REPUTATION AS RESERVOIR:
The Value of Corporate Goodwill as a Buffer Against Loss in Times of Economic Crisis

Dr. Gary H. Jones
Division of Language & Literature
100 East Normal
Truman State University
Kirksville, MO 63501-4221
Ph: (816) 785-4520
email: gjones@truman.edu

Dr. Beth H. Jones
College of Business
Western Carolina University
Cullowhee, NC 28723
Ph: (704) 227-7401
email: bjones@wcu.edu

Dr. Philip Little
College of Business
Western Carolina University
Cullowhee, NC 28723
Ph: (704) 227-7401
Email: plittl@wcu.edu
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Abstract: The premise of this study is that a good reputation serves as an intangible asset which can help protect the organization in times of corporate crisis—in public-relations terms, the "reservoir of goodwill" presumption. Using data from the stock market crashes in 1987 and 1989, this study examined whether companies with better reputations, as measured by Fortune's annual ratings of America's largest corporations, suffered less severe declines in market value. Results show no significant difference between companies with higher and lower reputations in 1987, when the market dropped over 20 percent in one day. During this crisis, there was a high volume of automated computer trading and a great deal of investor panic which may have precluded rational investment decision making. In 1989, however, the when the market took a less severe sudden, unexpected downturn, the stock prices of companies with better reputations dropped significantly less than those of companies not favored with such positive standing. This supports the hypothesis that good corporate reputations provide a reservoir of goodwill which buffers companies from market decline in times of economic turmoil (short of a panic), underscoring the importance of attentive reputation management.

Keywords: corporate reputation, goodwill, reservoir of goodwill, stock price, stock market crash, intangible asset, reputation management.
INTRODUCTION

Like individuals, organizations are identified in part by the value of their good name. There is growing recognition in the business community that managerial considerations of reputation are no less significant than those involved with corporate operational, financial, and legal decisions. Although a number of studies have addressed ways in which organizations might build a good reputation, the consequences of corporate reputation have been less well examined empirically. What is the value of a solid reputation once secured? It has been suggested that reputation can serve as something of a reservoir of goodwill, both in the accounting sense (where reputation is assigned a dollar value when a firm is sold (Batchelor, 1999; Bromley, 1993, p. 166; Davis, 1992), and in a public relations sense, where it is implied that communities will tend to give highly reputable firms the "benefit of the doubt" (Bostdorff and Vibbert, 1994; Fombrun, 1996; McGuire, Sundgren, and Schneeweis, 1988 (by implication); Patterson, 1993; Sobol, Farrelly, and Taper, 1992).

Unfortunately, few empirical studies have actually demonstrated hypothesized effects. The purpose of this study is to examine the benefit of corporate reputation. The question addressed is whether corporate reputation serves as an intangible asset that can help protect the organization in times of crises—in public relations terms, the "reservoir of goodwill" presumption.

LITERATURE REVIEW AND HYPOTHESES

The importance of reputation as an area of inquiry is underscored in the literature by its numerous suggested benefits. First and foremost, reputation has increasingly come to be recognized as an asset. (Batchelor, 1999; Bromley, 1993; Brouillard, 1983; Caminiti, 1992; Fombrun, 1996; Hall, 1992; Holmes, 1995; Sobol, et al., 1992; Weigelt and Camerer, 1988). As an asset a solid corporate reputation has a number of potential advantages. It can signal
publics how a firm’s products, jobs, strategies, and prospects compare with other firms. It can signal product quality, may enable premium prices, enhance access to capital markets, and attract investors (Bromley, 1993; Fombrun and Shanley, 1990). A good reputation can help attract better job applicants, retain them once hired, and maintain employee morale (Brouillard, 1983; Sobol et al., 1992). Building on an admirable reputation, a firm may have a more sustainable competitive advantage (Camaniti, 1992; Fombrun and Shanley, 1990), a better-protected "ecological niche" (Bromley, 1993), and a higher probability of generating desired returns on investment (Knipes, 1989; Riahi-Belkaoui and Pavlik, 1992). A reputable firm may charge higher prices for its product and services (Brouillard, 1983). Sobol et al. (1992) summarized many of the advantages of a good reputation under the four categories of labor, finance, product/service sales, and community (note especially pp. 58-79), and Fombrun (1996) reviewed many of these benefits.

Additionally, reputation is important because of its broad scope and potentially integrative nature. Reputation, Sobol et al. (1992) maintains, blends considerations of finance, management, advertising, and public relations. In a similar vein editor Paul Holmes, writing in the premiere edition of the trade publication *Reputation Management*, argues reputation must be managed, and such management must go beyond the traditional parameters of marketing, public relations, and communications (1995). Holmes calls for the creation of top-level organizational position in corporations, that of a chief reputation officer—a progressive idea, albeit somewhat overshadowed, at least in scope, by Hall’s suggestion (in the scholarly *Strategic Management Journal*) of a new corporate position titled 'manager of intangible resources' (1993, p. 617). Explicitly, although it has traditionally been assumed that financial factors were the key determinants of a stock price, market observers are beginning to put more emphasis on non-financial factors (Caminiti, 1992; Holmes, 1995; Sobol et al., 1992; see also various contributors to *Fortune*, including Fisher, 1996; Hutton, 1986; Reese, 1993; Schultz,
1988; Smith, 1990). Broadly construed, Hall (1993) theorizes, corporate reputation represents a positional capability which could, along with other organizational resources, contribute to a firm's sustainable long term competitive advantage.

Although less commented upon in the literature, it is generally presumed that reputation can provide some protection for the organization in times of trouble; it can, theoretically, provide the company with resource "slack" in the event of adversity—a crisis or sudden economic downturn. In this regard, some have considered reputation using an inoculation metaphor (Caminiti, 1992; d'Alessandro, 1990). More often this presumed aspect of reputation has been described in terms of an accumulation or "reservoir" among corporate stakeholders, the community, and the public at large. (Bromley, 1993; Davis, 1992; Patterson, 1993; Weigelt and Camerer, 1988). A number of such references are briefly reviewed below:

- Sobol et al. (1992) implied the existence of a reservoir when citing the durability of Coca-Cola subsequent to the clumsy MagiCans promotion. In a similar vein, the authors quote Johnson & Johnson's Chairman James Burke after the Tylenol crisis, "We really cashed in on the reputation of 90 years of this company" (p. 18).

- In Public Relations Review Bostdorff and Vibbert (1994) maintained that values advocacy advertising allows organizations to enhance their images and thereby to build up a "reservoir of credibility with which they may successfully sustain public criticism."

- Describing strategic corporate philanthropy as "enlightened self-interest," Wilcox, Ault, and Agee (1995, p. 385) declare that such contributions "can generate a reservoir of public support" (but they are not a substitute for corporate performance in other areas).

- In an intriguing article on managing issues and crises from a chaos theory perspective, Murphy (1996, p. 109) reasons that one implication for public relations is that "practitioners may reserve their resources until a pivotal event—a nuclear accident, product sabotage, takeover attempt—destabilizes an existing public opinion attractor."
Citing Johnson & Johnson's experience with the second case of Tylenol tampering, among other examples, Fombrun (1996) states that the well-regarded company is given the benefit of the doubt, observing that a good reputation creates a "halo (which) can soften the blow when crisis or scandal hits" (p. 79).

Sometimes this reservoir-of-goodwill idea is couched in terms of an inoculation metaphor. In her 1992 Fortune article, for example, Caminiti quotes a marketing consultant with Yankelovich that "Exxon never developed the kind of strong reputation that could have inoculated it against something like the Valdez spill" (p. 77). Burgoon, Pfau, and Birk (1995) find evidence that issue/advocacy advertising can inoculate against "attitude slippage" following exposure to a persuasive attack on behalf of an opposing position. Writing in the November 1993 issue of Public Relations Review, Patterson notes that in times of crisis a corporation must communicate with certain key publics. Further, "These same audiences should be addressed continuously to build the 'reservoir of goodwill' in the community that's necessary to retain your reputation" (p. 47).

The concept of a reservoir of public goodwill, like many common-sense assumptions (which may indeed be true), lacks empirical support, however. This study examines the increased importance of corporate reputation by empirically testing the premise that a good reputation provides a reservoir of goodwill, thus serving as an intangible asset which can help protect the organization in times of corporate crises.

For purposes of this study corporate reputation is operationalized using the Fortune's "most admired corporations" survey rating. These surveys have been conducted every fall since 1982, with summary results published within the first quarter of the following year. In these surveys, executives, outside directors, and corporate analysts were asked to rate the ten largest companies in their industry on eight attributes: quality of management; quality of products or services; long-term investment value; innovativeness; financial soundness; ability to
attract, develop, and keep talented people; community and environmental responsibility; and use of corporate assets. The industry groups surveyed are the largest in the Fortune 500 and Fortune Service 500 directories of U.S. industrial and non-industrial corporations.

As McGuire et al., (1988) and others have pointed out, there are several advantages in using the Fortune reputation data. First, it provides comparable data over an extended period of time. Second, the number of respondents is comparable or superior to other measures. Third, respondents rate only companies in an industry with which they are familiar. Thus respondents have reasonably direct access to "internal firm and industry information that is particularly critical in the area of corporate social responsibility (and other attributes of reputation), where annual reports and other official documents provide incomplete and inconsistent information" (Bowman and Haire, 1979, cited in McGuire, et. al, 1988). Despite some criticism of the narrowly defined respondent pool, a number of studies have used the Fortune data set (Fombrun and Shanley, 1990; McGuire et al., 1988; Riahi-Belkaoui and Pavlik, 1992; Sobol et al., 1992). Fombrun and Shanley (1990) point out, however, that the approach of several prior studies has been inappropriate to the extent that they relied on single dimensions of reputation—dimensions that, together, "demonstrate considerable empirical relatedness" (p. 245). Their factor analysis of the 1990 data, by rating, extracted a single factor which accounted for 84 percent of the variance (alpha=.97). After finding similar results with the Fortune survey results from 1982, 1983, 1984, and 1986, they concluded that "the eight attributes elicited from respondents were components of an underlying and stable construct of reputation" (p. 245). For the current study, the authors performed a similar analysis on the 1987 Fortune data set, with similar results. The eight attributes’ ratings were included as variables in a factor analysis; one factor emerged, with a Chronbach’s alpha reliability measure of .96. Thus, the overall reputation measure is unidimensional and the eight individual attributes are not included in further analyses.
The corporate crisis, or the event from which the buffer is to protect the company, is more difficult to select. While it would be interesting to study the impact of corporate reputation on disasters such as the Valdez spill or Tylenol tampering, these disasters are not comparable. They were unique and essentially affected one company. What is needed for the purposes of this analysis are instances where a general, unpredicted distress affected a large number of major corporations within a very narrow time frame. Additionally, such incidents must have occurred between 1982 and the present, which is the range of the corporate-reputation data set. Given these parameters, this study examines two significant one-day stock market declines that have occurred in the past 15 years: October 19, 1987 (508 points, or 22 percent of value) and October 13, 1989 (190 point drop, or 7 percent of value). Despite the wide range in percentages, both events were among the ten most significant point drops in the stock market of the past 15 years, as measured by the Dow Jones Industrial Average (Kansas, 1996). These declines also generated a tremendous amount of news coverage and each was generally referred to as a "crisis" in both the popular news media and the business trade press. The 1987 crash, of course, was of historic proportion; the selection of both events will allow for determination of reputation effects across a range of severity in market decline.

The final measurement issue concerns the actual economic harm suffered by the companies in this study relative to their respective reputations. This will be determined by using stock price following the crash as the dependent variable. It is essential to note that the corporate reputation composite index is constructed from eight attributes (described previously), only three of which are purely financial in nature (e.g., "financial soundness"). Several studies have found no significant correlation in the relationship between the Fortune reputation rankings and prior financial performance (Hammond & Slocum, 1996; Koch, 1994). Furthermore, Fortune survey respondents consist of over 8,000 managers and analysts, who rate each company in their area of expertise according to their perception of that corporation. Therefore,
as reputation is largely perceptual in nature, based on more non-financial than financial criteria, using stock prices to measure the concept of buffering while operationalizing economic shock as a general but severe decline in the market provides a meaningful degree of separation between event and effect.

The research question is "Does corporate reputation serve as an intangible asset that can help protect the organization in times of crises?" As operationalized in this study, the question asked is: "Can reputation, as measured by Fortune's reputation rating, serve to protect a company against short-term economic loss in the event of a major, sudden, general economic shock (in this case a major stock market crash or decline)?"

Based on the considerations outlined above, this study tests the primary hypothesis that the higher a firm's reputation, the less relative economic loss that firm will suffer in cases of economic crisis. Specifically, it is hypothesized that companies with higher reputations will suffer significantly lower stock price declines the day of the market plunge.

**METHOD**

A. Variables

**DEPENDENT: SUBSEQUENT STOCK PRICE:** The dependent variable is the closing price of the company's common stock the day of the crash for the years 1987 and 1989.

**INDEPENDENT:**

1. **PRIOR DAY'S STOCK PRICE** is the stock price prior to the market decline day. This variable provides the starting point for determining the drop in price on the decline day after considering the controlling independent variables discussed below (i.e., beta and size).

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1 The authors express their appreciation to the unnamed referee who suggested that this dependent variable would produce cleaner results than using percent changes.
2. CORPORATE REPUTATION RATING, or "reputation", is measured by Fortune magazine’s annual survey of corporate reputations, as discussed above. In 1987 there were 306 companies in 33 industries, with 3,480 survey responses; in 1989 there were 305 companies in 32 industry groups, with 8,000 mailed questionnaires and a 50 percent response rate. Stock market data and other data for independent variables were not available for all firms contained in the Fortune data sets due to private ownership or inability to locate a company’s trading data in any of the three major stock exchanges, the New York Stock Exchange, the American Stock Exchange, and the Over-The-Counter market. Additionally, firms in the banking, insurance, and utility industries were omitted from this study. These firms are generally government regulated and use different accounting methods and financial statement formats. Thus, by omitting these firms, the remaining companies are more homogeneous and the resulting tests should be more comparable (Gibson, 1998). The final sample sizes for three years of survey results analyzed were 203 and 200 for the 1987 and 1989 data sets, respectively.

3. BETA controls for the systematic rise or drop in stock price associated with the stocks included in the three years’ samples. Beta is a widely recognized variable that is used to measure the expected change in a company’s stock price relative to changes in the overall market. For example, a company’s stocks with a beta of 1.20 is expected to rise or fall at a rate 20% different from changes in the market as a whole. This variable controls for the fact that changes in the stock price from one day to another day may be attributable to the sensitivity of the stock to market factors, industry factors and individual firm factors. The question in this study pertains to whether or not there is a significant effect of reputation during a crises, over and above that already taken into account by firms’ betas. The beta values used in this research were obtained through Value Line reports for the year of the market decline (Value Line, 1987 and 1989).
4. **SIZE** as measured by total sales revenue is included as a moderating variable. It is expected that firm size and other firm and industry variables are already reflected in stock price, beta, and reputation. However, size is included in the model to examine whether firm size affects stock price in times of market declines over and above that which is already included in the other independent variables.

5. **INTERACTION TERM: YEAR X REPUTATION RATING** is used to determine if there is an interaction effect between year and reputation. If this is significant, the two years must be analyzed separately.

**B. Statistical Tests**

The main objective of the statistical analysis is to determine the effects of the five independent variables and one interaction term on the subsequent stock price. The model is expressed as follows:

\[
y = \beta_0 + \beta_1 \text{priorprice} + \beta_2 \text{reputation} + \beta_3 \text{beta} + \beta_4 \text{size} + \beta_5 \text{year} + \beta_6 (\text{year} \times \text{reputation})
\]

Regression analysis is used to determine the significance of each independent variable in the model. The Belsley, Kull, and Welch (1980) condition number test is used to test collinearity. The succeeding sections summarize the results and discuss conclusions drawn from the findings.

**RESULTS**

Results of the regression analysis are shown in Table 1 below. The interaction term between year and reputation is significant (\(p<.001\)). Using partial differentiation with respect to reputation yields the following equation:
This equation shows that the impact of reputation consists of two terms, the regression coefficient of reputation ($\beta_2$) and the coefficient of the interaction term ($\beta_6$) times the dummy variable year. When year = 0, representing the 1987 crash, the effect of reputation on subsequent stock price is $\beta_2$, which is not significant. When year = 1, representing the 1989 crash, the effect of reputation on subsequent stock price is $\beta_6$, which is highly significant in the expected direction. Thus, reputation had a significant effect on stock price during the 1989 crash but not the 1987 crash.

### Table 1
Regression Analysis - Overall Model

<table>
<thead>
<tr>
<th>Independent Variable</th>
<th>Regression Coefficient</th>
<th>P-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Prior Price</td>
<td>.8630</td>
<td>.0000*</td>
</tr>
<tr>
<td>Reputation</td>
<td>-.3182</td>
<td>.1843</td>
</tr>
<tr>
<td>Beta</td>
<td>-2.4732</td>
<td>.0066*</td>
</tr>
<tr>
<td>Size</td>
<td>-.00004</td>
<td>.7110</td>
</tr>
<tr>
<td>Year</td>
<td>-1.759</td>
<td>.4317</td>
</tr>
<tr>
<td>Interaction (Year x Rep)</td>
<td>1.227</td>
<td>.0004*</td>
</tr>
<tr>
<td>$R^2$</td>
<td>.987</td>
<td></td>
</tr>
</tbody>
</table>

Size was not significant. This indicates that, controlling for prior price, reputation, and beta, firm size (as measured by total sales) has no effect on stock price after a crash. It is important to note that size may very well have an impact on stock price changes, but if it does, this effect has already been taken into account within beta.

The controlling variable prior stock price is a significant predictor of subsequent stock price in all measurement periods. Obviously, these findings are consistent with expectations.
Beta is included in this study to control for the natural volatility of each company's stock price. Stocks with a beta greater than one tend to change more than the market (are more volatile) and less than one change less (less volatile). Beta is significant in the direction expected (the higher the beta, the larger the stock price decline). The Belsley, Kull, and Welch (1980) collinearity test reveals that the model is well-conditioned.

**DISCUSSION OF RESULTS**

The central focus of this study is the hypothesis that higher corporate reputation predicts lower economic losses in cases of sudden and general economic decline. In 1987, at the close of the day immediately following the radical stock market decline, the reputation variable did not approach statistical significance. Confounding this portion of the study, in retrospect, were aspects of trading technologies and irrational selling induced by panic. In post hoc analyses of the event (as was reported in *Business Week, Time, and The Wall Street Journal*, among other news publications), it was evident that a major factor behind the speed of the market's descent in 1987 was the almost total computerization of the New York exchange and other markets. A large volume of trades on the day of the 1987 crash was performed automatically by computers programmed to execute trades of large portfolios of stock when prices fell to predetermined trigger points. These programs took decisions out of the hands of brokers, contributing to a scenario where "...Wild price fluctuations bore little resemblance to the fundamental value of the venerable industries involved" (Isaacson, 1987). Where brokers were still in control of transactions, selling was typically described as "frenzied." Safeguards were subsequently imposed on the New York and Chicago (Mercantile) exchanges, and in subsequent declines these automatic trading cutoffs, or "circuit breakers," slowed rates of market descent.

Analysis of the 1989 stock market decline supports the hypotheses that reputation is associated with reduced economic losses in time of economic crises—the reputation variable
was significant. The argument that reputation can serve as a reservoir of goodwill and help buffer an organization during troubled times is strengthened, and it is logical to presume that this reputation effect would be proportionate to its positive strength. By extension, companies can help insulate themselves from inherent uncertainties of the business environment by nurturing a positive corporate reputation.

It is not surprising that beta, a measure of market risk, is significant. It is to be expected that the subsequent stock price would be influenced by the beta of the stock in relationship to the prior stock price. Size was not a significant factor, suggesting either (1) that larger companies do not necessarily have better reputation ratings or suffer less loss in a market decline or (2) more likely, size is a factor already reflected in beta.

**SUMMARY AND CONCLUSIONS**

Several studies have been conducted which focus upon suggested determinants of a good corporate reputation (Fombrun and Shanley, 1990; Riahi-Belkaoui and Pavlik, 1992; Sobol et al., 1992; Sobol and Farrelly, 1988); however, although a number of advantages to high reputation have been suggested (Bostdorff and Vibbert, 1994; Bromley, 1993; Brouillard, 1983; Caminiti, 1992; d'Alessandro, 1990; Davis, 1992; Fombrun, 1996; Hall, 1993; Knipes, 1989; Riahi-Belkaoui and Pavlik, 1992; Holmes, 1995; Patterson, 1993; Sobol et al., 1992; Weigelt and Camerer, 1988) few empirical tests of the possible consequences of corporate reputation have been conducted. This study investigated the practical question: does positive corporate reputation help to insulate a firm against loss in a sudden and general economic downturn, or crisis, as represented by a substantial stock market decline? In particular, this study was designed to demonstrate the rationality of enhancing the intangible corporate asset known as reputation to serve as a resource buffer or "reservoir of goodwill," which can help protect a firm against sudden, general economic declines.
This study found that corporate reputation was not a significant factor in protecting a company from loss amid the comparatively unique circumstances of the 1987 stock market crash. However, in instances of sudden, major market declines where human intervention and rational decision making persist—here the 1989 event—results support the hypothesis: A good reputation can serve to buffer a corporation from economic loss in specific types of crises. More generally, we conclude that one means by which corporations can reduce the uncertainty of a competitive and potentially hostile environment is by cultivating a 'reservoir of goodwill'—an abstraction often employed in both the organizational communication and public relations literature, but here empirically tested. This reserve could act in a preventative, proactive capacity in a similar fashion to the inoculation effects of issue/advocacy advertising, a phenomenon for which some empirical support has been presented in the advertising literature. Unlike issue advertising, however, which is based on specific issues and involves refutational preemption of a threat, reputation is a general construct which does not involve specific preemption and can protect the organization against loss in times of crisis. Reputation is the vessel in which 'goodwill' is accumulated.
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