the more recent research done by Krueger and Wrolstad (Spring 2007). They find that portfolios with the top RQ ratings provided a higher return than portfolios with the bottom RQ ratings on both the announcement date and the following year. Due to the limited sample size, these findings were found to be statistically insignificant. The study also reports that portfolios of the highest RQ firms have statistically significant lower investment risks as evidenced by both lower standard deviations and betas.

III. Empirical Results

Comparison of Firms with Improved versus Diminished Reputations

Firms with improved reputations from the prior report provide higher average rates of return on the announcement date than those firms with diminished reputations, as shown in Table I. On the day of the announcement, the average return of the firms with improved RQs was a negative 0.10%, while those with diminished RQs had an average return of -0.42%. The median difference in return was very similar at thirty basis points.

On average, firms with improved RQs earned 8.30% over the following year, as exhibited in the second column of Table I. Those with diminished reputations earned a 15.4% average rate of return over the following year, perhaps due to a rebounding reputation over that period.

Despite the seemingly large disparity in average return values over the subsequent 365 days, the difference was not found to be statistically significant.

A better measure of the relative impact on subsequent returns of firm reputation changes is to compare the performance relative to the market overall. In this research, the Standard & Poor's 500 Index (SP) was used as the market surrogate. All of the values that

are statistically significant at the 0.05 level or less are tied to the SP values. Though negative, the average return of the SP that coincided with the 128 advances in RQ (e.g., -0.09%) was significantly greater than the market surrogate's return that coincided with the 140 RQ declines (e.g., -0.50%). The median SP return coinciding with the 128 firms with improved reputations is also significantly better (e.g., -0.03 – (-0.41%) = 0.38%) at the 0.01 level. On the announcement date, the average and median returns of both the firms with positive and negative RQ changes is within 0.10 percent of the market return. However, due to the higher standard errors of the firm returns compared to the market returns, the return of the portfolio of firms with positive RQ changes is not statistically different from that of the portfolio of firms with negative RQ changes.

The other significant difference shown on Table I is the difference between the average SP returns during the following year. When reputations improved in the previous period, the SP return was 3.83% on average. However, when reputations decline, the stock market recovered nicely. The annual return of 9.84% is statistically significantly higher at the 0.01 level.

Over the year following publication of RQ information, the average return for improved firms was 4.47% (i.e., 8.30% - 3.83%) higher than the average market return, while the median return was 1.61% higher. The average return of firms with reductions in reputations also exceeded the SP, with a market excess return of 5.56% (i.e., 15.40% - 9.84%) on average and 3.23% using median returns. The SP performance coinciding with firms with reduced reputations is over two times its counterpart and the market-excess returns of firms with diminished reputations also exceed the market-excess returns of firms with improved RQs.

Sample Analysis

Over the 1999-2006 period corporate reputations declined as measured by the RQ. As shown in the top row of Table II (Panel A), the average corporate reputation rose in only three of the seven years. Interestingly, these were all bunched in the 2004-2006 period. The sum of the three most recent years of RQ increases together results in a value that is less than the reputation decrease in the year 2002 alone. The economic challenges of the period immediately following the terrorist attacks on this country may have adversely impacted corporate reputations.

Another way to examine RQ changes over time is to examine the frequency of advancing and declining reputations, as is shown in the Panel B of Table II. The number of firms with advancing or declining reputations parallels the information in Panel A. As detailed in the third row of Table II (Panel C), the range of the annual change in reputation varies from 11.0% in 2000 to 28.9% in 2005. Given the substantial changes in reputation quotient, it is important to do more than study the performance of the firms with the highest and lowest RQs, as done by Krueger and Wrolstad (2007). Depending on the number and magnitude of outliers, the number of firms experiencing a reputation change greater than average can vary dramatically.

In Panel D you can see that in 2000, when the second biggest drop in corporate reputation occurred, about two-thirds of the firms experienced an increase in corporate

reputations. When RQs rose by 1.04% in 2004, about two-thirds of the firms experienced a RQ decline. In fact, over the years, more than 129 firms have beaten the average increase, while a larger 139 have fallen short.

Changes in Corporate Reputation Relative to the Mean

The average RQ values change from year to year, as shown in Table II. Panel A of Table III presents the performance of firms with a RQ increase that exceeded the average increase (or in years when the average RQ declined there was less of a decline) versus those that didn't keep pace with the average change. The returns on announcement dates are very similar on an average or median basis. Over the subsequent year, those firms with better than average RQ changes earned an average return that was 1.3 percent (i.e., 12.7% – 11.4%) greater than firms with below average RQ changes. On a median basis, firms with better than average RQ changes had a return that was 5.4 (i.e., 10.6% - 5.2%) percent better. Although not statistically significant, the implication seems to be that firms with improved reputations relative to the market tend to provide better investment results.

Extreme changes in Corporate Reputation

The prior study by Krueger and Wrolstad (2007) looked only at the ten firms with the highest RQs and firms with the lowest RQs. This analysis takes that analysis forward and examines the performance of the ten firms with the most positive and negative reputation changes. As shown in Panel B of Table III, the announcement date reaction is very similar. Over the subsequent year, the ten firms with the greatest positive changes in RQ earned a return that was 4.4 (i.e., 13.7% – 18.1%) percent less than the ten firms with the largest negative changes in reputation. However, the median rate of return over the following year was 1.78 percent better for the ten firms with the greatest positive RQ change, though neither of the differences is statistically significant.

Analysis of Risk

An analysis of Sharpe values provides some additional insight. Most Sharpe measures were not significantly different, whether looking at mean or median values as exhibited in the first row of each data set in Table IV. The one exception to this was the Sharpe measures for the comparison of firms with above and below average changes in reputation. The median 1.20 Sharpe value for firms with above average changes in reputation was statistically greater than the median 0.23 Sharpe value for firms with below average changes in reputation, at the 0.10 level. These findings are supportive of those found by Krueger and Wrolstad (2007) for the RQ rankings themselves.

The beta values across RQ change portfolios are relatively similar, as exhibited in the second row of each data set in Table IV. The mean difference never exceeds 0.10, while the largest median difference is a virtually non-perceivable 0.02 Treynor measures are also insignificantly different in all but one case. In that instance, shown in Panel B of Table IV, the Treynor measure of firms with above average changes in RQ exceeds the Treynor measure of firms with below average changes in RQ at the 0.05 level.

IV. Summary and Conclusion

This research found that the median returns for firms with improved reputations, relative to the market, did provide better investment results. The reason for the superior average performance of firms with diminished reputations continues to be unclear. The most

likely explanation is the limited observation population but the "Bottom-Line Backlash Effect" discussed earlier may have played a role. The answer to our initial question is that changes in reputation as measured by the RQ, provides very limited new information useful to guide investment decisions.

Corporate reputation, as measured by RQ, declined from 1999 through 2003 and then increased in every subsequent year in the study. Over time, approximately half of the firms experienced an advancing RQ. Some RQ change-related, significant differences in financial performance were found. Although one would have expected firms with improved reputations, reputation improvements that exceeded the average change, and the portfolio of firms with the best changes to do significantly better than their alternative, such is not the case.

Table I

Comparative Holding Period Returns of Firms with Improved Reputations versus Diminished Reputations

Portfolio returns measurements that are statistically different at the 0.05 level are marked with corresponding small case letters. Those that are statistically different at the 0.01 level are marked with a corresponding capital superscript.

N values are the summation of observations reported in Panel B of Table 2.

	N	Announcement Date Return	Following Year Holding-Period Return
Firms with Improved Reputations			
Average return	128	-0.10%	8.30%
Median return	128	-0.11%	6.17%
Standard & Poor's 500			
Average return	128	-0.09%^{A}	3.83%^{C}
Median return	128	-0.03%^{B}	4.56%
Firms with Diminished Reputations			
Average return	140	-0.42%	15.40%
Median return	140	-0.41%	8.25%
Standard & Poor's 500			
Average return	140	-0.50%^{A}	9.84%^{C}
Median return	140	-0.41%^{B}	5.02%

The Treasury bills rate is being used as the surrogate for the risk-free rate in this research. Its average return ranged from 3.30 percent over the years following RQ improvements to 2.73 percent over the years following RQ declines.

Table II - Demographic Data Related to Reputation Quotient Changes.

The total number of observations (N) is number of firms in the Harris Interactive Reputation Quotient Survey that are included in the survey in the reported year and the prior year less any of the firms that did not trade in the stock market during the period between the two survey dates.

Year	2000	2001	2002	2003	2004	2005	2006
N	14	21	42	46	48	49	48
Panel A. Average and Median Changes in Reputation Quotient by Year							
Average Change in Reputation Quotient	-1.39%	-0.44%	-3.30%	-0.93%	1.04%	0.44%	1.08%
Median Change in Reputation Quotient	-0.70%	-0.64%	-2.50%	-1.13%	0.25%	0.76%	1.51%
Panel B. Frequency of Advancing and Declining Reputations							
Advancing	6	8	8	16	29	30	31
Declining	8	13	34	30	19	19	17
Panel C. Reputation Quotient Change Extremes							
Largest Positive Change	4.01%	6.32%	3.44%	9.04%	13.3%	17.5%	8.02%
Largest Negative Change	-7.02%	-5.50%	-22.3%	-7.01%	-12.1%	-11.4%	-13.3%
Range of Reputation Quotient Changes	11.0%	11.8%	25.7%	16.1%	25.4%	28.9%	21.4%
Panel D. Frequency of Changes Relative to Average Change							
More Positive	9	8	26	18	15	25	28
More Negative	5	13	16	28	33	24	20

Table III

Analysis of Relative Risk: Comparative Measures of Returns of Firms with Reputation Changes Above and Below Average and the Ten Firms with Greatest Reputation Improvement and Decay

Portfolio returns measurements that are statistically different at the 0.05 level are mark with corresponding small case letters. Those that are statistically different at the 0.01 level are marked with a corresponding capital letter superscript.

N values reported in Panel A below are the summation of observations reported in Panel D of Table II.

	N	Announcement Date Return	Following Year Holding-Period Return
Panel A. Firms with Above and Below Average Change in Reputation			
Firms with Above Average Changes in Reputations			
Average	129	-0.24%	12.7%
Median	129	-0.23%	10.6%
Firms with Below Average Changes in Reputations			
Average	139	-0.29%	11.4%
Median	139	-0.24%	5.20%
Panel B. Ten Firms with Most Positive and Negative Reputation Changes in Each Year.			
Ten Firms with Most Positive Reputation Changes			
Average	68[1]	-0.33%	13.7%
Median	68[1]	-0.25%	7.98%
Ten Firms with Most Negative Reputation Changes			
Average	67[1]	-0.37%	18.1%
Median	67[1]	-0.20%	6.20%

[1]There were only 14 firms in the 2000 change sample. In 2002 three firms had no change in reputation, resulting in a tie among the top 10 positive changes and 11 firms being included in that year.

Table IV - Comparative Measures of Risk

Portfolio returns measurements that are statistically different at the 0.10 level are marked with corresponding numbers. Those that are statistically different at the 0.05 level are marked with corresponding small case letters. Those that are statistically different at the 0.01 level are marked with a corresponding capital superscript.

	N	Mean	Median
Panel A. Firms with Improved and Diminished Reputations			
Firms with Improved Reputations			
Sharpe	128	0.84	0.30
Beta	128	0.97	0.92
Treynor Measure	128	0.12	0.02
Jensen Measure	128	4.53%	3.93%
Firms with Diminished Reputations			
Sharpe	140	1.78	0.94
Beta	140	0.93	0.92
Treynor Measure	140	0.13	0.05
Jensen Measure	140	5.37%	2.30%
Panel B. Firms with Above and Below Average Changes in Reputations			
Firms with Above Average Changes in Reputation			
Sharpe	129	1.47	1.20[1]
Beta	129	0.93	0.93
Treynor Measure	129	0.19	0.08[a]
Jensen Measure	129	4.22%	4.52%
Firms with Below Average Changes in Reputation			
Sharpe	139	1.20	0.23[1]
Beta	139	0.97	0.91
Treynor Measure	139	0.07	0.01[a]
Jensen Measure	139	5.66%	1.77%
Panel C. Ten Firms with Most Positive and Negative Reputation Changes in Each Year.			
Ten Firms Most Positive Changes in Reputation			
Sharpe	68[*`]	1.43	0.71
Beta	68[*]	1.00	0.96
Treynor Measure	68[*]	0.15	0.06
Jensen Measure	68[*]	14.2%	6.19%
Ten Firms with Most Negative Changes in Reputation			
Sharpe	67[*]	2.10	0.44
Beta	67[*]	0.91	0.95
Treynor Measure	67[*]	0.08	0.03
Jensen Measure	67[*]	18.3%	5.24%

[*]There were only 14 firms in the 2000 change sample. In 2002 three firms had no change in reputation, resulting in a tie among the top 10 positive changes and 11 firms being included in that year.

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