

LEND ME YOUR WALLETS: THE EFFECT OF CHARISMATIC LEADERSHIP ON EXTERNAL SUPPORT FOR AN ORGANIZATION

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We argue that charismatic leadership can influence external support for the organization, particularly in making the company more attractive to outside investors. Two studies were conducted to test this general hypothesis. First, an archival study demonstrated that the stock of companies headed by charismatic leaders appreciated more than the stock of comparable companies, even after differences in corporate performance were controlled. It was also found that the effect of charismatic leadership was heightened under more difficult economic conditions. Second, an experiment was conducted in which the salience of charismatic leadership was manipulated, along with information about the prospects for an organization's turnaround. Results showed that appeals from a charismatic leader led to increased investment in the firm, and the leader's influence was greater when the prospects for an organizational turnaround were more difficult. It was also found that an endowment of stock enhanced the influence of charismatic appeals and that charismatic leadership may have affected the general risk propensities of followers. These findings were interpreted in terms of an external perspective on leadership, illustrating how leaders can manage the firm's economic and social environment. Copyright © 2004 John Wiley & Sons, Ltd.

INTRODUCTION

Weber (1947) originally conceptualized charismatic leadership as a form of legitimate authority derived from ecclesiastical divinity. Since then, the term 'charismatic leadership' has been used to describe a subset of leaders who 'by the force of their personal abilities are capable of having profound and extraordinary effects on followers' (House and Baetz, 1979: 399). Such individuals exude confidence, dominance, a sense of purpose, and the ability to articulate a vision for followers to grasp (House, 1977; Conger, 1991). Charismatic

leaders are able to communicate this vision to their followers, and by the force of their own excitement and enthusiasm, induce their followers to support this vision (Yukl and Van Fleet, 1992). In this sense, charismatic leaders are said to have remarkable influence over subordinates who internalize the leader's vision of what can be achieved through collective effort (Bass, 1985).

Management scholars have argued that charismatic leadership can be a key determinant of individual and organizational performance (e.g., Bennis and Nanus, 1985; Conger and Kanungo, 1987; House, 1977; Kouzes and Posner, 1987; Tichy and Devanna, 1986). Shamir, House, and Arthur (1993) reviewed effects of charismatic leadership on important individual outcomes, such as satisfaction, commitment, and productivity. Other studies have showed a positive relationship between

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charismatic leadership and the performance of business units (e.g., Barling, Weber, and Kelloway, 1996; Howell and Avolio, 1993), work teams (e.g., Howell and Frost, 1989), and presidential administrations (e.g., House, Spangler, and Woycke, 1991). Taken together, these findings suggest that charismatic leaders can wield considerable influence over subordinates and coworkers at all levels of the organization.

To date, most research on charismatic leadership has focused only on what can be labeled 'the internal side of management;' that is, how charisma influences attitudes and behavior *within* organizations (e.g., Bass, 1985; Howell and Frost, 1989; Puffer, 1990). Less attention has been paid to the external side of management (cf. Pfeffer and Salancik, 1978), tasks such as steering an organization through difficult market conditions, securing scarce resources, or gaining support from outside constituencies (e.g., Trice and Beyer, 1986). Although organizational research on charismatic leadership has primarily focused on the relationship between the leader and followers inside the organization, 'followership' can be interpreted more broadly to include those outside the leader's own organization, such as suppliers, customers, and outside investors. With this approach, any person who is influenced by—adopting the course of action, goals, or set of values of—the leader, can be considered a follower.

Some organizational researchers have addressed external management functions like boundary spanning (e.g., Geletkanycz and Hambrick, 1997), network building (e.g., Thompson, 1967; Gulati, Nohria, and Zaheer, 2000), and reputation management (e.g., Fombrun and Shanley, 1990; Elsbach and Sutton, 1992). However, these efforts have not been married successfully with the literature on charismatic leadership. Nor has past research on charismatic leadership paralleled the public perception of the construct (cf. House *et al.*, 1991). General media descriptions of charismatic leaders tend to focus on external, public functions such as gathering adherents to a new cause or altering prevailing attitudes in the social/political environment (Madsen, 1991). In the business press, a CEO is not typically labeled as charismatic because he or she has persuaded employees to stay with the firm or follow a particular corporate policy. Rather, organizational leaders are dubbed charismatic when they have persuaded a skeptical public to accept a new product or when they have

rebuilt confidence in an ailing firm among customers, suppliers, and outside investors (e.g., Westley and Mintzberg, 1988). Thus, it is possible that a CEO can be perceived as charismatic by his or her subordinates, but not by the general public. Conversely, a CEO can be perceived as charismatic by the public, but not by his or her subordinates. Consequently, research that focuses on how charismatic leaders influence their external constituents should rely on the public perception of charisma.

This study will attempt to refocus our attention on the external side of leadership and the public perception of charisma. Specifically, we will test whether charismatic leadership influences people's tendency to invest money in a particular company. We will also test whether charismatic leadership especially influences investors during times of financial uncertainty, such as when economic conditions are tough or when a firm is attempting to mount a financial turnaround.

Charisma and external organizational relations

Charismatic leaders often are credited with building a shared identity within the organization, getting followers to sacrifice their own personal interests for the sake of a collective goal (House, 1977). The charismatic leader is one who gains trust, affection, and willing obedience of employees (House and Baetz, 1979). He or she is also one who can generate excitement and motivation among employees as they pursue organizational goals (Berlew, 1974). Given these persuasive skills in managing those inside the organization, one might logically expect charisma to bring support from external audiences. Many scholars have noted that the duties of top leaders are such that symbolism and the management of meaning often are critical to their success (Barnard, 1938; Pfeffer, 1981). The CEO must work hard at creating positive impressions of the organization among constituents both inside and outside the firm. Therefore, just as charismatic leaders are said to be especially skilled in communicating a vision to their subordinates, and by means of excitement and enthusiasm, inducing them to endorse that vision (Yukl and Van Fleet, 1992), we might also expect charismatic leaders to be especially skilled in convincing investors to confer their trust and resources to the organization. Thus, charismatic leaders may be particularly adept at extracting financial support from outside observers of the organization.

Hypothesis 1a: Investors will be more attracted to companies headed by charismatic leaders than to comparable companies.

Hypothesis 1b: Appeals from a charismatic leader will induce outside investors to invest more money in a company's stock.

Charisma and crises

Many researchers have described charismatic leaders as rising to prominence during crises (e.g., Beyer, 1999). They may come forth as prospective saviors promising to extricate an organization, social group, or nation state from disaster (Shamir *et al.*, 1993). As they take power, they may express confidence and articulate a vision necessary for an organization's turnaround. Yet, they may also benefit from what Meindl and his colleagues have termed the 'romance of leadership,' a tendency for people to overestimate the extent to which leaders are responsible for organizational outcomes (e.g., Meindl, 1993; Meindl, Ehrlich, and Dukerich, 1985). Indeed, followers' attributions of charisma often are validated, in part, because an organization has successfully passed through a crisis period, even though the change in a firm's fortunes may not be entirely due to the actions of the leader. Nonetheless, because of overattribution, charismatic leaders may be perceived as 'superhuman' by followers (Deluga, 1995), given credit for events and outcomes they have not originated or even materially influenced.

While it may be natural for charismatic leaders to emerge during organizational crises, due either to their own actions or observers' heightened perceptions of leadership, it is less clear whether charismatic leaders will be more *effective* in managing organizational crises. The notion that crises enhance the effectiveness of charismatic leadership has been suggested in the past (e.g., House *et al.*, 1991; Nadler and Tushman, 1990; Conger, 1991). And stories of charismatic leadership during crises, such as Lee Iacocca's success in securing a government bailout of Chrysler (Moritz and Seaman, 1984) or Lou Gerstner's turnaround of IBM (Garr, 1999), abound in organizational lore. But despite its apparent acceptance, the idea that charismatic leadership is more effective during difficult times has not been empirically supported, or even tested.

There is only indirect evidence of a relationship between charismatic leadership and effectiveness

during adverse situations. An early study by Hamblin (1958) found that experimental groups were more influenced by leaders during a crisis situation than at other times in a group's lifespan. Perhaps the reason for such increased influence is the heightened power of persuasive skills during a crisis. Some scholars have written about the need for top organizational leaders to galvanize their employees and secure from them increased commitment and effort during times of organizational stress (Pawar and Eastman, 1997). Yet, it may also be true that, during an organizational crisis, members look to their leaders for guidance about how to cope with pressing uncertainties (Waldman and Yammarino, 1999). When members are faced with doubts about the future of an organization, charismatic leaders may provide a source of control or mastery over difficult circumstances, offering reassurance and a path 'out of the darkness' (Langer, 1983).

The power of charismatic leaders to guide and influence members of an organization during difficult times may be only half the story. Equally important may be the restoration of *outsiders'* confidence in the organization. Through the use of accounts and other persuasion tactics (Elsbach and Sutton, 1992), charismatic leaders often can assuage negative impressions that outsiders hold of an organization. Sometimes the mere presence of a charismatic leader can remove doubts about the survival of a firm. Instead of critically evaluating the prospects of a firm, outside constituents may simply accept the charismatic leader's hopes for the future (Willner, 1984). In fact, the promises of the charismatic leader may be accepted 'not because of [their] rational likelihood of success ... but because of an effective belief in the extraordinary qualities of the leader' (Dow, 1969: 315).

If charismatic leaders of organizations are persuasive to outside investors, their skills should be particularly apparent when the situation is problematic. Because of the special qualities attributed to charismatic leaders, specifically high self-confidence and an ability to overcome obstacles, they may be able to reframe negative information about a company's prospects into a more benign future, converting an uncertain situation into one that assuages the concerns of outside investors. Thus, we would expect charismatic leadership to make more of a difference in outsiders' evaluation of a company when the economic environment is difficult. And, because charismatic leaders should

be at their best when having to assure outsiders of a difficult cause, we might also expect that appeals by a charismatic leader would be especially potent when a company is trying to mount a comeback under adverse circumstances. In other words, while there should be minimal effects of charismatic leadership when information about a corporate turnaround is clearly positive, charismatic leadership should make more of a difference when information is negative or conflicting.

Hypothesis 2a: The influence of charismatic leadership on the attractiveness of a company will be heightened under more difficult economic circumstances.

Hypothesis 2b: Appeals from a charismatic leader will have greater effect on investment in a company's stock when its business prospects are difficult or problematic.

Charisma and endowment

Because charismatic leaders attempt to galvanize and inspire others to pursue a common goal (Bass, 1985), they may depend on some prior acceptance for their 'magic' to work. Those who have no sense of attachment to the organization may be more skeptical about the sincerity and feasibility of the leader's vision. Followers who have some sense of attachment, on the other hand, may be inclined to remain consistent with their prior commitment. Indeed, psychological research suggests that even a modest level of prior commitment may invoke such a need for consistency, as demonstrated by both the dissonance (Wicklund and Brehm, 1976) and escalation (Staw and Ross, 1987) literatures. Moreover, in a series of experiments, Kahneman, Knetsch, and Thaler (1990) found a substantial increase in the value of a good with only minimal ownership or endowment. When people were asked to name the selling price of something they purportedly owned (e.g., a candy bar or a coffee mug just given to them), they were inclined to charge much more than they would pay for the same item (Knetsch and Sinden, 1984). Such endowment effects demonstrate that individuals can easily become committed to either a tangible product or course of action, and that their commitment may be responsible for an infusion of value in these entities.

We posit that a prior commitment to the organization, such as an endowment of stock in the company, will make an individual particularly susceptible to charismatic influence. Because charismatic leaders generally appeal to prototypical values of an organization (van Knippenberg and Hogg, in press), the greater the bond or commitment by the individual to the firm the more subject to influence will the follower be. There may be a greater likelihood to accept the premises and plans of leaders with whom there is a shared bond, since followers may believe such leaders can be trusted to further their interests. When there is prior commitment there may also be a tendency to agree with any arguments or interpretations of events that furthers that commitment. Just as citizens are more likely to accept the promises of politicians for whom they previously voted (rather than opposed), the persuasiveness of an organizational leader will likely be greater when the audience considers themselves to be followers. Therefore, if people have previously demonstrated their support for the leader or the firm that leader represents, they may be more receptive to the leader's charisma and persuasive tactics. And, in a situation where leaders need to encourage investment, a charismatic leader may likewise have more success with those who have some form of attachment to the organization. Hence, when charismatic leaders attempt to persuade potential investors to financially support an organization's turnaround, we expect stronger effects when the target audience already holds an endowment of stock in the organization.

Hypothesis 3: Appeals from a charismatic leader will have a greater effect on outside investors who already have an endowment of stock in the organization.

Charisma and risk-taking

To this point, we have argued that charismatic leadership can facilitate outside support for an organization, helping firms manage economic downturns and possible turnaround situations. We have further argued that the influence of charismatic leadership depends on more than objective evidence or detailed analyses of the firm's performance. When faced with a crisis, the charismatic leader often invokes personal and emotional appeals for others to join him or her in efforts to turn around the firm. And, when the situation is dire, such appeals

may, in a sense, be a request for supporters to suspend any doubts or disbelief, to accept the risks associated with the turnaround situation.

If charismatic leadership really does embolden outside supporters, we might then ask whether such an increase in risk-taking pertains solely to the focal organization. Can persuasive messages received from a charismatic leader have a more generalized effect on the risk propensities of followers? In investment contexts, for example, will a charismatic appeal lead people to accept risk in investments beyond those specifically touted by the charismatic leader?

To date, no research has considered whether charismatic leadership can alter a follower's risk tendencies. Social psychologists have identified several determinants of an individual's propensity for risk, including how the focal decision is framed and how the background or context of the choice is described (e.g., Kahneman and Tversky, 1979). Past research (e.g., Petty and Cacioppo, 1986) has also found that people can be persuaded on specific issues when they are distracted by the surface characteristics of a message (length, complexity, tone, etc.) and the status of the source (expert, celebrity, etc.). In fact, people often weigh such 'peripheral cues' more heavily than the details of the argument in making their decisions (Chaiken, 1980). We extend this logic to hypothesize a more generalized relationship between charisma and risk-taking. Because charismatic leaders often ask followers to accept their vision of the future, based more on faith in the leader than upon critical analysis, their communications may influence followers' willingness to engage in risky behavior. The charismatic leader may lead followers to frame investment decisions in a less skeptical manner, resulting in a greater acceptance of risk, not only in regard to the leader's own organization but relative to other investment opportunities as well. Thus:

Hypothesis 4: After receiving an appeal from a charismatic leader, investors will be less risk-averse in their investment decisions.

Summary

This study examines the relevance of charismatic leadership to the management of organization-environmental relations. We suggest that charismatic leaders will have greater influence on

external investors than will non-charismatic leaders. In particular, we propose that charismatic leaders' influence will be most potent when the economic conditions facing the firm are more, rather than less, difficult. Further, we posit that an endowment of stock in the organization will moderate the influence of leadership appeals and that charismatic leadership will influence the broader risk preferences of investors.

We tested these hypotheses in two ways. First, to examine the premise that investors are more attracted to companies headed by charismatic leaders we conducted an archival study of stock prices. We compared the prices investors were willing to pay for equity in companies led by charismatic leaders vs. equity in comparable companies. We then tested some of the hypothesized mechanisms underlying charisma effects in a laboratory experiment. Using manipulated investment scenarios, we tested whether effects of charismatic leadership are stronger under negative circumstances, whether charismatic appeals have a greater effect on those who already have an endowment of stock, and whether charismatic leadership can increase the risk-taking propensities of followers.

STUDY 1

Sample

We constructed a sample of charismatic CEOs by drawing on three archival sources: (1) articles accessible through the Dow Jones Interactive webpage, (2) organizational behavior textbooks, and (3) scholarly journals on management and leadership. To extract names of charismatic CEOs from Dow Jones Interactive, we conducted a search of all articles (during years 1985–2000) using derivations of the terms 'charisma,' 'visionary,' and 'transformational' in conjunction with the terms 'CEO' and 'chief executive officer.' The articles returned from this search were then scanned to extract the name and company of those CEOs who were deemed charismatic, yielding a total of 90 CEOs. Twenty-eight organizational behavior textbooks were then examined for the description of specific leaders as charismatic or as examples of charismatic leadership. The textbooks yielded an additional five charismatic CEOs not included in the Dow Jones Interactive search. Finally, academic journals such as *Academy of Management*

Journal of Administrative Science Quarterly, *Journal of Applied Psychology*, *Organizational Behavior and Human Decision Processes*, and *Leadership Quarterly* were searched through the years 1985 to 2000. All articles containing the term 'leader' or 'leadership' were reviewed, yielding the names of two charismatic CEOs not previously included in either the Dow Jones or textbook searches. In all, our initial sample of charismatic leaders totaled 97 CEOs mentioned by at least one archival source.

We included in this study all CEOs who had been labeled 'charismatic' and who had worked for companies listed by *Fortune* as one of the United States' 1000 largest industrial or service companies from 1985 to 1994. The data were limited to this 10-year period to assure comparability in baseline statistics. Prior to 1995, *Fortune* published two separate lists for the 500 largest industrial corporations and for the 500 largest service organizations, but after 1995 both industrial and service firms were combined into a single *Fortune* 500 list. We therefore included in our final sample 44 CEOs representing 46 different companies listed either as one of the 500 largest industrial or 500 largest service firms by *Fortune* from 1985 to 1994. Starting and ending dates for each CEO's term of office were determined by searching the company's website (e.g., officer profiles and press releases), contacting the company via telephone, or by reviewing newspapers and periodicals reporting such information.

Company performance and attractiveness to investors

In order to test investors' attraction to the stock of companies headed by charismatic leaders (Hypothesis 1a), we constructed a measure of stock price appreciation. We started with *Fortune*'s report of 'total return to investors,' which included both price appreciation and dividend yield to investors in the company's stock.¹ To separate out the effect of dividends from stock price appreciation, we subtracted the annual dividend from the measure of total return for each of the focal firms during the years 1985–94. For comparison, we also collected *Fortune*'s data on total return to investors for the median firm in the relevant industry for

each of the same years. Because firms headed by charismatic leaders are also included in the determination of industry medians, any differences between the focal firms and industry medians will be understated, yielding a conservative test of such differences. *Fortune* did not report dividend data for industries; thus, we were not able to adjust the industry returns for dividend yield. This factor, along with the fact that firms with charismatic leaders were also part of the industries from which medians were calculated, means that any differences found between charismatic and industry returns will represent a highly conservative test of the study's hypothesis.

To control for whether the performance of firms headed by charismatic CEOs was greater than that of comparable companies, we compiled *Fortune* data on firms' return on sales (ROS), return on assets (ROA), return on equity (ROE), and firm growth (change in sales) for each year the charismatic CEO was in office. For comparison, we gathered data on these same measures for the median companies in a firm's industry for the exact same years, also as reported by *Fortune*. In addition, we collected a measure of relative firm size to control for the strength of the firm (i.e., market share, brand equity, etc.). More specifically, we recorded the rank of a firm in the *Fortune* 500 along with the median rank of firms in their industry.

Economic environment

Since our theory suggests that charismatic CEOs will be relatively more successful than others during difficult economic times (Hypothesis 2a), we included a measure of the general economic climate in which sampled firms were operating. Annual data on the gross domestic product (GDP) were collected for the years 1984–94, and the percentage increase (or decrease) in the GDP from the previous year was calculated. A dummy variable was created to account for whether the economic conditions were relatively strong or relatively weak, using a median split to divide the measure of GDP growth (0 = strong economic conditions; 1 = weak economic conditions). In addition to this measure of macro-economic conditions, we also created a more industry-specific measure of the conditions facing firms in the sample, using a dummy variable for the industry's growth rate (i.e., median change in sales) to assess the economic climate of the industry in which firms operated

¹ Returns are adjusted for stock splits, stock dividends, recapitalizations, and corporate reorganizations as they occur. No effort has been made to reflect the cost of brokerage commissions or of taxes.

(0 = strong industry growth; 1 = weak industry growth).

Results

As expected, companies led by charismatic leaders outperformed comparable companies in their industries. Specifically, we contrasted ROS, ROA, and ROE between 'charismatic' firms and industry medians and found significant differences for each of these measures of performance ($t_{ROS} = 4.46$, $p \leq 0.001$; $t_{ROA} = 3.90$, $p \leq 0.001$; $t_{ROE} = 2.51$, $p \leq 0.001$), such that companies led by charismatic leaders outperformed comparable companies in their industries.

In order to test whether investors were more attracted to the stock of firms headed by charismatic leaders (Hypothesis 1a), an analysis of variance was conducted on stock price appreciation. When the price appreciation of companies led by charismatic CEOs was contrasted with the average appreciation of companies in their respective industries, the results were supportive of the charisma hypothesis. The mean stock price appreciation for companies with charismatic CEOs was 24.9 percent compared with 12.4 percent for median companies in their respective industries, yielding a statistically significant difference between the groups, $F = 15.42$, $p \leq 0.001$.

Because it is possible that differences in stock price appreciation are driven by factors relating to firm performance rather than charisma, we also included measures of firm performance (ROA, ROS, ROE), firm growth, and relative size as covariates in the analysis. After controlling for these factors, however, differences between stock price appreciation for companies led by charismatic CEOs and other companies in their industries remained significant, $F = 6.85$, $p \leq 0.01$.

Hypothesis 2a posited that the influence of charismatic leadership on the attractiveness of a company's stock would be greater when economic conditions were relatively weak. To test this hypothesis we used a 2×2 ANOVA, in which charismatic leadership (company led by a charismatic CEO vs. industry comparisons) and economic conditions (relatively strong or weak) were the independent variables. The results of this analysis showed, once again, a significant main effect for charismatic leadership on stock price appreciation, $F = 13.74$, ≤ 0.01 . There was also a significant interaction of leadership and economic

conditions on stock appreciation, $F = 5.21$, $p \leq 0.01$), which supports Hypothesis 2a. As illustrated in Figure 1, firms with charismatic leaders outperformed comparable firms more during weak economic years than during strong economic years.

The analysis of charisma and economic conditions was also tested using the industry-specific measure of conditions facing the firm. The results of this analysis demonstrated a main effect of charisma, $F = 8.59$, $p \leq 0.01$ as well as a significant interaction of charisma and industry conditions, $F = 2.74$, $p < 0.05$. The nature of the interaction is illustrated in Figure 2. As predicted in Hypothesis 2A, when industry conditions were

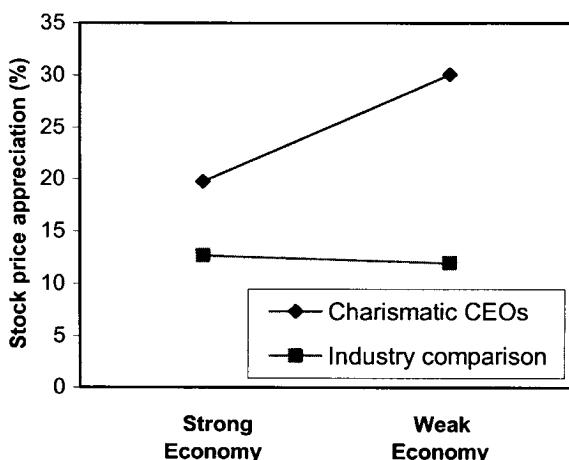


Figure 1. The impact of charismatic leadership and economic conditions on stock price appreciation

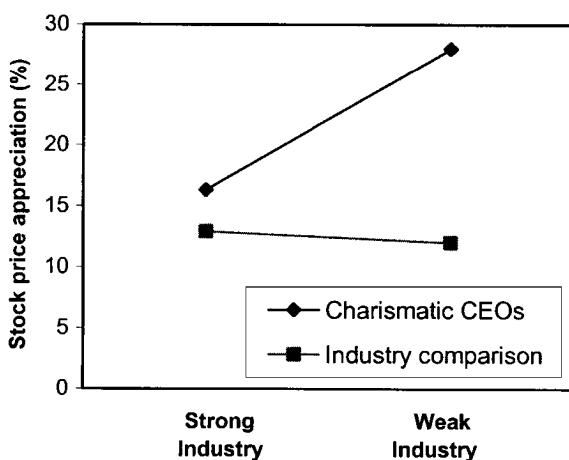


Figure 2. The impact of charismatic leadership and industry strength on stock price appreciation

relatively weak, companies with charismatic leaders performed particularly well.

Stock price appreciation may be driven by other factors besides charisma. To account for the possibility that the above results are simply a byproduct of factors related to firm performance and strength, we again included measures of firm performance (ROA, ROS, ROE), firm growth, and relative size as covariates in these analyses of variance. The main effect of charismatic leadership was essentially unchanged for either analysis. The effect of the interaction term involving economic conditions, however, was only marginally significant in this analysis, $F = 2.05$, $p \leq 0.10$, which suggests only partial support for Hypothesis 2a. The strength of the interaction term involving industry-specific conditions remained significant above and beyond the influence of firm performance and strength, $F = 4.45$, $p \leq 0.05$, which provides additional support for Hypothesis 2a.

Supplementary analyses

In the preceding analyses, it is possible to argue that differences in stock price appreciation could have more to do with the performance of the firm *before* the charismatic leader arrived than any actions he/she had taken after joining the company. In fact, increased stock price appreciation could have been due to a 'catch up' in performance from low levels achieved by the prior leader of the firm. Conversely, such appreciation could have been the result of continuing momentum established by a prior leader's performance. To control for these alternative explanations, we collected data on firm performance before the tenure of the CEO began, covering a period of (up to) 5 years. These data were limited to firms led by CEOs who were not the founders of the sampled firms, and they included only those years when the firm was in the *Fortune 500*.

Using this extended data set, we first conducted an analysis of stock price appreciation of firms before the arrival of the charismatic CEO. We compared the stock price appreciation of the focal firms with that of median firms in their respective industries. An analysis of variance demonstrated that price appreciation was not significantly different ($p = 0.31$) between these groups. The lack of pre-tenure differences suggests that our findings may be driven more by the arrival of charismatic CEOs than by some characteristic of

the firms that hired them. To provide a more generalized control for firm characteristics that might be associated with price appreciation, we also used pre-tenure stock price appreciation as a control variable in the previous analyses. The main effect of charismatic leadership remains positive and significant using this control variable. However, there were some differences in the interaction between charismatic leadership and economic conditions. Whereas the marginal significance of the interaction term involving economic conditions and charismatic leadership disappeared ($F = 0.99$, $p = \text{n.s.}$), the statistical significance of the interaction term involving the industry-specific measure and charismatic leadership remained ($F = 4.99$, $p \leq 0.05$). Thus, the findings do not seem to be entirely driven by a 'catch up' in performance or appreciation from pre-tenure levels.

Discussion

According to the results reported in Study 1, firms headed by charismatic leaders performed better than those of comparable companies. Beyond such differences in performance, however, investors also seemed to be more attracted to the firms headed by charismatic leaders. In fact, we found that investors were more willing to pay increased prices for stock in firms led by charismatic CEOs than for comparable companies. We also found some evidence that the effect of charismatic leadership on stock price appreciation was greater during difficult economic times, using economic conditions, particularly industry-specific conditions, as the moderating variable.

The above results constitute relatively conservative tests of the charismatic leadership hypotheses. This is because sampled firms were part of the industry data from which comparison medians were derived. It is also because dividend yields were subtracted from the focal firms but not from the industry medians used for comparison. Regardless of the strength of these results, however, one can still question the direction of causation because past research has suggested that firm performance may lead to attributions of charisma (e.g., Meindl, Ehrlich, and Dukerich, 1985). Although we controlled for firm performance by including various performance measures as covariates in our analyses, it is conceivable that charisma is also attributed to those leaders who bring investors appreciated stock prices. Perhaps

companies accorded higher stock prices are led by charismatic leaders because charisma is, in part, determined by these consequences.

To better understand the cause–effect relationships between charismatic leadership and investment behavior (as well as the psychological dynamics involved) it is necessary to gather data from a more controlled setting. Therefore, we conducted a laboratory experiment in which the behavior of investors could be examined as a function of manipulated variables. We tested whether receiving a message delivered by a charismatic leader influenced the investment of resources by outside investors, as prescribed by Hypothesis 1b. We also examined whether charismatic leadership is more effective in persuading investors when a company faces difficult circumstances (Hypothesis 2b). Finally, we tested whether charismatic leaders have a greater effect on investors who already have a stake in the investment (Hypothesis 3) by manipulating an endowment of stock, and whether charismatic appeals can increase the risk-taking of investors (Hypothesis 4) by comparing the purchase of common stocks vs. a more conservative money market investment. Thus, while the first study demonstrated a general relationship between charismatic leadership and financial support for the firm, the second study explored many of the dynamics underlying such a relationship.

STUDY 2

Sample and research design

One hundred fifty undergraduate students, enrolled in an introductory course in organizational behavior at a west coast university, participated in this study. Using original case materials, we manipulated the salience of charismatic leadership using an appeal (vs. no appeal) from a charismatic leader, information about a possible organizational turnaround (positive and negative), and endowment (endowment of stock, no endowment of stock) in a completely crossed-between-subjects design. Subjects were randomly assigned to eight cells, ranging in size from 17 to 22.

Procedure

At the start of a regular class session that focused on the topic of leadership, subjects were asked to

read a hypothetical case about a personal investment decision. The instructions preceding the case informed subjects that they had each recently inherited \$10,000 from a distant relative. In the no-endowment condition, subjects were not presented with a previously invested portfolio. In the endowment condition, the inheritance was already divided among three separate financial assets: \$2000 in a money market account, \$4000 in a popular stock index fund ('Fidelity Index Fund'), and \$4000 in the common stock of Apple Computer, Inc.

Regardless of any previous allocation of funds (endowment or no endowment), subjects were instructed to distribute (or redistribute) the \$10,000 among the same three investment options. They were told that a stipulation of the will required that funds be split (from \$0 to \$10,000) among these three investments. To help them make their decisions, a purportedly respected financial advisor provided relevant information about each investment. Subjects were instructed to review this information carefully and then decide how much money to allocate to each investment alternative. The only constraint was that subjects had to allocate the entire \$10,000 inheritance among the three investment options. The specific amount subjects allocated to any one of the three investment choices could range from \$0 to \$10,000, but the total amount allocated among the three investment options could not exceed or fall below \$10,000. Subjects were informed that their investment decisions would not affect their grades in the class in any way.

Investment options

Money market account

Case materials noted that 'the objective of a money market fund is to seek maximum income from investments in short-term money market instruments (e.g., certificates of deposit, time deposits, and banker's acceptances) that offer high liquidity.' In addition, subjects were told that 'the money market fund is designed for investors seeking stable money market yields through investments in corporate, bank, and government instruments that represent minimal credit risk.' Finally, annual return rates (at the time of the study) were shown to range from 5.22 percent (6 months) to 5.73 percent (3 years).

Fidelity Index Fund

The case described a market index fund as 'an investment that attempts to match the composition and performance of a chosen market indicator series.' In this case, the market indicator series being matched was Standard and Poor's (S&P) 500, one of the most widely recognized value-weighted series in the financial industry. Subjects were informed that Fidelity Index Fund was 'a moderate risk market index fund.' A graph was provided that depicted the performance of Fidelity Index Fund compared with the S&P average over the past 3 years. The graph demonstrated that the performance of the fund was nearly identical to that of the S&P series. In addition, annualized returns (at the time of the study) were shown to range from 9.69 percent (6 months) to 18.27 percent (3 years).

Apple Computer stock

All subjects were provided identical information about Apple Computer as of the approximate date of the study. This included descriptions of the company's history, current market and fiscal positions, and the company's most recent product line, which included the iMac (see Appendix 1). Subjects were provided with Apple's quarterly and yearly earnings and earnings-per-share data covering the past 3 years. A graph was included that depicted the performance of Apple stock compared with the S&P average over this 3-year period. Clearly shown by the graph was the fact that Apple stock had not performed as well as the S&P average.

Manipulated variables

Positive/negative turnaround information

After baseline financial data on Apple Computer was presented, subjects read varying descriptions of the company's future. In one condition, subjects were furnished with positive information about Apple's financial and market outlook. In a second condition, subjects were given negative information about Apple's future (see Appendix 2). These forecasts were designed to vary the direction of Apple's prospects. When positive forecasts were combined with objective data about Apple's current financial position, a turnaround was clearly evident. When negative forecasts were combined

with these same data, the prospects for Apple Computer were more dubious.

Charismatic leadership

After subjects had read the brief descriptions of the three investment opportunities (money market, index fund, Apple Computer), they viewed a 20-minute video of Steve Jobs, CEO of Apple Computer, presenting the iMac at a large trade show. The videotape presentation included a short introduction, a brief description of Apple's history and current financial position (identical to the information provided in the case materials), as well as a more detailed description of the new iMac computer. The purpose of Steve Jobs' presentation was not only to introduce the iMac, but also to persuade the audience (composed of developers, analysts, and the press) that Apple Computer was poised to make a dramatic turnaround in the near future. Half of the subjects were asked to make their investment decision before viewing the Steve Jobs video, while the other half were asked to make their investment decision immediately following the video.

Although previous experimental studies of charismatic leadership employed professional actors playing organizational roles (e.g., Howell and Frost, 1989; Kirkpatrick and Locke, 1996), we believed that using an easily recognizable corporate leader would provide face validity for the manipulation of charisma as well as greater external validity for the experimental results. Steve Jobs, co-founder and CEO of Apple Computer, was chosen for this study because much has been written in popular books (e.g., Butcher, 1988), business magazines (e.g., Berglas, 1999), and even academic textbooks (e.g., Roberts and Hunt, 1991) about Jobs being the quintessential charismatic organizational leader. In fact, John Sculley, Jobs' immediate successor at Apple, wrote, 'Steve was their inspirational leader, and they idolized him... That was Steve's power—to make people believe in him' (Sculley, 1987). Another characterization of Jobs' leadership style described him as 'part CEO and part cultural revolutionary' (Schlender, 1998: 96).

It should be emphasized that the salience of charismatic leadership was manipulated in this experiment by its enactment in a videotaped performance. We did not specifically manipulate 'non-charismatic' leadership because this would have

been impossible with a well-known corporate leader such as Steve Jobs. Substituting another person's presentation for that of Steve Jobs would not have been credible to college students, nor would an attempt to capture a non-charismatic portrayal of this well-known leader. Given that most of our subjects knew that Apple Computer was led by Steve Jobs, our manipulation of leadership should be interpreted as providing different levels in the salience of charisma rather than alternatives in specific leadership styles (e.g., charismatic vs. transactional leadership).

Non-manipulated variables

Ratings of charisma

After reviewing the charismatic leadership literature (e.g., Conger and Kanungo, 1987; House, 1977), we identified the following nine behaviors that help define charismatic leadership: (1) provides a sense of mission; (2) conveys excitement and enthusiasm; (3) displays self-confidence; (4) shows pride in the organization; (5) expresses important points in simple ways; (6) celebrates successes and accomplishments; (7) articulates a strategy for moving the organization forward; (8) develops a vision that is clear and meaningful to followers; (9) provides challenging goals for the organization. At the end of the experiment, we asked subjects to rate the extent to which Steve Jobs exhibited each of these behaviors in the video presentation, using a 9-point scale, ranging from 'Not at all' to 'To a great extent.' The overall reliability (alpha) coefficient for the 9-item scale was 0.87. Ratings were therefore averaged to create an overall measure of attributed charisma ($x = 7.48$, S.D. = 1.05). The high average score (hereafter referred to as charisma rating) indicates that the manipulation of charismatic leadership was successful.

Risk propensity

To assess subjects' propensity to assume risk in this investment exercise, we created a simple ratio of risky vs. conservative investments. We excluded the subject's investment in Apple Computer in this measure because it was the target of the charismatic appeal. Rather, the measure of risk propensity ($x = 0.70$, S.D. = 0.23) consisted of a ratio in which the numerator was the amount of money

invested in Fidelity Index Fund and the denominator was the amount of money available after investing in Apple stock (\$10,000—\$Apple). In short, as subjects increased the amount of money they invested in Fidelity Index Fund relative to the amount they invested in the money market account, the ratio measure of risk propensity increased. Three cases were dropped from the analyses because these subjects invested all \$10,000 in Apple stock (in these cases, the denominator would have equaled zero).

Control variables

Prior belief in Apple Computer

At the start of the experiment, we asked subjects to answer the following two questions: (1) 'How favorably do you look upon Apple, as a company?' and (2) 'How likely do you think it is that Apple will be a leader in the computer industry in the next decade?' The subjects were asked to indicate their responses to these questions using a 9-point scale, ranging from 1 = 'very unfavorably' to 9 = 'very favorably' for the first question ($x = 5.37$, S.D. = 1.79), and from 1 = 'highly unlikely' to 9 = 'highly likely' for the second question ($x = 4.75$, S.D. = 1.98). We averaged responses to these two items ($r = 0.57$, $p < 0.01$) to measure subjects' prior opinion of Apple Computer ($x = 5.07$, S.D. = 1.66).

Debriefing

At the conclusion of the experiment, subjects were debriefed about the purpose of the exercise, the nature of the experimental manipulations, and why deception was used. Experiments requiring deception may not yield valid results if subjects coming to the experiment have been informed of its true purpose or detect such deception during the experiment (Singleton, Straits, and Straits, 1993). Thus, the experimenter asked if any of the subjects were aware that they had been deceived during the exercise, if they were suspicious of the evidence presented in the experimental materials, or if anyone had told them about the experiment before they arrived. Subjects were made aware that an affirmative response would not endanger their receiving credit for participation in the experiment. No subjects reported any doubt about the accuracy of the data presented or knowledge of being deceived in the experimental exercise.

Subjects were also questioned about their knowledge of financial investments, and specifically, if they found the investment data presented in the study materials difficult to interpret. Again, no subjects reported any difficulty understanding the investment data as it was presented in the case. This is likely due to the fact that the overwhelming majority of subjects had already completed an introductory finance course during the previous semester.

Results

Means, standard deviations, and correlations for all study variables are reported in Table 1.

Hierarchical regressions were used to test the study's primary hypotheses. For Hypotheses 1b, 2b, and 3, the dependent variable was the amount of money invested in Apple stock, while for Hypothesis 4 the dependent variable was the risk ratio measure. In each regression analysis, the measure of subjects' prior belief in Apple was entered in the first step as a control variable. The three main experimental variables (charismatic leadership, turnaround information, and endowment) were entered in the second step. The charisma rating was entered in the third step. The fourth and fifth steps contained two-way and three-way interaction terms.

The impact of charismatic leadership on investment

Hypothesis 1b implies that investors would allocate more resources to Apple after listening to an appeal from its charismatic leader. The results in Table 2 (Equation 1) show a significant positive effect of charismatic leadership on investment in Apple stock ($\beta = 0.24$; $p \leq 0.001$), which supports the hypothesis. To further test the robustness of this finding, we also included a two-way interaction term (charisma rating \times salience of charismatic leadership) in the equation. If the basis for this hypothesis is sound, then the extent to which subjects found Steve Jobs to be charismatic should enhance the effect of seeing the Jobs video before making the investment decision. As shown in Table 2 (Equation 1), the two-way interaction term had a significant positive effect on investment in Apple stock ($\beta = 1.43$; $p \leq 0.01$), thus providing strong support for Hypothesis 1b.

Charismatic leadership and turnaround information

As one might expect, negative information about a potential turnaround at Apple Computer influenced the amount of money subjects allocated to this investment option. As shown in Equation 2 of Table 2, those who were given negative information about the potential turnaround invested significantly less money in Apple stock than those who were given positive information ($\beta = -0.25$; $p \leq 0.001$).

As predicted by Hypothesis 2b, the impact of charismatic leadership varied depending on whether investors were faced with positive or negative information about the company's future. As shown in Table 2 (Equation 2), there was a significant interaction of charismatic leadership and negative turnaround information ($\beta = 0.24$; $p \leq 0.05$), indicating that the influence of Steve Jobs was greater when subjects had previously been given discouraging information about Apple's future. A plot of this interaction effect is presented in Figure 3. When subjects had primarily positive information about Apple Computer, their investment was only slightly greater (an average of \$3767 compared with \$3371) after listening to the charismatic leader. When the information was more negative, however, subjects' investment was substantially greater (an average of \$3277 compared with \$1329) after listening to a message from the charismatic leader.

As an additional test of Hypothesis 2b, we also included the charisma rating with the manipulated

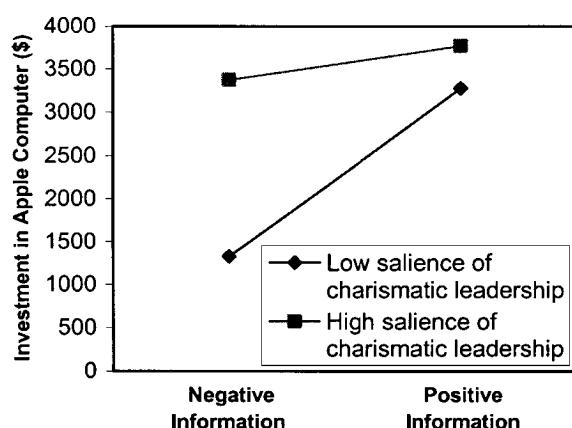


Figure 3. The effect of charismatic leadership salience and turnaround information on investment in Apple Computer

Table 1. Means, standard deviations, and correlations among study variables

Variables	<i>x</i>	S.D.	1	2	3	4	5	6	7	8	9
1. Endowment			—								
2. Salience of charismatic leadership			0.01	—							
3. Negative turnaround information			-0.03	-0.05	—						
4. Charisma rating	7.53	0.95	-0.02	-0.03	-0.01	—					
5. Prior belief in Apple	5.07	1.66	0.07	0.18*	-0.08	0.28**	—				
6. Money market investment	2220.67	1867.79	0.02	-0.29**	0.11	-0.23**	-0.13	—			
7. Fidelity investment	4888.33	2266.17	-0.25**	-0.06	0.19	-0.15	-0.26**	-0.44**	—		
8. Apple investment	2891.00	2205.68	0.24**	0.30**	-0.29**	0.35**	0.38**	-0.39**	-0.65**	—	
9. Risk ratio	0.70	0.23	-0.07	0.23**	0.01	0.14	0.04	-0.93**	0.65**	0.11	—

* $p < 0.05$; ** $p < 0.01$

Table 2. Hierarchical regression equations predicting amount invested in Apple and risk ratio

	1 Amount invested in Apple	2 Amount invested in Apple	3 Amount invested in Apple	4 Risk ratio
1. Control variables				
Prior belief in Apple	0.38***	0.38***	0.38***	0.04
Contribution to R^2	0.14	0.14	0.14	0.01
2. Experimental conditions				
Salience of charismatic leadership	0.24***	0.24***	0.24***	0.23**
Negative turnaround information	—	-0.25***	—	—
Endowment	—	—	0.25***	—
Contribution to R^2	0.06	0.12	0.12	0.04
3. Charisma rating	0.29***	0.29***	0.29***	0.16*
Contribution to R^2	0.08	0.08	0.08	0.02
4. Two-way interactions				
Salience of charismatic leadership \times Charisma rating	1.43**	—	—	-0.69
Salience of charismatic leadership \times Negative turnaround information	—	0.24*	—	—
Salience of charismatic leadership \times Endowment	—	—	0.16†	—
Contribution to R^2	0.03	0.02	0.02	0.01
5. Three-way interactions				
Salience of charismatic leadership \times Negative turnaround information \times Charisma rating	—	1.58***	—	—
Salience of charismatic leadership \times Endowment \times Charisma rating	—	—	1.57**	—
Contribution to R^2	—	0.04	0.03	—
Full equation F -ratio	15.92***	15.72***	14.60***	3.19**
Full equation R^2	0.31	0.40	0.39	0.08
Degrees of freedom	4,145	6,143	6,143	4,142

† $p \leq 0.10$; * $p \leq 0.05$; ** $p \leq 0.01$; *** $p < 0.001$; hypothesized effects are one-tail tests and all other results represent two-tail tests.

variables of charismatic leadership and turnaround information. If the hypothesis is correct, we might expect a significant three-way interaction of these variables. That is, the extent to which charismatic leadership has greater impact under the negative information condition should depend on the degree to which subjects found the CEO, Steve Jobs, to be charismatic. As seen in Table 2 (Equation 2), the three-way interaction term did have a significant positive effect on investment in Apple stock ($\beta = 1.58$; $p \leq 0.001$), thus strengthening support for Hypothesis 2b.

The effect of endowment

We proposed in Hypothesis 3 that charismatic leaders would have a greater impact on those subjects already holding stock in the organization.

As expected, an endowment of stock in Apple Computer influenced the amount of money subjects allocated to this investment option. As shown in Equation 3 of Table 2, those who held an endowment of stock in Apple Computer allocated more money toward Apple stock than those who did not hold an endowment of stock ($\beta = 0.25$; $p \leq 0.001$).

Also, as shown in Table 2 (Equation 3), there was a marginally significant positive interaction of endowment and charismatic leadership on investment in Apple ($\beta = 0.16$; $p \leq 0.10$). A plot of the interaction is shown in Figure 4. When subjects did not hold an endowment of stock in Apple Computer, their investment was greater after listening to the message from Steve Jobs (an average of \$2900) than before listening to the message

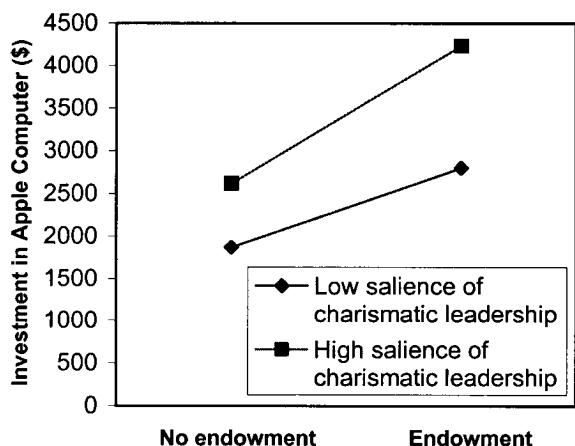


Figure 4. The effect of charismatic leadership salience and endowment on investment in Apple Computer

from the charismatic leader (an average of \$1872). When subjects held an endowment of stock in Apple Computer, however, the difference between their investments before and after listening to the message from Steve Jobs was even larger (\$2618 vs. \$4238).

To test the robustness of this interactional finding, we also included a three-way interaction term (*charisma rating* \times *salience of charismatic leadership* \times *endowment*) in the final step of the regression analysis. In line with Hypothesis 3, we not only expected the influence of charismatic leadership to be greater when subjects held an endowment of stock, but that this influence would depend on the extent to which subjects found Steve Jobs to be charismatic. As seen in Table 2 (Equation 3), the three-way interaction term had a significant positive effect on investment in Apple stock ($\beta = 1.57$; $p \leq 0.01$), providing additional support for the endowment hypothesis.

The effect of charismatic leadership on risk-taking

According to Hypothesis 4, charismatic leadership may have an effect on investors' risk propensities, such that more resources are allocated to riskier investments after listening to a charismatic appeal. As shown in Table 2 (Equation 4), the average risk ratio was significantly higher for subjects who had heard the charismatic appeal ($\beta = 0.23$; $p \leq 0.01$). The mean ratio for those subjects who viewed the video presentation before making their investment decision was 0.75, whereas the mean ratio for those subjects who viewed the video

presentation after making their investment decision was 0.65. There was also a significant effect for the charisma rating on the risk ratio of subjects ($\beta = 0.16$; $p \leq 0.05$), indicating that those who found Jobs to be charismatic also tended to make riskier investments.

As in previous analyses, we included a two-way interaction term (*charisma rating* \times *salience of charismatic leadership*) in the final step of the equation. In order to support the risk generalization hypothesis, the impact of charismatic leadership on an investor's propensity to assume risk should strengthen if investors find the organizational leader to be more charismatic. As seen in Table 2 (Equation 3), the two-way interaction term did not have a significant effect on the risk ratio variable ($\beta = -0.69$; $p = \text{n.s.}$). The absence of an interaction effect, combined with the significant main effects both for charismatic leadership and for charisma ratings, means that Hypothesis 4 received only partial empirical support.

Discussion

Max Weber described a charismatic leader's qualities as 'magical abilities, revelations of heroism, and power of the mind and speech' (Etzioni, 1961: 12). If true, such abilities would certainly aid charismatic leaders in motivating subordinates inside their organizations. Likewise, such abilities could prove instrumental in attracting and maintaining support for the organization among external constituents.

This research revealed strong evidence that companies headed by charismatic leaders outperformed comparable companies. In addition, we found that companies with charismatic leaders were more adept in attracting shareholders, as evidenced by increased stock prices. We also found that appeals from a charismatic leader increased people's willingness to invest money in a troubled firm. Not only was the experimental manipulation of charisma successful in increasing investment, but so too was its interaction with perceptual ratings of charisma. Given the parallel results from both archival and experimental studies, we can conclude that certain leaders do have the power to attract outside support for the organization, at least when this support is evidenced by financial investment.

A second conclusion that can be drawn from this study pertains to the interaction of charisma

and situational difficulty. We hypothesized that the effect of charisma would be stronger when the circumstances facing the firm are problematic, arguing that charismatic leadership is especially useful in economically difficult situations. We found such an interaction effect in the archival study using macro-economic data as a measure of business conditions. We also found an interaction between charisma and situational difficulty in the experimental study using positive or negative information about a business turnaround. Both these studies lead one to believe that the potency of charisma varies by the circumstances in which it is enacted. An alternative way of describing this same interaction is how charisma alters the influence of information on investment behavior. For example, our experimental results showed that when subjects were given information describing only a positive outlook for Apple Computer's latest products and strategies, they invested significantly more money than when they were provided negative information. When subjects listened to a charismatic presentation by Steve Jobs before making their investments, however, the same written materials ceased to have a significant impact. Regardless of the case descriptions stressing positive or questionable aspects of the turnaround (including a statement about how many brokerage houses were recommending the stock of Apple Computer), there was little difference in investment after hearing the appeal from Steve Jobs. Following the video presentation, subjects in the negative information condition invested virtually the same amount as those given more positive information. Thus, a message from a charismatic leader apparently transformed an economically troublesome situation into one that was equivalent to a more positive scenario, at least in the eyes of the beholder.

The manipulated effects of charismatic leadership, along with the effects of the charisma ratings, point to the power of certain leaders for persuading people to support an organization. But the influence of charismatic leaders does not appear to be unconditional. The results showed that charismatic leadership was most influential with those who had purportedly inherited an endowment of stock in Apple Computer. Thus, somewhat of a paradox is posed. While charismatic leadership may be generally instrumental in turning around a troubled organization, the effect may be weaker if the audience is primarily comprised of non-investors. Perhaps

when the situation is negative, non-investors fear that even the best efforts of a charismatic leader will not be enough to pull the company out of decline. We do not know exactly what level of prior investment constitutes a 'tipping point' for endowment effects. Further, the endowment effect manipulated in this study represented only a minimal, or superficial, form of commitment. It is possible that a more substantial form of commitment might reverse the effect obtained here; that is, charismatic leaders may have less of an impact on individuals who are strongly committed (or heavily invested) because they cannot deter from their previously chosen courses of action (e.g., Staw, 1976). Thus, all we can say from the present study is that charismatic leadership was more influential when received by an audience whose members had purportedly inherited an endowment of stock in the organization.

The perception of charisma revisited

As we have noted, charismatic leaders often are seen as coming to the forefront during times of crisis. One reason attention may be focused on charismatic leaders in crisis situations is that these leaders take special initiatives to solve group or organizational problems. Another reason may be that the experience of adversity has primed followers to see charismatic qualities in their leaders. Our study was not designed to sort out these two explanations of charisma. Nonetheless, we thought it would be useful to see whether subjects' ratings of charisma were conditioned by the presence of different information in the case. On the one hand, we might expect ratings of charisma to be higher when the situation was described as more negative because this would more closely resemble a crisis situation (Pillai, 1996). On the other hand, because the attribution of leadership can be inflated following positive group and organizational performance (Meindl, Ehrlich, and Dukerich, 1985), we might expect to find higher ratings of charisma when more positive information was provided. Empirically, the data supported neither position. There were no significant differences between ratings of charismatic leadership in the positive and negative information conditions.

Though we did not find evidence for how information influences the attribution of leadership, we did find that these attributions (whatever their source) were capable of influencing investment

decisions. We also found partial support for the effects of charisma on generalized risk tendencies. After exposure to the charismatic presentation by Steve Jobs, subjects were not only willing to invest more money in Apple Computer. They also increased their investment in other stocks and decreased their allocations to the more conservative money market fund. Because all of the analyses did not support risk generalization, this finding should be replicated before firm conclusions are drawn. If these findings are upheld by further research, they could hold serious implications for organizations. Charismatic leaders may provide a boost to firms emphasizing new products and technology, because innovation often entails the acceptance and encouragement of risk-taking behavior (Amabile *et al.*, 1996). But, since charismatic leadership might provoke risky behavior and decision making among followers, problems could be created for organizations requiring risk-averse behavior or high reliability (Weick and Roberts, 1993).

Charisma and external organizational relations

The literature on charismatic leadership has eschewed much of the research on organization–environment relations. Relationships with constituents outside the organization have typically been the province of sociological rather than psychological research. For example, resource dependence theory (Pfeffer and Salancik, 1978) suggests that organizations can increase their chances of survival by either decreasing their dependence on other organizations or increasing other organizations' dependence on them. Dependence can be managed through various means, including co-optation, mergers, joint ventures, and coalition building (e.g., Finkelstein, 1997; Thompson, 1967; Yan and Gray, 1994). Neo-institutional theory is similarly concerned with the survival and well-being of organizations. Its focus, however, is upon the maintenance of legitimacy within the larger social and economic system (Scott, 1992). Through processes of modeling and compliance, organizations can establish and maintain legitimacy in the eyes of outside observers, be they regulators, clients, or controllers of critical resources (DiMaggio and Powell, 1983).

Macro or sociological theories seldom refer to the motivation and actions of single individuals, even if they are the leaders of the organization

or are given formal responsibility for decision making. Instead, behavior is deemed to be either the product of collective entities, such as 'top management' and 'the dominant coalition,' or the inevitable product of environmental exigencies. Our position is more psychological. We maintain that individuals in high-power positions can and do make a difference in the way organizations behave in their environments (see Staw and Sutton, 1992, for a similar argument). And, of all the psychological theories that can help explain organization–environment relations, models of charismatic leadership may be among the most useful.

LIMITATIONS AND DIRECTIONS FOR FUTURE RESEARCH

While this study illustrated the role of charismatic leadership in securing financial support, one should also keep in mind that leadership involves a broad array of external tasks (Mintzberg, 1973). Building confidence among consumers, potential employees, regulatory agencies, and the business community are all tasks that can engage the skills of a charismatic leader. Elsbach and Sutton (1992), for example, described how leaders often are called on to avert threats to an organization's public image. They explained how leaders of activist groups employ impression management techniques during crises to maintain the positive image of the organization and, in turn, the support of external constituents. Though impression management techniques can be important means of defending an organization's image, they are not part of the typical arsenal of skills described in the leadership literature (cf. Giacalone, Knouse, and Pearce, 1998). Thus, if research is to turn its attention to the external role of leadership, a new set of skills and activities need to be investigated (Ginzel, Kramer, and Sutton, 1993).

Some of the existing set of leadership activities may also need to be updated for the external side of management. For example, prior research suggests that charismatic leaders are particularly skilled at managing relationships with others (Gardner and Avolio, 1998; House, 1977). If this is true, then charismatic leadership could be an important factor for organizations' success in a network-based economy (Miles and Snow, 1995; Powell, Koput, and Smith-Doerr, 1996). When rapid innovation and adaptation depend on the creation of temporary

alliances and joint ventures (Williamson, 1975), skills in coalition building can take precedence. Thus, leaders who can attract others, identify common interests, and manage potential conflicts may be instrumental in helping their firms compete in highly interconnected environments.

Although we have emphasized how a broadened view of charismatic leadership can contribute to organizational effectiveness, there may also be a downside to charisma. On the one hand, charismatic leaders may sometimes strive for personal gain over the interests of followers (Conger, 1990). This unethical or 'dark side' of charismatic leadership could help explain the recent spate of corporate scandals, many of which involved CEOs who were considered charismatic figures. On the other hand, charismatic leaders might be 'too successful' in securing support for an organization that is fundamentally unsound. These charismatic leaders espouse well-intentioned strategies and goals, but their ideas might be deeply flawed or ill advised. Given the manner in which charismatic leaders make their appeals, followers may accept their ideas too indiscriminately (Trice and Beyer, 1993: 291–293). Indeed, some scholars have even presented empirical evidence that the appointment of charismatic CEOs is not actually in the shareholders' best interest (Khurana, 2002). Indeed, these individuals often behave irrationally in their pursuit of a goal, which might lead us to question the true value of their popularity.

Finally, future research should address limitations of the studies presented here. Although the archival study offers external validity, one can still question its internal validity; that is, whether charisma may have been attributed to corporate leaders after they were successful in raising stock prices. And, whereas the experiment augmented the internal validity of findings from the first study, the subjects involved had little 'real' experience in making investment decisions. To address these limitations, future empirical research might consider a time-series analysis of charismatic leadership attributions in the popular press and changes in stock price, so as to examine whether charisma alters real investment behavior. Further, although the experiment provided some external validity by using a well-known charismatic leader, it offered a somewhat limited test of the study hypotheses because it involved only one leader and one modality of communication. Results might have been different with a message from a charismatic leader who

was not so well known to potential investors or a message that was communicated via another medium. In addition, the order in which materials were presented to subjects may have unduly influenced their subsequent judgments. If the information about Apple's prospects had been presented after (rather than before) showing the charismatic message, perhaps the charismatic appeal may have been lessened in the negative information condition and accentuated when positive information was provided. Future research is needed to clarify whether our findings generalize to these and other potential variations in experimental procedures.

CONCLUSION

This study was designed to show how charismatic leadership could influence external support for the organization. Both an archival study and a laboratory experiment showed how a charismatic leader might influence the attractiveness of investment in the firm. It was also found that the effects of charisma were heightened as the situation became more difficult. In fact, at its extreme, a charismatic appeal appeared to be capable of converting an economically difficult situation into one that could be interpreted as positive.

These findings give credence to the argument that charismatic leadership research should turn *outward* from the organization. Because most charismatic leadership research has focused on the attitudes and behavior of employees inside the firm, it may now be time to address the actions and consequences of charismatic leadership beyond the borders of the organization. We hope this research will serve as a stimulus for further studies on the role of charismatic leaders in managing the economic and social environment of organizations.

REFERENCES

- Amabile TM, Conti R, Coon H, Lazenby J, et al. 1996. Assessing the work environment for creativity. *Academy of Management Journal* **39**(5): 1154–1184.
- Barling J, Weber T, Kelloway EK. 1996. Effects of transformational leadership training on attitudinal and financial outcomes: a field experiment. *Journal of Applied Psychology* **81**(6): 827–832.
- Barnard C. 1938. *Functions of the Executive*. Harvard University Press: Cambridge, MA.
- Bass BM. 1985. *Leadership and Performance beyond Expectations*. Free Press: New York.

- Bennis W, Nanus B. 1985. *Leaders: The Strategies for Taking Charge*. Harper & Row: New York.
- Berglas S. 1999. What you can learn from Steve Jobs. *Inc* 21(14): 29–32.
- Berlew DE. 1974. Leadership and organizational excitement. *California Management Review* 17: 21–30.
- Beyer JM. 1999. Taming and promoting charisma to change organizations. *Leadership Quarterly* 10(2): 307–330.
- Butcher L. 1988. *Accidental Millionaire: The Rise and Fall of Steven Jobs at Apple Computer*. Paragon House: New York.
- Chaiken S. 1980. Heuristic versus systematic information processing and the use of source versus message cues in persuasion. *Journal of Personality and Social Psychology* 39: 752–766.
- Conger J. 1990. The dark side of leadership. *Organizational Dynamics* 19(2): 44–55.
- Conger J. 1991. Inspiring others: the language of leadership. *Academy of Management Executive* 5: 31–45.
- Conger JA, Kanungo RN. 1987. Toward a behavioral theory of charismatic leadership in organizational settings. *Academy of Management Review* 12(4): 637–647.
- Deluga RJ. 1995. The relationship between attributional charismatic leadership and organizational citizenship behavior. *Journal of Applied Social Psychology* 26(18): 1652–1669.
- DiMaggio PJ, Powell WW. 1983. The iron cage revisited: institutional isomorphism and collective rationality in organizational fields. *American Sociological Review* 48: 147–160.
- Dow TE. 1969. The theory of charisma. *Sociological Quarterly* 10: 306–318.
- Elsbach KD, Sutton RI. 1992. Acquiring organizational legitimacy through illegitimate actions: a marriage of institutional and impression management theories. *Academy of Management Journal* 35(4): 699–738.
- Etzioni A. 1961. *A Comparative Analysis of Complex Organizations*. Free Press of Glencoe: New York.
- Finkelstein S. 1997. Interindustry merger patterns and resource dependence: a replication and extension of Pfeffer (1972). *Strategic Management Journal* 18(10): 787–810.
- Fombrun C, Shanley M. 1990. What's in a name? Reputation building and corporate strategy. *Academy of Management Journal* 33: 233–258.
- The Fortune 500 Largest Service Corporations. 1989. *Fortune* 119(12): 358–385.
- The Fortune 500 Largest Service Corporations. 1990. *Fortune* 121(13): 304–331.
- The Fortune 500 Largest Service Corporations. 1991. *Fortune* 123(11): 260–279.
- The Fortune 500 Largest U.S. Corporations. 1995. *Fortune* 131(9): F1–F20.
- The Fortune 500 Largest U.S. Industrial Corporations. 1988. *Fortune* 117(9): D11–D30.
- The Fortune 500 Largest U.S. Industrial Corporations. 1989. *Fortune* 119(9): 354–373.
- The Fortune 500 Largest U.S. Industrial Corporations. 1990. *Fortune* 121(9): 346–365.
- The Fortune 500 Largest U.S. Industrial Corporations. 1991. *Fortune* 123(8): 286–305.
- The Fortune 500 Largest U.S. Industrial Corporations. 1992. *Fortune* 125(8): 220–239.
- The Fortune 500 Largest U.S. Industrial Corporations. 1993. *Fortune* 127(8): 180–203.
- The Fortune 500 Largest U.S. Industrial Corporations. 1994. *Fortune* 129(8): 220–239.
- The Fortune 500 Largest U.S. Service Corporations. 1992. *Fortune* 125(11): 174–193.
- The Fortune 500 Largest U.S. Service Corporations. 1993. *Fortune* 127(11): 206–225.
- The Fortune Directory of the Largest U.S. Industrial Corporations. 1984. *Fortune* 109(9): 276–295.
- The Fortune Directory of the Largest U.S. Industrial Corporations. 1985. *Fortune* 111(9): 266–284.
- The Fortune Directory of the Largest U.S. Industrial Corporations. 1986. *Fortune* 113(9): 182–201.
- The Fortune Directory of the Largest U.S. Industrial Corporations. 1987. *Fortune* 115(9): 364–383.
- The Fortune Directory of the Largest U.S. Non-Industrial Corporations. 1984. *Fortune* 109(12): 172–191.
- The Fortune Directory of the Largest U.S. Non-Industrial Corporations. 1985. *Fortune* 111(12): 175–195.
- The Fortune Directory of the Largest U.S. Non-Industrial Corporations. 1986. *Fortune* 113(12): 122–141.
- The Fortune Directory of the Largest U.S. Non-Industrial Corporations. 1987. *Fortune* 115(12): 196–215.
- The Fortune Directory of the Largest U.S. Non-Industrial Corporations. 1988. *Fortune* 117(12): D7–D34.
- Fortune's Service 500: the Largest U.S. Service Corporations. 1994. *Fortune* 129(11): 200–219.
- Gardner WL, Avolio BJ. 1998. The charismatic relationship: a dramaturgical perspective. *Academy of Management Review* 23(1): 32–58.
- Garr D. 1999. *IBM Redux: Lou Gerstner and the Business Turnaround of the Decade*. HarperBusiness: New York.
- Geletkanycz MA, Hambrick DC. 1997. The external ties of top executives: implications for strategic choice and performance. *Administrative Science Quarterly* 42(4): 654–681.
- Giacalone RA, Knouse SB, Pearce CL. 1998. The education of leaders: impression management as a functional competence. *Journal of Management Systems* 10(2): 67–80.
- Ginzel LE, Kramer RM, Sutton RI. 1993. Organizational impression management as a reciprocal influence process: the neglected role of the organizational audience. In *Research in Organizational Behavior*, Vol. 15, Staw BM, Cummings LL (eds). JAI Press: Greenwich, CT; 227–266.
- Gulati R, Nohria N, Zaheer A. 2000. Strategic networks. *Strategic Management Journal*, Special Issue 21: 203–215.
- Hamblin RL. 1958. Leadership and crises. *Sociometry* 21: 322–335.
- House RJ. 1977. A 1976 theory of charismatic leadership. In *Leadership: The Cutting Edge*, Hunt JG, Larson L (eds). Southern Illinois University Press: Carbondale, IL; 189–204.

- House RJ, Baetz ML. 1979. Leadership: some empirical generalizations and new research directions. In *Research in Organizational Behavior*, Vol. 1, Staw BM, Cummings LL (eds). JAI Press: Greenwich, CT; 341–423.
- House RJ, Spangler WD, Woycke J. 1991. Personality and charisma in the U.S. presidency: a psychological theory of leader effectiveness. *Administrative Science Quarterly* **36**: 364–396.
- Howell JM, Avolio BJ. 1993. Transformational leadership, transactional leadership, locus of control, and support for innovation: key predictors of consolidated-business-unit performance. *Journal of Applied Psychology* **78**(6): 891–902.
- Howell JM, Frost PJ. 1989. A laboratory study of charismatic leadership. *Organizational Behavior and Human Decision Processes* **43**: 243–269.
- Kahneman D, Knetsch JL, Thaler R. 1990. Experimental tests of the endowment effect and Coase theorem. *Journal of Political Economy* **98**(6): 1325–1348.
- Kahneman D, Tversky A. 1979. Prospect theory: an analysis of decisions under risk. *Econometrica* **47**: 263–291.
- Khurana R. 2002. *Searching for a Corporate Savior: The Irrational Quest for Charismatic CEOs*. Princeton University Press: Princeton, NJ.
- Kirkpatrick SA, Locke EA. 1996. Direct and indirect effects of three core charismatic leadership components on performance and attitudes. *Journal of Applied Psychology* **81**(1): 36–51.
- Knetsch JL, Sinden JA. 1984. Willingness to pay and compensation demanded: experimental evidence of an unexpected disparity in measures of value. *Quarterly Journal of Economics* **99**: 507–521.
- Kouzes JM, Posner BZ. 1987. *The Leadership Challenge: How to Get Extraordinary Things Done in Organizations*. Jossey-Bass: San Francisco, CA.
- Langer EJ. 1983. *The Psychology of Control*. Sage: Beverly Hills, CA.
- Madsen D. 1991. *The Charismatic Bond: Political Behavior in Time of Crisis*. Harvard University Press: Cambridge, MA.
- Meindl J. 1993. Reinventing leadership: a radical, social psychological approach. In *Social Psychology in Organizations*, Murnighan JK (ed). Prentice-Hall: Englewood Cliffs, NJ; 89–118.
- Meindl JP, Ehrlich SB, Dukerich JM. 1985. The romance of leadership. *Administrative Science Quarterly* **30**: 78–102.
- Miles RE, Snow CC. 1995. The new network firm: a spherical structure built on a human investment philosophy. *Organizational Dynamics* **23**(4): 4–18.
- Mintzberg H. 1973. Strategy making in three modes. *California Management Review* **16**(2): 44–53.
- Moritz M, Seaman B. 1984. *Going for Broke: Lee Iacocca's Battle to Save Chrysler*. Anchor Press/Doubleday: Garden City, NY.
- Nadler DA, Tushman ML. 1990. Beyond the charismatic leader: leadership and organizational change. *California Management Review* **32**(2): 77–97.
- Pawar BS, Eastman KK. 1997. The nature and implications of contextual influences on transformational leadership: a conceptual examination. *Academy of Management Review* **22**(1): 80–109.
- Petty RE, Cacioppo JT. 1986. The elaboration likelihood model of persuasion. In *Advances in Experimental Social Psychology*, Vol. 19, Berkowitz L (ed). Academic Press; 123–205.
- Pfeffer J. 1981. Management as symbolic action: the creation and maintenance of organizational paradigms. In *Research in Organizational Behavior*, Vol. 3, Cummings L, Staw B (eds). JAI Press: Greenwich, CT; 1–53.
- Pfeffer J, Salancik GR. 1978. *The External Control of Organizations: A Resource-Dependence Perspective*. Harper & Row: New York.
- Pillai R. 1996. Crisis and the emergence of charismatic leadership in groups: an experimental investigation. *Journal of Applied Social Psychology* **26**(6): 543–562.
- Powell WW, Koput KW, Smith-Doerr L. 1996. Interorganizational collaboration and the locus of innovation: networks of learning in biotechnology. *Administrative Science Quarterly* **41**(1): 116–145.
- Puffer SM. 1990. Attributions of charismatic leadership: the impact of decision style, outcome, and observer characteristics. *Leadership Quarterly* **1**(3): 177–192.
- Roberts KH, Hunt DM. 1991. *Organizational Behavior*. PWS-Kent Publishing: Boston, MA.
- Schlender B. 1998. The three faces of Steve. *Fortune* **138**(9): 96–104.
- Scott WR. 1992. *Organizations: Rational, Natural, and Open Systems*. Prentice-Hall: Upper Saddle River, NJ.
- Sculley J. 1987. *Odyssey: Pepsi to Apple ... A Journey of Adventure, Ideas, and the Future*. Harper & Row: New York.
- Shamir B, House RJ, Arthur MB. 1993. The motivational effects of charismatic leadership: a self-concept based theory. *Organization Science* **4**(4): 577–594.
- Singleton RA, Straits BC, Straits MM. 1993. *Approaches to Social Research*. Oxford University Press: New York.
- Staw BM. 1976. Knee deep in the Big Muddy: a study of escalating commitment to a chosen course of action. *Organizational Behavior and Human Performance* **16**: 27–44.
- Staw BM, Ross J. 1987. Behavior in escalation situations: antecedents, prototypes, and solutions. *Research in Organizational Behavior*, Vol. 9, Cummings LL, Staw BM (eds). JAI Press: Greenwich, CT; 39–78.
- Staw BM, Sutton RI. 1992. Macro organizational psychology. In *Social Psychology in Organizations: Advances in Theory and Research*, Murnighan JK (ed). Prentice-Hall: Englewood Cliffs, NJ; 350–384.
- Thompson JD. 1967. *Organizations in Action*. McGraw-Hill: New York.
- Tichy NM, Devanna MA. 1986. *The Transformational Leader*. Wiley: New York.
- Trice H, Beyer J. 1986. Charisma and its routinization in two social movement organizations. In *Research in Organizational Behavior*, Vol. 8, Staw BM, Cummings LL (eds). JAI Press: Greenwich, CT; 113–164.
- Trice H, Beyer J. 1993. *Cultures of Work Organizations*. Prentice-Hall: Englewood Cliffs, NJ.

- van Knippenberg D, Hogg MA. In press. A social identity model of leadership effectiveness in organizations. In *Research in Organizational Behavior*, Kramer R, Staw B (eds). Elsevier Science: Oxford, UK.
- Waldman DA, Yammarino FJ. 1999. CEO charismatic leadership: levels-of-management and levels-of-analysis effects. *Academy of Management Review* 24(2): 266–285.
- Weber M. 1947. *The Theory of Social and Economic Organization*, Henderson AH, Parsons T (eds). Free Press: Glencoe, IL.
- Weick KE, Roberts KH. 1993. Collective mind in organizations: heedful interrelating on flight decks. *Administrative Science Quarterly* 38(3): 357–381.
- Westley F, Mintzberg H. 1988. Profiles of strategic vision: Levesque and Iacocca. In *Charismatic Leadership: The Elusive Factor in Organizational Effectiveness*, Conger J, Kanungo R (eds). Jossey-Bass: San Francisco, CA; 161–212.
- Wicklund RA, Brehm JW. 1976. *Perspectives on Cognitive Dissonance*. Erlbaum: Hillsdale, NJ.
- Williamson OE. 1975. *Markets and Hierarchies: Analysis and Antitrust Implications*. Free Press: New York.
- Willner AR. 1984. *The Spellbinders: Charismatic Political Leadership*. Yale University Press: New Haven, CT.
- Yan A, Gray B. 1994. Bargaining power, management control, and performance in United States–China joint ventures: a comparative case study. *Academy of Management Journal* 37: 1478–1517.
- Yukl G, Van Fleet DD. 1992. Theory and research on leadership in organizations. In *Handbook of Industrial and Organizational Psychology*, Vol. 3 (2nd edn). Dunnette M, Hough L et al. (eds). Consulting Psychologists Press: Palo Alto, CA; 147–197.

APPENDIX 1

(Information given to all subjects)

Background

Apple Computer, Inc. ignited the personal computer industry back in the 1970s with the Apple II. In the 1980s, the company reinvented personal computing by introducing the Macintosh, a product that was widely considered a gold standard in the computer business for years. Despite these early successes, Apple's position among the industry elite has been questioned during the past decade. At the end of 1997, the firm rehired co-founder Steve Jobs to help return Apple to a position of prominence. For the past 10 months, Jobs and a new team of executives have been busy revamping the company's product line and creating a fresh new image for Apple. They believe their efforts will prove successful.

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Jobs reports the following as some early signs of a turnaround at Apple:

- Employee attrition rate cut from 33 percent to 15 percent (now below Silicon Valley average).
- Apple's revenue at CompUSA stores increased from 3 percent last year to 15 percent this year.
- The Apple website currently gets about 10,000,000 ‘hits’ a day.
- Apple's market share grew from 3.4 percent last quarter to 4.0 percent this quarter.
- Profits climbed to \$47 million last quarter and \$55 million this quarter.
- Cash available increased from \$1.5 billion last quarter to \$1.8 billion this quarter.
- Apple's worth was evaluated at \$1.8 billion last July. Its current worth is \$3.8 billion.

On October 14, Apple Computer announced results for the quarter and fiscal year ended September 25, 1998. For the quarter, the company posted earnings of \$106 million, or \$0.68 per share, compared to a loss of \$161 million, or \$1.26 per share, in the prior year quarter. Revenues and gross margins for the quarter were \$1.6 billion and 27 percent, respectively, compared to \$1.6 billion and 20 percent in the prior year.

Recently, Apple launched a major public relations campaign to promote its new products. The revamped product line includes the new desktop Macintosh G3 system, which is targeted to commercial and education users. Also for its commercial and education users, Apple released an updated version of the Power Book. It is in the midst of designing a similar laptop product for the consumer market (expected release: 1999). Finally, Apple is banking its turnaround on their new personal computer, the iMac, which is priced at \$1299. Each of these new Apple products is operating with a G3 processor that has been tested at speeds up to twice as fast as Pentium II processors.

APPENDIX 2

Positive turnaround information condition

This information suggests that Apple is poised to regain its edge over the competition. Indeed, industry experts and investment analysts have started singing Apple's praises once again. ‘Everyone is talking about how Apple has had success in the

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first stage of the iMac launch. The real question is not how many iMacs Apple has managed to sell, but who are they selling them to? The answer to that question is what's encouraging,' says Mark Thomas of A.G. Edwards. His point is a good one. Apple sold 278,000 iMacs in the first six weeks of its release, and only 14.5% of these machines were sold to loyal Apple customers who hadn't updated their machines for more than three years. A whopping 43.3% of iMac buyers are first time computer purchasers and 31.1% are former PC-users. Also, since 1996 Apple has only invested 3% of its annual sales (no more than the industry average) and 4% of its retained earnings into research and development efforts for the iMac. Thus, even if the iMac does not succeed, Apple won't be left in a dangerous financial position. Finally, despite earlier skepticism, it is clear that Apple's distribution systems and manufacturing operations can easily support the high demand for their products.

Overall, the iMac is off to a fast start. Apple has finally provided strong evidence that it can expand its existing customer base and once again become a highly profitable company. As a result, brokerage houses across the country are very positive about Apple's future. Out of fifty managers at the largest U.S. brokerage houses surveyed, over half are recommending Apple stock to clients. Most agree with Cynthia Severinson, a manager at Smith Barney, who states 'The initial figures are terrific. And, we can rest assured that the increase in Apple's stock price is not based on inflated expectations.'

Negative turnaround information condition

This information suggests that Apple is poised to regain its edge over the competition. However,

industry experts and investment analysts are reluctant to start singing Apple's praises. 'Everyone is talking about how Apple has had success in the first stage of the iMac launch. However, the real question is not how many iMacs Apple has managed to sell, but who are they selling them to?' says Mark Thomas of A.G. Edwards. His point is a good one. Apple sold 278,000 iMacs in the first six weeks of its release, but 94.5% of these machines were sold to loyal Apple customers who hadn't updated their machines for more than three years. Only 3.3% of iMac buyers are first time computer purchasers and only 1.1% are former PC-users. Also, since 1996 Apple invested 15% of its annual sales (more than 3 times the industry average) and 20% of its retained earnings into research and development efforts for the iMac. If the iMac does not succeed, Apple may find itself in a dangerous financial position. Regarding industry competition, the future looks pretty difficult. A Korean company has already begun making a cheaper clone of the iMac that will be released sometime in the next four or five months. Finally, skepticism remains about whether Apple's distribution and manufacturing systems can support a high demand for the product.

Overall, the iMac appears to be off to a fast start. But Apple still has provided no evidence that it can expand its existing customer base and once again become a highly profitable company. As a result, brokerage houses across the country are still dubious about Apple's future. Out of fifty managers at the largest U.S. brokerage houses surveyed, only five are recommending Apple stock to clients. Instead, most agree with Cynthia Severinson, a manager at Smith Barney, who argues 'The initial figures are misleading. The increase in Apple's stock price is based on inflated expectations.'