

# Non-GAAP Earnings: Informative or Opportunistic?

## An Analysis of Transitory Gains

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*Comments Very Welcome*

### Abstract

We examine the disclosure (and lack of disclosure) of non-GAAP earnings information of firms reporting transitory gains. How a firm discloses information about transitory gains allows us to distinguish between two competing motivations managers have for disclosing non-GAAP earnings: (1) a desire to be informative versus (2) the incentive to report overly optimistic earnings. Unlike transitory losses, the exclusion of transitory gains *reduces* continuing income, and thus the motivation is more likely to be a desire to be informative rather than a desire to report an optimistically biased earnings metric. We find that approximately 42 percent of the firms in our hand-collected sample fail to provide transparent disclosures of a transitory gain. Among these low-quality disclosers, we find that transitory gains are negatively associated with the 10-Q/K filing return for the same quarter, consistent with investors not accurately pricing the implications of the transitory gain at the time of the earnings announcement. Our evidence has implications for investors and regulators, as we find that at least some managers appear to strategically omit non-GAAP earnings information to report higher continuing income.

Keywords: Non-GAAP earnings, transitory gains, disclosure quality.

Data availability: All data are available from the sources cited in the text.

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## I. INTRODUCTION

Since the mid 1990s managers have commonly disclosed non-GAAP earnings per share in their earnings announcements.<sup>1</sup> When calculating non-GAAP earnings, managers generally exclude transitory items which are less relevant for companies' ongoing operations. Because most transitory items are income-decreasing, non-GAAP earnings are, on average, higher than GAAP earnings. As the exclusion of transitory expenses results in both a more persistent and higher earnings metric, it is difficult to determine the underlying motivation for managers to disclose non-GAAP earnings. On the one hand, the exclusion of transitory items can be informative to investors. On the other hand, the exclusion of recurring income-decreasing items overstates the performance of the company. A number of studies have investigated whether the use of non-GAAP earnings is motivated by informative or opportunistic reasons, with findings consistent with both explanations (e.g., Bhattacharya et al. 2003; Doyle et al. 2003; Lougee and Marquardt 2004; Choi et al. 2007; Johnson and Schwartz 2007; Black and Christensen 2009; Frankel et al. 2011). Although non-GAAP earnings are generally more informative than GAAP earnings in that they are more predictive of future operating earnings, they can also be opportunistic, as managers have been found to exclude recurring expenses to meet strategic earnings benchmarks on a non-GAAP basis.

We document clear evidence on the motivations for the use of non-GAAP disclosures for a sample of firms reporting transitory gains post Regulation G. Unlike transitory expenses, there is no opportunistic reason to exclude transitory gains. Instead, managers excluding transitory gains are likely to be motivated by the desire to provide an informative earnings figure. We focus our analysis on the post Regulation G period because the regulation was aimed at limiting

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<sup>1</sup> Generally, "street earnings" refer to adjusted earnings numbers disclosed by forecast tracking services like I/B/E/S or First Call, and "pro forma earnings" refer to manager-disclosed adjusted earnings metrics in the earnings announcement. "Non-GAAP earnings" is a more generic term and can refer to either source of adjusted earnings.

the misuse of non-GAAP disclosure but was silent on the omission of possibly informative non-GAAP disclosures.<sup>2</sup> Our research design allows us to better understand the motivations of managers reporting non-GAAP earnings metrics. Specifically, the disclosure of one-time gains decreases non-GAAP earnings relative to GAAP earnings, and also provides information about the persistence of the components of earnings. Thus, assuming that managers have an incentive to report higher earnings, on average, managers' disclosure of non-GAAP earnings information in the presence of a transitory gain allows us to distinguish between informative and opportunistic reporting of non-GAAP earnings. Evidence that managers clearly disclose transitory gains in their press releases would suggest that they present the earnings figure that has the highest relevance for future periods rather than just the highest level of earnings (i.e., their intent is to be informative).<sup>3</sup>

We identify transitory gains, ex post, using Compustat's identification of special items from firms' subsequent 10-Q/K filings. Our sample consists of 3,401 firm-year observations identified as reporting net positive (income-increasing) special items (hereafter transitory gains) from 2004 to 2009.<sup>4</sup> We examine the association between Compustat-identified transitory gains and both earnings announcement returns and returns around the 10-Q/K filing dates to infer the average clarity of management disclosure regarding the transitory nature of a gain in their

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<sup>2</sup> As noted in the SEC's final ruling on Regulation G, "a registrant, or a person acting on its behalf, shall not make public a non-GAAP financial measure that, taken together with the information accompanying that measure, contains an untrue statement of a material fact or omits to state a material fact necessary in order to make the presentation of the non-GAAP financial measure, in light of the circumstances under which it is presented, not misleading." What is not discussed, however, is the failure to use non-GAAP disclosure when such a disclosure would be informative, such as in the presence of a transitory gain.

<sup>3</sup> See Appendix A for an example of the difference between our research design and that of prior research designs, and for an illustration of the above discussion.

<sup>4</sup> We confirm that these special items have different implications for future earnings than continuing income, consistent with prior research.

earnings announcement relative to their less timely, but more structured 10-Q/K filings.<sup>5</sup> Specifically, earnings announcements are not audited and managers have a great deal of latitude over what they can disclose, while SEC filings are subject to more external monitoring (via an audit or review) and have more disclosure requirements; for example, material transitory gains must be broken out on the face of the income statement or disclosed in the footnotes.

We find that transitory gains are significantly positively associated with earnings announcement returns, but that this association is lower than the association between continuing income and earnings announcement returns. Subsequently, at the time of the 10-Q/K filing, the flexibility to disclose the nature of income is removed and these transitory gains are more clearly disclosed as one-time gains on the sale of assets, insurance and lawsuit settlements, reversals of prior restructuring reserves, and gains on debt extinguishments. At the time of the 10-Q/K filing, we document a negative association between the price reaction to the filing and the transitory gain, consistent with the revelation that previously disclosed components of income are unlikely to recur.<sup>6</sup> Taken together, these results suggest that investors do not have sufficient information available to them at the time of the earnings announcement regarding the transitory gain.<sup>7</sup>

We corroborate these inferences by documenting that the revelation of information about transitory gains at the time of the 10-Q/K filings is concentrated among firms that provide less transparent disclosure of the transitory gain in the earnings announcement. Specifically, for a

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<sup>5</sup> Our sample is distinct from prior studies which either (a) use I/B/E/S earnings to proxy for non-GAAP earnings (e.g., Doyle et al. 2003), or (b) search earnings announcements for key words indicating non-GAAP earnings usage (i.e., Bhattacharya et al. 2003). By identifying firms that recognized a transitory gain in the 10-Q or 10-K filing via Compustat, we are able to investigate management's treatment of these charges without (a) conditioning on analysts' treatment of these charges or (b) identifying only those managers that ex post disclose the transitory charges in their earnings announcements. Our study does, however, rely on Compustat's classification of transitory items, which we discuss below.

<sup>6</sup> In additional untabulated analysis, we replicate Burgstahler et al.'s (2002) tests to investigate whether transitory gains in the post Regulation G period appear to lead to predictable returns around one-year-ahead earnings announcements. We find evidence that, on average, investors appear to update their expectations about future income following the 10-Q/K filing, rather than at subsequent earnings announcements.

<sup>7</sup> In future versions of this paper, we plan to investigate the incentives that managers have to temporarily inflate stock price (i.e., insider trading between the earnings announcement and SEC filing).

hand-collected sample of firms, we identify the information about transitory gains disclosed in the earnings announcement. We document substantial variation in how firms disclose information on transitory gains, finding a range of approaches to disclosing (or not disclosing) this information, from no acknowledgment of the transitory gain, to the provision of a non-GAAP earnings per share figure that clearly removes the transitory gain. We also document that some firms are inconsistent in their disclosure of transitory gains and transitory losses in adjacent quarters, with this sample of firms providing information on the EPS effect of a transitory loss, but at best providing only a total dollar value for a transitory gain.

Our evidence contributes to the non-GAAP earnings literature and more generally to the disclosure literature. By examining a sample of firms with transitory gains, we are better able to identify when managers provide informative non-GAAP disclosures and when they opportunistically omit information about transitory gains. Thus, while Regulation G appears to have curtailed much of the misuse of non-GAAP reporting in the presence of one-time *expenses* (Heflin and Hsu 2008; Kolev et al. 2008; Black and Christensen 2009; Brown et al. 2011a; Zhang and Zheng 2011), the regulation is silent with respect to when non-GAAP earnings information should be disclosed, and some managers appear to omit supplemental disclosures about transitory gains in the presence of these income-*increasing* transitory items. This is especially salient as numerous studies have documented a reduction in the usage of non-GAAP reporting immediately following Regulation G (i.e., Entwistle et al. 2006; Marques 2006; Heflin and Hsu 2008).<sup>8</sup>

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<sup>8</sup> Using a more comprehensive dataset, Brown et al. (2011b) find that, although there was an initial dip in the frequency of non-GAAP earnings disclosures after SOX and Regulation G, the frequency of non-GAAP earnings usage has increased in recent years. Our study examines 2004–2009 and thus should be generalizable to the post Regulation G period.

In addition, our research design allows us to analyze the choice to report non-GAAP earnings, *conditional on the existence of a transitory item*, while prior research identifies their non-GAAP samples by conducting a search string, and thus consider only those firms that do ex post report non-GAAP earnings. Thus, our sample includes firms that do, and do not, disclose non-GAAP earnings information, instead of only non-GAAP disclosing firms. We then demonstrate that non-GAAP disclosure leads to more efficient pricing of earnings, while the lack of non-GAAP disclosure leads to a temporary mispricing of firm earnings.

The paper proceeds as follows. In the next section we motivate our hypotheses with a discussion of the related literature. In Section III we describe the data and provide descriptive statistics. In Section IV we present the test design and empirical findings, and in the final section, we conclude the study.

## **II. BACKGROUND AND MOTIVATION**

Bradshaw and Sloan (2002) document a growing disparity between earnings based on Generally Accepted Accounting Principles (GAAP) and alternative non-GAAP earnings measures which exclude transitory items. They suggest that managers appear to highlight non-GAAP earnings in their earnings announcements and that analysts and investors appear to focus on these highlighted non-GAAP earnings figures. Bradshaw and Sloan (2002) propose two possible explanations for the use of non-GAAP earnings. First, the exclusion of certain income-decreasing items allows managers and analysts to garner higher valuations, potentially inflating stock price. In this case non-GAAP earnings will exceed GAAP earnings (the opportunism hypothesis). Second, non-GAAP exclusions allow managers and analysts to present a better measure for forecasting future earnings and cash flows and estimating firm value (the information hypothesis).

A number of studies have investigated these competing explanations. Consistent with the information hypothesis, non-GAAP earnings are more informative to investors relative to GAAP earnings (e.g., Bhattacharya et al. 2003), especially when GAAP-earnings informativeness is low (Lougee and Marquardt 2004), or more subjective (Choi et al. 2007), and are more predictive of future earnings, consistent with these earnings figures being a better representation of continuing earnings (Brown and Sivakumar 2003). Consistent with the opportunism hypothesis, the exclusions from GAAP earnings systematically allow managers to meet earnings benchmarks (Black and Christensen 2009, Doyle et al. 2009) and are associated with future cash outflows and negative abnormal returns, consistent with these excluded expenses recurring in subsequent periods (Doyle et al. 2003).<sup>9</sup> Moreover, these relations are generally stronger when firms have weak governance (Frankel et al. 2011).

A limitation of these studies is that non-GAAP earnings exclusions tend to be income-decreasing, making it difficult to conclude whether the first-order objective of management is to be informative or opportunistic. Specifically, both hypotheses predict the same treatment for the disclosure of income-decreasing items, that is, to disclose that the item is transitory. In addition, for studies that find support for the opportunism hypothesis, it is difficult to identify specific firms that are acting opportunistically. To the extent that firms are shifting recurring expenses into transitory losses and then excluding them from non-GAAP earnings, these studies can only speak to an on average effect, requiring regression analysis on multiple periods of future financial data. Also, while the explicit exclusion of recurring expenses (i.e. stock compensation)

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<sup>9</sup> In response to concerns regarding the misuse of pro forma earnings numbers, the Securities and Exchange Commission (SEC) issued a warning about pro forma earnings in 2001, and Section 401(b) of Sarbanes-Oxley (SOX) is devoted to the regulation of pro forma usage (Regulation G). Regulation G requires that managers issuing pro forma earnings numbers reconcile these figures to the most directly comparable GAAP measure. Since Regulation G fewer managers release non-GAAP earnings in their press releases (Marques 2006; Entwistle et al. 2006), fewer managers are using non-GAAP earnings numbers to meet analyst forecasts (Heflin and Hsu 2008), and exclusions from non-GAAP earnings tend to be of higher quality (less associated with future earnings and cash flows) (Kolev et al. 2008).

would seem to suggest an opportunistic motive for non-GAAP disclosure, it is not clear that this is always the case. Barth et al. (2009) investigates analyst earnings forecasts and finds that when stock compensation is excluded from the forecast, the stock compensation does not significantly impact future firm fundamentals (i.e. future earnings, future cash flows, contemporaneous returns), consistent with the exclusion being used to better reflect firm continuing income. Given this, the exclusion of seemingly recurring expenses from non-GAAP earnings does not unambiguously imply opportunism.

Our contribution is to focus on material transitory *gains* to better distinguish between these two competing explanations. In this setting, the informative and opportunistic explanations are essentially mutually exclusive based on the assumption that, on average, managers wish to report higher earnings. Moreover, disclosure treatment in the current quarter does not determine disclosure treatment in future quarters, as Schrand and Walther (2000) find that managers strategically emphasize prior period earnings that improve the perceived performance of the current period (i.e., highlighting prior period transitory gains and omitting disclosure of prior period transitory losses), regardless of their initial disclosure strategy. Consistent with managers attempting to report higher earnings, on average, Bowen et al. (2005) find that firms with non-GAAP profits but GAAP losses are more likely to emphasize non-GAAP earnings, relative to GAAP earnings, in the press release. They do not, however, investigate whether some firms omit transitory gain information altogether.

We identify a sample of firms that experience a one-time gain, and investigate whether the treatment of these transitory gains in the earnings announcement is more supportive of the information or opportunism hypotheses identified in prior work. The information hypothesis predicts that managers will carefully highlight the transitory nature of the gains in the earnings



announcement to provide investors and analysts the best measure of sustainable continuing income for use in forecasting and valuation. The opportunism hypothesis, however, predicts that managers will choose not to highlight the transitory nature of the gains in the earnings announcement in order to garner the highest possible valuation. Specifically, we investigate two mutually exclusive hypotheses:

***H1a: Managers voluntarily disclose non-GAAP earnings information excluding transitory gains in the earnings announcement (Information Hypothesis)***

***H1b: Managers do not voluntarily disclose non-GAAP earnings information excluding transitory gains in the earnings announcement (Opportunism Hypothesis)***

To test our hypotheses, we first confirm that Compustat-identified transitory gains are less persistent than recurring earnings—a necessary condition to disentangle the information and opportunism hypotheses in our setting. We next investigate how clearly managers disclose the transitory nature of a gain in the earnings announcement. We begin by examining the association between transitory gains and market returns around the earnings announcement. Preliminary support for H1a is found if the association between transitory gains and returns is less than the association between continuing income and returns, suggesting investors are provided some information about the transitory gain. Conversely, support for H1b is found if the association between transitory gains and returns is equal to that of continuing income and returns, suggesting that investors are not provided sufficient information to disentangle the gain from continuing income.

As the 10-Q/K filing requires stricter disclosure of transitory items, and thus investors will be aware of the transitory nature of the gain at the time of the 10-Q/K filing, we next examine the association between transitory gains and the market returns around the subsequent 10-Q/K filing. Support for H1a is found if the association is insignificant, consistent with

investors already having sufficient information to identify the gain as transitory. Alternatively, support for H1b is found if the association is negative, consistent with investors correcting their priors with information on the transitory nature of the gain provided in the 10-Q/K filing, but not available to them in the earnings announcement. Finally, we hand-collect the actual disclosure treatment for a subset of firms to corroborate our initial inferences, and conduct cross-sectional tests on high- and low-quality disclosers to further distinguish between the information and opportunism hypotheses.

### **III. SAMPLE AND DESCRIPTIVE STATISTICS**

We consider two samples for our analyses. The first sample contains 3,401 firm-quarter observations of firms reporting net positive special items. We identify these transitory gains via Compustat (i.e., through disclosure in the subsequently-filed 10-Q or 10-K), using data item SPIQ from Compustat's Xpressfeed. The three main types of transitory gains are gains on assets sales, gains from litigation settlements, and gains from restructuring reversals. We also examine a subsample using hand collected data, comprised of 1,403 firm-quarter observations reporting net positive special items of at least one percent of sales for which we hand-collect the disclosure treatment of the gain in the firm's earnings announcement. We require net positive special items for both samples because if the firm concurrently reports transitory losses exceeding the transitory gains we examine, the reporting incentive (informative versus opportunistic) is again ambiguous.<sup>10</sup> Both samples span the years 2004–2009; Regulation G was implemented in 2003 and we restrict our analyses to the current reporting regime.

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<sup>10</sup> As noted in footnote 2, Regulation G asserts that firms shall not report a non-GAAP financial measure that includes or excludes material facts that would cause the measure to be misleading. We take this to mean that a firm should not provide a non-GAAP measure that includes transitory gains (losses), while it excludes transitory losses (gains).

Our sample collection is distinct from prior studies which either (a) use I/B/E/S earnings to proxy for non-GAAP earnings (e.g., Doyle et al. 2003), or (b) search earnings announcements for key words indicating non-GAAP earnings usage (i.e., Bhattacharya et al. 2003). By identifying via Compustat firms that recognized a transitory gain in the 10-Q or 10-K filing, we are able to investigate management's treatment of these charges without (a) conditioning on analysts' treatment of these charges or (b) identifying only those managers that ex post disclose the transitory charges in their earnings announcements.<sup>11</sup>

We require sample firms to have (1) CRSP coverage, (2) a non-missing earnings announcement date on Compustat, (3) a non-missing 10-Q/K filing date on Edgar, (4) at least two days between the earnings announcement and filing dates, and (5) have data available for each of the variables, including one-year-ahead earnings. We also require that the firm be covered by I/B/E/S, as we use the most recent median consensus analyst forecast to proxy for earnings expectations. Finally, we exclude financial firms and utility firms to avoid additional regulatory features that might confound our analyses.

Appendix B provides specific definitions of the variables and Table 1 provides descriptive statistics for the full and hand-collected samples (Panels A and B, respectively). Turning first to the full sample, operating earnings per share has a mean (median) of 0.302 (0.220), which is notably higher than studies examining income-decreasing special item firms. This evidence is consistent with transitory gains being less associated with poor underlying performance of the firm relative to most income-decreasing special items such as restructuring

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<sup>11</sup> We must, however, rely on Compustat's identification of transitory gains. Transitory items that are missed by Compustat, or are immaterial, and thus not disclosed in a firm's earnings announcement or 10-Q/K, should not affect our inferences, as these are excluded from our analysis. To the extent that Compustat identifies transactions that are not actually transitory, this should add noise to our analyses making it less likely to document statistically significant results. We also investigate the accuracy of transitory gains via hand-collection of the press release. For those observations where the gain is not mentioned in the press release, we then refer to the SEC filing (10-K or 10-Q). If we cannot identify the source of the transitory gain, we exclude the firm-quarter observation from our sample.

charges and asset write-offs. The mean Operating Earnings Surprise is negative, indicating that operating earnings per share falls short of expected earnings (from I/B/E/S), on average, while the mean Street Earnings Surprise is positive, i.e., I/B/E/S actual earnings exceeds I/B/E/S expected earnings, consistent with I/B/E/S analysts excluding more expenses than just special items or including transitory gains in their earnings realizations. Net income-increasing special items have a mean (median) of 0.143 (0.033) per share. This value is netted with concurrent income-decreasing special items (such as restructuring charges), suggesting that the actual value of the transitory gains may be larger. The mean (median) three-day cumulative abnormal return around the earnings announcement (announcement return) of 0.006 (0.004) is consistent with a small amount of good news, on average, being released at the time of the earnings announcement.<sup>12</sup> In contrast, the mean and median filing returns are both  $-0.002$ , suggesting that, for this sample of firms, the additional information provided at the 10-Q/K filing tends to temper the information from the earnings announcement, on average. Firms with transitory gains do not appear to be notably different from the average Compustat firm with average book-to-market ratios of 0.512, average market value of equity of 5.8 billion and average sales of 1.2 billion. The mean (median) firm beta is 1.246 (1.191), suggesting that firms in our sample are slightly more risky than the market portfolio. Finally, referring to our variable “Benchmark,” in just under 20 percent of the firm-quarter observations, the firm would be able to meet the analyst forecast if the transitory gain were included in continuing income, but would miss the analyst forecast if the transitory gain were excluded from continuing income.

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<sup>12</sup> Note that our operating earnings surprise measure (Operating Earnings Surprise) suggests bad news, on average, at the time of the earnings announcement, while the I/B/E/S earnings surprise measure (Street Earnings Surprise) suggests good news. Generally the analyst actual value is the standard measure of earnings realizations. We use the GAAP figure in our regression analysis, rather than the analyst-generated figure, as we do not want to condition on how analysts treat the gain (for example, Gu and Chen (2004) document variation in how analysts treat transitory items). Our inferences are not affected, however, by how we measure earnings surprise. Results are similar using both Street Earnings Surprise and a random walk (not tabulated).

Turning next to our hand-collected sample of firms (those with net gains of at least one percent of sales), operating earnings appear to be lower, and the gap between operating earnings and analyst actual is notably larger, suggesting that analysts may include transitory gains in their earnings realizations. The mean (median) net income-increasing special items per share of 0.317 (0.113) is higher than that of the full sample by construction. Market capitalizations, total assets and sales appear to be lower, on average, relative to firms in the full sample. Finally, the number of firm-quarter observations where the treatment of the gain changes the outcome of meeting the analyst forecast increases to 30 percent.

We further disaggregate the hand-collected sample by high- and low-quality disclosers in Table 2 (Panels A and B, respectively). High-quality disclosers represent 58 percent of our hand collected sample, suggesting that just over half of the firms in this sample provide investors with sufficient information to generate a non-GAAP earnings per share figure excluding the transitory gain. These firms report significantly higher operating earnings than low-quality disclosers, but also tend to be larger firms.<sup>13</sup> The earnings per share effect of the transitory gain is larger among high-quality disclosers, as these are larger transitory items, the inclusion/exclusion of the gain changes the outcome of meeting versus missing the analyst forecast in more of the firm-quarter observations (31.2% versus 27.1%).

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<sup>13</sup> It is possible, therefore, that high-quality disclosers are simply larger firms with better disclosure policies (Lang and Lundholm 1993; Botosan 1997). For this reason, we also examine how low-quality disclosers treat income-decreasing transitory items in adjacent quarters; we find that about one-third of these firms do disclose non-GAAP earnings information in quarters where they report income-decreasing transitory items (suggesting their treatment in the presence of a transitory gain is opportunistic), while the remainder appear to have a consistent disclosure policy of not providing non-GAAP earnings information.

## **IV. TEST DESIGN AND EMPIRICAL ANALYSIS**

### **Overview**

To test the information and opportunism hypotheses, we consider a three-part design. We first confirm, for our sample firms, that income-increasing special items have different implications for future earnings than continuing income, consistent with the results of prior research (e.g., Burgstahler et al. 2002). To the extent that they have the same implications for future earnings as continuing income, we would not expect even a diligent manager to highlight them as transitory in the firm's earnings announcement.

We next examine the earnings announcement response coefficient (measured over the three days around the earnings announcement) and the filing response coefficient (measured over the seven days (-1, +5) around the 10-Q/K filing date) associated with the transitory gain to infer management's disclosure policy for a large sample of firms. At the extremes, an earnings response coefficient on transitory gains that is less than that on operating earnings, with a corresponding filing response of zero, implies that on average managers clearly articulate, in the earnings announcement, the amount of GAAP earnings that are not expected to recur. In contrast, an earnings announcement response coefficient equal to that of operating earnings, with a corresponding negative filing response implies that on average managers do not highlight the transitory nature of these gains in the earnings announcement. As it is likely that there will be substantial variation in the informativeness and opportunism of managers' treatments of transitory gains at earnings announcements, our results are likely to be within these extremes.

Finally, for a subset of firms, we hand-collect the actual disclosures from the earnings announcement, and determine their quality, where high-quality disclosers provide sufficient information to determine earnings per share before the transitory gain, and low-quality disclosers

do not. We also partition our sample on a broader definition of disclosure quality, which allows for disclosure quality to be based on a continuous variable, and re-estimate the earnings persistence and earnings response tests. Evidence that managers highlight transitory gains is consistent with the information hypothesis, while evidence that managers fail to highlight transitory gains is consistent with the opportunism hypothesis.<sup>14</sup>

## Persistence

There are several ways to estimate the persistence of earnings components (e.g., Fairfield et al. 1996; Burgstahler et al. 2002; Doyle et al. 2003). We follow the estimation procedure outlined by Doyle et al. (2003) because they do not impose a specific expectation of when we would expect the future implications to occur (i.e., in the next quarter, four quarters hence, or spread over several future quarters). This structure works well for special items since we do not have a prediction for what quarter the gains may affect future earnings. Thus, we estimate the following pooled regression:

$$\begin{aligned}
 \text{Future Operating Earnings} = & \alpha_0 + \alpha_1 \text{Operating Earnings} + \alpha_2 \text{Transitory Gains} \\
 & + \alpha_3 \text{Sales Growth} + \alpha_4 \text{Log(Total Assets)} + \alpha_5 \text{Earnings Volatility} \\
 & + \alpha_6 \text{Loss} + \alpha_7 \text{Book-to-Market Ratio} + \varepsilon
 \end{aligned} \tag{1}$$

where each of these variables is defined in Appendix B. We use future operating earnings per share over the next four quarters as our dependent variable, following Kolev et al. (2008). Doyle et al. (2003) concentrate their examination of future implications of non-GAAP earnings exclusions on future cash flows, however, it is possible, especially in the year following the

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<sup>14</sup> Though, on average, we do not expect transitory gains to persist, it is possible that some firms regularly experience litigation settlements or insurance recoveries and therefore these gains exhibit positive autocorrelation with future net income. Riedl and Srinivasan (2010) correlate disclosure with ex post persistence in the setting of special items. They find that managers are more likely to disclose more persistent special items in the footnotes and less persistent special items on the face of the income statement and conclude that managers use placement within the financial statements for signaling (information) purposes.

special item, for cash flows to be realized in response to the special item (i.e., the firm could receive the cash from the litigation settlement). Thus, we focus on future operating earnings, which should not have a mechanical association with transitory charges.

We estimate least squares regressions with robust standard errors and include year and industry fixed effects, where industries are defined using the Fama-French 48 industry classification (Fama and French 1997). A coefficient on transitory gains that is not statistically different from zero ( $\alpha_2 = 0$ ) indicates that, on average, this income-statement component is perfectly transitory, while a coefficient of four ( $\alpha_2 = 4$ ) indicates that it is perfectly permanent (recall that the independent variable comprises a single quarter while the dependent variable comprises four quarters). We present the results in the first column of Table 3. The coefficient on operating earnings is 2.47, suggesting that one dollar of operating earnings is associated with \$2.47 of operating earnings over the next four quarters. In contrast, the coefficient on transitory gains is  $-0.34$ , suggesting that one dollar of transitory gains is associated with a *reduction* in earnings of 34 cents over the next four quarters, on average.<sup>15</sup> This association suggests that a manager motivated to use non-GAAP earnings to be more informative, would, on average, want to disclose the transitory gain since the implications for future earnings are significantly different from those of operating earnings. The empirical relation between transitory gains and future earnings is very similar in our hand-collected sample, where the coefficient on transitory gains is  $-0.24$  (see the second column of results in Table 3).

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<sup>15</sup> This coefficient differs from that found in Burgstahler et al. (2002), where income-increasing special items are positively associated with four-quarters-ahead earnings. Our estimations differ in at least four ways. First, our time period does not overlap with the sample used in Burgstahler et al. (2002), second, we omit all firm-quarters that do not have income-increasing special items, third, we consider an aggregation of four quarters of future earnings rather than focusing on four-quarters-ahead earnings, and finally, we consider future operating earnings, while Burgstahler et al. consider future unexpected net income. To further investigate this difference, we replicate the Burgstahler et al. (2002) study and extend the analysis to the post Regulation G period. We find that the coefficient on transitory gains is not statistically different from zero in each of the subsequent three quarters. For the fourth quarter ahead period, we find that transitory gains exhibit negative persistence, suggesting the time-series properties of transitory gains have changed over time.



In untabulated results, we partition transitory gains by type. The most common type of transitory gain is the gain on sale of an asset (1,153 observations), followed by settlements (996 observations). There are 682 transitory gains that are primarily classified as restructuring (which tend to be reversals of prior reserves), 531 classified as other, and 299 as debt extinguishments. With the exception of settlements, each of the classifications exhibit negative persistence. Among assets sales, it is possible that the negative association between future operating earnings and current period transitory gains is due to (1) the sale of a productive asset (leading to lower future revenues) or (2) the replacement of fully depreciated assets (leading to an increase in depreciation expense). Regardless of the underlying reason for the negative persistence, however, it is clear that transitory gains have different implications for future earnings than continuing income.

### **Earnings Response Coefficients**

We examine the earnings response coefficient on transitory gains at the earnings announcement and subsequent 10-Q/K filing to infer the market's assessment of the permanence of these gains relative to continuing income. To examine the earnings response coefficient on transitory gains at the time of the earnings announcement, we estimate the following regression:

$$\begin{aligned} \text{Announcement Return} = & \alpha_0 + \alpha_1 \text{Operating Earnings Surprise} + \alpha_2 \text{Transitory Gains} \\ & + \alpha_3 \text{Book-to-Market Ratio} + \alpha_4 \text{Market Value of Equity} + \alpha_5 \text{Beta} + \varepsilon \quad (2) \end{aligned}$$

where the variables are defined in Appendix B. To minimize the impact of outliers, we follow Doyle et al. (2003) and decile-rank the independent variables. Our coefficient of interest,  $\alpha_2$ , measures the association between the earnings announcement return and the transitory gain. As discussed previously, a coefficient on transitory gains ( $\alpha_2$ ) that is equal to the coefficient on unexpected earnings ( $\alpha_1$ ) implies that managers did not clearly isolate and discuss the transitory

gains in the press release, which prevents investors from properly pricing the gain. We corroborate this assumption by examining the response coefficient on transitory gains at the time of the 10-Q/K filing in Table 5.

The first column of results in Table 4 presents results for the full sample. The coefficient on unexpected earnings is 0.067, while the coefficient on transitory gains is 0.010, and these two coefficients are statistically different from one another (F-test p-value < 0.01; not tabulated). The coefficient on transitory gains is insignificant in the hand-collected sample (final column of results in Table 4).

The results suggests that, on average, managers do disclose the transitory gains in the earnings announcement, and investors weight these gains at an amount less than continuing income. It is difficult to assess, however, if a weighting of zero is the appropriate weighting, given the negative implications for future operating earnings. For this reason, we examine the subsequent 10-Q/K filing returns in Table 5. If investors accurately price transitory gains at the time of the earnings announcement, we would not expect the transitory gains to be associated with the subsequent 10-Q/K filing returns.

To examine the earnings response coefficient on transitory gains at the time of the 10-Q/K filing, we estimate the following regression:

$$\begin{aligned} \text{Filing Return} = & \alpha_0 + \alpha_1 \text{Operating Earnings Surprise} + \alpha_2 \text{Transitory Gains} \\ & + \alpha_3 \text{Book-to-Market Ratio} + \alpha_4 \text{Market Value of Equity} + \alpha_5 \text{Beta} + \varepsilon \end{aligned} \quad (3)$$

The first column of results in Table 5 presents results for the full sample. As in our examination of announcement returns, we decile-rank the independent variables. The coefficient on unexpected earnings is not statistically different from zero, consistent with the bulk of information regarding continuing income being impounded into price at the time of the earnings announcement. The coefficient on transitory gains, however, is negative (−0.008) and

significant, providing some evidence that managers were not fully transparent in their disclosure of transitory gains in the earnings announcement. For the hand-collected sample, however, the coefficient on transitory gains is not statistically different from zero. In the next section, we partition the hand-collected sample by disclosure quality to further investigate our hypotheses.

### **Earnings Announcement Disclosure Quality**

For 1,403 firm-quarters with net income-increasing special items of at least one percent of sales, we investigate whether the gain is disclosed in the firm's earnings announcement press release in sufficient detail for investors to back out the earnings per share amount from GAAP earnings. Specifically, if the earnings announcement contains any one of the three following disclosures, we consider the earnings announcement to have high disclosure quality, and if the earnings announcement does not contain any of the three following disclosures, we consider the earnings announcement to have low disclosure quality.

1. The earnings announcement contains the earnings per share effect of net transitory items (including the transitory gain identified by Compustat from the firm's SEC filings).
2. The earnings announcement contains the earnings per share effect of the gain identified by Compustat from the firm's SEC filings.
3. The earnings announcement contains a non-GAAP earnings per share figure that excludes the transitory gain identified by Compustat from the firm's SEC filings.

When any of these disclosures is present, we consider the disclosure quality of the firm to be high. If none of these disclosures is present, we consider the disclosure quality of the firm to be low. Of the 1,403 earnings announcements, 817 contain enough information to easily determine

GAAP earnings per share before the transitory gain (i.e., contain disclosures of 1, 2 or 3 listed above), and the remaining 586 firm-quarters do not.<sup>16</sup>

We also support the above disclosure classification with a broader definition of disclosure quality. Each observation receives one point for each of the following categories that are met, which leads to the worst (best) disclosers receiving a score of 4 (0). We then use the log of this score to proxy for a firm's overall transitory gain disclosure quality. This allows for disclosure quality to be determined by a continuous variable, opposed to the binary variable required by the above definition. The categories are:

- a) No Gain Mentioned: Where there is no mention of the transitory gain in the earnings announcement.
- b) No Value Provided: Where there is no mention of the transitory gain in the earnings announcement, or the transitory gain is mentioned in the earnings announcement, but no dollar value of the gain is provided.
- c) No EPS Effect of Gain Provided: Where there is no mention of the transitory gain in the earnings announcement, or the transitory gain is mentioned in the earnings announcement, but the earnings per share effect is not provided.
- d) No Non-GAAP Summary Figure Provided: Where there is no mention of the transitory gain in the earnings announcement, or the transitory gain is mentioned in the earnings announcement, but the firm does not specifically highlight the net impact

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<sup>16</sup> Note that our focus is on earnings per share. Some firms provide only the raw dollar value of the gain; these firms are classified as low-quality disclosers as investors would need to exert additional effort to discern the after-tax EPS effect of the gain. One difficulty in the estimation of the after-tax EPS effect of the gain relates to determining the appropriate tax rate. While it is often assumed that 35% is the appropriate tax rate, numerous observations in our hand collected sample disclose an after-tax EPS effect that is different, sometimes dramatically, from 35%. Moreover, there are instances where the tax rate applied to the special item differs from the firm's effective tax rate. Finally, managers could expect investors to fixate on the emphasized EPS figure (Bowen et al. 2005).

of transitory items or does not provide a non-GAAP summary measure excluding the gain.

For the broader definition of disclosure quality, 126, 143, 896 and 788 are No Gain Mentioned, No Value Provided, No EPS Effect of Gain Provided and No Pro Forma Values Provided, respectively. We re-estimate each of our tests allowing for an interaction term with low-quality disclosers, our binary variable measure, or with our broader definition of disclosure quality, our continuous variable measure.

In Table 6, we estimate our earnings persistence regressions with an interaction for low-quality disclosers. Under the information hypothesis, we expect the persistence of transitory gains to be lower (i.e., closer to zero) among high-quality disclosers, where transitory gains are disclosed more prominently. Similarly, among low-quality disclosers, we expect the persistence of the transitory gains to be higher (i.e., closer to the persistence of continuing income), thus reducing the need for disclosure. Under the opportunism hypothesis, we expect no relation between disclosure quality and the ex post persistence of the transitory gain.

We find that, among high-quality disclosers, transitory gains are not associated with future earnings (the main effect of transitory gain per share is not statistically different from zero), supporting their choice to highlight the transitory gain. Among low-quality disclosers, however, transitory gains are negatively associated with future earnings (the interaction term is negative and weakly significant, with a coefficient of  $-0.255$  and a t-statistic of  $-1.62$ ). Although we had not predicted a negative persistence, this finding supports that low-quality disclosers should have highlighted their transitory gains, as these gains have different implications for future earnings than continuing income. This finding is supported when we use the broader definition of disclosure quality, based on a continuous variable. Higher quality

disclosure firms have transitory gains that are not associated with future earnings; while lower quality disclosure firms have transitory gains that have a statistically significant negative association with future earnings (the interaction term is negative and significant, with a coefficient of  $-0.322$  and a t-statistic of  $-2.00$ ).

The first two columns of Table 7 present the results from estimating earnings response regressions for the three days around the earnings announcement  $(-1, 1)$ , with an interaction for low-quality disclosers. Among both high- and low-quality disclosers, we find that there is no discernable market response to the transitory gain, consistent with this gain being priced as transitory. This evidence extends to both definitions of disclosure quality.

To explore the implications of disclosure quality further, the last two columns of Table 7 investigate earnings response coefficients for the seven days around the 10-Q/K filing  $(-1, +5)$ . We require the earnings announcement to precede the filing date by at least two days in order to isolate the effects of each information event. For high-quality disclosers, we again find no discernable market response to the transitory gain, consistent with high quality disclosers appropriately highlighting the future earnings implications of the transitory gains at the earnings announcement and the market reacting accordingly. The results from the persistence and market response tests suggest that just over half of the observations in our sample are providing non-GAAP information to inform market participants, consistent with the information hypothesis. Among the low-quality disclosers, however, we find a negative association between transitory gains and the filing return (t-statistic =  $-2.13$ ), suggesting that disclosure quality does affect investors' perceptions of continuing income. Specifically, our results are consistent with low-quality disclosers, representing just under half of our sample, omitting value-relevant information about the persistence of transitory gains in the earnings announcement, consistent

with the opportunism hypothesis. When we use the broader definition of disclosure quality, the results are similar; the filing returns are insignificant for high-quality disclosers, and negative and significant for low quality disclosers (t-statistic  $-1.84$ ).

### **Opportunistic Reporting versus Disclosure Policy**

It is possible that those firms we identify as opportunistic because they omit transitory gain information, may simply be low-quality disclosers overall or have a policy to not provide non-GAAP earnings per share. To investigate this possibility, among our sample of 586 low-quality disclosers, we look at the adjacent quarters to determine if the firm's disclosure treatment extends to material transitory *losses*. We identify those adjacent quarters identified by Compustat as having a transitory loss that is of similar magnitude to the low quality discloser's transitory gain. Because managers may provide different levels of disclosure in the fourth quarter, we do not compare fourth quarter disclosure to other quarters. Thus, for fourth-quarter observations, we look four quarters ahead for transitory losses, and similarly, for third-quarter observations, we look four quarters ahead for transitory losses. For first- and second-quarter observations, we look one quarter ahead (i.e., either the second or third quarter of the same year). This initial collection procedure yields 94 firm-quarter observations with similar magnitude transitory losses.<sup>17</sup> Of these 94 firm-quarters, 31 firm-quarters (33 percent) disclose the EPS effect of the transitory loss. While finding that 33 percent of our low-quality disclosers behave inconsistently across quarters corroborates our initial classification of these firms, it also suggests that nearly two-thirds of our low-quality disclosers simply do not disclose non-GAAP earnings per share. Regardless, our evidence has implications for regulators, as the poor-quality

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<sup>17</sup> Hand collection in this area is ongoing.

disclosure has future negative return implications and thus appears to temporarily mislead investors.

### **Disclosure Quality Determinants**

For our hand collected sample of 1,403 firm quarter observation, we next investigate the type of special items prevalent in the sample and which firm characteristics are useful in identifying low quality disclosure observations. Table 8, Panel A, presents detail for the five largest special item types in our hand collected sample. Gain on sale of assets, settlements, and other special items are the most common types of special items in this sample, consistent with the full sample. Panel A also provides detail on the percentage of hand collected observations that are classified as low quality. The percent of observations listed as low quality varies by special item type and is monotonically decreasing in the mean and median size of the special item. This could suggest that the disclosure of non-GAAP financial information simply depends on the size of the special item.

Table 8, Panel B, presents a logit model to assess low quality disclosure firm characteristics. We find that firms with larger durations of time between the earnings announcement and the financial statement reporting date tend to be better disclosers. This finding may be representative of firms with stronger financial reporting processes having more ability to issue earnings announcements earlier in the financial reporting process, but waiting to file their financial statements until the required reporting date. We also find that larger and more profitable firms are less likely to provide low quality disclosures, consistent with our discussions of Table 2. Interestingly, while Panel A suggests that special item size influences firm disclosure quality, transitory gain per share is not statistically significant after controlling for firm size and



other determinants of disclosure quality. We find some evidence that firms filing a 10-K or firms with year-over-year increases in operating earnings are more likely to be low quality disclosers. Finally, we do not find that firms are more likely to omit non-GAAP information in order to meet the analyst forecast.

## **V. CONCLUSION**

We examine the disclosure treatment of transitory gains to disentangle two competing explanations for the disclosure of non-GAAP earnings. Non-GAAP earnings tend to exclude transitory items, which makes the number, on average, a better predictor of future earnings. Non-GAAP disclosure could therefore be motivated by managers wishing to provide the most information about variation in the persistence of different earnings components. Excluded expenses, however, are income-decreasing, on average, and so non-GAAP earnings values also tend to increase continuing earnings and thus could be opportunistically motivated. Because the disclosure of one-time gains decreases continuing earnings, but provides information about the persistence of the components of earnings, we use this setting to distinguish between the informative and opportunistic reporting of non-GAAP earnings.

We find that transitory gains are negatively associated with future earnings, on average, but are not priced as such at the earnings announcement. We then examine the associations between the disclosure quality of the earnings announcement with the persistence of the gain, the earnings response to the gain at the earnings announcement and 10-Q/K filing date. We classify high disclosure quality firms as those that provide sufficient information to infer non-GAAP earnings per share excluding the gain. Among high-quality disclosers, representing just over half of our sample, we find that transitory gains do not have implications for future earnings, on

average, and are priced accordingly, consistent the information hypothesis. Among low-quality disclosers, however, we find that transitory gains are associated with future reductions in operating earnings, which does not support managers' omissions of non-GAAP earnings. Moreover, among low-quality disclosers we find that transitory gains are associated with negative filing returns, consistent with investors of these firms not being able to accurately price the implications of the transitory gain at the time of the earnings announcement.

Our results suggest that the informative disclosure of non-GAAP information is associated with a more efficient pricing of earnings. Conversely, when non-GAAP information is omitted, investors tend not to be able to accurately price these firms' transitory gains, temporarily inflating the stock price.

Our evidence has implications for regulators, as our analyses are conducted in the period following Regulation G. While studies have documented an improvement, overall, in the quality of non-GAAP reporting following Regulation G, we find that at least some managers appear to omit information about transitory gains to report higher continuing income. To the extent that the omission of informative non-GAAP earnings figures affects investors' assessments of the persistence of performance, as our results suggest, it seems that regulators might consider requiring some non-GAAP earnings information in the presence of transitory gains.

Future researchers might investigate whether managers' disclosure choice in quarters with transitory gains affects their overall reputation. For example, do investors weight these firms' non-GAAP earnings more heavily in quarters with net transitory losses? Future researches might also investigate whether transitory disclosure quality varies with manager-specific (e.g., excisable options) or firm-specific incentives (e.g., secondary equity issuances).

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## Appendix A: Non-GAAP Disclosure Example

Prior Research Design		Our Research Design			
Negative Special Item *Informational or Opportunistic?		Positive Special Item *Informational		Positive Special Item *Opportunistic	
GAAP EPS	1.00	GAAP EPS	1.00	GAAP EPS	1.00
Restructuring Exclude: Charge	-0.25	Exclude: Litigation Gain	0.25	Include: Litigation Gain	0.25
Pro Forma EPS	1.25	Pro Forma EPS	0.75	Pro Forma EPS	1.00

## Appendix B: Variable Definitions

Variable Name	Variable Description	Variable Definition
Operating Earnings	Operating Earnings Per Share	OPEPSQ
Analyst Actual	Realized Earnings Per Share as reported by I/B/E/S	ACTUAL
Analyst Forecast	Median Consensus Analyst Forecast	MEDEST
Operating Earnings Surprise	Unexpected Earnings at the Earnings Announcement based on Operating Earnings	OPEPSQ-MEDEST
Street Earnings Surprise	Unexpected Earnings at the Earnings Announcement based on Analyst Actual	ACTUAL - MEDEST
Transitory Gain / Sales	Transitory Gain (Net) as a Percentage of Sales	SPIQ/SALEQ
Transitory Gain Per Share	Transitory Gain (Net) per basic Share	SPIQ/CSHPRQ
Announcement Return	3-Day Market-Adjusted Earnings Announcement Return	3-day buy-and-hold stock return less 3-day buy-and-hold value-weighted market return
Filing Return	7-Day Market-Adjusted Return Beginning 1 Day Prior to the Financial Statement Filing Date	7-day buy-and-hold stock return less 7-day buy-and-hold value-weighted market return
BM Ratio	Book-to-Market Ratio as of the end of quarter q	SEQQ/(CSHOQ*PRCCQ)
MarketCap	Market Value of Equity as of the end of quarter q	CSHOQ*PRCCQ
Total Assets	Total Assets as of the end of quarter q	ATQ
Sales	Sales for quarter q	SALEQ
Sales Growth	Sales growth per share from quarter q-4 to quarter q	((SALEq - SALEq-4)/CSHPRQ)
Earnings Volatility	Earnings volatility over at least six of the prior eight quarters	STD (IBCOMQ/ATQ)
Loss	Loss	An indicator variable equal to one if IBCOMQ < 0, zero otherwise.
Benchmark	“Including” the gain in EPS results in meeting the analyst forecast	An indicator variable equal to one if OPEPSQ < MEDEST and EPSPXQ ≥ MEDEST, zero otherwise.
High-Quality Discloser	Provided sufficient information to discern EPS before the gain.	An indicator variable that is equal to one if the earnings announcement contains sufficient information to discern EPS before the gain, and zero otherwise.

Beta	Individual firm risk proxy	Estimated using one year of daily returns, ending 46 days prior to the earnings announcement. Firms must have a minimum of 120 daily returns in the estimation window.
Announcement Difference	Number of days between the filing the earnings announcement and the 10-Q/K	10-Q/K filing date less the earnings announcement filing date
Financial Statement Type	Binary variable for financial statement type	An indicator variable equal to one if the financial statement reporting type is a 10-K, zero otherwise
Operating Earnings Change	The annual change in operating earnings	Current quarter operating earnings less operating earnings from the same quarter in the prior year

All continuous variables are winsorized at the extreme 1%. I/B/E/S per share variables have been transformed to be on a per basic share basis.

**TABLE 1**  
Descriptive Statistics

Panel A: Full Sample (Transitory Gains > 0; n = 3,401)					
Variable	Mean	STD	25%	Median	75%
Operating Earnings	0.302	0.466	0.020	0.220	0.510
Analyst Actual	0.355	0.466	0.060	0.260	0.560
Analyst Forecast	0.313	0.419	0.040	0.226	0.500
Operating Earnings Surprise	-0.011	0.168	-0.050	0.000	0.042
Street Earnings Surprise	0.036	0.121	0.000	0.020	0.060
Transitory Gain / Sales	0.053	0.159	0.002	0.008	0.031
Transitory Gain Per Share	0.143	0.337	0.008	0.033	0.110
Announcement Return	0.006	0.086	-0.039	0.004	0.052
Filing Return	-0.002	0.063	-0.033	-0.002	0.029
BM Ratio	0.512	0.393	0.273	0.429	0.667
MarketCap	5,745	15,467	372	1,124	3,669
Total Assets	4,842	11,535	346	1,092	3,462
Sales	1,205	3,003	71	261	822
Benchmark	0.185	0.389	0.000	0.000	0.000
Beta	1.246	0.542	0.865	1.191	1.576
Panel B: Hand-Collected Sample (Transitory Gains $\geq$ 1% Sales; n=1,403)					
Variable	Mean	STD	25%	Median	75%
Operating Earnings	0.225	0.446	-0.020	0.140	0.430
Analyst Actual	0.303	0.467	0.020	0.206	0.500
Analyst Forecast	0.240	0.407	0.000	0.160	0.417
Operating Earnings Surprise	-0.013	0.193	-0.060	0.000	0.048
Street Earnings Surprise	0.054	0.169	0.000	0.020	0.070
Transitory Gain / Sales	0.158	0.503	0.018	0.036	0.093
Transitory Gain Per Share	0.317	0.599	0.047	0.113	0.305
Announcement Return	0.006	0.088	-0.042	0.004	0.052
Filing Return	-0.004	0.070	-0.039	-0.004	0.031
BM Ratio	0.517	0.447	0.258	0.427	0.663
MarketCap	4,253	11,133	294	808	2,808
Total Assets	3,597	7,898	249	808	2,677
Sales	635	1,376	46	152	526
Benchmark	0.295	0.456	0.000	0.000	1.000
Beta	1.288	0.589	0.87	1.23	1.664

See variable definitions in Appendix B.



**TABLE 2**  
Descriptive Statistics for Hand-Collected Sample

Panel A High-Quality Disclosers (n = 817)					
Variable	Mean	STD	25%	Median	75%
Operating Earnings	0.307	0.444	0.050	0.240	0.520
Analyst Actual	0.361	0.429	0.100	0.289	0.560
Analyst Forecast	0.312	0.395	0.070	0.238	0.489
Operating Earnings Surprise	-0.002	0.172	-0.048	0.004	0.050
Street Earnings Surprise	0.046	0.127	0.000	0.021	0.062
Transitory Gain / Sales	0.130	0.352	0.018	0.038	0.097
Transitory Gain Per Share	0.379	0.628	0.068	0.161	0.396
Announcement Return	0.013	0.086	-0.030	0.011	0.057
Filing Return	-0.003	0.063	-0.035	-0.004	0.027
BM Ratio	0.509	0.426	0.270	0.425	0.620
MarketCap	5,987	13,263	489	1,452	4,152
Total Assets	4,902	9,045	442	1,522	4,342
Sales	880	1,559	91	294	845
Benchmark	0.312	0.464	0.000	0.000	1.000
Beta	1.268	0.557	0.874	1.215	1.598
Panel B: Low-Quality Disclosers (n = 586)					
Variable	Mean	STD	25%	Median	75%
Operating Earnings	0.110	0.424	-0.090	0.030	0.230
Analyst Actual	0.221	0.505	-0.040	0.085	0.350
Analyst Forecast	0.138	0.401	-0.060	0.050	0.250
Operating Earnings Surprise	-0.027	0.218	-0.080	-0.020	0.031
Street Earnings Surprise	0.066	0.214	-0.010	0.020	0.090
Transitory Gain / Sales	0.197	0.657	0.017	0.034	0.083
Transitory Gain Per Share	0.230	0.545	0.024	0.067	0.178
Announcement Return	-0.002	0.090	-0.052	-0.010	0.047
Filing Return	-0.004	0.079	-0.041	-0.004	0.035
BM Ratio	0.527	0.475	0.236	0.433	0.712
MarketCap	1,834	6,451	176	464	1,087
Total Assets	1,777	5,446	132	356	1,109
Sales	294	972	19	61	217
Benchmark	0.271	0.445	0.000	0.000	1.000
Beta	1.315	0.629	0.863	1.255	1.743

See variable definitions in Appendix B.

**TABLE 3**  
Earnings Persistence Tests

Dependent Variable = Future Operating Earnings Per Share		
Independent Variables	Full Sample Coefficient (t-statistic)	Hand-Collected Sample Coefficient (t-statistic)
Intercept	0.070 (2.21)	0.007 (0.49)
Operating Earnings Per Share	2.466 (18.99)	2.275 (11.21)
<b>Transitory Gain Per Share</b>	<b>-0.341</b> <b>(-3.91)</b>	<b>-0.242</b> <b>(-2.73)</b>
Sales Growth	-0.030 (-0.91)	-0.010 (-0.14)
Ln (Total Assets)	0.004 (4.15)	0.005 (2.98)
Earnings Volatility	-0.258 (-4.44)	-0.258 (-2.98)
Loss	-0.006 (-1.09)	-0.011 (-1.17)
BM Ratio	-0.033 (-8.10)	-0.030 (-4.56)
Year and Industry Fixed Effects	Included	Included
Adjusted R <sup>2</sup>	58.35%	55.28%
Number of Observations	3,401	1,403

See variable definitions in Appendix B. Future Operating Earnings Per Share, Operating Earnings Per Share, Transitory Gain Per Share and Sales Growth are scaled by Assets Per Share. We use White's robust standard errors to calculate the t-statistics.

**TABLE 4**  
Earnings Response Tests

Independent Variables	Dependent Variable = Announcement Return	
	Full Sample Coefficient (t-statistic)	Hand-Collected Sample Coefficient (t-statistic)
Intercept	-0.044 (-6.30)	-0.062 (-6.00)
Operating Earnings Surprise	0.067 (12.99)	0.059 (7.16)
<b>Transitory Gain Per Share</b>	<b>0.010</b> <b>(2.00)</b>	<b>0.003</b> <b>(0.39)</b>
BM Ratio	0.007 (1.26)	0.025 (2.79)
Ln (Marketcap)	-0.004 (-0.77)	0.013 (1.30)
Beta	0.003 (0.62)	0.013 (1.59)
Year and Industry Fixed Effects	Included	Included
Adjusted R <sup>2</sup>	6.22%	5.68%
Number of Observations	3,401	1,403

See variable definitions in Appendix B. Earnings Surprise and Transitory Gain Per Share are scaled by Price Per Share. Independent variables are decile-ranked. We use White's robust standard errors to calculate the t-statistics.

**TABLE 5**  
10-Q/K Filings Earnings Response Tests

Independent Variables	Dependent Variable = Filing Return	
	Full Sample Coefficient (t-statistic)	Hand-Collected Sample Coefficient (t-statistic)
Intercept	-0.001 (-0.18)	0.003 (0.35)
Operating Earnings Surprise	-0.001 (0.77)	-0.007 (-0.98)
<b>Transitory Gain Per Share</b>	<b>-0.008</b> <b>(-2.24)</b>	<b>-0.008</b> <b>(-1.29)</b>
BM Ratio	0.006 (1.28)	-0.002 (-0.30)
Ln (Marketcap)	0.002 (0.43)	0.008 (1.17)
Beta	-0.005 (-1.35)	-0.010 (-1.40)
Year and Industry Fixed Effects	Included	Included
Adjusted R <sup>2</sup>	0.12%	-0.18%
Number of Observations	3,401	1,403

See variable definitions in Appendix B. Earnings Surprise and Transitory Gain Per Share are scaled by Price Per Share. Independent variables are decile-ranked. We use White's robust standard errors to calculate the t-statistics.

**TABLE 6**  
Earnings Persistence Tests

Independent Variables	Dependent Variable = Future Operating Earnings Per Share	
	Low-Quality Discloser Indicator Variable	Disclosure Quality = Continuous Disclosure Score
	Coefficient (t-statistic)	Coefficient (t-statistic)
Intercept	0.012 (0.92)	0.018 (1.19)
Operating Earnings Per Share	2.627 (16.83)	2.257 (8.99)
<b>Transitory Gain Per Share</b>	<b>-0.096</b> <b>(-1.11)</b>	<b>-0.031</b> <b>(-0.28)</b>
Disclosure Quality	-0.005 (-0.88)	-0.006 (-1.25)
Operating Earnings Per Share × Disclosure Quality	-0.462 (-1.85)	0.036 (0.15)
<b>Transitory Gain Per Share</b> <b>× Disclosure Quality</b>	<b>-0.255</b> <b>(-1.62)</b>	<b>-0.322</b> <b>(-2.00)</b>
Sales Growth	-0.017 (-0.22)	-0.020 (-0.26)
Ln (Total Assets)	0.004 (2.32)	0.004 (2.38)
Earnings Volatility	-0.254 (-2.99)	-0.233 (-2.70)
Loss	-0.007 (-0.82)	-0.010 (-1.05)
BM Ratio	-0.027 (-4.29)	-0.029 (-4.42)
Year and Ind. Fixed Effects	Included	Included
Adjusted R <sup>2</sup>	55.77%	55.53%
Number of Low Quality Obs	586	N/A
Number of Observations	1,403	1,403

See variable definitions in Appendix B. Future Operating Earnings Per Share, Operating Earnings Per Share, Transitory Gain Per Share and Sales Growth are scaled by Assets Per Share. We use White's robust standard errors to calculate the t-statistics.

**TABLE 7**  
Earnings Announcement Earnings Response Tests

Independent Variables	Dependent Variable = Announcement Return		Dependent Variable = Filing Return	
	Disclosure Quality = Low-Quality Indicator Variable		Disclosure Quality = Low-Quality Indicator Variable	
	Coefficient (t-statistic)	Continuous Disclosure Score Coefficient (t-statistic)	Coefficient (t-statistic)	Continuous Disclosure Score Coefficient (t-statistic)
Intercept	-0.055 (-4.63)	-0.047 (-3.18)	-0.000 (-0.03)	0.000 (0.01)
Operating Earnings Surprise	0.056 (4.76)	0.051 (3.10)	-0.015 (-1.59)	-0.021 (-1.70)
<b>Transitory Gain Per Share</b>	<b>0.006</b> <b>(0.59)</b>	<b>-0.004</b> <b>(-0.27)</b>	<b>0.005</b> <b>(0.66)</b>	<b>0.010</b> <b>(0.98)</b>
Disclosure Quality	-0.005 (-0.43)	-0.015 (-1.23)	0.007 (0.77)	0.000 (0.38)
Earnings Surprise × Disclosure Quality	0.002 (0.12)	0.008 (0.48)	0.015 (1.07)	0.017 (1.22)
<b>Transitory Gain Per Share × Disclosure Quality</b>	<b>-0.013</b> <b>(-0.82)</b>	<b>-0.004</b> <b>(-0.27)</b>	<b>-0.029</b> <b>(-2.13)</b>	<b>-0.023</b> <b>(-1.84)</b>
BM Ratio	0.025 (2.80)	0.025 (2.81)	-0.002 (-0.26)	-0.002 (-0.20)
Ln (Marketcap)	0.004 (0.44)	0.005 (0.60)	0.010 (1.32)	0.009 (1.22)
Beta	0.013 (1.61)	0.013 (1.67)	-0.011 (-1.51)	-0.011 (-1.50)
Year and Ind. Fixed Effects	Included	Included	Included	Included
Adjusted R <sup>2</sup>	5.78%	5.65%	0.12%	-0.05%
Number of Low Quality Obs	586	N/A	586	N/A
Number of Observations	1,403	1,403	1,403	1,403

See variable definitions in Appendix B. Earnings Surprise and Transitory Gain Per Share are scaled by Price Per Share. Independent variables are decile-ranked. We use White's robust standard errors to calculate the t-statistics.

**TABLE 8**

## Disclosure Quality Detail and Determinants for Hand Collection Sample

Panel A: Special Item Detail					
Special Item Type	Number of Observations in Hand Collected Sample	Number of Low Quality Disclosure Observations	Percent of Observations as Low Quality Disclosure	Mean Transitory Gain Per Share	Median Transitory Gain Per Share
Gain on Sale	572	197	34%	0.42	0.15
Other Special	255	89	35%	0.35	0.14
Settlement	467	217	46%	0.30	0.11
Debt Extng.	144	70	49%	0.26	0.10
Restructuring	122	63	52%	0.11	0.03

  

Panel B: Logistic Regression for Determinants of Disclosure Quality	
Dependent Variable = Low Quality Discloser Indicator Variable	
Independent Variables	Coefficient (z-statistic)
Ln (Announcement Difference)	-0.379*** (-3.94)
Ln (Total Assets)	-0.493*** (-9.51)
Transitory Gain Per Share	-0.169 (-1.03)
Financial Statement Type	0.364* (1.87)
Loss	1.102*** (8.34)
Operating Earnings Change	0.201* (1.88)
Benchmark	0.081 (0.75)
Year and Industry Fixed Effects	Included
Adjusted R <sup>2</sup>	16.03%
Number of Observations	1,391

See variable definitions in Appendix B. 12 observations are dropped due to no variation within the associated fixed effects grouping. We use White's robust standard errors to calculate the z-statistic. \*\*\* p<.001, \*\* p<.05, \* p<.10.