Does the Stock Market Fully Value Intangibles? Employee Satisfaction and Equity Prices*

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December 13, 2007

Abstract

This paper analyzes the relationship between employee satisfaction and long-run stock performance. An annually rebalanced portfolio of *Fortune* magazine's "Best Companies to Work For in America" earned 14% per year from 1998-2005, over double the market return. The portfolio also outperformed industry- and characteristics-matched benchmarks; controlling for risk, it yielded a four-factor alpha of 0.64%. These findings have three main implications. First, employee satisfaction may improve corporate performance rather than representing inefficiently excessive non-pecuniary compensation. Second, the stock market does not fully value intangibles, even when independently verified by a publicly available survey. This suggests that intangible investment generally may not be incorporated into short-term prices, providing support for managerial myopia theories. Third, socially responsible investing ("SRI") screens need not reduce investment returns.

KEYWORDS: Employee satisfaction, market efficiency, short-termism, managerial myopia, human capital, socially responsible investing
JEL CLASSIFICATION: G14, J28, M14

*2428 Steinberg Hall-Dietrich Hall, 3620 Locust Walk, Philadelphia, PA 19104-6367. (215) 746 0498. I am grateful to Henrik Cronqvist, Xavier Gabaix, David Hirshleifer, Tim Johnson, Mozaffar Khan, Lloyd Kurtz, Stew Myers, Mahesh Pritamani, and seminar participants at the Conference in Financial Economics and Accounting at NYU, the Socially Responsible Investing annual conference, MIT Sloan, and Rockefeller for valued input. Special thanks to Amy Lyman of the Great Place To Work Institute for answering numerous questions about the Fortune survey, and to Patrick Sim for research assistance.

1 Introduction

This paper analyzes the relationship between employee satisfaction and long-run stock price performance. An annually rebalanced portfolio of *Fortune* magazine's "100 Best Companies to Work For in America" earned 14% per year from 1998-2005[1], over double the return on the CRSP value-weighted index. Controlling for risk using the Carhart (1997) four-factor model, this translates into a statistically significant monthly alpha of 64 basis points. Returns continue to be significant when calculated over industry- and characteristics-matched benchmarks, when adjusting for outliers, and when controlling for a large number of other characteristics known to affect returns. The outperformance is not confined to the 1998-2005 period. The "Best Companies" list was originally published in a book by Levering, Moskowitz and Katz in 1984, and later updated in 1993, before being published by *Fortune* in 1998 and then updated annually. Starting the portfolio in 1984 also leads to significant excess returns over all benchmarks. In addition to higher stock returns, the Best Companies also exhibit superior future accounting performance.

These findings contribute to three strands of research. The first is the increasing importance of human capital in the modern corporation. The second is the equity market's failure to fully incorporate the value of intangible assets, which underpins managerial myopia theories. The third is the effect of socially responsible investing ("SRI") screens on investment performance.

The traditional firm that pervaded throughout much of the 20th century was predominantly capital intensive and focused on generating cost efficiency through scarce physical assets. Employees were seen as merely a cost to be minimized, rather than a source of positive value creation (see, e.g., Taylor (1911) and Marglin (1974)). Management practices therefore centered around extracting maximum effort from workers, while minimizing their compensation.

Management philosophies have dramatically changed over the past fifty years. The current competitive environment places a significantly greater emphasis on quality and innovation, for which human, rather than physical capital, is particularly important (Zingales (2000)). Accordingly, the human relations movement (e.g. Maslow (1943), Hertzberg (1959), McGregor (1960)) has rapidly grown in influence. It recognizes employees as key organizational assets, rather than expendable commodities, and focuses on achieving "competitive advantage through people" (Pfeffer (1996)) through recruiting, developing and retaining critical workers.

Despite the intuitive logic of the human relations movement, there is little existing evidence on the benefits of employee-centric strategies. Supporting the traditional view that improvements in worker welfare must come at the expense of shareholder returns, Abowd (1989) finds that higher pay reduces equity values dollar-for-dollar. This void provides the first motivation for this paper. To my knowledge, it constitutes the first study showing that employee satisfaction is positively associated with shareholder value, rather than representing inefficiently excessive non-pecuniary compensation.

[1] Throughout this paper, I use "1998-2005" to measure returns starting with the 1998 *Fortune* list and ending with the 2005 *Fortune* list. Since the list is published in mid-January of each year, the returns are calculated from February 1998 through January 2006.

The second goal of the paper is to study the market's valuation of employee satisfaction. Even if CEOs are aware that human capital investment improves long-run value, they may still underinvest. This problem has been formalized by a number of managerial myopia models, such as Narayanan (1985), Stein (1988, 1989), and Edmans (2007a, 2007b). The fundamental problem is that such investment is intangible, and so its only immediately observable effect is reduced earnings. Since low profits may stem from poor firm quality, the stock price rationally falls. Fearing such a decline, an equity-aligned manager may inefficiently forgo investment in the first place.

Despite the widespread belief that managerial myopia is a significant issue (see, e.g., Porter (1992)), there is little evidence that it exists in reality. For example, while many CEOs claim that they are pressured into undertaking myopic actions (Graham, Harvey and Rajgopal (2005)), these claims may be self-serving as they wish to avoid the scrutiny of meeting earnings targets. This paper sheds light on the real-life importance of short-termism by studying the key assumption underlying myopia theories: that intangible investment cannot be credibly communicated to outsiders (such as through news releases). This explains why I choose a publicly observable and widely known measure of intangibles (the *Fortune* survey), and focus my analysis on long-horizon returns. Finding positive event-study reactions to *Fortune* inclusion would not imply that the market underestimates the benefits of employee satisfaction, since it immediately incorporates the news upon release, nor would finding superior returns based on a proprietary measure unavailable to most investors. This explains why my central results focus on the 1998-2005 period, when the lists were widely publicized by *Fortune*. However, as a robustness check I extend the sample back to 1984, when they were only published in a book.

By delaying portfolio formation until the month after the publication of the *Fortune* list, I give the market ample opportunity to react to the list. However, I still find significant outperformance of the "Best Companies" portfolio.[2] That even highly visible, independently verified measures of intangibles are not fully incorporated into stock prices implies that intangibles in general are undervalued by the stock market – the vast majority of which have no equivalent method of public certification such as the *Fortune* list. This in turn supports the key assumption that underlies managerial myopia concerns, and suggests that managers evaluated according to the short-term stock price may indeed have significant disincentives to invest for long-run growth.

The third implication of the study relates to the profitability of SRI investment strategies, whereby investors will only select companies that act in a socially responsible manner. Traditional portfolio theory (e.g. Markowitz (1959)) would suggest that SRI reduce returns, since it restricts an investor's choice set. Indeed, many existing studies find that SRI screens have a negative, or at best zero, effect on returns. This paper suggest that SRI screens may improve investment performance – at least when the screen focuses on employee welfare. Although SRI screens lead to a restricted choice set, they may be selecting attractive investments since a firm's

[2]Note that the underreaction to the *Fortune* list does not imply market irrationality. Given that theory provides no clear predictions on the effect of employee satisfaction, the market may have simply been unaware of the benefits to shareholders.

concerns for other stakeholders may benefit shareholders in the long run, yet not be impounded into the current stock price as "stakeholder capital" is difficult to value.

It is important to bear in mind a number of caveats when interpreting some of the above results. First, the evidence admits alternative interpretations than the existence of a causal link from employee satisfaction to shareholder value. Employee satisfaction may be irrelevant and simply proxy for other variables that are positively linked to stock returns. While I control for a large set of observable characteristics, by their very nature unobservables (such as good management practices) cannot be directly controlled for. Another explanation is that employees with private knowledge that their firm has strong future prospects will report higher satisfaction today. However, existing studies on employee trading behavior suggest that workers have no superior information on their firm's future stock returns. If either explanation is valid, introducing employee-friendly programs will not necessarily improve a firm's stock returns. However, the conclusions on market non-incorporation and the existence of a profitable SRI trading strategy still remain.

Second, the *Fortune* survey focuses on firms in the right tail of employee satisfaction. This small sample may reflect the effect of employee satisfaction in general on shareholder value, as it may be that satisfaction only has a beneficial effect when it reaches very high levels. Finally, while the paper suggests superior returns to an SRI screen based on employee relations, its results may not extend to other SRI screens (e.g. environmental policy).

This paper is organized as follows. Section 2 discusses the *a priori* reasons for hypothesizing a link between employee satisfaction and shareholder value. Section 3 discusses the data and methodology, Section 4 presents the results, and Section 5 concludes.

2 Why Might Employee Satisfaction Matter?

It may seem highly intuitive that employee satisfaction should be beneficial for firm value, perhaps even removing the need to document such a relationship empirically. However, existing theoretical and empirical research is far from unambiguous, thus providing the motivation for this study.

First, employee satisfaction may represent an inefficiently high *level* of compensation. Hotelling's (1932) lemma for the firm's profit function (that changes in labor costs leads to a change in profits of equal and opposite magnitude) underpinned "zero-sum" beliefs that shareholders maximize their return by minimizing employee wages. For example, Taylor's (1911) "scientific management" theory viewed employees as no different from any other input, and thus sought to extract maximum effort while minimizing total pecuniary and non-pecuniary compensation. High satisfaction may suggest that workers are being allowed to slack or are given superfluously pleasant working conditions, to the detriment of shareholder value. Indeed, agency problems may lead to managers tolerating insufficient effort and/or excessive pay, at shareholders' expense. The manager may derive private benefits from improving his colleagues' compensation, such as more pleasant working relationships (Cronqvist et al. (2006)), or seek to enjoy the

"quiet life" and avoid the confrontations that may result from holding employees to their reservation utility (Bertrand and Mullainathan (2003)). Alternatively, high wages may constitute a takeover defense and lead to managerial entrenchment (Pagano and Volpin (2005)).

Second, employee satisfaction may represent an inefficient *form* of compensation compared with cash, for the same reason that CEO perquisites are often viewed as inefficient compensation (e.g. Yermack (2006)). The CEO is forced to consume the perk even if his marginal valuation is low, whereas cash is fully fungible and could be used to buy the perk if the CEO desires it. Indeed, in the early 20th century, cash was viewed as the most effective motivator: given relatively harsh economic conditions, workers were mainly concerned with meeting their physical needs (such as food and shelter), which could be addressed with money.

Existing empirical evidence indeed fails to document a positive link between employee satisfaction and stock returns. Consistent with the "zero-sum" philosophy, Abowd (1989) finds that announcements of pay increases reduce stock market valuations dollar-for-dollar. Diltz (1995) demonstrates no link between shareholder returns and the Council on Economic Priorities employee relations variable, and Dhrymes (1998) finds the same result for KLD Research & Analytics' employee relations measure.

On the one hand, the above research renders the relationship between employee satisfaction and shareholder value non-obvious, and thus potentially interesting to study. On the other hand, to justify empirical investigation, it is also necessary to have convincing reasons, grounded in existing theories, for why a positive link might exist. A plausible *a priori* hypothesis is important to mitigate "data-mining" concerns and reduce the risk that erroneous inferences are drawn from accidental patterns in the data.

Human relations theories argue that satisfaction is an efficient *form* of compensation in the modern firm. Maslow (1943) and Hertzberg (1959) stress that money is only an effective motivator up to a point: once workers' basic physical requirements are met (which is increasingly true in the more affluent current economic environment), they are increasingly motivated by non-pecuniary factors such as recognition and self-esteem. While perks (such as country club membership) can be bought with cash from third parties, on-the-job satisfaction cannot be externally purchased and can only be provided directly by the firm.

Moreover, the efficiency wage hypothesis (Akerlof and Yellen (1986)) argues that employee satisfaction may represent an efficient *level* of compensation, since shareholders may benefit from paying workers in excess of their reservation wage. While the efficiency wage hypothesis was initially stated in terms of salary, "excessive" job satisfaction may be even more powerful if employees value it more highly than cash, for the reasons stated above.

One potential channel is motivation, and is supported by theories in both neoclassical economics and sociology. In the traditional firm, employees were primarily required to follow prescribed processes, the output of which was easily measurable. This made motivation easy: managers could simply measure output, and reward or punish the workers accordingly through monetary "piece rates" or the threat of dismissal (Taylor (1911)). However, in the modern firm, workers are now increasingly called upon to perform skilled tasks, the output of which can be very difficult to measure accurately (for example, building client relationships). Output-based

incentives may thus be ineffective or even destructive (e.g., Kohn (1993)). If the employee's output is not quantifiable, but still observable (e.g. her cooperativeness with colleagues), the manager can fire her if she shirks. In this case, providing "excessive" job satisfaction may be an effective motivator, since the employee risks being fired, and losing such satisfaction, if she exerts low effort (Shapiro and Stiglitz (1984)).

If output is neither verifiable nor observable, extrinsic motivators such as piece pay or the threat of severance are ineffective. In particular, motivating employees to innovate may require tolerance of failure (Manso (2007), Ederer and Manso (2007)). However, simply removing extrinsic motivators may encourage workers to shirk. This is where intrinsic motivators become important. An employee may view pleasant working conditions a "gift" from the firm, and respond with a "gift" of increased effort (Akerlof (1982)).[3] Sociological theories argue that job satisfaction can lead to employees identifying with the firm and internalizing its objectives in their own utility functions, thus inducing effort even if outputs are not directly rewarded (Maslow (1943), Hertzberg (1959), McGregor (1960)). Supporting this hypothesis, Mas (2007) finds that labor unrest in Caterpillar led to reduced product quality. Unlike quantities, quality is a non-contractible measure of effort that is difficult to control extrinsically and was only discovered by customers after a sustained period of use.

A second channel is retention. Unlike physical capital, human capital is inalienable and owned by the workers themselves, not managers or shareholders, and can thus leave the firm at little cost. Effective retention is therefore crucial for building competitive advantage through a superior workforce. Recent employee-centric theories of the firm such as Rajan and Zingales (1998, 2001), Berk, Stanton and Zechner (2006), and Lustig, Syverson and van Nieuwerburgh (2007) show that it can be addressed by paying workers in excess of their market wage or granting them a pecuniary share of surplus. However, if employees value job satisfaction more highly than salary, the former is an even more effective retention tool.[4]

In sum, while the relationship between employee satisfaction and corporate performance is not sufficiently unambiguous to remove the need for empirical documentation, there appears to be an adequately strong *a priori* hypothesis for a positive link to motivate such a study and address data mining concerns. Indeed, some recent studies document a positive effect of employee-friendly policies on productivity and/or perceptions of organizational performance (Delaney and Huselid (1996), Konrad and Mangel (2000), Perry-Smith and Blum (2000), Bloom, Kretschmer and Van Reenen (2006)). This paper differs firstly by measuring long-run stock returns, and secondly by using the *Fortune* list, which is a highly comprehensive measure of employee satisfaction as it surveys employees as well as incorporating observable policies.

Closest to this study is a working paper by Faleye and Trahan (2006). Their main results show that Best Companies exhibit superior contemporaneous accounting performance than

[3]See Bénabou and Tirole (2003) and Carlin and Gervais (2007) for additional economic models of intrinsic motivation and work ethic. Falk and Kosfeld (2006) show experimentally a positive relation between trust and productivity.

[4]If the labor market is perfectly competitive, and human capital is fully transferable, superior workers can only be retained by paying them in full for their higher productivity. Retention is still desirable if there are costs of replacing employees (e.g. recruitment and training costs).

benchmark firms. However, the causality of this relationship is unclear: better performing companies may choose to share some of their surplus with employees in the form of higher satisfaction. This paper focuses on the link with future long-term stock-price performance. It is a more direct measure of shareholder value than accounting numbers and suffers from fewer reverse causality issues: a better performing company should not exhibit superior future returns as its quality should already be incorporated in the stock price, if intangibles are fully valued.[5] A second reason for focusing primarily on stock returns is that the benefits of intangible investment may not manifest in accounting variables for several years.[6]

This paper is also related to a growing literature on socially responsible investing (SRI). Existing evidence on the profitability of SRI strategies is mixed at best. Moskowitz (1972), Luck and Pilotte (1993) and Derwall et al. (2005) find some evidence that SRI screening improves returns, although based on small samples. Hamilton, Jo and Statman (1993), Kurtz and DiBartolomeo (1996), Guerard (1997), Teoh, Welch and Wazzan (1999), Bauer, Koedijk and Otten (2005) and Schröder (2007) report that SRI portfolios have similar returns to their benchmarks. Hong and Kacperczyk (2006) document superior returns to "sin" stocks, such as tobacco and gambling, that would be screened out by a SRI strategy. Geczy, Stambaugh and Levin (2005) show that investors can experience large losses by restricting themselves to SRI mutual funds, depending on their prior beliefs about asset pricing models and fund managers' skills. Brammer, Brooks and Pavelin (2006) find a negative effect of environmental and community screens. This study provides support for an SRI strategy that involves investment in firms with superior employee relations.

3 Data and Summary Statistics

My main data source is *Fortune* magazine's list of the "100 Best Companies to Work for in America". (I call firms included in this list "Best Companies" for brevity). It is compiled from two principal sources. Two-thirds of the total score comes from employee responses to a 57-question survey created by the Great Place to Work® Institute in San Francisco. This survey covers topics such as attitudes toward management, job satisfaction, fairness in the workplace, and camaraderie. The remaining one-third of the score comes from the Institute's own evaluation of factors such as a company's demographic makeup, pay and benefits programs,

[5] Faleye and Trahan do consider the event-study reaction to the publication of the *Fortune* list; the focus of this study is long-horizon returns as it wishes to show that the market does not fully incorporate intangibles even after they are made public. Filbeck and Preece (2003) examine the relationship between inclusion in the 1998 *Fortune* list and stock returns from 1987-1999. Interpretations may therefore be affected by reverse causality: employee satisfaction may be caused by strong past performance. They also find that Best Companies do not outperform size- and industry-matched benchmarks. At a conference, Kurtz and Luck (2002) presented results of the Best Companies' performance using the BARRA and Northfield attribution models. This paper uses a broader range of controls for risk and characteristics. Anginer, Fisher and Statman (2007) investigate the returns to another *Fortune* list, "America's Most Admired Companies," and find negative returns to index inclusion, potentially as it is an overvaluation proxy.

[6] Employee satisfaction may show up in stock price performance without affecting accounting performance, as its effects may manifest in non-financial news releases (e.g. the invention of a new product or the filing of a patent).

and a company's response to a series of open-ended questions about its culture. The companies are scored in four areas: credibility (communication to employees), respect (opportunities and benefits), fairness (compensation, diversity), and pride/camaraderie (teamwork, philanthropy, celebrations). After evaluations are completed, if significant negative news about a firm's employee relations comes to light, the Institute may exclude that company from the list. It is important to note that *Fortune* has no involvement in the company evaluation process, else it may have incentives to bias the list towards advertisers (Reuter and Zitzewitz (2006)).

Previous literature typically studies the performance impact of observable human resource practices and outcomes, such as minority composition of the workforce, or the existence of a flextime work policy. The *Fortune* survey is particularly thorough as, in addition to considering such practices and outcomes, it involves an in-depth "grass-roots" analysis of employee satisfaction through extensively surveying the workers. Consequently it is arguably the most respected and prestigious measure of a firm's working conditions, receiving significant attention from shareholders, company management, employees and human resource departments. If the *Fortune* list is indeed a particularly accurate measure of employee satisfaction, I might expect to find a link with stock returns even though previous studies found no significant relationship using alternative measures of employee relations.

The *Fortune* list has been published in the first issue of each year since 1998. The publication date is typically mid-to-late January, and the issue reaches the newsstands one week before the publication date. If the stock market recognizes the importance of employee satisfaction and fully incorporates it into prices, the contents of the list should be impounded into prices by at least the start of February. Therefore, February 1 is the date for formation and rebalancing of the portfolios. Table 1 details the number of companies in the *Fortune* list in year t that had stock returns available on CRSP in at least one month from February of year t to January of year $t+1$. The table also gives the number of firms added to and dropped from the list.

I study long run returns as my objective is not only to examine the importance of employee satisfaction, but also to investigate whether stock market valuations fully incorporate intangibles. Event-study abnormal returns (with no drift) would not imply non-incorporation, since employee satisfaction is particularly difficult to observe before the release of the *Fortune* list. Positive drift indicates that the market does not fully value intangibles, even when such intangibles are made visible by a study as widely disseminated as the *Fortune* one, implying that intangibles more generally are not impounded into current stock prices. It would also suggest a profitable and actionable trading strategy.[7]

On February 1, 1998, I form an equally-weighted portfolio containing the 69 publicly traded "Best Companies" in that year, and measure the returns to this portfolio from February 1998

[7]In addition, event study returns are unlikely to capture the full economic benefits of satisfied employees. Since the market does not fully respond to announcements of tangible financial earnings (Bernard and Thomas (1989)), they are unlikely to fully incorporate news about intangibles. This scenario would lead to results being understated. Conversely, considering only short-horizon returns might lead to overstated results. Even if employee satisfaction is irrelevant for performance, the market might erroneously believe that it is important (especially given companies' increasing focus on this variable) and irrationally react to *Fortune* list inclusion. Gilbert et al. (2006) find that the market reacts to a meaningless variable that investors erroneously pay attention to, and Huberman and Regev (2001) document a firm-level case of reaction to non-information.

to January 1999. The portfolio is reformed on February 1, 1999 to contain the 65 firms included in the new *Fortune* list, and returns are calculated from February 1999 to January 2000. This process is repeated until January 2006 and I call this "Portfolio I". If a firm de-lists (e.g. goes bankrupt, or is acquired), then its delisting return is used in its final month. At the start of the next month, the proceeds are reinvested in all of the other stocks in the portfolio, based on their relative weights in the portfolio at that point in time. (Results are unchanged if I instead reinvest any takeover proceeds in the new parent, under the rationale that at least part of the merged entity exhibits superior employee satisfaction). If a Best Company is not traded in on February 1 but starts trading mid-way through the year, I add it to the portfolio from the first full month after it starts trading. For example, Portfolio I in March 1998 contains 70 firms, since Steelcase became public in mid-February. I include Best Companies with only ADRs in the U.S., since an investor constrained to hold U.S. shares would have been able to invest in such firms. The results are unchanged (or slightly stronger) when excluding firms with ADRs, or firms that go public mid-way through the year.

I run all my tests on three other portfolios. Portfolio II does not reform or reweight the portfolio each year: it simply calculates the returns to the original 69 Best Companies from February 1998 to January 2006. This portfolio represents the simplest trading strategy, as no rebalancing is required and no transactions costs incurred. Portfolio III adds to the original 1998 portfolio any new companies which appear on subsequent lists (and rebalances to equal-weighting each February), but does not drop any firm that is later removed. The motivation is that some companies may have dropped out of the Top 100, but still exhibited superior employee satisfaction than the average firm (e.g. now be in the Top 150). Portfolio IV includes only companies dropped from the list. Specifically, it is created on February 1, 1999 and includes any companies that were in the 1998 list but not in the 1999 list. On February 1, 2000, any companies that were in the 1999 list but not in the 2000 list are added, and so on. If a firm is later added back to the list, it is removed from Portfolio IV. The purpose of this portfolio will be explained shortly. Like Portfolio I, Portfolios III and IV include firms that go public mid-way through the year.

Table 2 presents summary statistics on the original 69 "Best Companies". The mean market capitalization is $22 billion, with the median being a significantly lower $5 billion. One notable statistic is that 17 companies do not pay dividends. The 48 that do have an average payout rate of 1.6%, leading to an average yield of 1.2% across the sample.[8] This low payout rate is consistent with significant investment in human capital. The average market-book ratio is a high 5 and the mean proportion of total assets accounted for by intangibles is only 5%. Together, these results suggest that these companies have little human capital on the balance sheet. This may result from accounting standards hindering capitalization of this asset. In any given year, approximately one-third of the Best Companies are private. This is consistent with the view that it is easier to develop human capital away from the constant scrutiny of the stock

[8]Since the dividend yield is calculated each July and held constant through the following June (see Section 4), companies need 1996 Compustat data to be included. This data is missing for 4 companies. In addition, three firms (Glaxo, Honda and Shell) are excluded from the table as they are ADRs: while their Compustat data is for the whole firm, their share data is only for the ADRs. I therefore only have payout data for 65 firms.

market.

The most common industries are consumer goods (7 companies), financial services (6), software (5), pharmaceuticals (5), hardware (4), and electronic equipment (4). Human capital is plausibly an important input in all of these industries, with the link less obvious perhaps only for consumer goods.

4 Analysis and Results

4.1 Hypothesis

My principal hypothesis is that Portfolios I-III generate significant excess returns over relevant benchmarks, which are described in the next section. This is a joint test of two sub-hypotheses: employee satisfaction is positively associated with corporate performance, and the market fails to fully incorporate the value benefits of employee satisfaction even when the *Fortune* list is published.

I can form a tentative hypothesis on the relative performance of these three portfolios. Portfolio I should perform the most strongly, since it represents the most up-to-date list. While both Portfolios II and III fail to drop companies that have fallen out of the latest *Fortune* list, the difference is that Portfolio III contains any companies newly added to the list. Therefore, it should outperform Portfolio II. The hypothesis is tentative as it is difficult to evaluate rigorously: since the three portfolios contain many common stocks, their returns will very similar and will be likely statistically indistinguishable. However, we can still verify whether the differences are of the hypothesized sign.

I also predict that Portfolio IV performs worse than Portfolios I-III, since the former contains companies outside the Top 100 for employee satisfaction. Whether its returns are also negative depends on market incorporation of intangibles. If the market at all times capitalizes the value of employee satisfaction, the removal of a company from the list signals that this variable has declined. Therefore, under the assumption that satisfaction improves performance, Portfolio IV should earn negative returns.

However, if employee satisfaction is important but not incorporated by the market, such a prediction is not generated. In the extreme, if the *Fortune* list is completely ignored, employee satisfaction only feeds through to returns when its benefits manifest in future news releases and earnings announcements. Hence the abnormal return of firm i depends on its level of employee welfare compared to the average firm, rather than compared to the market's previous assessment of firm i's level of welfare. If firm i is outside the Top 100, it may still exhibit above-average satisfaction (e.g. be in the Top 150) and thus generate superior abnormal returns.

In sum, my hypotheses are the following:

H1: Portfolios I-III outperform their benchmarks.

H1b: Portfolio I outperforms Portfolio III, which in turn outperforms Portfolio II.

H2: Portfolio IV underperforms Portfolios I-III, but does not underperform its benchmark.

4.2 Results

Table 3 presents the annual returns to each portfolio and the market benchmark. Consistent with H1, Portfolios I-III all significantly outperform the market, with Portfolios I and III earning over double the market's annualized return of 6.1%. Consistent with H1b, Portfolio I performs the strongest (13.9%), followed by Portfolio III (13.1%) and then Portfolio II (10.7%).

The outperformance of Portfolios I-III is consistent, with all three portfolios beating the market in 7 of 8 years. This includes 2000-2 when the market declined – the portfolios outperform in all market conditions. While Portfolio II shows that a simple buy-and-hold strategy generates superior returns when initiated in February 1998; unreported results also document significant outperformance for a buy-and-hold strategy regardless of which year it is started. Consistent with H2, Portfolio IV earns an average annual return of 8.7%, 2-5 percentage points below the returns of the first three portfolios, but still comfortably above the market.

If the bulk of Portfolio II's outperformance occurred in 1998, this would suggest that market reacts to the *Fortune* survey within one year, which is not unusually slow compared to other news. Bernard and Thomas (1989) find that the incorporation of earnings announcements may take up to 180 days; since this is significantly greater than the 2-4 week delay between *Fortune* publication and portfolio formation, the portfolio will capture part of this reaction. By contrast, the portfolios *underperform* in 1998 (and outperform in every year thereafter), suggesting that non-incorporation of the *Fortune* survey is significantly slower than for other information.

While Table 3 calculates the returns from 1998-2005, the remainder of my analyses focus on monthly returns, since the large number of months (96 for Portfolios I-III and 84 for Portfolio IV) allows testing of statistical significance. As is standard for monthly return calculations, all portfolios are now equal-weighted each month, rather than only at the start of each year.[9] Table 4 documents monthly returns in excess of a benchmark portfolio. Three benchmark portfolios are chosen. The first is the market portfolio, taken to be the CRSP value-weighted index. The second is an industry-matched portfolio using the 49-industry classification of Fama and French (1997). This is to ensure that outperformance is not simply because the Best Companies operated in industries that enjoyed strong performance. It also partially controls for risk, although additional controls are introduced shortly. The third is the characteristics-adjusted benchmark used by Daniel et al. (1997) and Wermers (2004)[10], which matches each stock to a portfolio of stocks with similar size, book-market ratio and momentum. This is to ensure that the outperformance is not simply because the Best Companies are exploiting the size, value and/or momentum anomalies. This adjustment also partially controls for risk.

[9] If the 1998-2005 returns were calculated allowing rebalancing to equal weights each month, all four portfolios exhibit greater outperformance. This is a result of mildly negative one-month autocorrelation.

[10] The benchmarks are available via http://www.smith.umd.edu/faculty/rwermers/ftpsite/Dgtw/coverpage.htm.

The benchmark-adjusted returns reinforce the results in Table 3. Portfolios I–III outperform both all three benchmarks by 50-70 basis points, with benchmark adjustment only slightly reducing the returns. Portfolio I performs the strongest, although the difference with Portfolios II and III is only economically significant when subtracting industry benchmarks. Portfolio IV also outperforms, but by a lower margin.

An alternative explanation is that employee satisfaction is irrelevant for stock returns, and instead that outperformance is due to risk. I therefore run monthly regressions of portfolio returns on the four Carhart (1997) factors, as specified by equation (1) below:

$$R_{it} = \alpha + \beta_{MKT} MKT_t + \beta_{HML} HML_t + \beta_{SMB} SMB_t + \beta_{MOM} MOM_t + \varepsilon_{it} \qquad (1)$$

where:

R_{it} is the return on Portfolio i in month t, either in excess of the risk-free rate (taken from Ibbotson Associates), the return on the industry-matched portfolio, or the return on the characteristics-matched portfolio.

α is an intercept that captures the abnormal risk-adjusted return, and is the key variable of interest.

MKT_t is the return on the CRSP value-weighted index in excess of the risk-free rate. This represents a market factor.

HML_t is the return on a zero-investment portfolio which is long (short) high (low) book-market stocks. This represents a value factor.

SMB_t is the return on a zero-investment portfolio which is long (short) small (large) stocks. This represents a size factor.

MOM_t is the return on a zero-investment portfolio which is long (short) past winners (losers). This represents a momentum factor.

ε_{it} is a generic error term which is uncorrelated with the independent variables.

All the regressors are taken from Ken French's website. There remains considerable academic debate as to whether the four factors proxy for economic risk or mispricing. I do not take a stance on this issue as the alternative hypothesis can equivalently be stated in terms of omitted variables bias. Employee satisfaction may be itself irrelevant but correlated with firm attributes that are positively related to stock returns – either because of risk or mispricing. The alpha in equation (1) reflects the excess return compared to passive investment in a portfolio of the factors. It is conservative, but not necessarily superfluous, to subtract the returns on the Daniel et al. (1997) benchmarks before running the four-factor regression, as characteristics can have explanatory power even when controlling for covariances (Daniel and Titman (1997)). Standard errors are calculated using Newey-West (1987), which allows for ε_{it} to be heteroskedastic and serially correlated; results are very similar if spherical standard errors are assumed.

Table 5 presents the results. Portfolios I-III all generate alphas of at least 0.4%, regardless of the benchmark, which are statistically significant at the 1% level. Portfolio IV earns positive alphas which are significant at the 10% level in two specifications. Taken together with the findings that suggest employee satisfaction affects corporate performance, the positive alphas

of Portfolio IV further imply non-incorporation. Note that the coefficient on the momentum factor is usually significantly negative. This is inconsistent with the idea that good stock performance leads employees to respond positively to the survey, and that the Best Companies simply capture a momentum effect.

In untabulated results, the outperformance is even stronger when the portfolio contains only the companies in the Top 50 of the *Fortune* list each year. The annualized return to this portfolio is 20.0%, representing a four-factor alpha of 97 basis points. This is consistent with the classification of these companies as exhibiting even higher employee satisfaction. Also untabulated are the results to value-weighted portfolios, which are similar, for example, a value-weighted Portfolio I is significant at the 5% level in all specifications. The tabulated results focus on equal-weighted returns for brevity, as these are most commonly used in the literature on the cross section of returns. The Daniel et al. (1997) benchmarks ensure that I am not simply rediscovering the size effect.

4.3 Further Robustness Tests

The above subsection showed that the Best Companies' outperformance was not due to covariance with the Carhart (1997) factors nor to selecting industries or characteristics associated with abnormal returns. This subsection conducts further robustness tests.

To test whether the results are driven by outliers, I winsorize the top 10% and bottom 10% of returns. The winsorization is conducted by portfolio and by month: for example, the returns of the top decile of firms in Portfolio I in June 2000 are replaced by the 90th percentile return among all firms in Portfolio I in June 2000, and similarly for the bottom decile. Table 6 illustrates the four-factor alphas for the winsorized portfolios. The alphas are significant for Portfolios I-III, regardless of the benchmark, and insignificant for Portfolio IV. Hence the results of Table 5 do not appear to be driven by outliers. (The results in other tables are also robust to winsorization).

Another concern is that the time period is short, since the *Fortune* lists only started in 1998. Typically, small samples bias the results against finding statistical significance, but this paper is able to document significant results despite such a small time series. A stronger issue is that the outperformance may result from the 1998-2005 period being anomalous. I therefore extend the sample by including the companies in the "100 Best Companies to Work For in America" book. This was published in March 1984 by Levering, Moskowitz and Katz, and updated in February 1993 by Levering and Moskowitz.[11] From 1998, *Fortune* magazine started to feature the lists which substantially enhanced their publicity. Since a core objective of this paper is to test whether intangibles are incorporated into prices even when made public by a widely available survey, the results thus far have focused on the 1998-2005 period during which *Fortune* published the lists. However, it is legitimate to extend the sample back to 1984 to evaluate the robustness of the second principal result of this paper, the positive association

[11] These dates are for the hardback edition. The paperback editions were published approximately a year later, but it is the hardback publication date that is relevant as investors became aware of the contents of the list once it was released.

between satisfaction and returns.

Table 7 documents the results. The portfolios are formed analogously to the main paper: for example, Portfolio I is formed in April 1984, updated in March 1994 and thereafter every February from 1998-2005. The results confirm the Best Companies' outperformance over all benchmarks, with Portfolio I displaying statistical significance at the 1% level in all specifications. Compared to Table 5, the alpha drops slightly to around 30 basis points per month, or 4% per year, but remains economically significant. The average annualized return exceeds 16%, compared with the market's return of 12%, and the portfolio outperformed the market in 19 out of the 22 years from 1984-2005. While Portfolios III and IV also generate highly significant alphas, Portfolio II is only significant at the 11% level.This is because the 1984 list contained firms such as Polaroid, Delta Airlines, Dana and Armstrong that did not feature in the 1998 list, and suffered very weak performance from 1998 onwards.[12] In sum, the extension of the time series confirms that an investor could have made significant risk-adjusted returns by investing in the Best Companies in the 1984 list and rebalancing his portfolio with each update.

An additional alternative hypothesis is that the explanatory power of *Fortune* list inclusion stems only from its correlation with firm characteristics associated with superior returns other than the size, book-to-market or momentum variables already studied in Table 4. Calculating the returns on a benchmark portfolio with similar characteristics is only feasible when the number of characteristics is small, else it is difficult to form a benchmark. I therefore use a regression approach to control for a wider range of characteristics than the three studied by Daniel et al. (1997). Specifically, I run a Fama-MacBeth (1973) estimation of equation (2) below:

$$R_{it} = a_t + b_t X_{it} + c_t Z_{it} + \varepsilon_{it} \tag{2}$$

where:

R_{it} is the return on stock i in month t, either unadjusted or in excess of the return on the industry-matched portfolio.

X_{it} is a dummy variable that equals 1 if firm i was included in the most recent *Fortune* survey.

Z_{it} is a vector of firm characteristics.

ε_{it} is a generic error term which is uncorrelated with the independent variables.

The firm characteristics included in Z_{it} are taken from Brennan, Chordia and Subrahmanyam (1998). These are as follows:

$SIZE$ is the natural logarithm of i's market capitalization at the end of month $t-2$.

[12] The high alphas for Portfolio IV (relative to the other portfolios) are because it exists only from 1993. While Portfolios I-III outperformed all benchmarks from 1984-1992, the outperformance is even greater from 1993-2005, and thus the alphas are lowered by including 1984-1992. Focusing on the 1993-2005 period for all portfolios, the alphas for Portfolios I-III are higher than for Portfolio IV by a similar margin to the outperformance in 1998-2005 documented in Table 5.

BM is the natural logarithm of i's book-to-market ratio. This variable is recalculated each July and held constant through the following June.

YLD is the ratio of dividends in the previous fiscal year to market capitalization measured at calendar year-end. This variable is recalculated each July and held constant through the following June.

RET2-3 is the natural logarithm of the cumulative return over months $t-3$ through $t-2$.

RET4-6 is the natural logarithm of the cumulative return over months $t-6$ through $t-4$.

RET7-12 is the natural logarithm of the cumulative return over months $t-12$ through $t-7$.

$DVOL$ is the natural logarithm of the dollar volume of trading in security i in month $t-2$.

PRC is the natural logarithm of i's price at the end of month $t-2$.

The results are presented in Table 8 for the core period of 1998-2005 (the results are similar for the extended period). For both the unadjusted and industry-adjusted specifications, the Best Companies variable is statistically and economically significant. Consistent with the point estimates of previous tables, *Fortune* inclusion is associated with an abnormal return of over 50 basis points.[13] This suggests that the Best Companies' outperformance does not result from their correlation with the observable characteristics studied by Brennan et al. (1998).

4.4 Accounting Performance Measures

The main conclusions of the paper (the importance of employee satisfaction, the existence of a profitable trading strategy when controlling for risk and characteristics, and the non-incorporation of intangibles) are agnostic as to the channel through which employee satisfaction has an effect. Possible mechanisms are improved accounting performance, the generation of good news not related in accounting data (e.g. patents or new products), or increased growth prospects. The principal analysis therefore used stock returns as the dependent variable, as the equity price is a direct measure of shareholder value and captures all the potential channels.

However, the stock price has some limitations. While its comprehensiveness is advantageous as it should incorporate all potential mechanisms, it is also disadvantageous as it may be influenced by factors unrelated to shareholder value, such as irrational speculation. To argue that the Best Companies' outperformance resulted from overvaluation, rather than a true increase in shareholder value, one would need a story as to why this overvaluation increased from 1998-2005, and why this increase in overvaluation was more pronounced in the Best Companies than their industry- and characteristics-matched benchmarks. (Irrational reaction to *Fortune* publication is unlikely to be a reason, since such a reaction would likely be concentrated immediately after the list is announced, similar to Huberman and Regev (2001) and Gilbert et al. (2006)).

The absence of a coherent story supporting an alternative explanation, however, does not constitute direct evidence in favor of the proposed explanation. I therefore investigate the accounting performance of the Best Companies. Note that this is not the only channel through which employee satisfaction may improve shareholder value, and may not even be the most

[13] *SIZE* and *BM* enter with the usual sign, but are statistically insignificant. This is because of the large number of regressors. In univariate regressions, both are highly statistically significant.

important one: particularly in the modern firm, the main benefit of superior human capital may be difficult-to-measure outputs such as the quality of new products or processes invented, or the strengthening of client relationships, which only manifest in accounting performance in the long-term. The strength or weakness of such a channel does not preclude a link through other mechanisms, but I focus on accounting performance as it is the most measurable.

Table 9 regresses various accounting performance measures on an indicator variable for whether the firm was a Best Company in the previous year. All values are industry-adjusted by subtracting the median value for the Fama-French (1997) industry. As in Gompers, Ishii and Metrick (2003), I use median (least-absolute-deviation) regressions owing to the presence of large outliers, and the log book-to-market ratio as a control variable. I find that the Best Companies are associated with higher next-year profit margins, return on equity, and profit per employee, for both measures of profit (operating income and net income); all differences are significant at the 1% level. The Best Companies are also associated with higher one-year operating income growth, net income growth and EPS growth, although the coefficient is only statistically significant for EPS growth. The only inconsistent result is that the Best Companies exhibit (insignificantly) lower next-year sales growth, although sales per employee is significantly higher.

While Table 9 looks at next-year performance measures, Table 10 analyzes long-term growth. It compares the Best Companies in the 1998 list with all other firms in Compustat according to their 7-year (1998-2005) growth in sales, operating profit and net income. I calculate both the percentage annualized growth rate and the growth rate in dollars per employee. Again, all variables are industry adjusted; in addition, they are winsorized at the 1st and 99th percentiles to remove outliers. While we have too few Best Companies to test the differences statistically, we can draw tentative conclusions based on economic significance. The Best Companies exhibit a mean industry-adjusted net income growth of 4.6% per year, significantly higher than the 1.1% exhibited by other companies, and represents an economically important annualized difference of 3.5%. Per employee, the growth in net income is nearly $10,000 higher. The Best Companies also exhibit higher growth in operating profit, operating profit per employee and sales, with only growth in sales per employee being slower.

Taken together, the results in Tables 9 and 10 provides suggestive evidence that the abnormal returns to the Best Companies was at least partially due to their superior accounting performance over the period.

4.5 Remaining Caveats

The existing evidence documents a robust empirical relationship between *Fortune* inclusion and future stock price performance. The hypothesis that motivated the study is that employee satisfaction causes superior corporate performance, for instance by increasing on-the-job productivity or by facilitating the retention of key employees. However, the results also admit a number of alternative explanations. Caution must therefore be used when interpreting the results, particularly if attempting to make prescriptions for human resource strategies.

One alternative hypothesis is that the link between satisfaction and returns arises because a third unobservable variable causes both, such as good management practices (Bloom, Kretschmer and Van Reenen (2006)). In other words, the explanatory power of *Fortune* inclusion only arises because it is correlated with an omitted variable. While the analysis in Table 8 ruled out correlation with observable determinants of returns, by their very nature unobservables cannot be used as regressors. A standard solution is to introduce firm fixed effects to absorb the unobservables and identify purely on within-firm changes in the variable in question. Unfortunately, this approach is not appropriate here because there is little within-firm variation in *Fortune* inclusion: many firms remain in the list for several years (and some indeed for the entire period), and a firm removed from the list may still exhibit significantly above-average satisfaction (e.g. be in the Top 150). In addition, a fixed effects approach requires the unobservables to be constant over time, but a change in employee satisfaction could be caused by changes in management practices.

A second explanation is reverse causality. If employees have private information about their firm's expected future stock price performance, those with positive information will plausibly be more likely to report higher satisfaction. Since *any* thorough measure of satisfaction (rather than just an observation of policies or outcomes) must come from workers (either directly through a survey, or indirectly by studying behavior), it is difficult to think of other measures that would be immune to this interpretation. However, this hypothesis can be evaluated indirectly by using prior research on employee trading behavior. Benartzi (2001) shows that employees make incorrect decisions when allocating their 401(k) accounts to company stock, and Bergman and Jenter (2007) find that firms are able to lower total compensation by granting their workers overvalued options in lieu of salary. Both of these studies are inconsistent with the notion that employees have superior information about future stock returns.

If the results were entirely driven by a combination of these two reasons, then satisfaction has no causal effect on returns and the introduction of employee-friendly programs (without altering other management practices) would have no impact. However, other conclusions from this paper would be unaffected. It still remains that the market does not incorporate intangibles (be they satisfaction or good management) even when made publicly available, and that an investor could have earned significant risk-adjusted returns by trading on the *Fortune* list.

5 Conclusion

This paper documents statistically and economically significant long-horizon returns to portfolios containing companies with high employee satisfaction, even when controlling for industries, factor risk or a broad set of observable characteristics. These findings imply that the market fails to incorporate intangible assets fully into stock valuations - even if the existence of such assets is verified by a widely respected survey. This suggests that the market may have even greater difficulty in valuing other forms of intangible investment, and provides empirical support for theoretical models of managerial myopia. In addition, it implies that certain SRI screens may improve investment performance.

The results are consistent with the view that employee satisfaction is positively related to corporate performance, rather than representing inefficiently excessive non-pecuniary compensation. However, there are other interpretations of this association which the data cannot entirely rule out. The economic magnitudes documented by the paper suggest that future research that successfully identifies the underlying causes of superior performance may have important implications. If superior employee satisfaction caused even a portion of the 64 basis point monthly abnormal return, then employee-friendly programs can substantially improve shareholder value.

Table 1: Summary Statistics

The second column details the number of Best Companies in the relevant year that had returns available on CRSP at any point during the year (from February to January). The third column gives the number of new companies added to the *Fortune* list in that year. The fourth column contains the number of companies on the previous year's *Fortune* list which no longer feature in the current year.

Year	Best Companies	Added	Dropped
1998	70		
1999	68	27	28
2000	60	20	28
2001	55	15	20
2002	55	14	14
2003	61	14	8
2004	57	11	15
2005	58	11	10

Table 2: Summary Characteristics

This table illustrates summary statistics for the 69 companies in *Fortune* magazine's 1998 "100 Best Companies to Work For in America" list that were public on February 1, 1998. All data are of the end of January 1998 and taken from CRSP and Compustat. To calculate book equity for the Market/Book ratio, I start with stockholders' equity (Compustat item 216) if it is not missing. If it is missing, I use total common equity (item 60) plus preferred stock par value (item 130) if both of these are present. Otherwise, I use total assets (item 6) minus total liabilities (item 181), if both are present. To obtain book equity, I subtract from shareholders' equity the preferred stock value, where we use redemption value (item 56), liquidating value (item 10), or carrying value (item 130), in that order, as available. Finally, if not missing, I add in balance sheet deferred taxes (item 35) to this book-equity value, and subtract the FASB106 adjustment (item 330). The last three items are based on Compustat data for 1996. They are missing for 4 companies that were not traded in 1996. In addition, they are excluded for 3 companies for which only the ADRs are traded.

	Mean	Std. Dev.	Min	Max
Market Cap ($ bn)	21.51	39.78	0.03	204.59
Price ($)	50.99	25.48	5.38	127.56
Volume (m)	34.27	71.67	0	406.38
Dividend yield (%)	1.18	1.20	0	5.97
Market/book	4.89	4.81	-3.14	29.10
Intangibles as a % of total assets (%)	5.01	7.50	0	28.88

Table 3: Annual Portfolio Returns

This table documents the annual returns of the four portfolios and the CRSP value-weighted portfolio. The figure for year t is the return from the start of February of year t to the end of January of year $t+1$. CAGR represents the Compound Annual Growth Rate (annualized) for February 1998-January 2006 for Portfolios I-III, and February 1999-January 2006 for Portfolio IV.

	I	II	III	IV	CRSP VW
1998	24.00%	24.97%	24.00%		26.40%
1999	40.75%	26.07%	33.41%	13.48%	15.84%
2000	13.09%	9.37%	16.50%	20.78%	-3.70%
2001	-14.81%	-13.33%	-9.55%	-4.69%	-16.02%
2002	-18.39%	-17.20%	-22.05%	-25.04%	-21.43%
2003	58.18%	39.75%	56.86%	55.64%	39.49%
2004	12.57%	13.04%	8.10%	4.70%	7.52%
2005	16.05%	15.06%	16.48%	16.87%	14.66%
CAGR	*13.91%*	*10.65%*	*13.13%*	*8.74%*	*6.05%*

Table 4: Monthly Portfolio Returns

This table documents the average excess monthly returns to the four portfolios, where the portfolios are rebalanced to equal-weighting at the start of each month. The second row gives the excess returns over the CRSP value-weighted index. The third row gives the excess returns over a benchmark portfolio constructed using the 49 Fama-French (1997) industries corresponding to the companies in the portfolio. The fourth row gives the excess returns over a benchmark portfolio constructed using the Daniel et al. (1997) characteristics of size, book-to-market and momentum. The sample period is February 1998-January 2006.

	I	II	III	IV
Excess return over market	0.67%	0.65%	0.64%	0.64%
Excess return over industry-matched portfolio	0.57%	0.45%	0.52%	0.45%
Excess return over characteristics-matched portfolio	0.60%	0.57%	0.53%	0.40%
Number of observations	96	96	96	84

Table 5: Risk-Adjusted Returns

This table documents the results of monthly regressions of portfolio returns on the four Carhart (1997) factors, MKT_t, HML_t, SMB_t, MOM_t. The regression is specified in equation (1). The dependent variable is the portfolio return less either the risk-free rate, the industry-matched portfolio return, or the characteristics-matched portfolio return. The regressors are the returns to zero-investment portfolios designed to capture market, value, size, and momentum effects. The alpha is the excess risk-adjusted return. The sample period is February 1998-January 2006.

	I	II	III	IV
Panel A (excess returns over risk-free rate)				
α	0.64	0.61	0.61	0.50
	(3.70***)	(3.25***)	(3.75***)	(1.70*)
β_{MKT}	1.12	0.97	1.11	1.06
	(20.64***)	(21.72***)	(29.40***)	(17.51***)
β_{HML}	0.08	0.23	0.14	0.22
	(1.45)	(4.30***)	(2.96***)	(2.36**)
β_{SMB}	0.12	0.10	0.16	0.20
	(1.75*)	(1.85*)	(3.38***)	(2.55***)
β_{MOM}	-0.11	-0.11	-0.16	-0.24
	(3.19***)	(2.89***)	(5.37***)	(5.27***)
Panel B (excess returns over industry-matched portfolios)				
α	0.46	0.44	0.46	0.38
	(3.25***)	(3.48***)	(3.81***)	(1.58)
β_{MKT}	0.11	-0.06	0.07	-0.01
	(2.62***)	(1.70*)	(2.10**)	(0.14)
β_{HML}	0.07	0.07	0.07	0.08
	(1.46)	(1.55)	(2.03**)	(0.95)
β_{SMB}	0.14	0.09	0.15	0.16
	(2.92***)	(2.01**)	(4.53***)	(2.09**)
β_{MOM}	-0.28	-0.04	-0.06	-0.13
	(1.11)	(1.76*)	(3.27***)	(2.93***)

Table 5: Risk-Adjusted Returns (cont'd)

	I	II	III	IV
Panel C (excess returns over characteristics-matched portfolios)				
α	0.57	0.56	0.55	0.44
	(4.08***)	(3.78***)	(4.11***)	(1.94*)
β_{MKT}	0.14	0.01	0.10	0.05
	(3.48***)	(0.12)	(3.10***)	(0.74)
β_{HML}	0.09	0.10	0.03	-0.02
	(1.92*)	(1.71)	(0.68)	(0.27)
β_{SMB}	-0.00	0.01	0.06	0.13
	(0.08)	(0.28)	(1.76*)	(1.82*)
β_{MOM}	-0.06	-0.05	-0.10	-0.15
	(2.26**)	(1.47)	(3.32***)	(3.42***)
Number of observations	96	96	96	84

*: Significant at the 10% level; **: Significant at the 5% level; ***: Significant at the 1% level

Table 6: Risk-Adjusted Returns of Winsorized Portfolios

This table documents the results of monthly regressions of portfolio returns on the four Carhart (1997) factors, MKT_t, HML_t, SMB_t, MOM_t. The regression is specified in equation (1). For each portfolio and for each month, the returns of the constituent stocks are winsorized at the 10% and 90% levels. The dependent variable is the winsorized portfolio return less either the risk-free rate, the industry-matched portfolio return, or the characteristics-matched portfolio return. The regressors are the returns to zero-investment portfolios designed to capture market, value, size, and momentum effects. The alpha is the excess risk-adjusted return. The sample period is February 1998-January 2006.

	I	II	III	IV
α over risk-free rate	0.51	0.42	0.39	0.23
	(2.94***)	(2.30**)	(2.67***)	(0.92)
α over industry	0.33	0.25	0.24	0.10
	(2.43**)	(2.04**)	(2.32**)	(0.52)
α over characteristics	0.48	0.36	0.35	0.21
	(3.46***)	(2.56**)	(2.93***)	(1.00)
Number of observations	96	96	96	84

*: Significant at the 10% level; **: Significant at the 5% level; ***: Significant at the 1% level

Table 7: Risk-Adjusted Returns from 1984

This table documents the results of monthly regressions of portfolio returns on the four Carhart (1997) factors, MKT_t, HML_t, SMB_t, MOM_t. The regression is specified in equation (1). The dependent variable is the portfolio return less either the risk-free rate, the industry-matched portfolio return, or the characteristics-matched portfolio return. The regressors are the returns to zero-investment portfolios designed to capture market, value, size, and momentum effects. The alpha is the excess risk-adjusted return. The sample period is April 1984-January 2006.

	I	II	III	IV
α over risk-free rate	0.34	0.18	0.29	0.38
	(3.48***)	(1.61)	(3.31***)	(2.77***)
α over industry	0.22	0.13	0.20	0.27
	(2.95***)	(1.33)	(3.06***)	(2.06**)
α over characteristics	0.25	0.11	0.21	0.29
	(2.97***)	(1.08)	(2.59***)	(2.26**)
Number of observations	262	262	262	155

*: Significant at the 10% level; **: Significant at the 5% level; ***: Significant at the 1% level

Table 8: Characteristics Regressions

This table documents the results of monthly regressions of individual stock returns on a *Fortune* list inclusion dummy and the characteristics used in Brennan, Chordia and Subrahmanyam (1998). *SIZE* is the natural logarithm of the firm's market capitalization (in billions) in month $t-2$. *BM* is the natural logarithm of the firm's book-to-market ratio as of the calendar year-end before the most recent June. *YIELD* is the firm's dividend yield as of the calendar year-end before the most recent June. *RET2-3*, *RET4-6* and *RET7-12* are the natural logarithm of the compounded returns in, respectively, month $t-3$ to month $t-2$, month $t-6$ to month $t-4$, and month $t-12$ to month $t-7$. *DVOL* is the dollar trading volume (in millions) in month $t-2$. *PRC* is the price at the end of month $t-2$. The sample period is February 1998-January 2006.

	Raw	Industry-Adjusted
Best Company	0.55	0.52
	(2.38**)	(2.60***)
SIZE	-0.02	-0.05
	(0.10)	(0.31)
BM	0.12	0.11
	(1.06)	(1.24)
YIELD	-0.03	-0.02
	(2.28**)	(2.35)
RET2-3	0.01	0.06
	(1.78*)	(0.02)
RET4-6	0.02	0.05
	(2.80***)	(0.03)
RET7-12	0.01	0.03
	(2.61**)	(0.02)
DVOL	1.65	1.40
	(0.03)	(0.09)
PRC	-0.58	-0.47
	(2.30**)	(1.92*)

*: Significant at the 10% level; **: Significant at the 5% level; ***: Significant at the 1% level

Table 9: Accounting Performance

This table reports the results of median (least-absolute-deviation) regressions of accounting performance measures on an indicator variable for whether the firm was a Best Company in the previous year. The book-to-market ratio is used as a control variable. The sample is the universe of Compustat firms for 1998 the growth in accounting performance measures between the Best Companies and all other Compustat firms, over 1998-2005. All variables are first winsorized at the 1st and 99th percentiles, and then industry-adjusted by subtracting the median value from the relevant Fama-French (1997) industry.

	BC dummy	ln(B/M)	Constant
Operating Income/Equity	0.1210***	-0.0198***	0.2282***
	(0.0118)	(0.0009)	(0.0012)
Net Income/Equity	0.0607***	-0.0258***	-0.0711***
	(0.0071)	(0.0005)	(0.0007)
Operating Income/Sales	0.0790***	-0.0055***	0.1255***
	(0.0090)	(0.0070)	(0.0010)
Net Income/Sales	0.0380***	-0.0089***	0.0389***
	(0.0050)	(0.0004)	(0.0005)
Operating Income/Employees	42.7821***	-0.7010***	21.8113***
	(2.2802)	(0.1836)	(0.2502)
Net Income/Employees	18.6764***	-1.4828***	6.1608***
	(1.0281)	(0.0826)	(1.1117)
Sales/Employees	86.4937***	1.0732*	203.5802***
	(7.8370)	(0.6296)	(0.8517)
1-year Sales Growth	-0.0095	-0.0255***	0.0760***
	(0.0111)	(0.0009)	(0.0012)
1-year Operating Income Growth	0.0229	-0.0335***	1.0537***
	(0.0176)	(0.0014)	(0.0019)
1-year Net Income Growth	0.0457	-0.0659***	0.9919***
	(0.0328)	(0.0025)	(0.0034)
1-year EPS Growth	0.0858**	-0.0310***	0.9223***
	(0.0420)	(0.0032)	(0.0044)

*: Significant at the 10% level; **: Significant at the 5% level; ***: Significant at the 1% level

Table 10: 7-Year Accounting Growth

This table compares the growth in accounting performance measures between the Best Companies and all other Compustat firms, over 1998-2005. For a percentage growth rate to be calculated, the firm have positive levels of the accounting variable in both 1998 and 2005. The growth rates are first winsorized at the 1st and 99th percentiles, and then industry-adjusted by subtracting the median value from the relevant Fama-French (1997) industry.

	Best Companies	Other	Difference
Sales Growth (% annualized)	1.11%	0.65%	0.45%
Operating Profit Growth (% annualized)	1.71%	1.08%	0.62%
Net Income Growth (% annualized)	4.59%	1.10%	3.49%
Growth in Sales per Employee ($k)	18.85	56.90	(38.04)
Growth in Pretax Profit Per Employee ($k)	16.46	12.50	3.96
Growth in Net Income Per Employee ($k)	14.40	4.67	9.72

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