

Brag, Brag, Brag:

Corporate Crowing and Shareholder Wealth

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We examine a sample of S&P 500 firms over the period 1999-2014 that publicly characterize their annual performance with extreme positive words, such as “outstanding” or “exceptional.” We find that over the previous year, only about 18% of these firms generated positive abnormal returns, thereby adding to shareholder wealth, while about 70% had insignificant abnormal returns, and the remaining 12% of the firms produced negative abnormal returns, thereby destroying value. Firms with insignificant abnormal returns have very high raw returns, suggesting that they could be crediting themselves with systematic performance. We find that outperformance in accounting measures seems to motivate such statements, with the effect being less prominent with positive-significant CAR firms. In comparison to a matched set of firms that did generate increases in shareholder wealth but did not make such statements, our sample firms show stronger industry-adjusted free cash flow growth. Our results suggest a concern that the overwhelming majority of companies do not understand shareholder wealth or they disregard the question of whether they have increased it.

Key words: shareholder wealth, shareholder value, abnormal returns, accounting performance, corporate language, textual analysis, press releases, annual report

JEL classification: G30, G32

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Perhaps the less we have, the more we are required to brag.

John Steinbeck, *East of Eden* (1952)

I. Introduction

On January 18, 2006, eBay issued the following press release:

*“q4 capped off a remarkable year for eBay,” said Meg Whitman,
President and CEO.*

Remarkable by what standard? From December 31, 2005 through December 31, 2006, the stock earned a compounded return of -24.59%. We estimate that its abnormal return using the Fama-French five-factor model was -88.87%. If the company had such a *remarkable* year, how did it manage to destroy so much shareholder wealth? Perhaps the CEO was referring to some other measure of the firm’s performance, but its ROE was only 1.78%, and its EPS growth was -33.05%.

What standard should we use to judge excellence in corporate financial performance? Theory tells us that economic profit is the return to suppliers of capital that exceeds the opportunity cost of their funds. Financial economists extend this concept to that of the abnormal return, an increase in wealth that exceeds the increase that would be expected given the opportunity cost of risk-free investing, the effect of inflation, and a premium for risk. Of course, in the spirit of the above definition, abnormal returns are sometimes called risk-adjusted returns, and their cumulative values over time are referred to as cumulative abnormal returns, which are commonly used to measure the performance of financial assets.

This anecdotal example of corporate braggadocio suggests that this company and perhaps others do not understand the concept of abnormal returns. Most contemporary corporate finance textbooks establish early on that the objective of a corporation should be shareholder wealth maximization, which is noted to be equivalent to the analogous concepts of stock price maximization, maximization of firm value, and minimization of the cost of capital. To evaluate whether shareholder wealth is being maximized, however, requires that we link the concept of shareholder wealth maximization to the specific actions taken by the company. For example, suppose a company with an abundance of cash passes up a project that would ostensibly add

value, and it continues to hold the cash in risk-free securities, a project that creates no value. Over the ensuing months, suppose the market rises substantially and with a positive beta, the systematic effect carries the stock price higher. Even though the shareholders have greater gross wealth later than they did when the project was rejected, the decision was clearly sub-optimal. Simply having a higher stock price should not credit the company with having done anything successfully. If the increase in the stock price does not produce a return in excess of the required return, which is based on the risk accepted, the shareholders could have done just as well by investing elsewhere.

On the other hand, consider another company that takes on a project that creates value and the stock market falls sharply, dragging the firm's stock down with it. The shareholders have less wealth at the end than they did at the start, but they earned a positive abnormal return. They are better off than other investors whose firms did not take on value-creating projects. Therefore, having a lower price and consequently lower wealth does not mean that the shareholders are worse off.

Corporations frequently issue press releases and other statements that proclaim their recent past successes. They may make glowing proclamations about growth in earnings, cash flow, or assets, or about what they perceive as spectacular ROA or ROE. On occasion, they may make very general statements about having had unusually strong overall performance. But corporations are merely portfolios of the efforts of human beings that engage physical and financial resources toward a common objective, and human beings are known to exaggerate, particularly when less than stellar success is achieved. There is reason to wonder whether the overall goal of increasing shareholder wealth is achieved when companies claim to have performed so well.

This paper addresses a simple question. When companies boast about superior performance, have the shareholders really experienced superior performance in the sense that they earned a return in excess of the return justified, given the underlying risk? In other words, did they earn an abnormal return? It is inarguable that superior performance for shareholders must equate to abnormal returns. Outstanding growth in earnings and a high ROE cannot be converted into shareholder consumption. To the extent that such measures as EPS growth and ROE are correlated with abnormal returns, however, shareholders may appear to benefit from excellent performance in their accounting metrics, but this correlation is imperfect and as such,

companies that assess their performance on accounting measures are not optimizing for their shareholders. In contrast, abnormal returns are solidly grounded in the concept of economic profit. When abnormal returns are earned, the shareholders have truly received economic profits.

Do companies understand abnormal returns? Do they know when they have earned them? Do they boast when their stock generates abnormal returns and refrain when they do not? Or on the other hand, do they boast when there is no justifiable reason, other than perhaps what they perceive as superior accounting performance? We do have reason to believe that companies have some concept of their stock price being benchmarked. As we will elaborate later, accounting rules require that annual reports show a graph of the stock price performance of the company compared to an industry peer-group and a broad market measure.¹ Companies must surely know that their returns are being compared to their industry peer group and the market. After all, companies provide this information to shareholders and the public that makes this comparison so easy to do.

Human beings can easily have slightly different interpretations of the meaning of strong positive words such as “excellent,” “outstanding” or “superb.” A salesperson could equate an excellent year to generating a substantial number of new clients or new sales dollars. An athlete might have played on a championship team or led the league in some performance category. In financial economics, however, there is only one standard of excellence: a positive abnormal return. A negative abnormal return is certainly not excellent. And a zero abnormal return can hardly be described as excellent inasmuch as the shareholders could have done just as well by investing in a risk-free asset, the overall market index, or an alternative and correctly priced firm that generates zero abnormal return. A CEO who regards excellence as strong EPS growth or high ROE as indicative of an excellent year without regard to whether abnormal returns were generated has the wrong focus. But as noted, one person might use a word such as “excellent” when a different person might not. Nevertheless, if a person uses the word, it is reasonable to wonder whether performance really was excellent. Put another way, one might wish to empirically question whether performance characterized with extreme positive language is truly excellent by the standards of shareholder wealth maximization, which is the only measure of unambiguous excellence in corporate financial performance.

¹Yet another reason might be the efforts of finance faculty to promote shareholder wealth maximization as the appropriate normative objective of the firm to students who may eventually rise to high decision-making levels.

This paper endeavors to examine the share price performance of companies that have proclaimed in public that they generated outstanding or excellent performance. It does so by examining the S&P 500 companies over the period 2000-2015 that characterize their annual performance with very strong positive words. We examine their share price performance and assess whether the shareholders earned abnormal returns. In trying to give these corporations the greatest benefit of the doubt, we depart from the typical standard of statistical testing and admit that abnormal returns over the previous 250 trading days with statistical significance at 10% or better is indicative of superior performance. Yet even under that relaxed criterion, we find that only about 18% of the sample firms did actually generate positive abnormal returns, while about 70% had statistically insignificant abnormal returns. That means, of course, that almost 12% of the sample even generated significant negative abnormal returns! And they boasted about what a great year they had.

So, even though the entire sample of firms stated that the performance was excellent or a similar extreme word, more than 80% of these firms did not produce a positive abnormal return. It is, thus, unclear as to what was so excellent. We endeavor to determine what if anything the companies were boasting about. We make comparisons of their accounting performance with a matched sample of firms, the industry, and the company's previous year's accounting performance. We also develop a separate set of matched-sample S&P 500 firms that did generate abnormal returns and, therefore, could have conceivably boasted about excellent performance but did not do so. We then compare our sample firms that had significant positive abnormal returns to the matched sample of firms to determine what differences might exist that could lead us to identify the criteria used by companies that do not generate increases in shareholder wealth to justify making superlative statements about their performance.

Our analysis gives us a profile of the extent to which publicly traded corporations understand the concept of abnormal returns, whether directly, indirectly, or by intuition. If shareholder wealth maximization is accepted as the normative model, it seems reasonable to expect that companies will not make such extreme positive statements unless they have truly generated abnormal returns. Certainly some companies could have exceptionally high standards and may refuse to use such language even when they have generated abnormal returns.² Others

²For example, a company prone to boasting might say, "We had an exceptional year," whereas a more reserved company might say, "We had a very good year." We study the former, not the latter.

may use such language far too freely. If they do, we shall evaluate whether they really do increase shareholder wealth.

The paper is organized as follows. Section II contains the conceptual framework. Section III describes the sample selection process. Section IV contains the empirical results. Section V provides the conclusions.

II. Conceptual Framework

In this section, we examine the concept of shareholder wealth maximization and its linkage to abnormal returns, and we develop the framework through which we examine whether corporate performance is consistent with its own characterizations of its performance.

A. Shareholder Wealth Maximization

The classical view that companies should endeavor to maximize shareholder wealth is often attributed to Berle and Means (1932). The concept was further advanced and strongly championed by Nobel Laureate Milton Friedman (1962, 1970), particularly in defending it against critics that argue for a model based on social welfare and stakeholder theory. Friedman (1970) succinctly summarizes the attraction of the shareholder wealth maximization model:

The great virtue of the shareholder wealth maximization norm is that it forces people to be responsible for their own actions and it makes it difficult for them to ‘exploit’ other people for either selfish or unselfish purposes. They can do good – but only at their own expense.

Jensen (2001) counters the stakeholder-driven model by saying that

Stakeholder theory plays into the hands of special interests that wish to use the resources of corporations for their own ends. . . . If widely adopted, stakeholder theory will reduce social welfare even as its advocates claim to increase it – much as happened in the failed communist and socialist experiments of the last century.

Criticisms of shareholder wealth maximization include the view that it exploits employees, natural resources, and society, and that it leads to performance myopia, sacrificing long-term goals for short-term gains. As pointed out by Danielson, Heck, and Shaffer (2008) advocates of shareholder wealth maximization have contributed to these criticisms by encouraging a focus on the firm’s stock price. Despite the fact that a stock price reflects

expected long-term performance, corporate reward systems are often based on transitory rather than long-term performance.

A history of shareholder wealth maximization through the end of the 20th century is found in Lazonick and O’Sullivan (2000). Though they argue that the concept became a dominant theme in the financial world only in the 1980s, it has been taught in business schools for at least five decades and is the basis for much of the theory of finance, as in such classic works as Fama and Miller (1972) and Huang and Litzenberger (1988).³ Virtually all theoretic and applied financial models are derived with the notion that the objective of a business is to benefit the shareholders and the shareholders only.⁴ Reliance on Adam Smith’s (1776) notion that the pursuit of objectives that maximize personal utility leads to greater welfare for society is implied therein.⁵ In other words, companies that maximize the welfare of their shareholders maximize the welfare of society, and this principle is the basis of virtually every major financial model.

Most microeconomic theory models are based on profit maximization, exhorting firms to produce until marginal revenue equals marginal cost. Profit maximization or the accounting analogs of maximizing earnings per share or return on equity have formed the foundation for the paradigm of shareholder wealth maximization for many years. Thus, companies that acted in the best interests of their shareholders were considered to be those that attempted to achieve the best possible accounting performance. Eventually this notion gave way to that of maximizing the price of the stock. None other than the iconic Warren Buffett appears to have led this charge. Hu (1997-98) quotes Buffett as saying,

Accounting consequences do not influence our operating or capital-allocation decisions. When acquisition costs are similar, we much prefer to purchase \$2 of earnings that is not reportable by us under standard accounting principles than to

³One of the classic early textbooks on finance, *Corporate Finance: Policy and Management* (Donaldson and Pfahl (1969)) is market-oriented and clearly favors the virtues of shareholder wealth maximization. . Of course, the classic Modigliani-Miller paper showing that in a perfect market capital structure has no relevance to shareholder wealth was first published in 1958, so the concept was well-established in the academic community, though it may not have appeared in textbooks for another decade or so. Interestingly, one of the widely-used and earliest texts in corporate finance, Weston and Brigham (1969), makes no mention of shareholder wealth maximization in its first edition. It is certainly valuation-focused, but it never directly connects such concepts as NPV to shareholder wealth.

⁴For example, the authors have seen no models that propose the acceptance of positive-NPV projects subject to spending a minimum amount on employee salaries for the project.

⁵For example, consider Smith’s classic and often-repeated line: “*It is not from the benevolence of the butcher, the brewer, or the baker, that we expect our dinner, but from their regard to their own interest.*”

*purchase \$1 of earnings that is reportable. This is precisely the choice that often faces us since entire businesses (whose earnings will be fully reportable) frequently sell for double the pro-rata price of small portions (whose earnings will be largely unreportable.)*⁶

Clearly Buffett is more focused on price-earnings multiples than on earnings themselves. The extraordinary returns of his conglomerate Berkshire Hathaway would appear to validate the notion that his objective is long-term shareholder value through stock price maximization, as he has strongly emphasized the assumption that Berkshire's shareholders are in for the long haul and he pays no dividends.

B. Abnormal Returns

While the notion of share value maximization is solidly grounded in theory, the concept is not as simple as what is implied by the three words themselves. The implication of the phrase "shareholder wealth maximization" is that firms should endeavor to increase shareholder wealth. That is, the actions taken by corporate executives should be based on the fundamental question of whether those actions increase the stock price. The stock price can increase, however, for reasons other than the consequences of corporate actions. Positive exposure to systematic risk in an upward tending market can lift the stock price and, hence, the total wealth of the shareholders.⁷ Indeed, the very existence of a positive risk premium, regardless of the equilibrium risk-pricing model, can raise the stock price by the risk-free rate at a minimum, seemingly making the shareholders wealthier with a possibility that management erroneously gets credit for value creation.

If shareholder wealth does not increase by enough to cover the risk premium, however, the shareholders are no better off, and are probably worse off. They have failed to earn an economic profit. It is interesting to note that most executive stock options are issued at-the-money and the typical life is 10 years, suggesting that executives will be rewarded if the stock price increases by any amount, including the range between zero and the risk-free rate, over the next 10 years. The virtual absence of indexed executive stock options is either evidence that

⁶Buffett does not appear to be arguing for deceptive accounting but rather for the notion that a small amount of reportable short-term earnings is less preferred to a large amount of potential future long-term earnings.

⁷In a world in which multi-factor models describe the evolution of stock prices, positive values of factors such as the Fama-French's small-minus-big or value premium can also lift the stock price independent of any corporate actions.

firms do not grasp the concept of abnormal returns or they are attempting to exploit the fact that shareholders never consider the implications of at-the-money stock options.

There is reason to believe that companies might have a limited understanding of abnormal returns. Item 201 of Regulation S-K (17 CFR 229.201) of the Securities Act of 1933 and SEC rules require that in Item 5 (“Market for Registrant’s Common Equity, Related Stockholder Matters and Issuer Purchases of Equity Securities”) of the 10-K, companies provide a visual referred to as a “performance graph” that compares the stock price with a “broad equity market index” and either “a published business or line-of-equity index” or an index of competitors if that is deemed more appropriate. This graph must cover five years. This regulation is stipulated for the 10-K but not for the annual report. Annual reports are regulated under Sections 13 and 15(d) of the Securities Exchange Act of 1934, and there is no mention of a performance graph. Obviously annual reports must contain accurate information, but there is no apparent reason why this chart is not required in the annual report. Of course, some companies simply use the 10-K as their annual report, so this chart would appear in their annual reports. For others, it would probably appear only in the 10-K.

An example of this chart is shown in Figure 1, taken from the 10-K of Coca Cola for fiscal year 2016. We see that from 2012 through 2016, Coca-Cola underperformed both the S&P 500 and its Peer Group Index. Assessing performance in this manner is somewhat akin to the Brown-Warner (1985) notion of mean-adjusted returns, wherein returns are reduced by their means, which effectively implies that the notion of abnormal performance is based on the assumption of a beta of one. Anecdotally, assuming a beta of one is quite common in the performance attribution.⁸ Mutual fund managers are often evaluated by determining whether they beat their benchmark or the S&P 500.⁹

Based on the required graph of performance, it should be clear that companies know that their stock prices are being benchmarked. It is not clear, however, whether companies really do practice shareholder wealth maximization. There has been a surprising dearth of research on this subject. Jorg et al (2004) survey about 300 public and private Swiss firms in 1998 and find

⁸See for example, Stambaugh, Taylor, and Pastor (2015) and Cremers, Petajisto, and Zitzewitz (2013).

⁹Recall, for one example, one of the most widely-cited cases of alleged outstanding performance, that of Legg Mason’s Bill Miller, manager of the Legg Mason Capital Management Value Trust, which earned a higher return than the S&P 500 for 15 consecutive years. It is unclear what beta this fund had, though it has been proven that the statistical likelihood of someone achieving this result was extremely high (Mlodinow (2009)).

evidence that firms pursue multiple goals, which include customer satisfaction, stakeholder value, and profits. Almost 20% of firms admit to pursuing as many as six different objectives, as provided in the questionnaire. The authors find that the firms mention shareholder wealth maximization about 57% the time, though this percentage rises to 75% for publicly traded firms. They also find that shareholder wealth maximization is more often mentioned when their stock prices have recently fallen. About two-thirds of the companies respond that profit maximization is an objective. They find that the majority of firms use both payback and NPV as investment criteria. Most listed firms use discounted cash flow methods, while unlisted firms prefer discounted earnings. They also find that firms that list shareholder wealth maximization as a criterion have marginally better abnormal stock price performance.

Loderer et al (2010) examine the mission statements of a sample of 1,800 large worldwide firms in 23 countries during the period 2006-2007. The find, perhaps shockingly, that only about one in every three firms mentions shareholders in their mission statements with only 38% in the U. S. and 40% in the U.K., two countries known for being shareholder friendly.¹⁰ The highest proportion is Canada, with over 64% percent of firms mentioning shareholders. A slightly higher proportion (45%) is found for firms that have websites available in English. Nonetheless, they find that those firms that mention shareholders do have better abnormal stock price performance, ROA, and ROE.

Shin and Yu (2017) attempt to gauge how the mention of shareholder value by companies affects executive compensation. They analyze the shareholder letters of slightly more than 300 U. S. firms and find that when shareholder-value language is used, executives have higher compensation. They also find that shareholder activism is a strong motive for using shareholder-value language.

C. Examining the Connection between Corporate Language and Abnormal Returns

There have been a number of studies that examine the types of language used by corporations.¹¹ Textual analysis has been widely used in linking qualitative information to firm

¹⁰Brounen et al (2004) find in a mail survey with about 300 responses that shareholder wealth maximization is a relatively low priority for European firms from the U. K., Netherlands, Germany, and France. In order of priority, the countries ranking shareholder wealth maximization most favorably are the U.K., Netherlands, Germany, and France but all rate maximizing profits, maximizing sustainable growth, market position service and quality, cost control productivity and efficiency; and continuity higher or about equal with shareholder wealth maximization.

¹¹For a recent review of the literature, see Loughran and McDonald (2015).

value (Frazer, Ingram, and Tennyson (1984), Antweiler and Frank (2004), Das and Chen (2007), Tetlock (2007), and Li (2008). In this study, we address a simple question that relates the qualitative information in the language used by companies to their performance. When companies announce that they have generated extreme positive performance, we ask whether the shareholders have earned an abnormal return? When CEOs make such statements as “We had an outstanding year,” we believe it is reasonable to ask whether the shareholders had an outstanding year. The shareholders are the owners of the company. If the company had an outstanding year, should it not be reasonable to assume that the shareholders had an outstanding year? Since shareholders cannot spend earnings per share or return on equity, there is but one unambiguous question: did the shareholders earn an abnormal return or economic profit? If we find that that corporate statements that the company had an extreme positive year are not associated with abnormal returns, we will endeavor to determine with what measures of performance the statements were referring to in the first place.

III. Sample Selection

The objective of the study is to determine how the shareholders’ investment performs over the period in which companies describe their performance with extreme positive statements. The selection of the sample has two principal steps. One is the development of a list of key words that is used to describe performance in the corporate statements. The second involves the actual search of the corporate statements, the extraction of the sample of firms that use words from the first step, and the verification of the relevance and usefulness of each observation.

A. Development of Key Words

The initial challenge is to determine what constitutes as an extreme positive statement. Statements that characterize performance can vary from virtually mundane, such as “Our company grew by 5% last year,” to mildly positive, such as “Our company generated solid growth in the past year,” to strongly exuberant, such as “Our company had an outstanding year.” We are interested in events in which the company is clearly characterizing its performance in the strongest possible terms. There are, of course, many largely equivalent strong positive terms. A company might say, “We had an excellent year,” or “We had an extraordinary year,” or “We had an outstanding year.” We consider the distinguishing factor to be that it would be virtually

impossible to make a more extreme statement.¹² Clearly, there is a modest degree of arbitrariness in this choice, but it does not lead to a bias. It simply means that there will be fewer observations. In other words, some people are prone to using extreme language more easily than others who may have higher standards. One executive might use the term “solid,” while another might characterize virtually the same performance as “outstanding.” Again, we would use the latter and not the former, resulting in fewer observations.

The important point is that all observations that we use are clearly indicative of an extreme positive characterization of performance. Again, we acknowledge that other observations may have represented exceptionally strong performance, but the firm may not have characterized it as such, simply because it is more cautious in how it describes its performance. For this study, all we need are observations in which the company clearly characterized its performance as extreme positive. We are careful not to include observations that are not obviously stated in the extreme.

We then consult the Harvard Psychological Dictionary’s (HPD) General Inquirer Categories for all words indicating “overstatement” (abbreviated by HPD as “overst.”)¹³ We choose this category of words, because we believe that while the performance being characterized might not be overstating, the related words are likely to capture other words that represent extreme positive characterizations of performance. This search initially returned 696 words, some positive and some negative. HPD further classifies each word in this category as positive or negative or neither, and we limit our sample of words to only those that are classified as positive.¹⁴ After this step, we are left with a sample of 111 words. We then cross-reference this list with the Loughran-McDonald list of words that was used in their study, one of the first that employed textual analysis of language used by corporations.¹⁵ All of the 111 words in the HPD are contained in the Loughran-McDonald list.

¹²There could be an exceptional case in which the company uses more than one strongly positive word, such as “We had an extraordinarily outstanding year.” We do not, however, consider this phrase to be any stronger than to have used the words “extraordinary” or “outstanding” by themselves.

¹³<http://www.wjh.harvard.edu/~inquirer/inqdict.txt>

¹⁴The original plan for this study was to also examine the use of negative words used by corporations. We had hoped that if a company used strong negative words, we would expect to see negative abnormal returns. Perhaps to no one’s surprise, the number of press releases using such strong negative words was too small to obtain a reasonable sample. The implication would seem to be that following bad performance, companies are quite reluctant to characterize their performance in extreme negative language, perhaps due to fear of litigation vulnerability.

¹⁵The original article is Loughran and McDonald (2011). Documentation is contained at http://www3.nd.edu/~mcdonald/Word_Lists.html. We thank Tim Loughran for making the list publically available.

We then manually review the list of words and drop some that do not appear to be relevant to company performance, such as main, confide, commotion, shock. We also create our own set of words that we felt would capture the extreme positive characterization of performance. These words were brilliant, great, magnificent, remarkable, sensational, incredible, exceptional, tremendous, extraordinary, fantastic, excellent, outperform, substantial, unbelievable, outstanding. We consult a thesaurus for variations, but it gave too many words that we felt were distracting and unlikely to be used in a corporate statement. We then turn to the Microsoft Office Dictionary for synonyms. We continue to eliminate words that we are unlikely to be used in the context of corporate performance, resulting in a final list of 26 words that are shown in Table 1.

The methodology we use to construct this sample involves an element of both objectivity and subjectivity. The ultimate goal is to obtain a set of key words that can be searched for in corporate statements. These words should unambiguously identify cases in which a company uses an extreme positive characterization of its performance. This process is not an empirical test of the response to the use of extreme positive language. While all of the included words do seem to clearly indicate extreme positive language, it is possible that there are other omitted words. If that is the case, its effect will not bias our results but only give us a smaller sample size.

B. Sample of Firm Statements

Our sample consists of 865 companies that were S&P 500 firms over the period 2000-2014. Using LexisNexis, we begin by downloading approximately 16,000 press releases issued by these firms during that period. The newswire services are PR Newswire, Business Newswire, and Canada Newswire. We filter the press releases using the following criteria. First, we obviously search by company ticker to ensure that the companies were S&P 500 firms during that time. Second, we make sure that the press release subject is “company earnings” or “annual financial results” and not “interim financial results,” or the headline contains “company earnings” or “annual financial results” and not “interim financial results,” or the headline or subject contains “fourth quarter” or “full year” or “fiscal year annual.” We also observe that in some cases, a press release is issued by one company but might be about another. The former might be an asset management company commenting on the press release of a stock it is following. To avoid these distractions, we restrict the sample to press releases with only one

company identified in the header. There are also some duplicate press releases appearing on different newswires that we delete.

The next stage involves searching the press releases for the use of these words. We recognize that many words can be employed in multiple forms, such as the adjective “remarkable” (“We had a remarkable year.”) and the adverb “remarkably” (“We had a remarkably good year.”) Hence, our search is based on the root that would capture both uses, in this case “remarkabl.” In addition, some words will be used in contexts that have no relevance to the characterization of performance. For example, we hope to capture phrases such as “outstanding year” or “outstanding performance,” but the word “outstanding” is extremely common in corporate statements. Companies can refer to “shares outstanding,” or “outstanding options.” Likewise, “extraordinary” might characterize performance, but it might also refer to “extraordinary items” that appears in financial statements. It is most efficient if we are cognizant of such uses of these words in accounting contexts. As such, we develop a set of common accounting expressions using “outstanding” and “extraordinary” and code these expressions into the search routine so as to reject such references.

Further examination reveals a number of noisy and irrelevant phrases that can trigger the capture of an inappropriate press release, so we drop those press releases. This pares the sample down to about 2,800 press releases. We then isolate the sentence in the press release that contains the key word. We extract the 10 words on both sides of the key word and manually read the language. We apply the criterion that the key word must make a *general reference to performance*. As an example, a press release containing an expression such as “We had an outstanding year,” would be retained, whereas a press release containing an expression such as “We had outstanding growth in earnings” would not be retained. Our objective is to analyze abnormal stock performance, so we restrict the sample to cases in which the company does not specify in the same sentence any particular metric on which the extreme characterization was being made. In other words, stating that the company had an outstanding year is subject to interpretation as to what was outstanding. As we argued earlier, such phrasing as “outstanding year” or “extraordinary year” when used in this general manner should be reasonably interpretable as applying to overall performance, whereas references to accounting metrics makes unambiguously clear that what is referenced is a specific accounting measure. Of course, a company could say in one sentence “We had an outstanding year,” followed by another

sentence that says “Our earnings grew by 10%.” One could perhaps infer that the notion of an outstanding year was in reference to its earnings growth of 10%. If that is the case, we might not expect to find abnormal stock performance, but we will also examine accounting performance. In short, we believe that characterizing performance as outstanding should manifest in share price performance, though it may manifest in accounting performance. Nonetheless, we do drop press releases in which a company directly links the key word to an accounting measure.

At this point, we have 178 press releases. Some of these have missing data in Compustat and CRSP. We are able to backfill some of that data from 10K filings. The final sample consists 153 press releases.

It is tempting to conclude that the sample size is small, but in fact, the sample size is rather comforting. It is roughly one out of every 100 press releases in the original sample. If the sample size were relatively large, it would suggest that companies may not take this language seriously or that they have low standards of excellence. A large number of observations might also suggest that we are being too lenient as to what we admit into the sample.¹⁶

C. Sample Characteristics

The distribution of firm-year observations by search word is shown in Table 2. Perhaps not surprisingly, we see that the most commonly used word was “excellent” with 50 mentions, while “outstanding” was a very close second with 49. “Exceptional” was used 20 times, and “great” was used 16 times. No other words were used more than five times. Of the 26 words we searched for, only 10 were actually used in the context of characterizing the company’s general annual performance.

The sample contains 118 unique companies. Not surprisingly, some companies appear multiple times, but the analysis will employ firm-year observations. One company (Disney) appears five times, while another (the former ACE Limited, owner of Chubb Insurance) appears four times, while Hartford and Ventas appear three times. Ninety companies, however, appear only once.

¹⁶The sample size is not usual for recent financial studies that link. For example, Akey (2015) studies 97 firms that contributed to political campaigns, Sunder, Sunder, and Zhang (2017) examine 88 CEOs who fly airplanes, and Cohen and Wang (2013) have a sample of 139 firms in their study of staggered boards.

The year with the most press releases containing these key words is 2006 with 23. The year 2004 has the second most at 14. Six other years have from 10 to 12. Every year has at least one press release used in the study, while 2009 and 2014 have only one.

Table 3 contains descriptive statistics with univariate tests of the firm versus its industry average. We report both mean and median tests, but the discussion focuses on the median tests, as most of the accounting measures are not likely to conform to a normal distribution. Thus, with respect to the median, the sample firms are significantly smaller in total assets, and have lower sales, book-to-market, sales growth, and asset growth than the industry median, while they have higher free cash flow-to-sales, ROA, ROE, and EBITDA margin than the industry median. In addition, their free cash flow growth and EPS growth are right at the cusp of 5% positive significance relative to their respective industries.

IV. Results

We begin by examining the response of investors to the press release. We first conduct an event study for the entire sample and then we divide the sample into the firms that had positive, negative, and insignificant cumulative abnormal returns over the previous 250 days. Later we endeavor to determine what the extreme statements could have been about, assuming they were not apparently about shareholder wealth. Finally, we compare our sample firms with a set of firms that did increase shareholder wealth but did not make any such extreme statements.

A. Share Price Performance

To determine whether the use of such extreme language is justified in terms of shareholder wealth, we examine the CARs for a period of 250 days prior to the announcement. This period corresponds roughly to the year that is referenced in the press release. We estimate the CARs for five different models of abnormal returns: the CAPM, the Fama-French three-factor model, the Carhart model, which is the Fama-French three-factor model plus the Carhart momentum factor, the Fama-French five-factor model, and a model that removes the market and industry factors.^{17,18} In addition, we examine the results for the raw returns. Raw returns are of

¹⁷In the market and industry model, the stock returns are regressed on the market factor and the residuals are then regressed on a value-weighted industry index defined by cumulative returns on firms with the same two-digit SIC code similar to Chance et. al (2015). Thus, the two factors are orthogonal.

¹⁸We obtain data on the factor returns from Kenneth French's website. See <http://mba.tuck.dartmouth.edu/pages/faculty/ken.french/>. We thank Kenneth French for making these data available.

interest in that firms could be referring to extreme positive performance but that performance might be observable only in returns that are not adjusted for risk. These firms would be taking credit for systematic increases in their stock prices.

Figure 2 shows the CARs for the period of 250 days before and after the press release for the full sample using the Fama-French five-factor model. While the full sample consists of firms that made these superlative statements, there is reason to question whether the performance of some was actually superlative. Hence, Figure 2 is a mixture of firms that may or may not have had significant increases in shareholder wealth.¹⁹ Indeed, as event studies go, Figure 2 is rather nondescript. It does, nonetheless, show a pattern of positive abnormal returns prior to the announcement, which may be indicative of superior performance.

Statistical tests of the abnormal returns are presented in Table 4. As noted earlier, we use a 10% significance level, which is higher than normal, to give the companies the benefit of the doubt. In Panel A, the full sample, we see that with the parametric tests the CARs are significant for the CAPM and the Carhart model at the 10% level and for the market-and-industry model at the 5% level. Using the medians, however, none of the CARs is even remotely significant for any model. The raw returns are positive and highly significant, however, averaging around 35% with a median of over 18%, suggesting that perhaps strong systematic performance may have triggered the extreme positive statements in the press releases.

We then divide the sample into three groups based on the CARs over the previous 250 trading days: the firms with positive-significant CARs, those with insignificant-CARs, and those with negative-significant CARs. Those with positive-significant CARs did truly generate an increase in shareholder wealth. Those with insignificant-CARs did not generate an increase in shareholder wealth. Those with negative significant-CARs not only did not generate an increase in shareholder wealth, they generated a decrease. Again, we determine whether the CARs are statistically significant using a 10% type I error.

The results for all five models are in Panel B, but first note Figure 3, which shows the pattern of Fama-French five-factor CARs for the 250-trading day periods before and after the

¹⁹When we refer to significant increases in shareholder wealth, we are referring to abnormal returns. Significant increases in shareholder wealth that are not adjusted for risk are not truly increases in shareholder wealth. We shall recognize, however, that some companies may regard systematic increases in shareholder wealth as indicative of superior idiosyncratic performance.

event. The three graphs are distinct, as they should be by construction.²⁰ The increasing line is the CARs for the 29 firm-year observations comprising 18% of the sample, that each had positive and statistically significant CARs in the 250-day period preceding the announcement. The negative line is the set of 18 firm-year observations comprising 12% of the sample that each had negative and statistically significant CARs prior to the announcement. The nearly flat line is the set of 106 firm-year observations comprising 70% of the sample that had insignificant CARs prior to the announcement. While the graph also shows the lines after the announcement, we draw conclusions based on formal statistical tests of the post-event CARs, which we will present in Table 5.

Panel B of Table 4 shows the pre-announcement returns for these sub-groups. The discussion will focus on the Fama-French five-factor model. The sub-group of firms that have positive and statistically significant abnormal returns generate an overall mean CAR of over 75% with a median of over 46% and mean and median raw returns of over 104% and 49%. The group with negative significant CARs generate mean and median CARs of about -65% and -63% with mean and median raw returns of around -11% and -10%. While there are only 18 such cases, keep in mind that these 18 firm-year observations were press releases stating telling their shareholders that the company's performance was extremely positive, when we now know that shareholder wealth was significantly reduced. The remaining group, which had insignificant CARs, had means and medians that were slightly negative but obviously not statistically distinguishable from zero. Nonetheless, their raw returns were quite high with means and medians of about 23% and 18% respectively. If these companies were referring to stock price performance when they boasted in their press releases, they were crediting themselves for performance that was driven by systematic factors.

Table 5 shows the post-announcement performance for various windows around the announcement and 50, 100, 200, and 250 days after the announcement. Panel A shows the results for the overall group and Panel B shows the results for the three sub-groups. For the full sample, there are no significant reactions in the CARs around the announcement, and the post announcement reactions are also not statistically significant. The raw returns, however, do show

²⁰By construction, they have to be distinct in the 250-day period prior to the announcement. They do not technically have to be distinct in the post-announcement period, but since they are cumulative, strongly positive (negative) significant CARs will not return to zero unless they are followed by strongly negative (positive) significant CARs. Hence, the graphs are virtually distinct by design but do give a perspective on the differences between the groups.

a significant positive reaction over the 10-day window around the announcement and are highly significant for the longer post announcement periods. Of course, the raw return results are not especially remarkable, as they simply indicate that on average and as measured by the median, the returns are greater than zero. In addition, the raw returns are not significant over the two-day and five-day windows.

In Panel B, we see that the announcements show no significant results in the windows around the event for any of the sub-groups.²¹ The positive-CAR firms, meaning the firms whose CARs were positive and significant at 10% over the 250 days prior to the announcement, do show positive performance over the 200-day period after the announcement that is significant at the 10% level, but the median test is not significant. These firms also show significant performance at the 5% level for 250 days after the announcement, but again, the median test is not significant. The insignificant-CAR firms do not show statistically significant performance for any post-announcement period with the mean or median test. The negative-significant CAR firms have significant negative performance at 5% for the first 100 days after the announcement with the mean test, but not with the median test. Interestingly, these firms have negative significant returns over the 200-day window at just under the 10% level using the median but not the mean.

We also compare the positive significant firms against the insignificant firms and find that there is a statistically significant difference for the 200- and 250-day post-announcement periods at 5% for both the mean and median test, with of course, the positive significant firms outperforming. The shorter holding periods are also significant at 10%. The negative significant and insignificant groups do not show any statistically significant differences after the announcement.

To summarize the results to this point, of 153 firm-year observations in which companies announce that they had extreme positive performance, about 18% of the firms did generate positive and statistically significant abnormal performance over the previous year, about 70% of the firms generated insignificant abnormal performance, and about 12% actually generated negative and statistically significant abnormal performance. There is some indication that the insignificant group may have observed their stock price performance without accounting for risk

²¹This is an interesting result in and of itself, since the press releases are also the first announcements of fourth quarter earnings. So, statistically, there were no surprises.

when they claimed to have had an extreme positive year, but the negative statistically significant group even has negative raw returns and even greater negative abnormal returns. We also observe no announcement effect, and we find some modest evidence that the positive group shows some superior performance for the next year as well, and that this group also strongly outperform the insignificant group by a substantial margin.

B. Analysis of Accounting and Raw Stock Price Performance

The results so far suggest that the overwhelming majority of the sample firms could not possibly have been referring to shareholder wealth or abnormal returns when they made their extreme positive statements in the press releases.²² Recall that about 82% of the firms had not generated positive and statistically significant risk-adjusted share price performance, and in fact, almost 12% of the firms actually generated negative statistically significant performance, thereby destroying shareholder value. Also note that the press releases were examined to determine if the extreme reference was tied directly to a specific measure of performance. Statements such as “It was an outstanding year for earnings growth,” were not included in the sample. Only general statements that did not reference a specific measure in the same sentence were retained. In this section we examine various accounting measures of performance in order to determine if the basis on which these extreme positive statements is made is accounting performance.

In Table 6, we analyze these companies on the following measures: sales growth, free cash flow growth (FCF growth), earnings per share growth (EPS growth), return on assets (ROA), return on equity (ROE), and earnings before interest, taxes, depreciation, and amortization margin (EBITDA margin). Of course, these values are well-known accounting measures. We also look at the raw stock return. While the raw stock return is not an accounting measure, we will compare the accounting measures here with various benchmarks and the raw return will be a useful measure in this context. All of these measures are ones in which larger positive values are better than smaller positive values or negative values.

We use three benchmarks for comparison. The first is the firm’s industry, which is constructed by estimating a market-value weighted index of the firms in the same two-digit SIC code, excluding the sample firms. We shall refer to this comparison as industry-adjusted. The

²²It is possible they could have been referring to their own misguided notion of shareholder wealth, which credits the company with gains achieved by the rising tide of a positive systematic effect, or they could have had some other notion of what shareholder wealth is, such as accounting performance, which we investigate in this section.

second benchmark is the firm's own previous fiscal year. Here we subtract the previous fiscal year value of the measure from the current fiscal year, which is the year of the performance that is referenced in the press release. We shall refer to this comparison as the fiscal year-adjusted performance. The third benchmark is a set of firms matched on size, book-to-market, profitability as captured by EBITDA margin, and investment as captured by year-over-year asset growth. The latter two measures are motivated by the fourth and fifth factors introduced by Fama and French (2016). In addition, these matching firms have the same two-digit SIC code and the same fiscal year. We refer to this approach as the matched firms-adjusted performance.

These results are presented in Tables 6 and 7. Table 6 presents the raw unadjusted tests in Panel A, meaning there is no benchmark, and the industry-adjusted tests in Panel B. Table 7 presents the fiscal year-adjusted tests in Panel A and the matched-firms adjusted tests in Panel B. We show tests based on the mean and median, but our interpretations as described herein are based on the median.

In Table 6, the overall results (Panel A), which use no benchmark except zero, are for the most part highly significant for almost all of the measures using both means and medians. EPS growth is the only measure that does not show up highly significant across the table. But of course, the comparison against a benchmark of zero is relatively trivial. It is interesting to note, however, that for the overall sample, the median ROA is 6% and ROE, 5%. On the surface, these ROA and ROE values do not seem particularly impressive. It is also interesting to observe that EPS growth is not even close to being statistically greater than zero for the positive-CAR firms. Thus, it appears that these firms were not bragging about EPS growth, though the insignificant and negative-CAR firms may have been doing so. The negative-significant CAR firms had mean EPS growth of 44%, which is nearly significant at 5% and median growth of 23%, which is just within the 10% level of significance. The raw returns are highly significant for the positive- and insignificant-CAR firms and negative and highly significant for the negative-CAR firms.

In Panel B, the industry-adjusted comparison, we see that for all the firms, positive and statistically significant relationships are found for ROA, ROE, and EBITDA margin and almost for FCF growth and EPS growth, with a significance level of about 5.2%. For the positive-CAR firms, positive and statistically significant relationships are around for FCF growth and for the raw return. The result for the raw return is not surprising. These firms by definition had positive

and statistically significant abnormal returns, so it should not be surprising that their raw returns beat the industry. For the insignificant-CAR firms, there is positive and statistically significant performance on ROA, ROE, and EBITDA margin. For the negative-CAR firms, there is no evidence of superior industry-adjusted performance for any measure except raw return.

In Table 7, the benchmark is the firm's own previous fiscal year. We omit the raw stock price performance from this comparison, as we do not believe a firm would simply compare its raw stock price performance with that of the previous year. For the full sample, we see positive and statistically significant performance on sales growth, FCF growth, EPS growth, and ROE. For the positive-CAR firms, FCF growth is the only statistically significant variable. For the insignificant-CAR firms, FCF growth, EPS growth, and ROE are significantly positive. For the negative-CAR firms, FCF growth is significantly positive and the only significant variable.

In Table 8, we compare the sample firms against their matched firms. While companies do not typically compare themselves to a matched sample, the use of a matched sample serves somewhat as a general benchmark that accounts for peer performance. For the full sample, sales growth, FCF growth, EPS growth, and ROA are significant at better than the 5% level and ROE is close at 5.2%. For the positive-CAR firms, FCF growth is statistically positive at the 1% level and is the only significant variable. For the insignificant-CAR firms, FCF growth and ROA are significant positive. For the negative-CAR firms, only ROE is significant and it is positively related.

Interestingly, in most cases the relationships are positive, though in some they are not statistically significant. The positive-CAR firms consistently show greater FCF growth regardless of the benchmark. It seems clear that these firms that did generate an increase in shareholder wealth also had excellent growth in free cash flow relative to their industry, their previous year, and their peers. Thus, perhaps not surprisingly, free cash flow seems to be highly associated with shareholder wealth. Interestingly, these firms do not have significantly greater EPS growth, ROA, or ROE, which seem to be the major accounting measures that firms emphasize. The insignificant-CAR firms have significantly greater FCF growth relative to the previous fiscal year and the matched sample but not at all to their industry peers. They show significantly greater EPS growth relative to their previous fiscal year and are close to having significantly greater EPS growth relative to their industry and the matched sample. Their ROA is significantly greater than their industry and the matched sample but not compared to their

previous fiscal year. Their ROE is significantly greater compared to their industry and their previous fiscal year and close to significant for the matched sample. The negative-CAR firms show little in the way of significantly better performance. Their ROE versus the matched firms and free cash flow growth versus their previous year are significantly greater.

An obvious question is the degree to which accounting performance and risk-adjusted stock price performance are correlated. Of course, this question has been of interest quite generally to accounting and finance researchers for many years, but our focus is on companies that make announcements of extreme positive performance, not firms in general. Table 9 contains rank correlation coefficients CARs and the various accounting variables for the entire sample and the sub-groups. In addition, we run the correlation for the raw return and the CAR. We do not show the traditional correlation table with 1.0s in the diagonal, as we are not particularly interested in the correlations of the accounting variables with themselves. In Panel A, the accounting measures are industry-adjusted and in Panel B, they are adjusted for the previous fiscal year. We do not adjust for the matching firms, since some of these measures are already used in creating the matched sample.

In Panel A, the industry-adjusted measures, for all samples, the raw return is, not surprisingly, positive and highly significantly correlated with the CAR. For the positive-CAR firms only free cash flow growth is significantly correlated with the CAR. For the insignificant- and negative significant-CAR firms, there are no variables significantly correlated with the CAR. In Panel B, where the measures are adjusted for their own previous year's values, ROE is highly correlated for the full sample, but the correlation is, perhaps surprisingly, negative. For each of the sub-groups, the correlation is also negative, and it is significant for the positive-CAR firms at better than 5% and for the negative-CAR firms at a little under 9%. The positive-CAR firms have significant positive correlation of free cash flow growth at 6.23%. There are no significant correlations for the insignificant-CAR firms, and only a modest correlation of ROE for the negative-CAR firms. In brief, we find that positive-CAR firms show the strongest correlations with free cash flow growth and not surprisingly, raw stock price performance. They are also negatively correlated with their ROE relative to the previous year. This negative correlation could represent improvement in the sense that an ROE that is low in one year might be followed by one that is high in the next year. Insignificant-CAR firms show the strongest correlation with

only their raw stock return. Negative-CAR firms show correlation with their raw stock return, and they are mildly negatively correlated with their ROE.

C. Logit Regressions for Factors that Distinguish Firms that Make Extreme Statements

We now conduct a multivariate analysis to determine the factors that lead a company to make a positive extreme statement in their press releases. Table 10 presents logistic regressions in which the dependent variable is 1 if the firm made such an extreme positive statement and zero if not. The firms with 1 as the dependent variable are our sample firms. Those with zeroes are the matched firms. We run one regression with the full sample and one with the positive-CAR firms. Because the negative-CAR firms are relatively small in number, we combine them with the insignificant-CAR firms to conduct a third regression. In Panel A, the measures are industry-adjusted, meaning that the industry mean values of the variables are subtracted, and in Panel B, they are previous fiscal year-adjusted, meaning that the previous fiscal year measure is subtracted. The independent variables are the accounting measures and the CAR.

The first column, which is the regression for the entire sample, shows that only the ROE is statistically significant, and the relationship is positive. This means that a higher ROE is associated with a firm making such a statement, without consideration of the firm's market performance. The odds ratio for the ROE variable, not shown in the table, is 389.57 and indicates that if the company beats industry ROE by 1%, the probability of making an extreme positive statement increases by 79.50%. Note that the CAR variable is not significant, suggesting that risk-adjusted stock price performance is not associated with whether a firm makes such a statement, at least for the sample as a whole. Of course, keep in mind that this regression is for the full sample.

In the second column, which is the positive-CAR firms, we see that CARs and EPS growth are statistically related to the likelihood of making an extreme positive statement. In the third column, which includes firms that had insignificant or negative CARs, we see that ROE is positively related and has an odds ratio of 183.87. This indicates that if the company beats the industry ROE by 1%, the probability of making an extreme positive statement increases by 64.77%. The negative relationship for CAR is moderately explicable as the effect of including the negative-CAR firms in the regression, but these firms make up less than 5% of the

observations.²³ These firms make such statements and had negative CARs. These firms also show that industry-adjusted ROE is significantly related to their propensity to make such a statement.

Panel B is the logistic regression in which the variables are adjusted for the previous year's performance. No variables are significant for the full sample. For the positive-CAR sample, the CAR is naturally significant and no other variables are significant at the 5% level. The CAR odds ratio is 6.67%, so a 10% increase in CARs raises the probability of making an extreme positive statement by 0.65%. Sales growth is close to significant at 5.19% and EPS growth and ROE are within the 10% level. Interestingly, ROE is negatively related to the likelihood of making a statement. For the sample containing the insignificant and negative-CAR firms, no variables are significant at the 5% level, but the CAR is close to negative significance at the 5% level.

To conclude, for the sample as a whole, industry-adjusted ROE seems to be the most important factor in making such an extreme statement. Because many firms are likely to view ROE as a measure of shareholder wealth, this finding is probably not surprising. For the positive-CAR firms, industry-adjusted EPS growth seems to be positively related but the CAR has a stronger positive relationship. Nonetheless, the strongest factor is clearly the CAR. For the non-positive significant CAR sample, industry-adjusted ROE is positively related and the industry-adjusted CAR is negatively related.

C. Comparison to Firms that Could Have Justifiably Bragged

So far we find little evidence that the overwhelming majority of our sample firms can justify the extreme statements they made. Yet, there are surely many firms that generate significant positive abnormal returns that could have made such statements but did not. In this section we examine those firms in order to determine how they performed and perhaps gain some insights into why they did not release these statements and why our sample firms did. In particular, these comparison firms will provide an additional control group. These are not just matched firms, as are those described in the previous section. They are also matched firms that could have made strong positive statements and did not. That is, they generated significant

²³There are 18 such firm-year observations, which are combined with the 106 insignificant firm-year observations, for a total of 124 firm-year observations. These 124 observations are also combined with a matched set (maximum of three per firm) of another 334 observations. Thus, there are 18 such observations out of 458. Also, we obtain similar results using only one matched firm per firm in our sample.

increases in shareholder wealth, but they did not characterize their general performance with extreme positive language.

First, we are interested in knowing the extent to which abnormal returns were earned by the universe of firms we examine, which is all firms in the S&P 500 in our sample time period. We generated the distribution of abnormal returns of S&P 500 firms over the period 1999-2014. Out of the total number of firm-year observations of 865, an average of 54.8 per year, about 11% of the S&P 500, produced positive abnormal returns that are significant at the 10% level or better. The maximum number of firms that have significant positive abnormal returns in a given year is 99, which occurred in 2008, with the second largest being 98 in 2007. The minimum number is 10 in 2010.

From this set, we will choose a sample of firms that match our 29 firms that made extreme positive statements and generated statistically significant positive CARs. We match on size, book-to-market, profitability, investment, and fiscal year.²⁴

Table 11 shows univariate tests and regression estimates. The first two columns are tests of the mean and median, whereupon we find no statistical significance for the mean except for the CAR. For the median, CAR and EBITDA margin are negative and significant, while sales growth and ROE are positive and significant. In the third column, we show the simple logistic regression, and in the fourth, we present a pairwise logistic regression. By controlling for the level of CARs in firms that we know have increased shareholder wealth, we allow the accounting variables to tell us whether they are related to the issuance of such a statement, above and beyond any motivation based on shareholder wealth. In Panel A, the data are adjusted by the industry mean. Note that the CAR variable comes in strongly significant, and only free cash flow growth is significant among the accounting variables. As noted, free cash flow is generally considered an extremely important measure of performance, and it clearly is a distinguishing factor in the likelihood of a firm making such a statement. Note that the CAR variable comes in negative, which means that the lower the CAR the more likely the statement would be made, or vice versa. Recall that all of the firms have significant positive CARs. Thus, our sample firms

²⁴We initially intended to choose from S&P 500 firms that had significant CARs at 1%. This very high threshold would have enabled us to say that these firms clearly had superior performance. Unfortunately, there are simply not enough firms. There would have been only 290 firm-year observations. With our sample of 29 positive statistically significant firms, there would have been only 10 possible matches for each firm. Since our matched firms need the same fiscal year, the constraint would have been too great.

must be on the low end of the significant positive CARs. In the pairwise, logistic regression, the results are quite similar.

In Panel B where the comparison is against the previous fiscal year accounting measures, again the CAR comes in negative and highly significant. Free cash flow growth also comes in highly positively significant, and EBITDA margin comes in negative and significant. In the pairwise regression, all of the accounting variables come in significant, but it is important to note that some are negative and significant.

Thus, the evidence shows that of firms that do generate significant increases in shareholder wealth, those that make extreme positive statements typically require some evidence of superior accounting performance beyond ROE, such as free cash flow.

V. Conclusions

Sometimes corporations brag about their performance. Our interest is in whether this bragging is justified in that they have generated significant increases in shareholder wealth. Moreover, we consider the possibility that what a corporation perceives as extraordinary positive performance is performance that is not translatable into shareholder wealth.

We examine a sample of S&P 500 firms over the period of 1999-2014 that issue press releases bragging about their general annual performance. They use certain extreme words such as “outstanding”, “excellent,” “great” or “exceptional” to characterize the year on which they are commenting. Given that these firms have stated that their performance was extreme positive, we ask the obvious question of whether the shareholders experienced an increase in their wealth. We do this by examining the risk-adjusted stock price performance over the previous year. While the entire sample generates an average return of over 34% and a median return of over 18%, only 18% of the firms generate statistically significant cumulative average returns, while 69% of the firms had insignificant CARs and about 12% had negative significant abnormal returns. Thus, slightly over 80% of the sample does not produce an increase in shareholder wealth even though these firms claimed that they had generated extremely positive performance. The insignificant-CAR firms had relatively high unadjusted returns, with means and medians of about 23% and 18%, respectively, but the firms with significant negative CARs had unadjusted mean and median returns of -11% and -19%, respectively. Thus, some of the firms performed poorly even without adjusting for risk. Looking ahead, the firms with significantly positive-CARs over the previous year outperform the other firms over the next year. While we have not

formally tested a trading strategy, there may be relevant and predictive information for investors when companies brag about their performance and are justified in doing so.

We also find evidence that some firms may have been crediting themselves with systematic stock performance and others have credited themselves with strong accounting performance, either relative to their industry, their previous fiscal year, or against a set of matched firms. Firms with positive-significant CARs seem to emphasize free cash flow growth, and we find that this measure is significantly associated with abnormal returns on a univariate basis. On a multivariate basis, however, we find that firms with positive-CARs over the previous year are more likely to make such a statement if they have outstanding EPS growth relative to their industry and when their CARs are significantly greater than their industry and their previous fiscal year. For these firms, EPS growth is not significantly correlated with abnormal performance, so these variables are independently and cleanly associated with abnormal performance. Firms that had insignificant increases in shareholder wealth but made such statements seem to require strong ROE relative to their industry and to their previous year, suggesting that they view ROE as an appropriate measure of shareholder wealth. For firms that had insignificant or negative significant CARs, no accounting measures are correlated with their CARs.

We also compare our sample firms that made such statements and had positive significant abnormal performance to another set of firms that generated positive statistically significant abnormal performance but chose to tone down their statements by not using extreme positive language. In other words, this second set of firms could justifiably have bragged but did not. In comparison to these firms, our firms that did make such statements are more driven to do so based on free cash flow growth. There is also evidence that accounting variables can be related to their tendency to make such statements, but some of these variables come in with negative significance. In other words, these firms are clearly not just considering shareholder wealth. They require some excellence in accounting performance, but at least that excellence seems to manifest in free cash flow, which is generally considered very important in equity valuation.

Corporate bragging is clearly, and perhaps fortunately, not a common occurrence. For the firms that do it, a relatively small percentage (< 20%) could justifiably do so, as they do generate significant increases in shareholder wealth, but it does appear that they also require strong accounting performance. Almost 70% of the firms that make such statements do not

generate significant changes in shareholder wealth and appear to be highly focused on accounting measures. Perhaps most disconcerting is the fact that about 11% of the sample brag about their performance but generate significantly negative changes in shareholder wealth, even without adjusting for risk. Clearly a large portion of firms have no notion of what it means to increase shareholder wealth, or if they do, they simply ignore it.

It is also perhaps comforting to know that in a given year, an average of about 10% of S&P 500 firms do generate statistically significant positive abnormal returns, but do not characterize it with extreme positive language. Since we found only about 2% of firms bragged, it thankfully appears that restraint is more common than braggadocio. But sadly, most of the crowing was not associated with an increase in shareholder wealth.

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Table 1. Extreme Positive Words Chosen for the Study

These words were derived by consulting the Harvard Psychological Dictionary, the Loughran-McDonald list of key words, and by subjectively eliminating obviously inappropriate words given the context of the study, and incorporating words that would seem to be relevant to the question at hand.

<i>amazing</i>	<i>marvelous</i>
<i>astonishing</i>	<i>outstanding</i>
<i>awesome</i>	<i>remarkable</i>
<i>brilliant</i>	<i>sensational</i>
<i>excellent</i>	<i>significant</i>
<i>exceptional</i>	<i>splendid</i>
<i>extraordinary</i>	<i>super</i>
<i>fabulous</i>	<i>superb</i>
<i>fantastic</i>	<i>superlative</i>
<i>great</i>	<i>terrific</i>
<i>impressive</i>	<i>tremendous</i>
<i>incredible</i>	<i>unbelievable</i>
<i>magnificent</i>	<i>wonderful</i>

Table 2. Number of Times Each Key Word is Mentioned in the Press Releases

This table gives the distribution of each time the word appeared in the sample of 153 press releases that were usable and in which the firms had adequate data variables available. The sample starts with all S&P 500 member firms from 1999-2014. For an observation to be captured, the firm must use the word in the first press release of the first quarter of a fiscal year that references the previous fiscal year performance. In addition, the word must be used in a general context. Thus, the word must be used in a sentence to describe general performance and not a specific measure. Hence, a statement such as “We had an excellent year” would be usable, while a statement such as “It was an excellent year for earnings growth” would not.

Key Word	Number of Times Mentioned
<i>amazing</i>	0
<i>astonishing</i>	0
<i>awesome</i>	0
<i>brilliant</i>	0
<i>excellent</i>	50
<i>exceptional</i>	20
<i>extraordinary</i>	1
<i>fabulous</i>	0
<i>fantastic</i>	0
<i>great</i>	16
<i>impressive</i>	4
<i>incredible</i>	0
<i>magnificent</i>	0
<i>marvelous</i>	0
<i>outstanding</i>	49
<i>remarkable</i>	3
<i>sensational</i>	0
<i>significant</i>	2
<i>splendid</i>	0
<i>super</i>	0
<i>superb</i>	0
<i>superlative</i>	0
<i>terrific</i>	5
<i>tremendous</i>	3
<i>unbelievable</i>	0
<i>wonderful</i>	0
Total	153

Table 3. Descriptive Statistics

This table contains descriptive statistics for the firm-related variables. Total Assets and Sales are in US dollar millions. Book-to-Market is the ratio of book value of equity to market value of equity. Sales Growth is the year-over-year percentage growth in sales. FCF/Sales is the ratio of free cash flow to sales. EPS is the earnings per share (basic) excluding extraordinary Items. EPS growth is the year-over-year percentage growth in earnings per share (basic) excluding extraordinary items. ROA is the ratio of net income to total assets, and ROE is the ratio of net income to market value of equity. Price/earnings is the ratio of price per share to the current annual earnings per share. Asset Growth is the year-to-year growth in total assets, and EBITDA margin is earnings before interest, taxes, depreciation, and amortization over sales. All variables are calculated at the end of the fiscal year and winsorized at 1 percent and 99 percent.

	<i>N</i>	Mean	Median	StDev	Sample - Industry Mean	Sample - Industry Median
Total Assets	153	45,353	10,315	122,477	8,515 (0.3431)	-8,950 (<.0001)
Sales	153	16,851	7,344	28,640	667 (0.7394)	-3,892 (<.0001)
Book-to-Market	153	0.403	0.364	0.277	-0.04 (0.0125)	-0.08 (0.0035)
Sales Growth	153	0.19	0.13	0.23	-0.10 (0.0449)	-0.01 (0.1056)
FCF/Sales	153	0.18	0.15	0.12	0.27 (<.0001)	0.03 (0.0095)
FCF Growth	153	0.56	0.19	3.64	0.38 (0.2216)	0.05 (0.0520)
EPS	153	2.76	2.34	2.41	0.32 (0.0447)	0.22 (0.1454)
EPS Growth	153	0.62	0.17	7.62	0.61 (0.3156)	0.11 (0.0520)
ROA	153	0.07	0.06	0.06	0.01 (0.0125)	0.01 (0.0095)
ROE	153	0.06	0.05	0.06	0.01 (0.0012)	0.01 (<.0001)
Price/earnings	153	33.37	18.73	162.47	9.33 (0.4779)	-0.92 (0.2576)
Asset Growth	153	0.20	0.11	0.38	-0.10 (0.0438)	-0.04 (0.0095)
EBITDA Margin	153	0.26	0.21	0.17	0.26 (<.0001)	0.04 (<.0001)

Table 4. Performance of Firms that Make Extreme Positive Statements

This table reports the 250-day return performance statistics for firms that make extreme positive statements about their results. The cumulative abnormal returns are calculated using the CAPM, the Fama-French three-factor model, the Fama-French-Carhart four-factor model, the Fama-French five-factor model and a Market and Industry two-factor model. Panel A shows the results for the entire sample. Panel B shows the results for subsamples of firms with significant positive CARs, significant negative CARs, and insignificant CARs. The CARs for the subsampling are determined using the respective model, so the samples are not the same across each model. *N* represents the sample size. The models are not relevant to the raw returns, so the same results are shown under each model for raw returns.

Panel A: Entire Sample

	CAPM	FF3	Carhart	FF5	Market and Industry
CAR					
Mean	8.81%	5.86%	9.29%	5.23%	8.41%
Median	-0.62%	0.80%	3.95%	1.61%	5.37%
<i>N</i>	153	153	153	153	153
<i>p</i> -value (Mean > 0)	0.0573	0.2045	0.0692	0.2362	0.0357
<i>p</i> -value (Median > 0)	0.6278	0.8716	0.5179	0.8716	0.3320
Raw Return					
Mean	34.59%	34.59%	34.59%	34.59%	34.59%
Median	18.46%	18.46%	18.46%	18.46%	18.46%
<i>N</i>	153	153	153	153	153
<i>p</i> -value (Mean > 0)	<.0001	<.0001	<.0001	<.0001	<.0001
<i>p</i> -value (Median > 0)	<.0001	<.0001	<.0001	<.0001	<.0001

(Table 4 continues on next page)

(Continuation of Table 4)

Panel B: Subsamples

Subsample					
(> 0, Significant at 10%)					
CAR					
Mean	89.63%	95.37%	94.09%	75.32%	72.50%
Median	59.16%	56.85%	57.28%	46.59%	45.62%
<i>N</i>	28	22	27	29	25
Raw Return					
Mean	118.19%	130.09%	110.94%	104.09%	107.54%
Median	56.83%	55.99%	50.94%	49.37%	41.24%
<i>N</i>	28	22	27	29	25
Subsample					
(< 0, Significant at 10%)					
CAR					
Mean	-68.58%	-66.66%	-60.45%	-65.32%	-44.27%
Median	-70.92%	-64.87%	-52.18%	-63.24%	-33.50%
<i>N</i>	11	16	15	18	11
Raw Return					
Mean	-15.17%	-13.09%	-9.98%	-10.90%	-11.36%
Median	-10.10%	-9.99%	-9.13%	-9.61%	-19.47%
<i>N</i>	11	16	15	18	11
Subsample					
(Insignificant CARs)					
CAR					
Mean	-3.58%	-1.18%	-1.91%	-1.97%	-0.34%
Median	-3.82%	-1.25%	-0.17%	-2.26%	-0.65%
<i>N</i>	114	115	111	106	117
Raw Return					
Mean	18.85%	22.95%	22.04%	23.30%	23.32%
Median	14.53%	17.84%	17.77%	18.10%	17.77%
<i>N</i>	114	115	111	106	117

Table 5. Announcement Returns

This table reports the cumulative abnormal returns to announcement of extreme positive statements about annual results. The performance is measured using the Fama-French five factor model. Panel A shows the results for the full sample, while Panel B shows the results for the sample split into three groups. Positive-CAR firms are those that had positive abnormal returns during the fiscal year, Negative-CAR firms are those that had negative significant abnormal returns during the fiscal year and, and Insignificant-CAR firms are those that had negative significant abnormal returns during the fiscal year.

Panel A: Announcement CARs for entire sample										
	Cumulative Abnormal Returns					Unadjusted Raw Returns				
	Mean	Median	Stdev	<i>p</i>-value (Mean > 0)	<i>p</i>-value (Median > 0)	Mean	Median	Stdev	<i>p</i>-value (Mean > 0)	<i>p</i>-value (Median > 0)
CAR (-1 , 1)	0.18%	0.47%	5.48%	0.6881	0.3320	0.71%	0.56%	5.87%	0.1386	0.4189
CAR (-2 , 2)	-0.15%	0.01%	5.81%	0.7557	1.0000	0.56%	0.58%	6.29%	0.2762	0.3320
CAR (-5 , 5)	0.19%	0.96%	7.50%	0.7502	0.1454	1.27%	1.86%	7.57%	0.0390	0.0058
CAR (1 , 50)	-0.99%	0.33%	14.65%	0.4035	0.8716	3.69%	4.76%	12.80%	0.0005	0.0003
CAR (1 , 100)	-1.54%	-0.07%	22.33%	0.3960	1.0000	4.82%	5.83%	17.02%	0.0006	<.0001
CAR (1 , 200)	-2.03%	-2.59%	40.18%	0.5338	0.4655	6.59%	7.91%	28.51%	0.0050	0.0044
CAR (1 , 250)	0.52%	-1.52%	45.40%	0.8878	0.8078	10.84%	11.05%	34.30%	0.0000	0.0015

(Table 5 continues)

(Table 5 continued)

Panel B: Announcement CARs by Three Sub-Groups										
	Positive-CAR Firms		Insignificant-CAR Firms		Negative-CAR Firms		Positive - Insignificant		Negative - Insignificant	
	Mean (<i>p</i>-value)	Median (<i>p</i>-value)	Mean (<i>p</i>-value)	Median (<i>p</i>-value)	Mean (<i>p</i>-value)	Median (<i>p</i>-value)	Mean (<i>p</i>-value)	Median (<i>p</i>-value)	Mean (<i>p</i>-value)	Median (<i>p</i>-value)
CAR (-1 , 1)	0.56% (0.6363)	0.26% (1.0000)	0.18% (0.7152)	0.47% (0.2853)	-0.46% (0.7683)	0.58% (1.0000)	0.38% (0.7660)	-0.22% (0.7660)	0.64% (0.6950)	-0.11% (0.6950)
CAR (-2 , 2)	0.24% (0.8453)	0.11% (0.7111)	-0.20% (0.7033)	0.11% (0.9227)	-0.46% (0.7807)	-1.57% (0.4807)	0.45% (0.7430)	0.00% (0.7430)	0.25% (0.8820)	1.68% (0.8820)
CAR (-5 , 5)	1.91% (0.2250)	0.99% (0.1360)	0.14% (0.8241)	1.17% (0.3821)	-2.28% (0.3568)	-0.71% (1.0000)	1.77% (0.2970)	-0.17% (0.2970)	2.43% (0.3430)	1.88% (0.3430)
CAR (1 , 50)	3.36% (0.1362)	1.82% (1.0000)	-1.66% (0.2365)	0.02% (1.0000)	-4.05% (0.3826)	0.36% (0.8145)	5.02% (0.0580)	1.80% (0.0580)	2.39% (0.6190)	-0.34% (0.6190)
CAR (1 , 100)	5.80% (0.1638)	5.14% (0.4583)	-2.18% (0.3255)	0.12% (1.0000)	-9.55% (0.0342)	-8.98% (0.2379)	7.98% (0.0910)	5.02% (0.0910)	7.36% (0.1280)	9.10% (0.1280)
CAR (1 , 200)	14.52% (0.0623)	10.97% (0.2649)	-6.10% (0.1086)	-3.10% (0.4351)	-4.97% (0.6404)	-17.10% (0.0963)	20.61% (0.0180)	14.07% (0.0180)	-1.13% (0.9200)	13.99% (0.9200)
CAR (1 , 250)	23.18% (0.0113)	12.23% (0.1360)	-3.20% (0.4475)	-1.94% (0.5584)	-14.29% (0.2245)	-22.41% (0.2379)	26.38% (0.0080)	14.17% (0.0080)	11.09% (0.3690)	20.47% (0.3690)

Table 6. Financial Performance Unadjusted and Compared to Industry

This table reports the financial performance of the firms that make extreme positive statements to their industry. Panel A shows the results for the full sample as well as the three sub-groups with no benchmark. Panel B reports the industry-adjusted financial performance of the full sample and the three sub-groups. The adjustment is made by subtracting the industry average, with the industry defined using two-digit SIC codes. The variables are defined in Table 3.

Panel A: Financial Performance of Entire Sample and Three Sub-Groups								
	All Firms		Positive CAR Firms		Insignificant CAR Firms		Negative CAR Firms	
	Mean	Median	Mean	Median	Mean	Median	Mean	Median
	(<i>p</i>-value)	(<i>p</i>-value)	(<i>p</i>-value)	(<i>p</i>-value)	(<i>p</i>-value)	(<i>p</i>-value)	(<i>p</i>-value)	(<i>p</i>-value)
Sales Growth	0.19 (<.0001)	0.13 (<.0001)	0.15 (0.0010)	0.10 (0.0001)	0.20 (<.0001)	0.14 (<.0001)	0.18 (0.0008)	0.13 (0.0075)
FCF Growth	0.56 (0.0580)	0.19 (<.0001)	2.00 (0.1711)	0.18 (<.0001)	0.21 (0.2106)	0.19 (<.0001)	0.35 (0.0077)	0.17 (0.0075)
EPS Growth	0.62 (0.3167)	0.17 (<.0001)	0.10 (0.6872)	0.11 (0.4583)	0.79 (0.3734)	0.18 (<.0001)	0.44 (0.0532)	0.23 (0.0963)
ROA	0.07 (<.0001)	0.06 (<.0001)	0.06 (<.0001)	0.06 (<.0001)	0.07 (<.0001)	0.06 (<.0001)	0.07 (<.0001)	0.06 (0.0013)
ROE	0.06 (<.0001)	0.05 (<.0001)	0.05 (<.0001)	0.05 (<.0001)	0.06 (<.0001)	0.05 (<.0001)	0.06 (0.0002)	0.06 (0.0013)
EBITDA Margin	0.26 (<.0001)	0.21 (<.0001)	0.20 (<.0001)	0.18 (<.0001)	0.27 (<.0001)	0.24 (<.0001)	0.26 (<.0001)	0.18 (<.0001)
Raw Return	0.35 (<.0001)	0.18 (<.0001)	1.04 (0.0039)	0.49 (<.0001)	0.23 (<.0001)	0.18 (<.0001)	-0.11 (0.0521)	-0.10 (0.0309)

(Table 6 continues)

(Table 6 continued)

Panel B: Industry-Adjusted Financial Performance of Entire Sample and Three Sub-Groups								
	All Firms		Positive CAR Firms		Insignificant CAR Firms		Negative CAR Firms	
	Mean (<i>p</i>-value)	Median (<i>p</i>-value)	Mean (<i>p</i>-value)	Median (<i>p</i>-value)	Mean (<i>p</i>-value)	Median (<i>p</i>-value)	Mean (<i>p</i>-value)	Median (<i>p</i>-value)
Sales Growth	-0.10 (0.0449)	-0.01 (0.1056)	0.02 (0.6462)	-0.01 (0.4583)	-0.10 (0.1158)	-0.01 (0.4968)	-0.32 (0.1652)	-0.07 (0.0963)
FCF Growth	0.38 (0.2216)	0.05 (0.0520)	1.93 (0.1918)	0.14 (0.0081)	0.00 (0.9925)	0.02 (0.6274)	0.14 (0.3084)	0.08 (0.4807)
EPS Growth	0.61 (0.3156)	0.11 (0.0520)	0.13 (0.5533)	-0.02 (1.0000)	0.74 (0.4004)	0.12 (0.0645)	0.66 (0.1318)	0.26 (0.2379)
ROA	0.01 (0.0125)	0.01 (0.0095)	0.00 (0.7808)	0.00 (0.7111)	0.02 (0.0183)	0.01 (0.0250)	0.01 (0.2548)	0.01 (0.2379)
ROE	0.01 (0.0012)	0.01 (<.0001)	0.00 (0.6261)	0.00 (0.4583)	0.01 (0.0020)	0.01 (<.0001)	0.01 (0.2481)	0.01 (0.4807)
EBITDA Margin	0.26 (<.0001)	0.04 (<.0001)	0.27 (0.0412)	0.00 (0.7111)	0.25 (<.0001)	0.06 (<.0001)	0.36 (0.0919)	0.03 (0.8145)
Raw Return	0.12 (0.0822)	-0.03 (0.1454)	0.74 (0.0324)	0.19 (0.0081)	0.00 (0.9397)	-0.04 (0.1448)	-0.18 (<.0001)	-0.15 (<.0001)

Table 7. Financial Performance Compared to Previous Fiscal Year

This table reports the financial performance of the firms that make extreme positive statements to their [own](#) financial performance in the previous [fiscal](#) year for the full sample and the three sub-groups. The variables are the current year's performance minus the previous year's performance. The variables are defined in Table 3.

	All Firms		Positive-CAR Firms		Insignificant-CAR Firms		Negative-CAR Firms	
	Mean (<i>p</i> -value)	Median (<i>p</i> -value)	Mean (<i>p</i> -value)	Median (<i>p</i> -value)	Mean (<i>p</i> -value)	Median (<i>p</i> -value)	Mean (<i>p</i> -value)	Median (<i>p</i> -value)
Sales Growth	0.08 (<.0001)	0.04 (0.0049)	0.04 (0.2664)	0.04 (0.1849)	0.08 (0.0017)	0.04 (0.0594)	0.14 (0.0294)	0.05 (0.1849)
FCF Growth	0.56 (0.0980)	0.14 (<.0001)	2.09 (0.1808)	0.18 (<.0001)	0.19 (0.3600)	0.11 (<.0001)	0.13 (0.2862)	0.15 (<.0001)
EPS Growth	-0.20 (0.6708)	0.20 (<.0001)	-0.23 (0.5588)	0.27 (0.0872)	-0.41 (0.5353)	0.15 (<.0001)	1.11 (0.0564)	0.35 (0.0872)
ROA	0.01 (0.0956)	0.00 (0.1374)	-0.01 (0.1889)	0.00 (1.0000)	0.01 (0.0551)	0.00 (0.1978)	0.03 (0.0610)	0.01 (1.0000)
ROE	0.14 (<.0001)	0.08 (<.0001)	0.09 (0.0593)	0.04 (0.1849)	0.15 (<.0001)	0.08 (<.0001)	0.15 (0.0102)	0.10 (0.1849)
EBITDA Margin	0.01 (0.1081)	0.00 (0.9317)	0.00 (0.9024)	0.00 (0.2478)	0.01 (0.1631)	0.00 (1.0000)	0.02 (0.1279)	0.01 (0.2478)

Table 8. Financial Performance Compared to Matched Sample Firms

This table reports the financial performance of the firms that make extreme positive statements to the financial performance of a matched sample for the full sample and the three sub-groups. The matched sample is determined by matching on fiscal year, two-digit SIC code, book-to-market, size, profitability (EBITDA margin), and investment (asset growth). The variables are defined in Table 3.

	All Firms		Positive-CAR Firms		Insignificant-CAR Firms		Negative-CAR Firms	
	Mean (<i>p</i> -value)	Median (<i>p</i> -value)	Mean (<i>p</i> -value)	Median (<i>p</i> -value)	Mean (<i>p</i> -value)	Median (<i>p</i> -value)	Mean (<i>p</i> -value)	Median (<i>p</i> -value)
Sales Growth	0.02 (0.5204)	0.03 (0.0352)	-0.10 (0.5089)	0.03 (0.4583)	0.05 (0.0510)	0.02 (0.0982)	0.053 (0.1914)	0.036 (0.4807)
FCF Growth	0.404 (0.1864)	0.074 (0.0020)	1.885 (0.1926)	0.106 (0.0081)	0.013 (0.9479)	0.07 (0.0250)	0.32 (0.1900)	0.02 (1.0000)
EPS Growth	0.598 (0.3764)	0.15 (0.0233)	-0.031 (0.9459)	0.063 (1.0000)	0.602 (0.5317)	0.144 (0.0645)	1.589 (0.0227)	0.359 (0.0963)
ROA	0.016 (0.0011)	0.009 (0.0150)	0.011 (0.3423)	0.004 (1.0000)	0.016 (0.0077)	0.01 (0.0250)	0.025 (0.0741)	0.011 (0.2379)
ROE	0.014 (0.0013)	0.005 (0.0520)	0.012 (0.0797)	-0.001 (0.4583)	0.013 (0.0232)	0.006 (0.0645)	0.022 (0.0326)	0.011 (0.0309)
EBITDA Margin	0.013 (0.1441)	0.001 (0.7465)	-0.006 (0.6794)	-0.013 (0.7111)	0.015 (0.1892)	0.006 (0.4968)	0.031 (0.1999)	-0.002 (1.0000)

Table 9. Correlations between CARs and Financial Performance Measures

This table contains the rank correlations between the CARs and the accounting performance measures for the full sample and the three sub-groups. Panel A shows the results for the industry-adjusted accounting performance measures, and Panel B shows the results for the accounting performance measures adjusted for the previous fiscal year. Raw return is included in Panel A but not in Panel B, as it does not seem appropriate to compare raw return in one fiscal year to that in the previous fiscal year. The variables are defined in Table 3.

Panel A: CAR and Industry-Adjusted Performance Measures				
	All Firms	Positive-CAR Firms	Insignificant-CAR Firms	Negative-CAR Firms
Raw Return	0.60 (<.0001)	0.70 (<.0001)	0.40 (<.0001)	0.47 (0.0475)
Sales Growth	0.13 (0.1168)	0.09 (0.6437)	0.05 (0.5786)	0.18 (0.4654)
FCF Growth	0.13 (0.1061)	0.55 (0.0022)	0.02 (0.8243)	0.17 (0.5124)
EPS Growth	-0.08 (0.3303)	0.22 (0.2515)	0.01 (0.8854)	-0.10 (0.6925)
ROE	-0.09 (0.2815)	-0.12 (0.5515)	-0.10 (0.3138)	0.16 (0.5258)
ROA	-0.03 (0.7023)	-0.02 (0.9121)	-0.01 (0.8820)	0.18 (0.4628)
EBITDA margin	-0.08 (0.3476)	-0.05 (0.8055)	-0.05 (0.6340)	-0.37 (0.1311)

(Table 9 continues)

(Table 9 continued)

Panel B: CARs and Accounting Performance Measures Adjusted For Last Fiscal Year

	All Firms	Positive-CAR Firms	Insignificant-CAR Firms	Negative-CAR Firms
Sales Growth	-0.08 (0.3397)	-0.25 (0.1926)	-0.01 (0.8951)	-0.40 (0.1145)
FCF Growth	0.07 (0.3873)	0.36 (0.0623)	-0.06 (0.5996)	0.09 (0.7288)
EPS Growth	-0.09 (0.2887)	-0.16 (0.4279)	-0.02 (0.8612)	-0.30 (0.2356)
ROE	-0.21 (0.0102)	-0.41 (0.0283)	-0.07 (0.4718)	-0.43 (0.0858)
ROA	-0.08 (0.3438)	0.28 (0.1553)	-0.01 (0.9082)	-0.35 (0.1710)
EBITDA margin	-0.11 (0.2047)	-0.24 (0.2184)	-0.05 (0.6619)	0.21 (0.4246)

Table 10. Pairwise Logistic Regression

This table contains the results for pairwise logistic regressions where the dependent variable equals one if the firm makes an extreme positive statement and, thus, is included in our main sample. The firms with dependent variable of zero are the pairwise matched firms that did not make extreme positive statements. Column 1 contains results for the entire sample. Column 2 contains results for the firms with significant positive CARs in the fiscal year, and Column 3 contains results for the firms with insignificant CARs in the fiscal year. The regressions in Panel A use industry-adjusted accounting performance. The regressions in Panel B use accounting performance adjusted for the previous fiscal year.

Panel A: Industry-Adjusted Accounting Measures

	Full Sample Estimate (<i>p</i>-value)	Positive-CAR Sample Estimate (<i>p</i>-value)	Non Positive- Significant-CAR Sample Estimate (<i>p</i>-value)
Sales Growth	0.11 (0.4757)	-0.40 (0.8977)	0.88 (0.0749)
FCF Growth	0.06 (0.2881)	0.44 (0.7643)	-0.03 (0.7158)
EPS Growth	0.01 (0.4792)	0.38 (0.0281)	0.01 (0.4784)
ROE	5.97 (0.0125)	-4.61 (0.7697)	5.21 (0.0367)
EBITDA Margin	0.70 (0.4895)	-9.10 (0.2206)	0.84 (0.4411)
CAR	0.33 (0.1732)	6.10 (0.0011)	-0.68 (0.0346)

(Table 10 continues)

(Table 10 continued)

Panel B: Previous Fiscal Year-Adjusted Accounting Measures

	Full Sample Estimate (<i>p</i>-value)	Positive-CAR Sample Estimate (<i>p</i>-value)	Non Positive- Significant-CAR Sample Estimate (<i>p</i>-value)
Sales Growth	0.59 (0.3261)	7.89 (0.0519)	0.85 (0.2053)
FCF Growth	0.07 (0.2719)	-0.06 (0.8757)	-0.01 (0.8679)
EPS Growth	0.00 (0.8122)	0.33 (0.0717)	0.00 (0.9303)
ROE	-0.58 (0.3051)	-8.27 (0.0723)	0.13 (0.8443)
EBITDA Margin	2.08 (0.2933)	3.84 (0.7555)	1.74 (0.4117)
CAR	0.39 (0.1351)	6.67 (0.0013)	-0.65 (0.0615)

Table 11. Pairwise Logistic Regression Analysis of Positive-CAR Firms

This table contains the results for logistic regressions where the dependent variable equals one if the firm makes an extreme positive statement. The sample includes our firms that make extreme positive statements and have positive significant CARs as well as a matched sample of S&P500 firms that have positive significant CARs. Matching is performed on same fiscal year, log assets, book-to-market ratio, EBITDA margin, and asset growth. Column 1 and 2 contain univariate differences between independent variables. Column 3 contains results for the simple logistic regressions. Column 4 contains the results for a pairwise logistic regression. The regressions in Panel A use industry-adjusted accounting performance. The regressions in Panel B use accounting performance adjusted for the previous fiscal year.

Panel A: Industry-Adjusted Accounting Measures

	Difference in Mean (<i>p</i>-value)	Difference in Median (<i>p</i>-value)	Regression Estimate (<i>p</i>-value)	Regression Estimate (<i>p</i>-value)
Intercept			4.83 (<0.0001)	
CAR	-0.17 (0.0002)	-0.20 (0.0022)	-4.49 (<0.0001)	-3.96 (0.0003)
Sales Growth	0.01 (0.4604)	0.03 (0.0073)	4.33 (0.0909)	2.48 (0.4402)
FCF Growth	0.21 (0.2389)	-0.01 (0.7557)	0.54 (0.0110)	0.65 (0.0100)
EPS Growth	0.04 (0.7505)	0.05 (0.4184)	0.16 (0.2695)	0.16 (0.5334)
ROE	0.00 (0.7506)	0.00 (0.0211)	-1.83 (0.5534)	-4.77 (0.1991)
EBITDA Margin	0.00 (0.9971)	-0.10 (<0.0001)	-0.15 (0.8443)	-0.62 (0.6076)

(Table 11 continues)

(Table 11 continued)

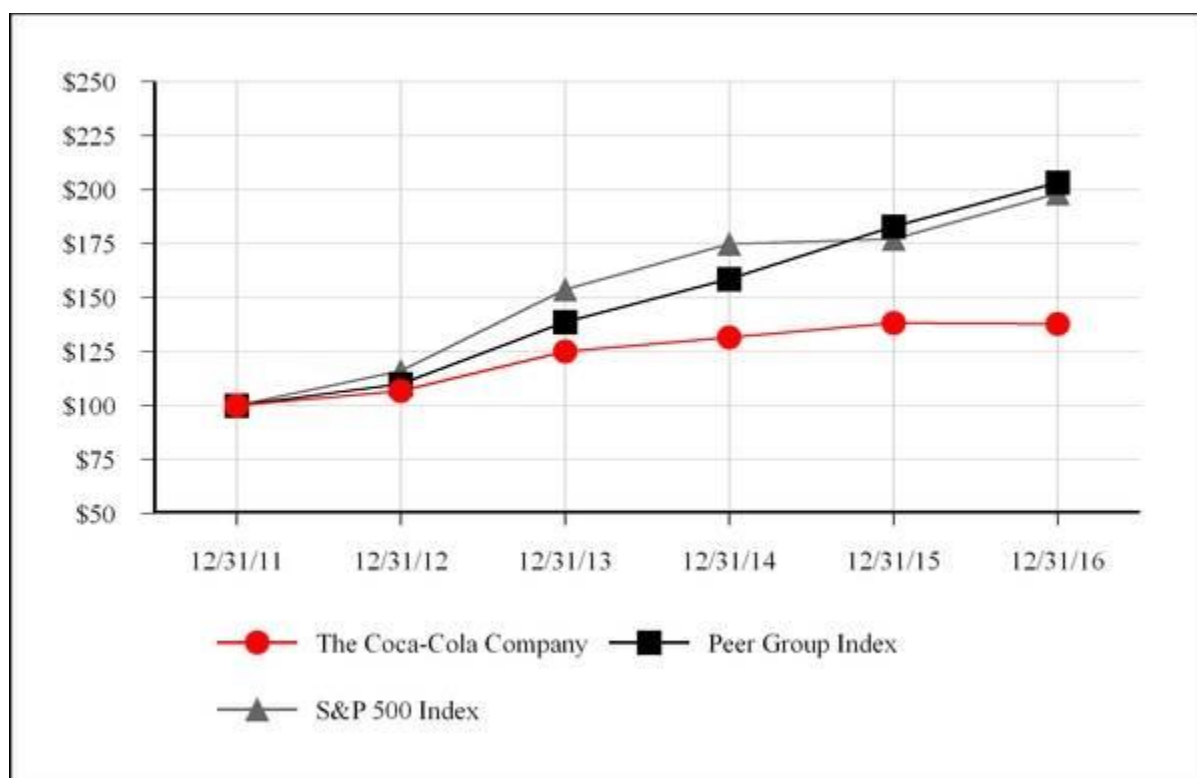
Panel B: Previous Fiscal Year-Adjusted Accounting Measures

	Difference in Mean (<i>p</i>-value)	Difference in Median (<i>p</i>-value)	Regression Estimate (<i>p</i>-value)	Regression Estimate (<i>p</i>-value)
Intercept			5.73 (<0.0001)	
CAR	-0.17 (0.0002)	-0.20 (0.0022)	-5.44 (<0.0001)	-370.80 (<0.0001)
Sales Growth	0.00 (0.8328)	-0.01 (<0.0001)	-1.81 (0.4578)	-291.50 (<0.0001)
FCF Growth	0.21 (0.2359)	-0.04 (0.6581)	0.54 (0.0327)	52.10 (<0.0001)
EPS Growth	-0.05 (0.8300)	-0.08 (0.1631)	-0.08 (0.3510)	-9.93 (<0.0001)
ROE	0.01 (0.5152)	-0.01 (0.4091)	2.85 (0.1569)	286.10 (<0.0001)
EBITDA Margin	0.00 (0.7195)	0.00 (0.3750)	-27.28 (0.0025)	-3,043.40 (<0.0001)

Figure 1. Sample Performance Graph of Coca-Cola for Fiscal Year 2015

Source: Coca-Cola Form 10-K for fiscal year 2015

**Performance Graph
Comparison of Five-Year Cumulative Total Return Among
The Coca-Cola Company, the Peer Group Index and the S&P 500 Index
Total Return
Stock Price Plus Reinvested Dividends**



December 31,	2011	2012	2013	2014	2015	2016
The Coca-Cola Company	\$ 100	\$ 107	\$ 125	\$ 131	\$ 138	\$ 138
Peer Group Index	100	110	139	159	183	203
S&P 500 Index	100	116	154	175	177	198

Figure 2. Announcement CARs

This figure shows the CARs for the 153 firms in our sample for the period of 250 trading days before and after their announcements. The horizontal axis presents days relative to the announcement date for the fiscal year results. CARs are estimated using the Fama-French five-factor model.

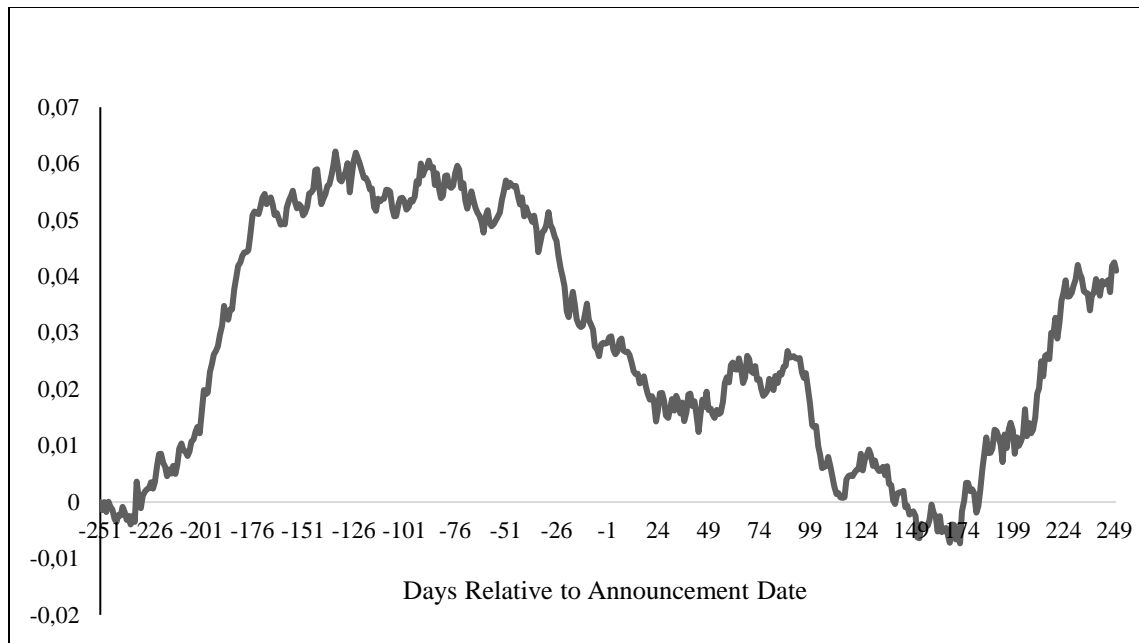


Figure 3. Announcement CARs for Sub-samples

This figure shows the CARs for the three sub-samples of firms for the period of 250 trading days before and after the announcements. The 29 Positive-CAR Firms have significant positive CARs the fiscal year for which the announcement is made, the 18 Negative-CAR Firms have significant negative CARs, and the 106 Insignificant-CAR Firms have insignificant CARs. The horizontal axis is days relative to the announcement date for the fiscal year results. CARs are estimated using the Fama-French five-factor model.

