

The Announcement and Long-Term Effects of Hiring a Management Consulting Firm

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June 26, 2003

ABSTRACT

Despite the prominence of management consulting firms, there is little systematic evidence in the finance and economic literature of their impact on corporate performance. This paper assembles a unique dataset of companies that announce their relationships with a management consulting firm between 1991 and 2001. Stock returns fall by an average of 4.3 percentage points relative to the market when an announcement is made. The median price drop is 1.6 percentage points. In a longer-term analysis, the intercepts from a Fama-French four-factor model show that announcing companies earn negative risk adjusted returns prior to their announcements. Risk adjusted returns are significantly higher after the announcement, with the total risk adjusted return peaking at 1.3 percentage points per month approximately three years after the announcement. In addition, we show that the companies that announce a relationship with a management consultant tend to underperform their competitors before hiring and then begin to outperform them after two years. Average employment growth turns sharply negative in the years following the announcement; however, the positive risk-adjusted returns are only weakly correlated with employment contractions in the cross-section of announcement companies.

Keywords: Consultant, Event study, Multifactor model
JEL Classification: G12, G14, G34

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I. Introduction

Management consulting firms have become critical institutions in corporate governance. Whether dispensing advice, conducting systematic reviews, or facilitating changes in corporate control, management consultants are involved with many of the world's most important corporations. The fees paid for consulting services are far from trivial. Total revenues from management consulting worldwide are \$62 billion, up from \$17 billion just 10 years ago. After years of double-digit growth, the recent economic slowdown has hit the consulting industry hard. In 2001, revenues at the 50 largest consulting firms climbed by only 2 percent, with little hope for an improvement in the near term.¹ The industry's hard times have been compounded by its association with recent bankruptcies at Enron and Global Crossing, as well as a spate of lawsuits by former clients. Potential clients are asking themselves now more than ever, "What do these consulting fees actually buy?"

Despite the prominence of the consulting industry in matters of corporate governance and its precarious position in recent years, the economics literature is completely silent on this question.² The problem is one of data availability, which is limited for two important reasons. First, consulting firms have historically been organized as partnerships, whose reporting requirements are dramatically lower than publicly traded corporations. Second, confidentiality of the consultant-client relationship is accorded the utmost respect on both sides of the relationship. In this paper, we take a step toward the systematic econometric analysis of the industry by compiling a unique dataset of companies that have, nonetheless, announced their

¹ All figures in this paragraph are attributable to Kennedy Information, a Peterborough, NH, research firm that tracks the consulting industry. The figures are quoted in Kennedy Information Research Group (2003), Byrne (1994), and Byrnes (2002).

² Systematic analyses of the industry's evolution are provided in Higdon (1969) and McKenna (2001). Recent insider exposés include O'Shea and Madigan (1997) and Pinault (2000). "Consultant, Heal Thyself" (2002) in *The Economist* is a particularly good discussion of the industry's recent troubles.

relationship with consultants. Specifically, we examine announcements for 7 of the top 10 consulting firms (as ranked by Vault Inc.) from 1991 to 2001: McKinsey & Company, The Boston Consulting Group, Bain & Company, Booz Allen Hamilton, Mercer Management Consulting, Deloitte Consulting, and Accenture (formerly known as Andersen Consulting).

We acknowledge that firms who announce their consulting relationship are a potentially selected sample of all firms that employ consultants. We study this group in two ways. First, we conduct an event study of the stock price response to the announcement. Event studies measure the market's perception of the change in company value in response to news. In our study, the announcement effect will reflect the news that: 1) the company was in a position where hiring a consultant was a useful thing to consider, 2) the company has actually gone ahead and made this choice, and 3) the company, for whatever reason, has decided that it was optimal to make this information public. What we would really like is an estimate of the effect of (2). Relative to this ideal, our estimate is biased downward by the possibility that (1) was not fully incorporated into the stock price prior to the announcement and biased upward by the positive selection inherent in (3) if managers care about the current stock price and the announcement effect is negative. Our objective is to document the size of the announcement effect and to explore its potential determinants. An event study is informative and may lead others to focus on cleaner identification of (2) in subsequent work.

The second approach that we take to getting at (2) is to observe the changes in the firm's value as the consultant's work begins, rather than relying solely on what the market initially forecasts those changes to be. Measuring what the consultant actually does over time eliminates the problems with (1) and reduces the selection effect in (3) to the extent that the announcement effect does not change the consultant's subsequent behavior. Toward that end, we consider the

evolution of risk-adjusted returns from the pre- to post-announcement periods by estimating a four-factor model based on the Fama and French (1993) risk factors using monthly data from 1991 to 2002. We estimate separate coefficients for different time periods relative to the announcement date. Increases in the regressions' intercepts over time indicate an improvement in risk-adjusted returns. We also investigate the changes in company operations in the period after the announcement relative to prior years, focusing on leverage, investment, and employment growth.

We obtain six main results. First, the announcement effect is negative. Firms that announce a relationship with a consultant experience returns 4.3 percentage points below the market return during the three day announcement window. Second, the negative announcement effect owes some of its magnitude and statistical significance to the presence of outliers and to other news announced alongside the consulting relationship—specifically, negative warnings on earnings. We show that the announcement effect of the combination of a consultant and negative warnings on earnings is comparable to the announcement effect in a sample of other companies that announce only the warning on earnings. As a more robust measure of the center of the distribution, the median announcement is -1.6 percentage points and is statistically significant. Third, the intercepts from the multifactor model show that announcing companies earn negative risk adjusted returns prior to their announcements. Risk adjusted returns are significantly higher after the announcement, with the total risk adjusted return peaking approximately three years after the announcement. Fourth, the improvements in risk adjusted returns are more dramatic when industry returns are netted out, suggesting that consultants help industry laggards become industry leaders. Fifth, the estimated factor sensitivities from the multifactor model indicate that hiring a management consultant also appears to lessen the company's sensitivity to financial

distress embodied in the risk premium on small relative to large capitalization stocks. Sixth, our analysis of the financial statements of our announcement companies and their industries reveals only one robust pattern. Employment growth compared to industry trends turns sharply negative after the announcement—over –5 percent at the median—and remains low over the subsequent five years. However, in the cross-section of announcing companies, the negative correlation between employment growth and risk-adjusted stock performance is not statistically significant. We therefore find only weak evidence that employment contractions generate the higher risk-adjusted returns.

The remainder of the paper is organized as follows: Section II discusses the construction of the sample of announcements and returns. Section III identifies the characteristics of announcements that lead to greater announcement effects. Section IV estimates the multifactor model of returns for the portfolio of announcement companies to gauge the long-term effects. Section V estimates this same model compared to the industries represented in our announcement sample. Section VI examines the financial statements of announcement companies and their industries. Section VII concludes.

II. Announcement Data and Returns

The relationship between a company and its consultant is generally kept out of public knowledge. Because of this culture of confidentiality, finding a sample of announcements to use as the basis of a study presents some challenges. We first discuss the methodology for choosing the consulting firms and then describe the process of finding actual announcement dates.

We select our sample of consulting firms based on Vault.com's 2003 rankings of the top management consulting firms in the world: (1) McKinsey (2) BCG (3) Bain (4) Booz Allen

Hamilton (5) Monitor Group (6) Mercer (7) IBM (8) Deloitte (9) Accenture (formerly known as Andersen Consulting) and (10) Gartner.³ As we are interested in the traditional management consultants, we exclude both IBM and Gartner from our search for articles, due to their emphasis on information technology consulting. Monitor Group is rarely mentioned in any articles, and as a result yields no usable announcements, leaving us with seven consulting firms in our sample of announcements.

Our methodology for constructing the announcement sample is to locate instances in which the client allows it to become public knowledge that it has hired a consultant based on extensive searches of the Lexis-Nexis “Business News” database over the 1991 – 2001 period. We locate 825 companies that were mentioned as working with consultants over this period. The breakdown of those companies by consultant is shown in the first column of Table 1. We then imposed the requirement that the client company is publicly traded and listed on the NYSE, NASDAQ, or AMEX, so that we can gather the necessary stock return data from the Center for Research on Security Prices (CRSP) database. The second column of Table 1 shows that 225 of the companies were listed on CRSP, again with a breakdown by consulting firm.

Given this sample of consultant-client pairs, we search Lexis-Nexis again to determine if there was an identifiable announcement date. The following excerpt on August 12, 1993, is an example of an article that we consider to be an announcement: “Great Western Financial Corp. today announced it has begun an intensive self-evaluation program. ... To assist in this process, Great Western has retained McKinsey & Co.”⁴ From the 225 companies listed on CRSP, we located 78 instances in which there was such an announcement. The breakdown of the announcements, by consulting firm, is shown in the last column of Table 1.

³ See Cantor and Risen (2002) for the complete list and rankings.

⁴ “Great Western Launches Internal Review; Goal Is To Improve Productivity, Reduce Costs,” 1993, 22 November 2002, <<http://web.lexis-nexis.com/universe>>.

In the other 147 instances, we were unable to locate an actual announcement. For a minority of companies, there is a specific reason why no announcement is present. In some cases, the work done by a management consultant took place before 1991, and only a casual mention could be found between 1991 and 2001.⁵ Other companies made their announcements at a time when data were not available on CRSP. For example, on May 22, 2001, an article mentions that Lechters “has hired Deloitte Consulting to help work out a turnaround plan.”⁶ However, data for Lechters are unavailable on CRSP after April 12, 2001. In still other instances, the mention was not about getting help from a consultant, but rather was a lawsuit being brought up. For example, in 1994, Figgie International brought BCG and Deloitte to court over a fee dispute.⁷

For other companies, there is no announcement because the hiring of consultants is not a discrete event. It is commonly known that many Fortune 500 firms and other prominent companies have worked with a management consulting firm at some point in time. About one third of our sample of mentions are from recognizable names, some of whom appear to always be working with consultants. For example, Byrne (1994) discusses how AT&T has had ongoing relationships with many different consulting firms, including a couple from our sample. Another example comes from *Business Week*'s cover story in December 1996 about IBM. The article discusses how Louis Gerstner has turned the company around since becoming CEO in early 1993. Late in the article, it mentions that since coming to IBM, “Gerstner has hired consultants

⁵ For example, in an article about Nissan in 1992, after a detailed description of its history and recent problems, the author mentions that in 1990, one of the U.S. executives “brought in Boston Consulting Group Inc. to help.” No specific announcement of bringing in BCG in 1990 can be found, and the mention in this article is too casual to be considered an announcement. See “Will Nissan Get It Right This Time?” 1992, 22 November 2002, <<http://web.lexis-nexis.com/universe>>.

⁶ “Lechters in Bankruptcy,” 2001, 9 April 2003, <<http://web.lexis-nexis.com/universe>>.

⁷ “Figgie Suing Deloitte and Touche,” 1994, 9 April 2003, <<http://web.lexis-nexis.com/universe>>.

from Booz, Allen & Hamilton, McKinsey, Coopers & Lybrand, and other firms.” Clearly this article represents a mention, but it does not constitute an announcement.⁸

In the remaining cases where no announcements are found, there is simply the mention of a company having worked with a consulting firm in the past but no evidence of an announcement like there is in, for example, the Great Western Financial article previously mentioned. Consider the following mention from February 16, 1994: “Boston Consulting Group, which helped develop Reuters’ scheme, calculated that the company would have hit its top target in five of the past six years.” This article clearly does not announce that Reuters and BCG are working together, but rather it alludes to a relationship they had in the past.⁹

McKinsey comprises more than half of the sample of announcements. At first, this discrepancy may seem a bit surprising, but it is clearly related to the size and openness of the firms. For example, Bain is also a large firm but had a stronger culture of secrecy, particularly in the early 1990’s. We find no announcements made with them until 1997. BCG is also quite large, but most of the companies that mentioned working with BCG were listed on international exchanges and are thus excluded from our study. Booz Allen Hamilton, Accenture and Deloitte are rather large consulting firms, but most of their announcements were related to their accounting practices, which were not included in the sample.

For each announcement, we obtain stock return data for the 3-day window centered on the announcement day. The focus of our announcement effect analysis is the excess return over the S&P 500 during this window.¹⁰ For the long-term analysis conducted in the next section, we obtain the monthly returns on the client firms for the twelve-year period between 1991 and 2002.

⁸ “How IBM Became a Growth Company Again,” 1996, 14 April 2003, <<http://web.lexis-nexis.com/universe>>.

⁹ “Boardroom Hunt for New Executive Virility Symbol; Jane Simms Looks at Alternatives to Share Option Schemes,” 1994, 9 April 2003, <<http://web.lexis-nexis.com/universe>>.

¹⁰ We conducted all analyses with the excess return over the CRSP value-weighted index as well. The results are almost identical.

The first row of Table 2 shows that the mean excess return for the full sample of announcements is -4.33 percent, which is significant at the 0.5 percent level. The next rows of the table show the deciles of the announcement effect distribution. The median announcement effect is -1.62 percent, which is also significantly different from zero. The negative announcement effects are statistically significant up to the 50th percentile of the distribution. The 70th percentile of the distribution is positive, and the positive effects are statistically significant by the 80th percentile of the distribution, where the effect is 2.54 percent.

III. Understanding the Announcement Effect

On balance, announcement effects are negative. To determine the source of this negative correlation, we consider the univariate relationships between characteristics of the announcement and the magnitude of the average announcement effect. In each case, we estimate a regression of the announcement effect on an exhaustive set of indicator variables for each value that the characteristic might take. The table reports the coefficients and standard errors from each regression. We first investigate patterns in average announcement effects by sample year. Prior to 2000, there is no discernible pattern by year, and only the coefficient for 1998 is statistically significant. The announcement effects in the last two years of the sample are the largest two estimates, and the difference between these two years and the earlier years is -7.26 percentage points and is significant at the 6.5 percent level.

Further examination of these last two years shows that each year has one of the two largest negative announcement effects in the sample: Roberds Inc.'s announcement in 2000 that it had hired Deloitte, which had an excess return of -73.31 percent, and Comdisco's 2001

announcement that it had hired McKinsey, which had an excess return of -52.84 percent.¹¹ If these two observations are separately controlled for, then the last two years are no longer among the largest negative coefficients. Without these two outliers, the average announcement effect falls in magnitude to -2.79 percent but remains statistically significant at the 1 percent level. The presence of these two outliers in a sample of 78 announcements merits attention in all of the subsequent analyses. We therefore report results for all 78 firms, as well as the results without these two outliers for the groups that contain them.

We next examine the breakdown of announcement effects by consulting firm. Most of the estimates are negative but not significantly different from zero. The variables for consulting firm are also not jointly significant, suggesting that there are simply not enough announcements for each company to discuss the disparities in the announcement effects by consultant with confidence.

The second part of Table 2 considers other characteristics reported in the text of the article discussing the announcement. For example, the articles discuss the type of help that the consulting firm has or will provide. The announcement effects for “Downsizing” and “Restructuring” tend to be smaller than those for “Merger” or “Cost Cutting,” but none of these differences are statistically significant from zero or each other. The announcement effect for “Strategic Review” (with about half the observations) is -6.45 percent and is statistically significant. However, both Roberds and Comdisco are in this category. With the outliers excluded, the announcement effect for this category falls in magnitude to -3.55 percent, which is not significantly larger than the other categories.

¹¹ The next largest negative announcement effect is American Pad and Paper, at -31.20 percent. The largest positive announcement effect is Smith Corona, at 31.21 percent.

The articles also discuss the progress of the consultant's work as of the announcement date. We classify the progress as either "Completed," "Current," or "Starting," with the last group consisting of 41 announcements. The announcement effects are about -2 percent for completed or current projects and over -6 percent for projects just starting. Removing both outliers from the "Starting" category reduces the announcement effect to -3.65 percent, which is significantly different from zero but not the other categories.

Some announcements are made deliberately by the company, while others are inferred by the media from sources within the company. The next part of the table shows that there is a slightly larger effect, -4.67 percent versus -2.80 percent, when the company deliberately makes the announcement. When the two outliers (which were deliberate announcements) are removed, the effect for the deliberate announcements falls in magnitude to -2.79 percent. In neither case are the estimates significantly different from each other.

Lastly, we examine the possibility that announcing a relationship with a consulting firm is also tied to other announcements that are relevant for stock returns. We classify articles that discussed only the hiring of the consultant and what it would be doing for the firm as having "Nothing" else announced. Articles that focused on the company's own efforts to review its operations that also noted the involvement of a consultant were placed in the "Review" category. There were several instances where consultant announcements were made alongside standard announcements of current quarter earnings, warnings that earnings will differ from expectations, and layoffs or the possibility of layoffs. Each of these announcements has its own category. Some announcements were the unveiling of a restructuring or a new strategy, indicating that the consultant's work had reached "Completion." The "Other" category includes miscellaneous announcements, such as the possible sale of a subsidiary or the realignment of headquarters. At

issue is whether the subset of consultant announcements made without other significant information being released result in negative announcement effects.

Across these categories, only announcements made alongside “Other” or “Warnings on Earnings” are negative and statistically significant, with announcement effects around –10 percent each. The announcement effects that coincide with “Review” or “Nothing” are negative and insignificant. The announcement effects that coincide with “Completion” or “Layoffs” are positive, though not statistically significant. Consultant announcements that coincide with “Earnings” announcements are around –4.56 percent but not statistically significantly. Both outliers are in the “Other” category: Roberds Inc. for its announcement of its possible sale and Comdisco for its announcement that it had drawn down almost \$900 million of committed bank lines for corporate purposes. Removing these two outliers reduces the announcement effect for the “Other” category to –1.95 percent, similar to the “Nothing” and “Review” categories.

The part of our sample that was announced along with warnings on earnings is significant and negative and not the result of the two largest outliers. Six of the eight announcements are negative warnings. The natural question is whether the negative effect can be attributed to the news that the firm will miss an earnings or revenue forecast or to the news that a consultant is now on board. In order to distinguish the effects, we find a sample of companies that announced negative warnings on earnings within the same week as the six companies that announced hiring a consulting firm along with their warnings. Using Lexis-Nexis once again, and implementing a search criterion that returns these six announcements, (specifically, “quarter” and “lower” or “below”), we find 65 warnings on earnings, with 44 of those negative warnings announced without any other substantive news.

The announcement effect for this sample of 44 companies is -16.97 percent, with a standard error of 3.55 percent. The announcement effect for the 6 companies that also hired a consultant is -15.46 percent, with a standard error of 9.60 percent. The firms with negative warnings on earnings that also announce a consultant have 1.51 percentage point higher announcement returns, and this difference is not statistically significant. The negative announcement effect in the original sample can therefore be attributed to the warning, not the consultant.

To summarize, the average announcement effect in our sample of 78 firms is a statistically significant drop of 4.33 percent in the value of the company. We identify two important determinants of this negative effect. First, companies that have warnings on earnings announced alongside the consultant announcement have particularly negative returns, and these effects are comparable to other firms making such warnings without hiring consultants. Removing the eight firms that make any warning on earnings, the overall announcement effect falls in magnitude to -3.52 percent, with a p-value of 3.2 percent. Second, there are two large negative outliers in the sample. If these two outliers are also excluded, the average announcement effect is -1.77 percent, with a standard error of 1.05 percent. While it is inappropriate to exclude the outliers without theoretical justification, we do note the sensitivity of the negative average announcement effect to their inclusion. The median announcement effect, which is a more robust measure of the center of a distribution than the mean, is -1.62 percent and is statistically significant, with a p-value of 3.6 percent.

IV. Longer-Term Effects for the Announcement Sample

We next consider how a company's association with a management consulting firm changes its longer-term performance. As many companies in need of a consultant may have fallen on hard times, we expect underperformance in the period prior to hiring the consultant. Our analysis of the announcement effect above suggests that underperformance will also be measured in the month that the announcement is made. The critical test is whether firm performance subsequently improves relative to the pre-announcement period.

The framework for our longer-term analysis is based on the multifactor asset-pricing model of Fama and French (1993), which includes risk factors for the market portfolio, a portfolio that is long small capitalization stocks and short large capitalization stocks (denoted by SMB, for small-minus-big), and a portfolio that is long value stocks and short growth stocks (denoted by HML, for high-minus-low book-to-market equity). The market factor captures the systematic risk that is central to the capital asset pricing model. SMB and HML, while empirically derived, are thought to capture the risk associated with the probability of financial distress. Small firms are more susceptible to the risk of financial distress than are big firms. The same is true of stocks with high rather than low ratios of book value to market value. The model has been used extensively in the finance literature to investigate anomalies and deviations from market efficiency.¹²

Related work by Jegadeesh and Titman (1993) and others has also demonstrated the presence of momentum in stock returns. Momentum may be a risk factor due to positive feedback trading by noise traders, for example, as in the De Long, Shleifer, Summers, and Waldmann (1990) model. It may also reflect market inefficiency due to the slow dispersal of

¹² See, for example, Carhart's (1997) study of persistence in mutual fund performance and Ritter and Welch's (2002) review of the pricing and performance of initial public offerings.

information, as in the model of Hong, Lim, and Stein (2000). In either case, we also include a factor portfolio that represents momentum (denoted UMD, for up-minus-down), to ensure that any pattern we identify in changes in stock returns across periods is distinct from the presence of momentum in stock returns.¹³

Again using the CRSP database, we collect data on monthly returns for all of the stocks in our announcement sample from the date of the first announcement, January, 1991, until December, 2002, which is over a year after our last announcement. We obtain 8,670 stock-month observations, as not all stocks were listed in each of those 144 months. Table 3 shows the summary statistics for the factor portfolios, along with the risk-free rate. The average returns on all four factor portfolios are positive, indicating that positive factor sensitivities will require higher expected rates of return.

To measure the impact of the consultants on stock performance, we divide our sample of stock-month observations into six categories: before the announcement, the announcement month, the first year after the announcement, the second year after, the third year after, and the fourth and higher years after. For each category in each month, we construct an equal weighted portfolio of stock returns that are available for that category. Not every category will have an observation in each month (e.g., some months have no announcements and the months after the last announcement have no values for the “Before” category). We use the excess return of that portfolio over the risk-free rate as the dependent variable in the following regression equation:

$$r_{pt} - r_{ft} = \alpha_p + \beta_p^m (r_{mt} - r_{ft}) + \beta_p^s SMB_t + \beta_p^h HML_t + \beta_p^u UMD_t + \varepsilon_{pt}, \quad p = 1 \dots 6$$

We estimate the six equations as a system and allow for dependence among the six error terms by calendar month.

¹³ The factor portfolios (along with the industry portfolios discussed below) are obtained from http://mba.tuck.dartmouth.edu/pages/faculty/ken.french/data_library.html, which also provides documentation of their construction.

We are interested primarily in the changes in the intercept, α_p , which measures the risk-adjusted performance of the portfolio, between the period before the announcement and the periods after the announcement. The changes in the factor sensitivities, β_p , may also provide useful information about the way consulting firms may change the risk profile of their clients' stock returns.

Summary statistics and regression results are displayed in Table 4. The first column shows the number of stock-month observations in each sample period. The second column shows the number of portfolio-month observations derived from these stock-month observations. For example, the 78 announcements occur in 59 unique months, ranging from January 1991, to November 2001. There are therefore 130 months in which we can construct a “before” portfolio (all months up to October, 2001) and 142 months in which we can construct a “1-year after” portfolio (all months except January, 1991, and December, 2002). The “2-year after” portfolio is available beginning with the 14th month of the sample, and the other portfolios lose 12 months off the beginning with each successive increment.

The third column of the table shows the mean of the excess portfolio return (the dependent variable), along with the t-statistic for the null hypothesis that this portfolio return is zero. In the months before the announcement, the sample stocks earn excess returns of -0.139 percent (per month), which is statistically indistinguishable from zero. In the announcement months, the stocks earn excess returns of -1.915 percent.¹⁴ During the first three years after the announcement, the excess returns are positive and rising, from 0.445 percent in the first year to 1.343 and 1.421 percent in the second and third years, respectively. The excess returns fall to

¹⁴ This is the return in excess of the riskfree rate. The return in excess of the market portfolio is -3.39 percent in the announcement month, which is comparable to the -4.33 percent return in excess of the market portfolio during the three-day announcement window documented above.

0.500 percent per month in subsequent years. Only the average excess returns of the second and third year after announcing show statistical significance.

More importantly, comparisons across time periods must allow for potentially different exposures to risk, which is accomplished by examining the intercepts from the multifactor model shown in the fourth column. In the period before the announcement, the intercept is -0.837 percent, which is significantly different from zero at the ten percent level. That the risk-adjusted return is lower than the excess return is the result of the positive risk premium required due to the generally positive factor sensitivities to the risk factors, particularly SMB. It is not surprising that companies that hire management consultants tend to do so after a period in which their stock price has underperformed by nearly a percentage point per month.

During the announcement month, sensitivities to the market, SMB, and HML risk factors are dramatically higher.¹⁵ This is also not surprising, since, as suggested by the relationship of the announcement effect to warnings on earnings, the need to bring in a management consultant may signal greater sensitivity to business cycles and financial distress. These large increases in the factor sensitivities push the required rate of return much higher and, consequently, the measure of underperformance much more negative. During the announcement months, the portfolio of stocks underperforms by a risk-adjusted 6.914 percentage points, which is substantial.

For the first year after the announcement month, the risk-adjusted return becomes slightly positive, at 0.091 percent, and insignificantly different from its value prior to the announcement. The risk-adjusted monthly return increases to 0.879 percent in the second year and 1.344 percent in the third year. These intercepts are significantly different from the period before the

¹⁵ Significant differences from the period before the announcement at the 10- and 5-percent levels are indicated by one and two asterisks, respectively, for all of the subsequent periods.

announcements, each at the 5 percent levels. After the third year, the risk-adjusted return falls to 0.151 percent, which is significantly different from the period before the announcements at the 10 percent level.

The only intercept that is significantly different from zero during the post-announcement period is the third year, where the risk-adjusted return peaks at 1.344 percent per month, with a t-statistic of 1.96, resulting in a p-value of 5.2 percent. The longer-term effect of hiring a management consultant can therefore be summarized as converting underperforming companies to companies whose returns are not generally significantly different from the security market line given by the multifactor model. Additionally, the changes in risk-adjusted returns display greater statistical significance than the excess returns, suggesting an important role for the risk adjustments. Over the post-announcement period, factor sensitivities to SMB decrease, while those to HML increase. We return to this issue in the next section.

Our main result is that the risk-adjusted returns are higher after the announcement than before the announcement. We view this as evidence that consultants improve returns on a company-by-company basis. However, our panel of company returns is not balanced with respect to the announcement date. An alternative explanation of the results in Table 4 could be that company-specific intercepts do not change, but that the sample composition shifts over time to include disproportionately more high-intercept companies. This would occur, for example, if companies that continued to perform poorly were more likely to leave the sample through acquisitions or delistings.

To address this concern, we extend our analysis with robustness tests that drop those firms from our sample that do not survive for specified time periods after announcing their consulting relationships. These results are summarized in Table 5. The first two columns repeat

columns 3 and 4 from Table 4, showing the excess returns and risk adjusted returns. The next three pairs of columns progressively restrict the sample in all months to companies that survive for at least one, two, or three years after their announcements. The coefficients will change for all periods prior to the cutoff, since the mix of companies with returns during those periods will change, but not for periods after the cutoff.

Excluding those companies that do not survive one full year after the announcement month raises returns in each of the first three periods. Risk adjusted returns during the first year after the announcement are now 0.379 percent per month, and this value is now significantly different from the pre-announcement period returns of -0.727 percent at the 10 percent level. Further excluding those companies that do not survive two full years after the announcement raises pre-announcement returns to -0.496 percent per month. Risk adjusted returns during the first year after the announcement stay roughly the same at 0.400 percent, and those in the second year after the announcement increase slightly to 0.952 percent from 0.879 percent. The increase in the pre-announcement period returns reduces the statistical significance of the increases in the post-announcement returns.

Finally, excluding companies that do not survive for three years after their announcements generates the strongest results against the null hypothesis. Pre-announcement risk adjusted returns are negative and significantly different from zero. The announcement month risk adjusted returns are about half their original magnitude. First-year returns are again positive though small and insignificant. Risk adjusted returns peak in the second year after the announcement at 1.332 percent, falling to 0.889 percent in the third year and 0.151 percent after three years. In each of these three periods, the results are significantly higher than the pre-

announcement period risk adjusted returns at the 5 percent level. Our original results are therefore robust to possibly non-random sample attrition after the announcements are made.

V. Comparison of Consultant Effects to Overall Industry Effects

Through analysis of the longer-term effects of the 78 firms in our announcement sample, we find a distinct pattern in the average excess returns from the time prior to the announcement until our sample ends in December 2002. In the period before the announcement, the intercept is -0.837 percent, which is significantly different from zero at the 10 percent level. The announcement month proves to be even more negative. After the announcement month, we find increased average excess returns during the first, second, and third subsequent years, with the second and third years significantly different than the period prior to announcing.

One potential shortcoming with our methodology for the longer-term effects is that we examine only one sample of stocks. It may be that a portfolio of stocks with similar characteristics to those in our sample but that did not announce a consulting relationship would have shown the same patterns over time. To investigate this possibility, we extend our analysis from the previous section by replacing the company returns by the returns of those companies' industries. If we find a similar pattern of excess and risk adjusted returns among these portfolios, then we cannot claim that the work of management consultants is responsible for the improvements that we have documented.

We obtain industry returns using Fama and French's classification of 48 industry portfolios from 1991 to 2002. We match each sample firm to its industry portfolio based on the 4-digit SIC code reported in CRSP. The full list of industries represented is shown in the Appendix. Summary statistics for the industry data are shown in the bottom panel of Table 3.

Industry excess returns over the riskfree rate average 1.15 percent per month. The industry portfolios are comprised of an average of 268 stocks, with a minimum of 4 and a maximum of 1061.

We begin by substituting the portfolio of industry excess returns for the portfolio of company excess returns and estimating the same regression from Table 4. That is, for each stock-month observation, we replace the company return with the industry return, construct the portfolio of returns, and estimate the model. The results are presented in Table 6. The monthly returns for the industry data do not appear to follow the same pattern as the consultant effects we found earlier. In the pre-announcement period, excess returns are 0.806 and risk adjusted returns are 0.408 percent per month, with the latter significant at the 5 percent level. This is in sharp contrast to the negative and significant risk adjusted returns for the announcement companies themselves. Over time, the industry returns continue to do well for up to a year, but then falter, to the point where the risk adjusted return on the industry portfolios is a mere 0.02 percent four years after the announcement and significantly lower than the 0.408 percent pre-announcement period risk adjusted return. This is again in contrast to the pattern for the announcement companies, for which performance went from negative to positive over the sample period.

We next estimate the model using the difference between the announcement company and industry returns. In choosing industry portfolios as a comparison group, we introduce two important biases against finding significant improvements in the announcement sample. First, each industry includes some companies that have hired consultants but have not announced these relationships. Second, the most appropriate control group for our announcement sample would include only those companies that were in a position to hire a consultant. Each industry also includes companies that were well managed and successful, for whom a consultant could add no

value. To require that consultants be able to get their companies to outperform a benchmark that includes the industry leaders is a very high standard.

The results net of industry returns are shown in Table 7. The coefficients in this table are simply the difference between those in Tables 4 and 6, with t-statistics for whether those differences are equal to zero. Focusing on the risk adjusted returns, companies that eventually hire consultants underperform other companies in their respective industries by 1.245 percent per month in the period prior to the announcement, which is significantly different from zero. Such a large negative intercept is not surprising, since a company that is underperforming with respect to its competitors would tend to hire a management consultant more often than a company that is doing relatively well compared to its peers. As in earlier results, the sensitivities to the risk factors, particularly SMB, are large during the announcement months, contributing to statistically significant risk adjusted differences in performance of -6.675 percentage points.

For the first year after the announcement month, the risk-adjusted return of the announcement sample continues to underperform the industry by -0.145 percent. This value is not significantly different from zero. The risk-adjusted return difference increases to 0.697 percent in the second year. In the third year, the return difference increases to a healthy 1.145 percentage points, and after the third year, the announcement sample continues to outperform the industry sample by 0.131 percent. The differences in returns after the first year are all statistically significant at the 5 percent level or below. Among the factor sensitivities, significant differences persist only with respect to SMB—the factor sensitivity drops from a 0.885 difference between the announcement and industry samples in the period before the announcement to a difference of only 0.365 after three years. The increase in the factor

sensitivity to HML shown in Table 4 for the announcement sample is also present in the industry sample in Table 6, resulting in an insignificant difference in the comparison.

Overall, the longer-term effect of hiring a management consultant is to convert a company with a high sensitivity to the small firm risk factor that is seen as an underperformer among its peers to a company with a lower sensitivity to risk that is as strong as or stronger than its competitors.

VI. Financial Statements Analysis for Announcement Sample

We now consider what changes, if any, are made to a company's operations when it hires a management consultant. We look for patterns in the company's financial statements over time, relative to the announcement of hiring a management consultant. One possible result is that management consultants tend to apply the same formula to each company they work with, such as decreasing investment in capital and labor. Another possible result is that there is no clear pattern, and management consultants tailor their approach to fit the idiosyncratic needs of each company. Our approach can yield insights only to the extent that some aspects of management consulting are common to all relationships. We first examine return on assets, the accounting counterpart to the analysis of stock returns above. We then consider borrowing, and finally investment and employment growth.

We collect financial statement data using Compustat's Research Insight. Our analysis proceeds in two stages. We first analyze annual financial data from our announcement sample over the five years before and after the year of the announcement, during the period 1987 to 2002. We are able to find the necessary data for 73 of the 78 announcing companies.¹⁶ We then

¹⁶ The five companies not in the sample are Advantica Restaurant Group, Bank of Montreal, Borden's Inc., Royal Bank of Canada, and Satyam Infoway.

compare the patterns for the announcement sample to the patterns for the industries that contain our announcement sample firms. To collect industry data, we use Compustat’s “Global Industry Classification System (GICs)” industry groups.¹⁷ We gather the same financial data for all firms in the 30 (out of 59) industries represented in our sample. There are a total of 12,868 companies in these industries, including the 73 from the announcement sample. The industry benchmarks are constructed as the median for return on assets, leverage, investment, and for the percent change in employment.¹⁸

We analyze several important ratios related to financial performance and company structure. We look at four main variables: return on assets; leverage, defined as the ratio of total long-term debt to total assets; investment, defined as the ratio of purchases of property, plant and equipment to the net stock of PP&E at the beginning of the year; and the percentage change in employees. For each of these variables, we are interested in any identifiable patterns within the announcement sample, as well as whether these patterns persist when industry medians are netted out. As a test of robustness, we also make comparisons on the subset of companies that have data available for three years before and after the announcement year. In Tables 8 – 11, we present comparisons based on the medians of the variables across the announcement sample. The significance of a variable being different than the announcement year level is based on analogous median regressions. At the bottom of each table, we compare the 3-year average prior to the announcement year, the announcement year, and the 3-year average after the announcement.

¹⁷ GICs groups are determined by Standard & Poor’s and Morgan Stanley Capital International. This classification system uses 6-digit codes to categorize industries. We use comparison firms from the currently active and inactive company files. The GICs scheme is not the same as the classification scheme used in the Fama-French industry portfolios in the long-term analysis above.

¹⁸ We also construct industry benchmarks using the aggregate ratio for the industry and find similar results.

Table 8 presents the results for return on assets for the announcement sample and the announcement sample net of their industries. For the announcement sample, we find a pattern in which the return on assets gradually decreases during the years leading up to the announcement, bottoming out during the announcement year at 1.073 percent. There is evidence of a gradual return after the management consultant is hired, as the return on assets increases by almost half a percentage point one year after the announcement and continues to increase in subsequent years. Compared to the industry, return on assets is higher prior to the year before the announcement and then turns negative. In the second year after the announcement, return on assets exceeds that of the industry. The last three rows of the table show that the announcement year is significantly lower than the three years prior to the announcement in both the announcement sample and relative to the industry. The announcement year is also lower than the three years following the announcement, although the comparison is significant only when industry returns are netted out and then only at the 10 percent level. The return on assets during the three years after the announcement is not as high as the three years prior to the announcement.

Only 45 of the 73 companies have data available both three years before and after the announcement year, but a pattern of gradual decline still persists before the year of the announcement, with the return on assets eventually hitting its trough during the announcement year, at 1.239 percent. In the three-year comparisons at the bottom of the table, the signs remain the same as in the full sample, but the differences lack statistical significance. Overall, this measure of performance follows the results from our long-term analysis: companies start to perform poorly leading up to the announcement and then show signs of improvement with the presence of a management consulting firm.¹⁹

¹⁹ We examine return on equity and return on investments for these companies. We find a similar, but not as evident, pattern to return on assets with these two performance variables.

Table 9 shows the analogous comparisons for leverage, measured as the ratio of total long-term debt to total assets. While only two of the coefficients in the table are statistically significant, some patterns are suggested by the point estimates. In all comparisons, there is a tendency for leverage to peak just after the announcement year. In the full sample, leverage in the announcement year is 24.21 percent, 4.77 percentage points higher than in the average of the three prior years and 1.41 percentage points higher than in the average of the three subsequent years. Leverage ratios are generally higher after the announcement than before the announcement, by about 4 percentage points in the announcement sample and 1 percentage point net of industry levels. Companies that announce relationships with management consultants tend to have higher leverage than their industries. Leverage ratios eventually fall, but our estimates lack the statistical precision to attribute the reductions to the consultants.

Table 10 examines investment, defined as the ratio of purchases to stock for property, plant and expenditures. These two items are not reported every year for all 73 companies, which is why, for example, the announcement sample only has 62 companies during the year of the announcement. For the announcement sample, we find that investment is generally falling over the whole period, with a clear reduction as of the year before the announcement. It is in that year that the announcement companies begin to underinvest relative to their industries. The three-year period before the announcement year has investment rates that are 7 percentage points higher than the three-year period after the announcement. Relative to industry investment rates, the former period is 4 percentage points higher than the latter period, and both of these differences are significant at the 5 percent level. In the test of robustness, the magnitudes of the

differences are cut in half and are no longer statistically significant at even the 10 percent level. These patterns suggest that perhaps consultants do make reductions in investment in capital.²⁰

The final variable we analyze is the employment growth rate, shown in Table 11. The companies in the announcement sample show positive employment growth of over 2 percent per year in four of the five years prior to the announcement year. There is a dramatic decline in employment during the announcement year, with the growth rate dropping to -5.01 percent. The employment growth rate stays around -5 percent in the year after announcing a consultant has been hired, and then increases over the subsequent years, but remains below the level of the year prior to the announcement.

When compared to industry data, the sample companies start to fall behind the industry before bringing in help, but slightly slower growth turns to employment contraction with the presence of a management consultant. The employment growth rate for the sample is greater than that of the related industries until three years before the announcement. During the announcement year and the year after a consultant's presence is acknowledged, the excess employment growth rate is around -7 percent. This level remains negative for all subsequent years, at around -4 percent for these years, but not significantly better than the announcement year level. The employment growth rate for all years after the announcement is significantly different from zero.

In the full sample and the three-year robustness tests, employment growth in the period prior to the announcement year is significantly higher than in the announcement year. The period after the announcement has higher employment growth than the announcement year, but

²⁰ We also examined related variables, including the current ratio (total current assets/total current liabilities) and asset turnover (sales/total assets). There is no discernible pattern in relation to the announcement period for either of these variables.

this difference is not statistically significant. When industry returns are netted out, these same patterns emerge.

Consultants are often brought in to cut costs at their client companies. The results in Table 11 clearly show that this often includes money spent on labor. We next consider whether our two robust findings—negative employment growth and positive risk-adjusted returns over the three years after the announcement—are causally related. To do so, we cumulated the firm-by-firm residuals to our multifactor model beginning with the month after the announcement and ending with the 36th month after the announcement. We then calculate average employment growth before, during, and after the announcement year for all companies that report at least one annual figure during each of those three periods. For both the risk-adjusted returns and the average employment growth, we use all of the data available in each period for each firm, to maximize the number of firms in each comparison.

The first row of Table 12 shows the partial correlations between compound 3-year risk-adjusted returns and employment growth in each of the three periods. Partial correlations allow us to assess whether employment growth and risk-adjusted returns are related over any given period holding constant the values of employment growth in the other two periods. The values of 0.21 in the years before the announcement and -0.06 in the years during and after the announcement suggest that higher 3-year risk-adjusted returns are associated with higher employment growth before the announcement year and with lower employment growth during and after the announcement year. However, because none of these partial correlations are statistically significant, the evidence that it is the firms at which employment increases were reversed that had the highest risk-adjusted returns is weak.

The next row of Table 12 shows an opposite pattern for investment in property, plant, and equipment in the analogous correlations. Firms with low investment rates prior to the announcement, and high investment rates after the announcement, are the ones that tend to have the highest 3-year risk-adjusted returns. The partial correlation with the period after the announcement is statistically significant, with a p-value of 0.016. This result for the cross-section contrasts with the pattern of generally declining *average* investment rates shown in Table 10. The remainder of the table shows the partial correlations with the other two financial variables, leverage and return on assets. In both cases, none of the partial correlations are statistically significant.

Overall, after comparing the consultant effects on various financial statement items versus overall industry effects, we can draw two main conclusions. First, we find that employment growth rate for companies that announce the hiring of a consultant firm dramatically decreases during and after the year of the announcement. This is likely one of the more effective measures used by consultants to help cut costs. However, we find only weak evidence that low employment growth after the announcement is associated with high risk-adjusted returns. Second, a more important role in determining the cross-sectional variation in post-announcement performance may be the ability to maintain investment rates in property, plant, and equipment. Despite the reduction in investment rates over time in the sample as a whole, those companies that have high investment rates after the announcement, conditional on their investment rates prior to the announcement, are the ones that subsequently perform well.

VII. Conclusion

From the perspective of the shareholders, the decision to announce a consulting relationship is an investment in the long-term performance of the stock. The overall announcement effect is a 4 percent drop in the value of the stock during the 3-day announcement window. However, our analysis of the determinants of this negative announcement effect shows a role for confounding announcements of bad news, such as negative warnings on earnings. In a sample of only 78 announcements, there is also concern that a few outliers are driving the results for the mean. The median announcement effect is a smaller though statistically significant -1.62 percent. Risk-adjusted returns during the announcement month are about -7 percent (although some portion of this decline occurs prior to the announcement itself).

Over the longer term, the investment appears to yield positive rewards. Estimates from a multifactor asset pricing model indicate that working with a consultant has a statistically significant and positive effect on risk adjusted returns for companies that announce the relationship. Prior to the announcement, these firms earn risk adjusted returns of -0.837 percent per month. During the third year after the announcement, these firms earn risk-adjusted returns of 1.344 percent per month. This latter estimate is significantly different from both zero and the estimated returns during the pre-announcement period. These results are robust to the exclusion of companies that do not continue trading (or made the announcement too recently to have data) for three years after their announcements.

When comparing our announcement sample to companies in their respective industries, we find a similar pattern. Those companies that announce hiring a management consultant underperform their competitors until the second year after the announcement, when they improve significantly from the period prior to the announcement. They continue to improve and

outperform their peer companies into the third year after the announcement. Additionally, the sensitivity to the SMB factor portfolio is significantly lower in the multifactor model and when comparing our samples to their industry. Another effect of hiring a consultant is therefore to reduce the company's sensitivity to the risk factor common to small capitalization stocks.

A comprehensive analysis of what management consultants do to merit this long-term improvement in stock market performance is beyond the scope of this paper. It may be that the firms that hire consultants suffer from idiosyncratic maladies, in which case management consultants would necessarily tailor their recommendations to each company and no patterns would be evident. Based on our analysis of company financial statements, we find some evidence of a peak in leverage and lower capital investment after the announcement date. The most robust pattern is an abrupt change from positive employment growth to a statistically significant contraction in employment beginning with the year of the announcement. It may also be that firms that wish to trim payrolls are the ones who are most likely to announce their consulting relationships. In this case, the reduction in employment that we observe would not be representative of all firms that hire—rather than hire and announce—a management consultant.

The main contribution of this paper is to provide the first systematic, empirical estimates of the effect of hiring a management consultant. However, our sample of 78 announcements is a small fraction of the companies that hire consultants and excludes some well-known companies that are known to have hired consultants over this period. More precise search strategies for identifying announcements can be investigated. The sample can also be extended to more consulting firms or to companies that trade on international exchanges. Those on the inside of the consulting industry can also apply the multifactor models estimated in Section IV and V to proprietary data to verify our initial findings.

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Table 1: Distribution of Announcements by Consulting Firm

Consultant	Companies Mentioned	Available on CRSP	Announcements
McKinsey	337	97	41
BCG	127	31	9
Accenture	121	35	9
Deloitte	82	19	5
Booz Allen	76	17	4
Bain	56	20	7
Mercer	23	6	3
Monitor	3	0	0
TOTAL	825	225	78

Notes:

- 1) The sample of consulting firms is based on Vault's 2003 rankings of the top ten consultants, excluding IBM and Gartner as primarily information technology consultants.
- 2) Announcements are identified from the Lexis-Nexis "Business News" database between 1991 and 2001.

Table 2: Univariate Analysis of Announcement Effect by Characteristic

Characteristic	Number	Full Sample		Excluding Outliers	
		Ann. Effect	T-Statistic	Ann. Effect	T-Statistic
All Announcements	78	-4.33	2.87	-2.79	2.63
Percentiles	Minimum	-73.31		-31.20	
	10	-14.19	2.42	-12.35	4.91
	20	-9.64	5.70	-8.36	4.90
	30	-5.14	3.11	-5.02	3.34
	40	-2.56	2.15	-2.51	2.26
	50	-1.62	2.13	-1.09	1.61
	60	-0.64	1.23	-0.58	1.12
	70	0.71	0.93	0.73	0.92
	80	2.54	3.48	2.54	3.43
	90	4.41	2.42	4.41	2.28
	Maximum	31.21		31.21	
Year of Announcement					
1991	6	-6.23	1.12		
1992	3	-0.14	0.02		
1993	8	-0.12	0.03		
1994	6	-1.89	0.34		
1995	6	-4.32	0.78		
1996	5	-3.22	0.53		
1997	7	-2.98	0.58		
1998	15	-6.51	1.85		
1999	8	2.08	0.43		
2000	8	-9.13	1.89	0.04	0.01
2001	6	-11.84	2.12	-3.64	0.86
Consulting Firm					
McKinsey	41	-3.78	1.78	-2.55	1.82
BCG	9	-3.57	0.79		
Accenture	9	-2.99	0.66		
Deloitte	5	-8.59	1.41	7.59	1.71
Booz Allen	4	-5.18	0.76		
Bain	7	-10.06	1.96		
Mercer	3	3.36	0.43		

Note: Table continues on the next page.

Table 2: Univariate Analysis of Announcement Effect by Characteristic, Continued

Characteristic	Number	Full Sample		Excluding Outliers	
		Ann. Effect	T-Statistic	Ann. Effect	T-Statistic
			Type of Help		
Cost Cutting	6	-3.51	0.63		
Downsizing	4	0.09	0.01		
Merger	3	-2.61	0.33		
Restructuring	16	-1.94	0.57		
Strategic Review	41	-6.45	3.04	-3.55	2.33
Other	8	-1.75	0.36		
			Progress of Project at Announcement		
Completed	7	-1.99	0.40		
Current	30	-1.86	0.77		
Starting	41	-6.54	3.15	-3.65	2.44
			Announcement Made Deliberately by Company Official		
No	14	-2.80	0.78		
Yes	64	-4.67	2.79	-2.79	2.36
			Announcements Made Contemporaneously with Consultant		
Completion	4	1.17	0.18		
Earnings	13	-4.56	1.25		
Layoffs	6	1.35	0.25		
Nothing	22	-1.38	0.49		
Review	10	-1.79	0.43		
Warning on Earnings	8	-11.48	2.48		
Other	15	-10.10	2.98	-1.95	0.79

Notes:

- 1) Calculations pertain to our sample of 78 announcements between 1991 and 2001.
- 2) Announcement Effect is the average 3-day return in excess of the S&P 500.
- 3) Columns 5 and 6 report values only for categories that contained one of the two large negative outliers.
- 4) T-Statistics are from the regression of the excess return on the dummy variables given in each category heading.
- 5) T-Statistics for deciles are from quantile regressions with 1000 bootstrap replications.

Table 3: Descriptive Statistics for Fama-French Portfolios, 1991 - 2002

Factor Portfolios	Mean	Standard Dev	Minimum	Maximum
Riskfree Rate	0.36	0.11	0.11	0.56
Market Excess Return	0.58	4.39	-16.12	10.32
Small Minus Big	0.19	4.05	-16.26	21.38
High Minus Low	0.45	3.86	-12.05	13.67
Up Minus Down	1.08	5.20	-25.13	18.21
Industry Portfolios				
Excess Return	1.15	6.49	-30.18	34.97
Number of Firms	268.04	226.85	4.00	1061.00

Notes:

- 1) Factor and Industry portfolios are the Fama-French research portfolios, available at:
http://mba.tuck.dartmouth.edu/pages/faculty/ken.french/data_library.html.
- 2) The sample includes 144 monthly observations from 1991 to 2002.

Table 4: Multifactor Model Estimates of Consultant Effects on Monthly Returns

Time Period	Stock Months	Portfolio Months	Portfolio Excess Return	Fama-French 4-Factor Model				
				Intercept	Mkt - Riskfree	SMB	HML	UMD
Before Announcement	4209	130	-0.139 (0.18)	-0.837 (1.67)	1.234 (7.41)	0.928 (5.32)	-0.048 (0.24)	-0.307 (2.14)
Announcement Month	78	59	-1.915 (0.75)	-6.914 (2.42)**	3.008 (2.95)*	2.597 (3.31)**	2.043 (2.17)**	-0.226 (0.30)
First Year After	898	142	0.445 (0.66)	0.091 (0.18)	1.221 (10.45)	0.490 (3.62)*	0.242 (1.35)	-0.519 (4.25)
Second Year After	781	131	1.343 (1.68)*	0.879 (1.30)**	1.069 (5.53)	0.641 (3.66)	0.645 (1.81)*	-0.350 (2.97)
Third Year After	661	119	1.421 (1.79)*	1.344 (1.96)**	1.052 (6.98)	0.443 (2.53)*	0.261 (1.34)	-0.438 (2.45)
Four or More Years After	2043	107	0.500 (0.96)	0.151 (0.47)*	1.028 (13.82)	0.254 (3.35)**	0.499 (5.19)**	-0.205 (5.13)

Notes:

- 1) Returns are monthly over the period 1991 - 2002 and are expressed in percentage points.
- 2) Stock Months are the number of unique monthly stock returns used to construct the portfolios in the specified period.
- 3) Portfolio Months are the number of unique monthly portfolio returns in the specified period.
- 4) T-statistics are robust to heteroskedasticity and dependence in returns within calendar months across the six time periods.
- 5) T-statistics pertain to the null hypothesis that the coefficient is zero. Asterisks indicate that the coefficient is significantly different from the corresponding coefficient in the pre-announcement period at the 10 (*) and 5 (**) percent levels.

Table 5: Multifactor Model Estimates of Consultant Effects on Monthly Returns, by Post-Announcement Survival Status

Time Period	All Announcements		Survive 1-year		Survive 2-year		Survive 3-year	
	Excess Return	Alpha	Excess Return	Alpha	Excess Return	Alpha	Excess Return	Alpha
Before Announcement	-0.139 (0.18)	-0.837 (1.67)	-0.012 (0.02)	-0.727 (1.46)	0.919 (0.90)	-0.496 (0.66)	0.412 (0.84)	-0.739 (2.91)
Announcement Month	-1.915 (0.75)	-6.914 (2.42)**	0.163 (0.08)	-2.876 (1.57)	-1.237 (0.77)	-4.386 (2.34)*	-0.840 (0.53)	-3.633 (1.96)
First Year After	0.445 (0.66)	0.091 (0.18)	0.770 (1.14)	0.379 (0.80)*	0.680 (0.91)	0.400 (0.65)	0.749 (1.28)	0.134 (0.30)
Second Year After	1.343 (1.68)*	0.879 (1.30)**	1.343 (1.68)	0.879 (1.30)**	1.217 (1.62)	0.952 (1.37)	1.693 (2.32)*	1.332 (1.88)**
Third Year After	1.421 (1.79)*	1.344 (1.96)**	1.421 (1.79)*	1.344 (1.96)**	1.421 (1.79)	1.344 (1.96)*	1.400 (2.12)	0.889 (1.60)**
Four or More Years After	0.500 (0.96)	0.151 (0.47)*	0.500 (0.96)	0.151 (0.47)	0.500 (0.96)	0.151 (0.47)	0.500 (0.96)	0.151 (0.47)**
Stock Months	8670	8670	8119	8119	6923	6923	6632	6632
Portfolio Months	688	688	682	682	644	644	608	608

Notes:

- Returns are monthly over the period 1991 - 2002 and are expressed in percentage points.
- Stock Months are the number of unique monthly stock returns used to construct the portfolios in the specified period.
- Portfolio Months are the number of unique monthly portfolio returns in the specified period.
- T-statistics are robust to heteroskedasticity and dependence in returns within calendar months across the six time periods.
- T-statistics pertain to the null hypothesis that the coefficient is zero. Asterisks indicate that the coefficient is significantly different from the corresponding coefficient in the pre-announcement period at the 10 (*) and 5 (**) percent levels.
- Each pair of columns makes a progressively more restrictive assumption about post-announcement survival of each firm. The "Survive n-year" columns pertain to the sample of firms that continue to trade at least n years after their announcements.

Table 6: Multifactor Model Estimates of Industry Monthly Returns

Time Period	Stock Months	Portfolio Months	Portfolio Excess Return	Fama-French 4-Factor Model				
				Intercept	Mkt - Riskfree	SMB	HML	UMD
Before Announcement	4209	130	0.806 (1.63)	0.408 (2.34)	1.058 (18.70)	0.044 (0.79)	-0.303 (4.01)	-0.264 (6.08)
Announcement Month	78	59	2.067 (2.42)	-0.239 (0.40)	1.579 (8.80)**	0.189 (1.01)	0.172 (0.86)**	-0.089 (0.58)
First Year After	898	142	0.817 (1.75)	0.236 (0.91)	1.164 (18.63)*	-0.028 (0.39)	0.087 (0.77)**	-0.132 (2.52)**
Second Year After	781	131	0.595 (1.39)	0.182 (0.98)	1.056 (18.17)	0.079 (1.42)	0.105 (1.66)**	-0.106 (2.85)**
Third Year After	661	119	0.483 (1.09)	0.199 (1.01)	0.982 (19.54)	0.078 (1.24)	0.194 (2.63)**	-0.195 (5.77)
Four or More Years After	2043	107	0.431 (0.97)	0.020 (0.21)**	1.033 (37.69)	-0.030 (1.01)	0.276 (8.59)**	-0.079 (4.85)**

Notes:

- 1) Returns are monthly over the period 1991 - 2002 and are expressed in percentage points.
- 2) Stock Months are the number of unique monthly stock returns used to construct the portfolios in the specified period.
- 3) Portfolio Months are the number of unique monthly portfolio returns in the specified period.
- 4) T-statistics are robust to heteroskedasticity and dependence in returns within calendar months across the six time periods.
- 5) T-statistics pertain to the null hypothesis that the coefficient is zero. Asterisks indicate that the coefficient is significantly different from the corresponding coefficient in the pre-announcement period at the 10 (*) and 5 (**) percent levels.

Table 7: Multifactor Model Estimates of Consultant Effects on Monthly Returns Net of Industry

Time Period	Stock Months	Portfolio Months	Portfolio Excess Return	Fama-French 4-Factor Model				
				Intercept	Mkt - Riskfree	SMB	HML	UMD
Before Announcement	4209	130	-0.944 (1.93)	-1.245 (2.52)	0.176 (1.24)	0.885 (5.15)	0.255 (1.33)	-0.044 (0.30)
Announcement Month	78	59	-3.982 (1.72)	-6.675 (2.51)**	1.428 (1.50)	2.408 (3.37)**	1.871 (1.91)*	-0.137 (0.19)
First Year After	898	142	-0.373 (0.72)	-0.145 (0.24)	0.056 (0.41)	0.518 (3.27)	0.155 (0.75)	-0.387 (2.71)**
Second Year After	781	131	0.748 (1.08)**	0.697 (1.08)**	0.012 (0.07)	0.562 (3.24)	0.540 (1.50)	-0.244 (2.12)
Third Year After	661	119	0.938 (1.43)**	1.145 (1.58)**	0.070 (0.45)	0.365 (1.85)*	0.066 (0.30)	-0.243 (1.31)
Four or More Years After	2043	107	0.069 (0.23)*	0.131 (0.44)**	-0.005 (0.08)	0.283 (4.06)**	0.223 (2.48)	-0.126 (3.26)

Notes:

- 1) Returns are monthly in excess of industry returns over the period 1991 - 2002 and are expressed in percentage points.
- 2) Stock Months are the number of unique monthly stock returns used to construct the portfolios in the specified period.
- 3) Portfolio Months are the number of unique monthly portfolio returns in the specified period.
- 4) T-statistics are robust to heteroskedasticity and dependence in returns within calendar months across the six time periods.
- 5) T-statistics pertain to the null hypothesis that the coefficient is zero. Asterisks indicate that the coefficient is significantly different from the corresponding coefficient in the pre-announcement period at the 10 (*) and 5 (**) percent levels.

Table 8: Estimates of Consultant Effects on Annual Return on Assets

Time Period	All Announcements			Survive 3-year before/after		
	Number	Sample	Excess on Industry	Number	Sample	Excess on Industry
5-years Before	59	4.895**	1.598**	35	4.598**	1.598
4-years Before	67	4.855**	1.918**	42	3.900**	1.741
3-years Before	72	3.228*	0.503**	45	3.255*	0.435
2-years Before	73	3.815**	0.943**	45	3.815*	0.380
1-year Before	73	1.939	-0.215	45	1.941	0.242
Announcement Year	71	1.073	-1.386	45	1.239	-0.097
1-year After	60	1.523	-0.121	45	1.541	0.066
2-year After	54	1.657	0.212*	45	3.096	0.307
3-year After	45	1.813	0.000	45	1.813	0.000
4-year After	30	2.304	0.596**	30	2.304	0.596
5-year After	25	2.827	0.725*	25	2.827	0.725
3-years Before - Announcement		1.912**	1.774**		1.765*	0.449
3-years After - Announcement		0.598	1.413*		0.911	0.221
3-years After - 3 years Before		-1.314*	-0.361		-0.854	-0.228

Notes:

- 1) Return on Assets is annual over the period of 1987-2002 and is expressed in percentage points.
- 2) "Number" represents number of companies from announcement sample with available ROA data.
- 3) Results are based on median values.
- 4) P-values are based on analagous median regressions with 200 bootstrap replications.
- 5) Asterisks indicate that the coefficient is significantly different from the corresponding coefficient during the announcement year at the 10 (*) and 5 (**) percent levels.

Table 9: Consultant Effects on Leverage

Time Period	All Announcements			Survive 3-year before/after		
	Number	Sample	Excess on Industry	Number	Sample	Excess on Industry
5-years Before	58	15.23*	0.59	34	13.53	0.23
4-years Before	66	15.40*	1.92	41	16.15	2.34
3-years Before	72	18.04	1.02	45	18.11	0.67
2-years Before	73	17.86	3.91	45	17.15	2.53
1-year Before	73	20.35	3.49	45	16.77	1.86
Announcement Year	70	24.21	4.37	45	18.53	3.14
1-year After	60	25.54	4.50	45	25.89	3.40
2-year After	54	23.86	2.48	45	23.43	2.35
3-year After	45	17.77	3.07	45	17.77	3.07
4-year After	30	19.80	4.01	30	19.80	4.01
5-year After	25	14.72	2.72	25	14.72	2.72
3-years Before - Announcement		-4.77	-1.89		-1.18	-1.46
3-years After - Announcement		-1.41	-1.26		3.84	-0.21
3-years After - 3 years Before		3.36	0.63		5.02	1.25

Notes:

- 1) Leverage is defined as total long term debt/total assets and is expressed in percentage points.
- 2) "Number" represents number of companies from announcement sample with available leverage data.
- 3) Results are based on median values.
- 4) P-values are based on analagous median regressions with 200 bootstrap replications.
- 5) Asterisks indicate that the coefficient is significantly different from the corresponding coefficient during the announcement year at the 10 (*) and 5 (**) percent levels.

Table 10: Consultant Effects on Annual Investment in Property, Plant and Equipment

Time Period	All Announcements			Survive 3-year before/after		
	Number	Sample	Excess on Industry	Number	Sample	Excess on Industry
5-years Before	46	20.80	0.84	23	17.68	-0.71
4-years Before	50	26.83	3.87	25	23.09	0.86
3-years Before	58	22.88	0.72	31	20.28	0.88
2-years Before	63	26.13	2.14	31	22.25	0.60
1-year Before	64	22.21	-0.60	31	19.96	-2.19
Announcement Year	62	21.87	-0.78	31	18.34	-2.45
1-year After	51	18.44	-1.59	31	17.05	-1.59
2-year After	45	18.11	-1.85	31	18.11	-1.85
3-year After	35	15.20*	-6.17*	31	16.39	-2.82
4-year After	25	17.93	-2.33	21	18.52	-2.33
5-year After	20	14.09	-2.06	18	14.09	-2.06
3-years Before - Announcement		2.14	0.95		2.49	2.22
3-years After - Announcement		-4.85*	-3.08		-1.16	0.37
3-years After - 3 years Before		-6.99**	-4.03**		-3.65	-1.85

Notes:

- 1) Investment in PP&E is the ratio of purchases to the stock as of the beginning of the year, expressed in percentage points.
- 2) "Number" represents number of companies from announcement sample with available PP&E data.
- 3) Results are based on median values.
- 4) P-values are based on analagous median regressions with 200 bootstrap replications.
- 5) Asterisks indicate that the coefficient is significantly different from the corresponding coefficient during the announcement year at the 10 (*) and 5 (**) percent levels.

Table 11: Estimates of Consultant Effects on Employment Growth Rate

Time Period	All Announcements			Survive 3-year before/after		
	Number	Sample	Excess on Industry	Number	Sample	Excess on Industry
5-years Before	50	3.25**	1.19**	28	3.25**	1.48**
4-years Before	56	3.31**	1.11**	31	3.41**	1.15**
3-years Before	61	0.59**	-0.54**	37	0.00	-1.80*
2-years Before	66	2.03**	-0.91**	37	2.55**	1.81**
1-year Before	67	2.06**	-0.87**	37	0.69**	-1.18**
Announcement Year	67	-5.01	-7.13	37	-5.01	-6.49
1-year After	56	-5.23	-7.29	37	-2.93	-3.96
2-year After	50	-1.26	-3.68	37	-0.26	-2.60
3-year After	40	0.03**	-5.46	37	0.16*	-4.26
4-year After	29	0.83*	-2.82**	26	1.36	-2.82
5-year After	24	-3.89	-6.04	23	-2.74	-5.04
3-years Before - Announcement		6.60**	6.44**		6.09**	6.10**
3-years After - Announcement		2.58	1.45		4.00	2.88
3-years After - 3 years Before		-4.01**	-4.99**		-2.09	-3.22**

Notes:

- 1) Employment growth rate is annual over the period of 1987-2002 and is expressed in percentage points.
- 2) "Number" represents number of companies from announcement sample with available employment data.
- 3) Results are based on median values.
- 4) P-values are based on analagous median regressions with 200 bootstrap replications.
- 5) Asterisks indicate that the coefficient is significantly different from the corresponding coefficient during the announcement year at the 10 (*) and 5 (**) percent levels.

Table 12: Partial Correlations of 3-year Risk Adjusted Returns

	Before Announcement	Announcement Year	After Announcement
Employment Growth [n = 52]	0.2129 [0.138]	-0.0667 [0.645]	-0.0573 [0.693]
Investment [n = 51]	-0.1925 [0.185]	0.1390 [0.341]	0.3417 [0.016]
Leverage [n = 60]	-0.1529 [0.252]	0.1363 [0.308]	-0.0371 [0.782]
Return on Assets [n = 60]	0.0336 [0.802]	0.1056 [0.430]	-0.1451 [0.277]

- 1) Partial correlations of compound 3-year risk-adjusted return with financial and non-financial variables.
- 2) The sample includes all firms with at least one non-missing value of the variable in the before, during, and after periods.
- 3) P-values are reported in brackets beneath each partial correlation coefficient.

Table A1: Description of Announcement Sample

Company	Ticker	Consulting Firm	Industry at Announcement Date	Announcement Date	Excess Return over S&P 500 for 3-day Announcement Window
CBS	CBS	McKinsey	Communication	01/14/91	-0.65%
Ratner's	RATNY	McKinsey	Retail	01/24/91	-29.31%
La Quinta	LQM	McKinsey	Restaraunts, Hotels, Motels	05/16/91	-7.45%
Pepsico	PEP	McKinsey	Candy & Soda	06/27/91	0.71%
National City Corp.	NCC	McKinsey	Trading	07/23/91	1.80%
Unocal Corp.	UCL	McKinsey	Petroleum and Natural Gas	08/10/91	-2.51%
Time Inc Magazine (owned by Time Warner)	TWX	McKinsey	Printing and Publishing	03/23/92	-1.68%
WESTPAC	WBK	McKinsey	Banking	09/23/92	-3.67%
Philips Electronics NV	PHG	McKinsey	Trading	01/26/93	-5.14%
Pacific Gas and Electric	PCG	McKinsey	Utilities	02/08/93	-0.58%
Borden's Inc	BN	McKinsey	Food Products	03/17/93	-2.43%
ITT Corporation	IIN	McKinsey	Electronic Equipment	07/15/93	2.89%
Great Western Financial Corp.	GWF	McKinsey	Banking	08/12/93	-2.32%
Delta	DAL	McKinsey	Transportation	08/26/93	2.25%
Shoney's Inc.	SHN	McKinsey	Restaraunts, Hotels, Motels	08/18/94	3.00%
Royal Dutch/Shell	RD	McKinsey	Coal	09/19/94	0.10%
Woolworth	Z	McKinsey	Retail	04/25/95	-4.10%
Pennzoil	PZL	McKinsey	Petroleum and Natural Gas	10/27/95	-3.39%
Imperial Chemical Industries	ICI	McKinsey	Chemicals	03/04/96	1.63%
Unilever	UL	McKinsey	Food Products	03/14/96	4.02%
English China Clay	ENC	McKinsey	Non-Metallic and Industrial Metal Mining	09/17/96	3.08%
Time Warner	TWX	McKinsey	Printing and Publishing	10/11/96	-0.72%
National Australia Bank	NAB	McKinsey	Banking	06/23/97	2.54%
Koor	KOR	McKinsey	Chemicals	08/25/97	2.86%
Quaker State	KSF	McKinsey	Petroleum and Natural Gas	12/08/97	-0.93%
Insurance Auto Actions	IAAI	McKinsey	Wholesale	02/18/98	-10.61%
British American Tobacco	BTLD	McKinsey	Tobacco Products	03/11/98	-4.34%
Bank of Montreal	BMO	McKinsey	Banking	04/30/98	-0.80%
Royal Bank of Canada	RY	McKinsey	Banking	04/30/98	-1.63%
Pentair Inc.	PNR	McKinsey	Business Supplies	06/18/98	-0.95%
Hewlett Packard	HWP	McKinsey	Computers	12/17/98	-2.27%
3M	MMM	McKinsey	Shipping Containers	09/01/99	1.76%
Marvel Enterprises	MVL	McKinsey	Recreation	09/08/99	3.17%
Chilean Telecommunications Company	CTC	McKinsey	Communication	11/09/99	0.55%
Advantica Restaurant Group	DINE	McKinsey	Restaraunts, Hotels, Motels	11/09/99	-8.36%
OMI Corporation	OMM	McKinsey	Transportation	03/23/00	-0.64%
Satyam Infoway	SIFY	McKinsey	Business Services	10/12/00	-14.19%
Tomkins	TKS	McKinsey	Food Products	10/24/00	4.41%
Pentair Inc.	PNR	McKinsey	Business Supplies	12/18/00	-16.57%
Comdisco	CDO	McKinsey	Business Services	04/03/01	-52.84%
3COM	COMS	McKinsey	Electronic Equipment	04/23/01	-0.35%

Note: Table continues on the next page.

Table A1: Description of Announcement Sample, Continued

Company	Ticker	Cons. Firm	Industry Classification at Announcement Date	Announcement Date	Excess Return over S&P
					500 for 3-day Announcement Window
Dominion Bankshares Corp	DMBK	Accenture	Trading	01/17/92	4.95%
Rank Organization	RANKY	Accenture	Entertainment	01/10/94	-6.44%
Kmart	KM	Accenture	Retail	04/25/94	-11.44%
Wachovia Corp	WB	Accenture	Banking	03/09/95	-1.62%
Westinghouse Electric Corp	WX	Accenture	Electrical Equipment	08/11/95	-0.97%
National Home Centers	NHCI	Accenture	Retail	11/21/97	-9.94%
Best Buy	BBY	Accenture	Retail	03/05/98	8.26%
UBICS	UBIX	Accenture	Business Services	11/05/98	-18.45%
West Marine Inc	WMAR	Accenture	Retail	10/28/99	8.76%
Silverado Foods	SLV	Bain	Restaraunts, Hotels, Motels	08/13/97	-7.85%
American Pad and Paper	AGP	Bain	Business Supplies	07/16/98	-31.20%
AMF Bowling	PIN	Bain	Entertainment	11/20/98	-12.35%
Rank Organization	RANKY	Bain	Entertainment	11/22/98	-0.30%
Franchise Finance Corp of America	FFA	Bain	Trading	05/10/00	-4.64%
Radio Shack	RSH	Bain	Retail	04/07/01	-30.95%
Gateway	GTW	Bain	Computers	11/03/01	16.84%
R.R. Donnelley and Sons	DNY	BCG	Business Services	11/22/93	2.79%
AST Research Inc.	ASTA	BCG	Computers	09/11/95	-10.83%
Scitex Corp.	SCIX	BCG	Computers	11/17/96	-11.38%
Cable and Wireless	CWP	BCG	Communication	01/13/97	-5.42%
Advance Radio Telecom	ARTT	BCG	Communication	03/04/98	1.29%
Oak Technology	OAKT	BCG	Electronic Equipment	11/23/98	-2.56%
ANZ Banking Group	ANZ	BCG	Banking	07/15/99	0.73%
Select Comfort Corp	SCSS	BCG	Consumer Goods	09/17/99	-13.97%
Information Resources Inc.	IRIC	BCG	Business Services	11/01/99	7.26%
Borland International Inc	BORL	Booz	Business Services	12/22/94	-9.00%
America West	AWA.B	Booz	Transportation	01/09/95	-5.02%
BancTec	BTC	Booz	Computers	10/26/98	-7.76%
General Motors	GM	Booz	Automobiles and Trucks	06/21/01	1.08%
Michigan National Corp	MNCO	Deloitte	Trading	10/07/93	0.21%
Jo-Ann Stores	JAS	Deloitte	Retail	05/24/99	3.76%
Roberds Inc	RBDS	Deloitte	Retail	01/01/00	-73.31%
Smith Corona	SCCO	Deloitte	Computers	02/14/00	31.21%
Westaff Inc	WSTF	Deloitte	Business Services	08/15/01	-4.84%
Kansas City Southern Industries	KSU	Mercer	Transportation	05/19/94	12.47%
Consolidated Edison Co.	ED	Mercer	Utilities	06/09/97	-2.12%
Ryder System	R	Mercer	Business Services	11/30/99	-0.27%

Note: Industry Classification is accurate at the time of announcement. Some changes occur within the period from 1991-2002