

# Non-GAAP Earnings for Contracting and Financial Disclosure

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# **Non-GAAP Earnings for Contracting and Financial Disclosure**

## **ABSTRACT**

We explore how the internal use of non-GAAP performance metrics in compensation contracting relates to the disclosure of non-GAAP earnings to external stakeholders. Ex ante, it is unclear why information useful in contracting would be informative for valuation purposes unless a firm's compensation and financial disclosure processes are related. We explore this relation using a large hand-collected sample of non-GAAP earnings numbers from firms' proxy statements and annual earnings announcements. We find that the use of a non-GAAP performance measure in compensation contracting is positively associated with the likelihood that managers will disclose a non-GAAP metric in the earnings announcement, and that these two numbers are often exactly equivalent. We also find that the quality of non-GAAP reporting is higher when the firm uses non-GAAP performance metrics for both compensation contracting and financial disclosure, and that investors find non-GAAP earnings to be more credible when compensation committees corroborate the externally-disclosed non-GAAP number by relying on it internally. Finally, using non-GAAP earnings for compensation contracting appears to reduce the likelihood that managers will report non-GAAP earnings aggressively. Overall, our results suggest that the dual use of non-GAAP earnings for internal performance evaluation and external performance disclosure improves non-GAAP reporting quality.

**JEL Codes:** G34; M12; M41; M48; M52

**Keywords:** Non-GAAP earnings; contracting; compensation; performance evaluation

## *1. Introduction*

A well-established literature examines the disclosure of non-GAAP earnings to external stakeholders via earnings announcements (e.g., Bradshaw and Sloan [2002], Bhattacharya et al. [2003]). This research suggests that both opportunistic and informative incentives can influence managers' non-GAAP reporting, and that analysts provide more informative non-GAAP performance metrics than those disclosed by managers (Bentley et al. [2018]). In addition, boards of directors frequently use non-GAAP earnings as a performance metric in compensation contracts. This phenomenon, repeatedly questioned in the business press (Rapoport [2014]), has prompted researchers to consider the extent to which boards and managers influence one another in the use of non-GAAP performance metrics.

Two recent studies provide evidence regarding the interplay between boards and managers regarding the use of non-GAAP performance measures. Using a sample of public earnings announcements, Guest et al. [2017] find that firms that exclude the most expenses in calculating non-GAAP earnings also have the highest paid CEOs. They conclude that *external* non-GAAP reporting influences the board to increase executive pay. However, they do not examine whether the board actually uses non-GAAP earnings information in compensation contracts.

Using a sample of proxy statement compensation disclosures, Curtis et al. [2017] examine the explicit use of non-GAAP measures in compensation contracting, as disclosed in proxy statements. Curtis et al. [2017] find that non-GAAP performance measures are more likely to be used in compensation contracts when a CEO is hired from outside of the firm and has less direct control over operations, which is consistent with the board using non-GAAP measures to filter out elements that fall outside of the manager's control. They do not find evidence of an association between the use of non-GAAP performance metrics in contracting and higher bonus compensation

or the likelihood of meeting or beating compensation targets. Thus, they conclude that the *internal* use of non-GAAP performance measures reflect efficient contracting by the board. However, they do not examine external non-GAAP disclosures.

While Guest et al. [2017] imply that managers use external non-GAAP disclosures to influence the board, Curtis et al. [2017] conclude that boards use non-GAAP metrics appropriately and are only indirectly influenced by managers' risk aversion to tasks beyond their control. Both studies provide plausible explanations for the use of non-GAAP performance metrics, but the extent to which each motivation has the stronger influence on practice is unclear based on the non-overlapping empirical evidence in these two studies. We directly compare firms' use of non-GAAP earnings in both compensation contracting and *external* disclosure. Specifically, we examine whether incentives associated with management compensation or financial disclosure have the stronger influence on external non-GAAP earnings disclosure. We also examine how the joint use of non-GAAP performance metrics for compensation contracting and financial disclosure influences the quality of externally-reported non-GAAP earnings metrics.

We collect non-GAAP EPS metrics from both proxy statements and earnings announcements for firms covered by ExecuComp from 2009 to 2015. We first examine the likelihood of agreement of non-GAAP measures between the proxy and the earnings announcement to provide evidence on the relation between how the board and managers use non-GAAP metrics. We find significant overlap between the use of non-GAAP measures in earnings announcements and proxy statements. Specifically, 11.4% of our sample observations report non-GAAP earnings-per-share (EPS) in both the earnings announcement and the proxy statement, with non-GAAP EPS figures agreeing between these disclosures 68.8% of the time.

Next, we examine the determinants of managers' disclosure of non-GAAP EPS-based performance metrics in both earnings announcements and proxy statements. Since the use of non-

GAAP EPS in one of these disclosures may influence the likelihood of inclusion in the other, we estimate two equations that predict the likelihood of non-GAAP EPS disclosure—one for the earnings announcement and one for the proxy statement. Using a two-stage least squares approach, we find evidence suggesting that the use of non-GAAP earnings in compensation contracting (i.e., the proxy statement) is positively associated with the likelihood that managers will disclose non-GAAP earnings in their earnings announcements. We also find evidence suggesting that a firm's likelihood of using non-GAAP EPS in contracting is positively associated with its external disclosure of non-GAAP EPS in earnings announcements. Moreover, non-GAAP EPS use in the proxy statement predicts non-GAAP disclosure in the earnings announcement more than non-GAAP EPS disclosure in the earnings announcement predicts non-GAAP use in the proxy statement. However, the difference is not statistically significant at traditional levels. Importantly, the existence of special items predicts non-GAAP EPS use for both financial disclosure and compensation contracting, but this evidence is significantly stronger for non-GAAP use in financial disclosure, suggesting a greater willingness of managers to exclude special items in calculating core earnings reported to investors relative to earnings reported to the board.

Using principle components analysis of the determinants of non-GAAP EPS disclosure in the earnings announcement and the proxy statement, respectively, we also explore factors associated with the joint use of non-GAAP earnings in both financial disclosure and compensation contracting. Specifically, our model includes two principal components: one comprised of factors associated with non-GAAP EPS disclosure and the other comprised of the determinants of the use of non-GAAP performance metrics in compensation contracting. Our model also includes other general determinants of non-GAAP disclosure. We find that non-GAAP EPS use in compensation contracting is a much stronger predictor of the joint use of non-GAAP EPS (for both financial disclosure and compensation contracting), suggesting that compensation incentives associated

with a non-GAAP EPS performance measure have a higher association with the firm's non-GAAP EPS use than other financial reporting incentives. Moreover, our evidence suggests that non-GAAP EPS is useful for both stewardship and valuation purposes.

To provide further evidence on the usefulness of non-GAAP EPS figures, we examine whether non-GAAP earnings exclusions in calculating non-GAAP metrics disclosed in earnings announcements are less persistent (i.e., of higher quality) when non-GAAP EPS is also used for compensation contracting, consistent with efficient contracting motives for using non-GAAP performance metrics (consistent with Curtis et al. [2017]). We use persistence tests common in the non-GAAP reporting literature and allow the coefficient on non-GAAP exclusions to vary with whether a non-GAAP EPS figure is also disclosed in the proxy statement (Doyle et al. [2003], Kolev et al. [2008], Whipple [2015]). This evidence suggests that non-GAAP EPS exclusions in the earnings announcement are less persistent (i.e., of higher quality) when the board provides compensation incentives using a non-GAAP EPS figure.

Since compensation contracts can be written to encourage or constrain managers' financial disclosure behavior, and some contracts appear to be written on or associated with analysts' consensus earnings expectations (Matsunaga and Park [2001]), we examine whether the use of non-GAAP EPS in compensation contracting inhibits the propensity of managers to report non-GAAP numbers in earnings announcements that exceed analysts' consensus actual earnings numbers. Our descriptive evidence and regression analyses both suggest that managers are much less likely to disclose a non-GAAP EPS figure in the earnings announcement that exceeds analysts' consensus actual earnings when a non-GAAP EPS figure is used for compensation contracting.

As a final test of how the dual use of non-GAAP EPS in compensation contracting and financial disclosure influences the usefulness of non-GAAP performance metrics, we examine whether investors' response to non-GAAP earnings news in the earnings announcement varies

with non-GAAP earnings use in compensation contracting. We find evidence suggesting that investors respond more to non-GAAP earnings news of firms that also use non-GAAP earnings in compensation contracting. In other words, investors find public non-GAAP disclosures more credible when they are corroborated by the board in the proxy statement.

Our results provide evidence suggesting that the use of non-GAAP EPS in internal contracting influences the likelihood and quality of non-GAAP EPS disclosures in annual earnings announcements. Unlike prior studies that examine only non-GAAP disclosures disclosed in annual earnings announcements (i.e., Guest et al. [2017], Black et al. [2018]) or in proxy statements (i.e., Curtis et al. [2017]), we provide evidence using data collected from both sources. Moreover, our results are important because they suggest a link between the compensation contracting process and voluntary disclosure decisions. Moreover, they suggest that this link results in non-GAAP earnings figures that are of relatively higher quality. Our results also inform the literature on the determinants of the properties of non-GAAP EPS figures used for both stewardship and valuation.

## *2. Hypothesis Development*

### 2.1 NON-GAAP COMPENSATION CONTRACTING AND FINANCIAL DISCLOSURE.

We propose that three different relations could exist between the board and the manager with regard to non-GAAP earnings metrics. First, the board and the manager could use non-GAAP metrics independently. In this case, the board uses non-GAAP metrics to contract efficiently (Curtis et al. [2017]), while the manager uses non-GAAP metrics to influence investors' valuation for informative or for opportunistic reasons. Overlap in the board's and the manager's non-GAAP metrics implies that efficient contracting and valuation result in the same (or very similar) performance metrics. Understanding this setting is of particular importance given the debate about

the contracting and stewardship uses of accounting and the extent to which they have competing goals (Hemmer and Labro [2008], Kothari, Ramanna, and Skinner [2010], Lambert [2010]).

Second, the manager could use non-GAAP earnings metrics to influence the board. In this case, the manager uses non-GAAP metrics to maximize share price and/or compensation (Guest et al. [2017]), and the board adopts the manager's metric (potentially with less concern about contracting efficiency). To the extent that the board and the manager use the same non-GAAP metric, this scenario implies that they should be more (less) reflective of the manager's (board's) incentives. This scenario also implies that the compensation contracting performance metric lags rather than leads managers' earnings figure disclosed to investors.

Third, the board could use a non-GAAP metric to influence the manager. The manager's metric is generally disclosed to investors before the board's metric, but boards often establish performance targets and measures prior to the beginning of a performance evaluation period. Thus, this case presumes that the board's non-GAAP metric acts as a constraint on the manager's reporting, perhaps through ex ante performance targets in the manager's compensation contract. Moreover, investors and regulators may scrutinize the manager significantly more if the board's later definition of earnings differs from the manager's, prompting questions about whether the manager's earnings definition was opportunistic (potentially damaging the manager's reputation). To the extent that the board and the manager use the same non-GAAP metric, this scenario implies that they should be less (more) reflective of the manager's (board's) incentives.

While each of these relations may exist in any given firm in our sample, we use large sample analyses to ascertain which of these relations is most frequent, leading to our first research question:

***RQ1: Which relation between compensation contracting and earnings disclosure is most likely: Independent; Manager influences Board; or Board influences Manager?***



## 2.2 OVERLAP BETWEEN EARNINGS ANNOUNCEMENTS AND PROXY STATEMENTS

If the non-GAAP earnings metric used for compensation contracting and financial disclosure is the same, this agreed-upon metric may be more useful for valuation because the compensation committee and the manager appear to concur on the non-GAAP earnings calculation, and managers' and shareholders' (agents' and principals') incentives are more likely to be aligned (i.e., the stewardship function and valuation purpose of these measures converge). In other words, when the compensation committee and managers agree on which expenses, losses, and gains should be excluded from GAAP earnings to arrive at non-GAAP earnings, the resulting performance metric is likely to be of higher quality (i.e., be more representative of underlying firm performance).

Therefore, it is important to understand the factors that affect the overlap of the non-GAAP number disclosed in the earnings announcement and in the proxy statement. Examining the determinants of dual use of non-GAAP reporting for financial disclosure and compensation contracting also allows us to observe which set of motives (associated with disclosure or contracting) influences the use of non-GAAP EPS to a greater degree. We expect that certain factors are associated with the likelihood that non-GAAP EPS is used for both contracting and financial disclosure. Prior research indicates that loss firms are less likely to persist in the future (Hayn [1995]), that special items are gains or losses not expected to persist in the future (McVay [2006], Curtis et al. [2014]), that firms with intangible assets have performance that maps relatively poorly into existing GAAP accounting rules (Srivastava [2014]), and that firms with volatile performance may appear to be more risky to investors (Francis et al. [2004], McInnis [2010]). Controlling for these financial reporting and operating features that may influence the likelihood of non-GAAP earnings use and non-GAAP earnings properties, we examine whether contracting

or disclosure determinants are the stronger predictors of the choice to use non-GAAP EPS for both contracting and financial disclosure, prompting our second research question:

***RQ<sub>2</sub>: What are the determinants of overlap between non-GAAP EPS use in the earnings announcement and proxy statement?***

### 2.3 OVERLAP AND NON-GAAP EXCLUSION PERSISTENCE

One method used to assess the quality of non-GAAP earnings in prior research is to examine the persistence of non-GAAP adjustments. By persistence, we mean the association between the adjustments (i.e., exclusions) and future performance, typically measured as operating earnings and operating cash flow (Doyle et al. [2003], Kolev et al. [2008], Whipple [2015], Black et al. [2018]). Managers and analysts often motivate non-GAAP reporting by arguing that by excluding one-time or non-cash items, managers and analysts provide investors with a measure of “core” earnings—an earnings metric that is more likely to persist in the future (e.g., Bhattacharya et al. 2003). The intuition underlying this analysis is that if exclusions are truly less relevant for future performance, they should have low persistence.

If both the manager and the compensation committee are focused on non-GAAP earnings metrics, these two performance measures provide discipline to constrain exclusions to be higher in quality (i.e., to have lower persistence). The board of directors, working in the interests of shareholders, uses performance measures that motivate high effort and discipline the manager, while the manager prepares the non-GAAP EPS disclosure in anticipation of the market response to it and is disciplined by reputation effects that could result if the disclosed non-GAAP EPS figure is not useful to investors. Thus, when managers and compensation committees both focus on non-GAAP earnings, and especially when this number is the same, we expect to observe less persistent non-GAAP exclusions.

***H<sub>1</sub>: Exclusions are less persistent (i.e., of higher quality) when a firm uses non-GAAP earnings for both compensation contracting and external financial disclosure.***

## 2.4 OVERLAP AND NON-GAAP DISCLOSURE AGGRESSIVENESS

As explained previously, manager aggressiveness in non-GAAP reporting may be curbed by monitoring or board involvement in the performance evaluation process. In addition, since the manager faces the ex-ante constraint of market discipline of earnings disclosures, managers may be less likely to report non-GAAP earnings aggressively when they face both board and market discipline simultaneously. Moreover, since the board of directors chooses the performance measures used to award pay based on performance measure informativeness about manager effort which disciplines manager activities, managers will be less likely to be able to change the definition of non-GAAP earnings for financial disclosure when it is also used in compensation contracting. Finally, since the passage of the Sarbanes-Oxley Act of 2002, the promulgation of Regulation G in 2003, and expanded disclosure requirements for executive compensation contracting beginning in 2006, the “double disciplining” effect of the board and the market on non-GAAP disclosure is much more observable and likely much more powerful than it was prior to these changes. Our entire sample period follows these regulatory changes (2009 to 2015).

Our proxy for non-GAAP reporting aggressiveness is managers’ propensity to report non-GAAP EPS in annual earnings announcements that exceeds analysts’ consensus actual earnings number from I/B/E/S. A positive difference between manager-disclosed non-GAAP EPS and the I/B/E/S actual earnings number likely indicates that managers are excluding recurring expense items in excess of the items excluded by analysts. Prior studies hypothesize that excluding recurring expense items is a tactic sometimes employed to meet earnings benchmarks (Black and Christensen [2009]) or report non-GAAP earnings aggressively (Black et al. 2012). We hypothesize that managers will be less likely to use this tactic when compensation committees focus on non-GAAP performance metrics in compensation contracts.

***H<sub>2</sub>: Non-GAAP earnings from the earnings announcement are less aggressive when a firm uses non-GAAP earnings for both compensation contracting and external financial disclosure.***

## 2.5 OVERLAP AND STOCK MARKET PRICING OF NON-GAAP EARNINGS NEWS

Prior research indicates that investors find non-GAAP earnings to be more informative than GAAP earnings (Bradshaw and Sloan [2002], Bhattacharya et al. [2003]). If the dual signal of non-GAAP earnings use in the proxy statement and the annual earnings announcement improves the persistence of non-GAAP earnings or increases the credibility of the non-GAAP earnings metric (Easton and Zmijewski [1989]), we might expect investors to respond more to non-GAAP earnings news disclosed in the earnings announcement. The intuition is similar to the previous discussion of non-GAAP earnings persistence.

Since both persistence and reliability (or risk) underlie the earnings response coefficient (Easton and Zmijewski [1989]), it is possible to find evidence consistent with H<sub>1</sub>, but inconsistent with an increased market response to non-GAAP earnings news, and vice versa. Nevertheless, we predict that if the dual use of non-GAAP earnings in internal compensation contracting and externally-reported annual earnings announcements improves the overall informativeness of non-GAAP earnings to financial markets, the earnings response coefficient for non-GAAP earnings news should be higher, relative to firms without dual use.

***H<sub>3</sub>: Investors find non-GAAP earnings news to be more informative when a firm uses non-GAAP earnings for compensation contracting and financial disclosure.***

## 3. Data Collection and Sample Selection

### 3.1 DATA COLLECTION

To test our hypotheses, we collect a sample of annual non-GAAP EPS measures used by compensation committees in compensation contracting and by managers in earnings

announcements. We focus on non-GAAP earnings per share (EPS) because it is easily comparable between the board of directors and management parties, as opposed to trying to compare non-GAAP revenues to non-GAAP EPS, for example. Our sample consists of S&P 1500 firms covered by the ExecuComp dataset from 2009 to 2015. We focus on this sample period for several reasons. First, the use of non-GAAP earnings metrics has increased over time and especially in executive compensation contracts (Rapoport [2014]; Bentley et al. [2018]; Black et al. [2018]). Moreover, we want to focus on a sample period in which non-GAAP earnings use and disclosure is a common practice. Second, our sample period post-dates heightened SEC regulation of non-GAAP reporting resulting from Regulation G (2003) and coincides with the SEC's interpretive guidance on non-GAAP disclosures (2010 and 2011). We focus our main results on this regulated setting (relative to earlier studies on non-GAAP earnings) because we want to understand how performance evaluation and performance reporting are associated in today's more transparent and arguably less flexible environment with regard to non-GAAP reporting. Third, our sample period post-dates the SEC's adoption of new compensation disclosure requirements in 2006 and coincides with the passage of the Dodd-Frank Act in 2010, when compensation contracts became more transparent and arguably allowed managers less discretion related to non-GAAP disclosures.

To collect our data, we programmatically search for key words associated with non-GAAP earnings in both the proxy statement (Form DEF 14A) and annual earnings announcement (Form 8-K) from the SEC's EDGAR repository. We extract sentences containing non-GAAP keywords and collect non-GAAP earnings numbers from each source. Using the Amazon Mechanical Turk (MTurk) platform to expedite the process of hand-collection, we recruit workers using a qualification test and hire qualified workers to read through each sentence and record any annual non-GAAP EPS number, if present. For proxy statements, we collect actual non-GAAP earnings per share, rather than non-GAAP earnings per share targets, to enable comparisons between actual

non-GAAP earnings used in compensation contracting by the board of directors and actual non-GAAP earnings reported to investors by management. We provide a copy of our data collection instructions and qualification test in Appendix A.

After collecting the non-GAAP metrics, we aggregate all of the data by firm and year and construct two variables. *NG EA* (*NG PROXY*) is an indicator set to 1 when coders identify at least one annual non-GAAP EPS number in the earnings announcement (proxy statement), and set to 0 otherwise. To examine the accuracy of our variables, we randomly sample 30 firm-year observations from each of four scenarios: (1) *NG EA* = 1; (2) *NG EA* = 0; (3) *NG PROXY* = 1; and (4) *NG PROXY* = 0. We manually classify the observations by reading the SEC filings, to determine “truth”, and compare *NG EA* and *NG PROXY* to our hand classification.

Table 1 presents accuracy statistics. Panel A provides our accuracy for earnings announcements. When *NG EA* = 1 (0), we are correct 100% (76.7%) of the time that the firm did (did not) report an annual non-GAAP EPS number in the earnings announcement. For the 30 observations that we correctly identify as reporting an annual non-GAAP EPS number, we find that the set of numbers identified by the coders contains the correct number in 90% of the observations. We are 90.5% accurate when the coders identify only a single number, and 88.9%  $((4+3+1) / 9)$  accurate when they identify more than one number. Panel B presents our accuracy for proxy statements. When *NG PROXY* = 1 (0), we are correct 86.7% (93.3%) of the time that the firm did (did not) report an annual non-GAAP EPS number in the proxy statement. For the 26 observations that we correctly identify as reporting an annual non-GAAP EPS number, we find that the set of numbers identified by the coders contains the correct number for 73.1% of the observations. We are 81.0% accurate when the coders identify only a single number, but only 40.0% accurate when coders identify more than one number. Overall, Table 1 suggests that our

data collection accuracy is reasonably high, especially when only one non-GAAP EPS number is in either the earnings announcement or proxy statement.

### 3.2 SAMPLE SELECTION

Table 2 summarizes our sample selection process. Our sample includes all firms covered by ExecuComp between 2009 and 2015, which corresponds approximately to the S&P 1500. If a firm appears in ExecuComp for only part of that sample period, we attempt to collect data for that firm for all years from 2009 to 2015. For our firm years, we require a valid 8-K filing containing an earnings announcement and a DEF-14A filing containing a proxy statement. We eliminate REITs because they have an industry-specific performance measure that does not fit the set of instructions we provided to Amazon workers. Our full sample is comprised of 9,511 firm-years from 1,870 unique firms. To examine the persistence and informativeness of non-GAAP reporting, we require a single non-GAAP number from the earnings announcement for each firm-year. We therefore limit the sample in later tests to firm-years with only a single number disclosed, where we are also the most accurate in identifying the correct number. Our non-GAAP EA sample is comprised of 2,675 firm-years from 1,168 unique firms that have a single non-GAAP EPS number in the earnings announcement and at most one non-GAAP EPS number in the proxy statement. Because of the accuracy issue noted in Table 1 when more than one non-GAAP EPS number is disclosed, for analyses that rely on the non-GAAP number, we restrict our sample to observations in which MTurkers found at most one non-GAAP number. This is the NONGAAP EA Sample.

To provide a graphical representation of the overlap between non-GAAP EPS use for contracting and disclosure, we present Figure 1 for our full sample of 9,511 firm years. Panel A indicates that non-GAAP EPS is much more commonly disclosed in earnings announcements ( $3,541 + 1,081 = 4,622$  observations) than in proxy statements ( $1,081 + 317 = 1,398$  observations). Moreover, there are scenarios in which non-GAAP EPS is present in the earnings announcement,

but not the proxy statement (3,541 observations), and scenarios where non-GAAP EPS is present in the proxy statement, but not the earnings announcement (317 observations). 4,572 firm-year observations report neither a non-GAAP EPS in the earnings announcement nor the proxy statement.

Figure 1, Panel B presents descriptive evidence on how often non-GAAP EPS numbers from the earnings announcement and proxy statement are the same. For the full sample when both the earnings announcement and proxy statement contain non-GAAP EPS, the EPS numbers coincide approximately 68.8% (744 / 1,081) of the time. For the NONGAAP EA sample when both the earnings announcement and proxy statement contain non-GAAP EPS, the EPS numbers coincide approximately 64.2% (298 / 464) of the time.

### 3.3 DESCRIPTIVE STATISTICS

Table 3 presents descriptive statistics for both the full sample and the NONGAAP EA sample. The variables needed for each analysis differ, and we use the largest sample possible for each test. To understand why the board and the manager use non-GAAP metrics and the extent to which they influence each other, we examine the determinants of non-GAAP EPS use in the earnings announcement and proxy statement. We do this in two ways. First, we estimate the determinants of both management's and the board's decision to provide non-GAAP EPS as opposed to providing only GAAP information. Second, we estimate the determinants of the two parties making the same non-GAAP reporting choices (i.e., both reporting non-GAAP EPS or both reporting the same non-GAAP EPS).



## 4. Results

### 4.1 NON-GAAP COMPENSATION CONTRACTING AND FINANCIAL DISCLOSURE

We first examine the determinants of non-GAAP EPS use in the earnings announcement and proxy statement. We predict that managers' use of non-GAAP metrics may influence the board, and vice versa. We therefore identify instruments for non-GAAP EPS use in the earnings announcement and non-GAAP EPS use in the proxy statement, and use the instrumented propensity to report non-GAAP metrics in a particular filing (8-K or DEF 14A) to test whether the manager and the board influence one another.

We employ three instruments for non-GAAP EPS use in the earnings announcement that we expect to be correlated with the manager's use of non-GAAP metrics but not the board's: (1) whether non-GAAP EPS is used in the earnings announcement in the prior year (*NG EA<sub>t-1</sub>*), (2) whether the firm misses analysts' forecasts on a GAAP basis (*NEG GAAP SURPRISE*), and (3) whether the firm faces litigation risk (*LITIGATION*).

We use three instruments for non-GAAP EPS use in the proxy statement that we expect to be correlated with the board's use of non-GAAP metrics but not the manager's: (1) whether non-GAAP EPS is used in the proxy announcement in the prior year (*NG Proxy<sub>t-1</sub>*), (2) whether the CEO was promoted internally (*INTERNAL*), and (3) the CEO's tenure (*TENURE*). Our latter two variables are motivated by evidence from Curtis et al. (2017) that boards use non-GAAP metrics to shield executives from factors outside of their control.

We also include other determinants that we expect could influence both the manager and the board to use non-GAAP metrics, based on prior research. Specifically, we include proxies for GAAP profitability (*LOSS*), the presence of one-time special items (*SPECIAL*), firm size (*SIZE*),

growth opportunities as represented by the book-to-market ratio (*BM*), earnings volatility (*STDROA*), and the degree to which the firm has intangible assets (*INTANGIBLES*).

Equations 1 and 2 summarize our empirical specifications and are estimated using probit regressions based on our full sample and predicted non-GAAP use. We calculate predicted non-GAAP use in the proxy statement (earnings announcement) by estimating a first stage OLS regression of actual non-GAAP use in the proxy statement (earnings announcement) on the relevant instruments and factors that could influence both the manager and board to use non-GAAP metrics, as well as industry and year fixed effects. We then use the predicted values in equations 1 and 2. We compute bootstrapped standard errors by generating 1000 random samples of the same size and estimating the first-stage OLS and second-stage probit regressions. We define all variables in detail in Appendix B.

$$\begin{aligned}
NG\ EA_{it} = & \beta_0 + \beta_1 NG\ \widehat{PROXY}_{it} + \beta_2 LOSS_{it} + \beta_3 SPECIAL_{it} + \beta_4 SIZE_{it} + \beta_5 BM_{it} \\
& + \beta_6 STDROA_{it} + \beta_7 INTANGIBLES_{it} + \beta_8 NG\ EA_{it-1} \\
& + \beta_9 NEG\ GAAP\ SURPRISE_{it} + \beta_{10} LITIGATION_{it} + \sum_{j=1}^J \beta_j IND_i \\
& + \sum_{k=1}^K \beta_k YEAR_t \varepsilon_{it}
\end{aligned} \tag{1}$$

$$\begin{aligned}
NG\ PROXY_{it} = & \beta_0 + \beta_1 \widehat{NG\ EA}_{it} + \beta_2 LOSS_{it} + \beta_3 SPECIAL_{it} + \beta_4 SIZE_{it} + \beta_5 BM_{it} \\
& + \beta_6 STDROA_{it} + \beta_7 INTANGIBLES_{it} + \beta_8 NG\ PROXY_{it-1} + \beta_9 INTERNAL_{it} \\
& + \beta_{10} TENURE_{it} + \sum_{j=1}^J \beta_j IND_i + \sum_{k=1}^K \beta_k YEAR_t \varepsilon_{it}
\end{aligned} \tag{2}$$

Table 4 presents the results of estimating equations 1 and 2. We find that predicted non-GAAP use in the proxy statement (earnings announcement) is positively associated with non-GAAP use in the earnings announcement (proxy statement). This result is consistent with both the board influencing the manager and the manager influencing the board with respect to the use of non-GAAP EPS. Though the influence of the proxy statement on the earnings announcement

appears to be stronger than influence of the earnings announcement on the proxy statement (i.e., 0.572 vs. 0.367). However, the difference is not statistically significant at conventional levels.

We also find evidence that non-GAAP use by managers and the board jointly determined by other factors. Firms with losses (*LOSS*) are less likely to provide non-GAAP EPS in the earnings announcement and the proxy statement. Special items (*SPECIAL*) are positively associated with non-GAAP in the earnings announcement and the proxy statement, but to a significantly lesser extent for the proxy statement, suggesting that the board is less inclined to exclude special items than are managers. Finally, the intensity of intangible assets is positively associated with non-GAAP in the earnings announcement and proxy statement.

Overall, Table 4 provides evidence consistent with all three possible relations between the board and the manager. The two parties independently make similar decisions, the board influences the manager, and the manager influences the board.

#### 4.2 OVERLAP BETWEEN EARNINGS ANNOUNCEMENTS AND PROXY STATEMENTS

Next, we estimate the determinants of the board and the manager making similar non-GAAP reporting choices. Specifically, we examine the determinants of dual use (i.e., *OVERLAP*) of non-GAAP EPS in both financial disclosure and compensation contracting. Ex-post, when both the manager and the board have provided non-GAAP EPS, these analyses provide evidence regarding who is primarily responsible for the decision to disclose non-GAAP earnings.

To facilitate comparison of the magnitude of influence from the board and the manager, we construct a single variable based on principal components analysis for each channel (i.e., compensation contracting vs. financial disclosure) to represent factors associated only with non-GAAP reporting in the proxy statement (i.e., *NG PROXY<sub>t-1</sub>* and *SIZE*), and a similar variable to represent factors associated only with non-GAAP reporting in the earnings announcement (i.e., *NG EA<sub>t-1</sub>*, *NEG GAAP SURPRISE*, and *LITIGATION*). The determinants we test are the variables

from equations 1 and 2 and Table 4 that we predict are associated with non-GAAP earnings reporting. We test whether overlap in non-GAAP reporting is more highly associated with reporting decisions of the board or reporting decisions of the manager (i.e., compensation contracting incentives vs. financial disclosure incentives). Equation 3 represents our empirical specification.

$$\begin{aligned}
OVERLAP_{it} = & \beta_0 + \beta_1 LOSS_{it} + \beta_2 SPECIAL_{it} + \beta_3 BM_{it} + \beta_4 STDROA_{it} + \beta_5 INTANGIBLES_{it} \\
& + \beta_6 NG\ PROXY_{COMPONENT_{it}} + \beta_7 NG\ EA_{COMPONENT_{it}} + \sum_{j=1}^J \beta_j IND_i \\
& + \sum_{k=1}^K \beta_k YEAR_t \varepsilon_{it}
\end{aligned} \tag{3}$$

We estimate equation 3 for the full sample and requiring non-GAAP EPS numbers to match for observations that report non-GAAP EPS in both the proxy statement and the annual earnings announcement. We cluster standard errors by firm and earnings announcement month. All variables are defined in detail in Appendix B.

We present the results of estimating equation 3 in Table 5. We find that overlap in non-GAAP reporting has a higher associated with factors that lead to the board's use of non-GAAP EPS. When an event occurs that would lead to the board using non-GAAP EPS for compensation contracting but would not itself influence the manager, we are likely to observe that the board and the manager (1) both report non-GAAP EPS, and (2) report the same metric. In contrast, when an event occurs that would lead to the manager reporting non-GAAP EPS in the annual earnings announcement but would not itself influence the board, we do not find a significant relation, or a less positive relation, with overlap in non-GAAP EPS reporting. All within-equation tests of  $NG\ PROXY_{COMPONENT} = NG\ EA_{COMPONENT}$  indicate that compensation contracting is a more positive determinant of the likelihood of non-GAAP EPS overlap than is financial disclosure. The evidence

in Table 5 implies that the board’s influence over the manager is greater than the manager’s influences over the board in the use of non-GAAP EPS.<sup>1</sup>

#### 4.3 OVERLAP AND NON-GAAP EXCLUSION PERSISTENCE

Next, we examine implications of overlap in non-GAAP EPS between the earnings announcement and proxy statement for the quality of non-GAAP EPS reported by managers in the earnings announcement. Regulators, the media, and prior research has been particularly critical of non-GAAP earnings reporting by managers. We predict that the board’s influence on the manager can act as a governance mechanism, improving the quality of non-GAAP metrics. In our first test of whether non-GAAP EPS use for compensation contracting is associated with improved non-GAAP EPS quality for financial disclosure, we test for differences in the relation between non-GAAP exclusions from the earnings announcement and future cash flows and earnings, which prior research refers to as “persistence” (Doyle et al. [2003], Kolev et al. [2008], Whipple [2015], Black et al. [2018]). Equation 4 represents our empirical specification.  $PERF_{it+1}$  is equal to either  $CFO_{it+1}$  or  $OPEARN_{it+1}$ . We estimate equation 4 for the NONGAAP EA sample and requiring non-GAAP EPS numbers to match for observations that report non-GAAP EPS in both the proxy statement and the annual earnings announcement. We cluster standard errors by firm and earnings announcement month. We define all variables in detail in Appendix B.

$$\begin{aligned}
PERF_{it+1} = & \beta_0 + \beta_1 NONGAAP\ EARN_{it} + \beta_2 NONGAAP\ EXCL_{it} + \beta_3 NONGAAP\ EARN_{it} \\
& \times NG\ PROXY_{it} + \beta_4 NONGAAP\ EXCL_{it} \times NG\ PROXY_{it} + \beta_5 NG\ PROXY_{it} \\
& + \beta_6 LOSS_{it} + \beta_7 SIZE_{it} + \beta_8 BM_{it} + \beta_9 SALES\ GROWTH_{it} + \beta_{10} STDROA_{it} \\
& + \sum_{j=1}^J \beta_j IND_i + \sum_{k=1}^K \beta_k YEAR_t \varepsilon_{it}
\end{aligned} \tag{4}$$

---

<sup>1</sup> Inferences in this table are similar if we replace  $NG\ PROXY_{COMPONENT}$  with  $NG\ PROXY_{t-1}$  and  $NG\ EA_{COMPONENT}$  with  $NG\ EA_{t-1}$ . If we include the principal second component for  $NG\ EA$ , the second component is not significant in any regression and inferences are the same.

Table 6 presents the results of estimating equation 4. We find that exclusions are less persistent for future cash flows and earnings when non-GAAP EPS is also reported in the proxy statement for that fiscal year ( $NONGAAP\ EXCL \times NG\ PROXY < 0$ ). This result implies that the excluded items are less persistent, and that non-GAAP EPS is of higher quality, when the board appears to influence non-GAAP EPS reporting via non-GAAP EPS contracting.

#### 4.4 OVERLAP AND NON-GAAP DISCLOSURE AGGRESSIVENESS

Next, we test for differences in the propensity of reported non-GAAP EPS to exceed analysts' core earnings metric. Prior research finds that analysts have higher quality non-GAAP reporting than managers and play a filtering role (Bentley et al. [2018]). We proxy for the aggressiveness of managers' non-GAAP reporting with an indicator variable equal to one when managers' disclosed non-GAAP EPS from the annual earnings announcement exceeds analysts' actual core earnings number from I/B/E/S (*INCREMENTAL*). The intuition behind this measure is that when managers' non-GAAP EPS number is greater than analysts', chances are higher that managers are excluding recurring expense items that are not "one-time" in nature and are likely to persist in future periods. If managers are truly attempting to report "recurring" earnings when they disclose non-GAAP EPS in their earnings announcements, they should not exclude recurring expense items from non-GAAP EPS.

In Table 7, Panel A, we construct 2 x 2 matrices to compare the likelihood of compensation contracting use of non-GAAP EPS (*NG PROXY*) with our measure of non-GAAP financial disclosure aggressiveness (*INCREMENTAL*). Chi-square tests indicate that the likelihood of aggressive non-GAAP financial disclosure is significantly lower when the firm uses non-GAAP EPS for compensation contracting purposes ( $p < 0.01$ ).

To examine the relation between compensation contracting use of non-GAAP EPS and non-GAAP financial disclosure aggressiveness in a multivariate setting, we estimate equation 4.

$$\begin{aligned}
INCREMENTAL_{it} = & \beta_0 + \beta_1 NG\ PROXY_{it} + \beta_2 LOSS_{it} + \beta_3 SPECIAL_{it} + \beta_4 SIZE_{it} + \\
& \beta_5 BM_{it} + \beta_6 STDROA_{it} + \beta_7 INTANGIBLES_{it} + \beta_8 NG\ EA_{it-1} + \\
& \beta_9 NEG\ GAAP\ SURPRISE_{it} + \beta_{10} LITIGATION_{it} + \sum_{j=1}^J \beta_j IND_i + \\
& \sum_{k=1}^K \beta_k YEAR_t \varepsilon_{it}
\end{aligned} \tag{5}$$

We estimate equation 4 for the NONGAAP EA sample and requiring non-GAAP EPS numbers to match for observations that report non-GAAP EPS in both the proxy statement and the annual earnings announcement. We cluster standard errors are clustered by firm and earnings announcement month. We define all variables are defined in detail in Appendix B.

Table 7, Panel B presents the results of estimating equation 4. We find that non-GAAP EPS metrics in the annual earnings announcements are significantly less likely to exceed analysts' actual earnings metrics when non-GAAP EPS is also reported in the proxy statement for that fiscal year. This result implies that managers are less willing to use aggressive non-GAAP EPS measures when the board influences non-GAAP reporting via non-GAAP compensation contracting.

#### 4.5 OVERLAP AND STOCK MARKET PRICING OF NON-GAAP EARNINGS NEWS

Finally, we examine investors' response to reported non-GAAP earnings. If dual use of non-GAAP EPS for compensation contracting and financial disclosure is associated with improved non-GAAP EPS quality or reliability, we expect investors to respond more to non-GAAP earnings news.

To examine the stock market pricing of non-GAAP earnings news, we estimate equation 6 for the NONGAAP EA sample, the NONGAAP EA sample requiring non-GAAP EPS numbers to match with observations that report non-GAAP EPS in both the proxy statement and the annual earnings announcement, and the NONGAAP EA sample replacing the  $NG\ PROXY_t$  with  $NG\ PROXY_{t-1}$  to allow for the possibility that compensation contracting use of non-GAAP EPS

determines or incentivizes non-GAAP EPS financial disclosure. We cluster standard errors by firm and earnings announcement month. We define all variables in detail in Appendix B.

$$\begin{aligned}
CAR_{it} = & \beta_0 + \beta_1 NONGAAP FE_{it} + \beta_2 NONGAAP FE_{it} \times NG PROXY_{it} + \beta_3 NG PROXY_{it} \\
& + \beta_4 SIZE_{it} + \beta_5 BM_{it} + \beta_6 ANALYSTS_{it} + \beta_7 RPT LAG_{it} + \beta_8 INSTOWN_{it} \\
& + \beta_9 NONGAAP FE_{it} \times SIZE_{it} + \beta_{10} NONGAAP FE_{it} \times BM_{it} \\
& + \beta_{11} NONGAAP FE_{it} \times ANALYSTS_{it} + \beta_{12} NONGAAP FE_{it} \times RPT LAG_{it} \\
& + \beta_{13} NONGAAP FE_{it} \times INSTOWN_{it} + \sum_{j=1}^J \beta_j IND_i + \sum_{k=1}^K \beta_k YEAR_t \varepsilon_{it} \quad (6)
\end{aligned}$$

Table 8 presents the results of estimating equation 6. We find modest evidence that investors' respond more to non-GAAP EPS in the earnings announcement when the same non-GAAP EPS is also disclosed in the proxy statement (columns 1 and 2). One possibility for the weak evidence is the timing difference between when the earnings announcement and proxy statement are released. Investors may not be aware that the board is monitoring non-GAAP reporting by the manager if non-GAAP EPS has not been used for compensation contracting in prior years.

When we examine whether the board used non-GAAP EPS for compensation contracting in the prior year (column 3), and likely will appropriately monitor managers using non-GAAP EPS in the current year, we find strong evidence that investors respond more to non-GAAP EPS in the earnings announcement. Overall, we conclude that boards' compensation contracting use of non-GAAP EPS disciplines managers' non-GAAP EPS disclosures, which investors find to be more reliable than if boards did not use non-GAAP EPS for compensation contracting.

## 5. Conclusion

We explore how the internal use of non-GAAP performance metrics in compensation contracting relates to the external reporting of non-GAAP earnings to stakeholders. Ex ante, it is



unclear why information useful in contracting would be informative for valuation purposes unless a firm's compensation and financial disclosure processes are related. We explore this relation using a large hand-collected sample of non-GAAP earnings numbers from firms' proxy statements and annual earnings announcements.

The evidence suggests that non-GAAP EPS use for stewardship purposes influences the likelihood and quality of non-GAAP EPS information disclosed to stakeholders in annual earnings announcements. Unlike previous studies that examine only non-GAAP disclosures disclosed in annual earnings announcements (i.e., Guest et al. [2017], Black et al. [2018]) or in proxy statements (i.e., Curtis et al. [2017]), our study provides evidence based on data collected from both sources. Moreover, our results are important because they suggest a link between the compensation contracting process and voluntary disclosures decisions, and that this link results in non-GAAP earnings figures that are of relatively higher quality. Our results also inform the literature on the determinants of the properties of non-GAAP EPS figures used in both compensation contracts and financial disclosure.

Our study raises several important questions for future research to consider. First, how do specific non-GAAP exclusions vary between compensation contracting and financial disclosure? We provide preliminary evidence that the presence of special items influences the likelihoods of non-GAAP EPS use in both compensation contracting and financial disclosure, but does so differentially. Second, how does board discretion to use non-GAAP performance metrics versus actual use of non-GAAP performance metrics in compensation contracting influence manager behavior? Does commitment to non-GAAP performance measure use in compensation contracting via proxy statement disclosure result in different manager behavior than if such use was merely part of the board's subjective performance evaluation and not explicitly disclosed? Third, we provide evidence that both the stewardship and valuation channels influence one another, with the

compensation contracting channel having stronger effects on non-GAAP EPS, on average. How do the two channels of compensation contracting and financial disclosure influence non-GAAP quality in the cross section and over time? We believe that answers to these questions will advance our understanding of the stewardship and valuation uses of accounting information.

## REFERENCES

- Bentley, J., Christensen, T., Gee, K., & Whipple, B., 2018. Disentangling managers' and analysts' non-GAAP reporting choices. *Journal of Accounting Research*, forthcoming.
- Bhattacharya, N., Black, E., Christensen, T., & Larson, C., 2003. Assessing the relative informativeness and permanence of pro forma earnings and GAAP operating earnings. *Journal of Accounting and Economics*, 36: 285-319.
- Black, D., Black, E., Christensen, T., & Heninger, W., 2012. Has the regulation of pro forma reporting in the US changed investors' perceptions of pro forma earnings disclosures? *Journal of Business Finance & Accounting*, 39: 876-904.
- Black, D., & Christensen, T., 2009. US managers' use of 'pro forma' adjustments to meet strategic earnings targets. *Journal of Business Finance & Accounting*, 36: 297-326.
- Black, D., Christensen, T., Ciesielski, J., & Whipple, B., 2018. Non-GAAP earnings: A consistency and comparability crisis? *Working paper*, Dartmouth College, University of Georgia, and R. G. Associates, Inc.
- Bradshaw, M., & Sloan, R., 2002. GAAP versus the street: an empirical assessment of two alternative definitions of earnings. *Journal of Accounting Research*, 30: 41-66.
- Curtis, A., Li, V., & Patrick, P., 2017. The use of adjusted earnings in performance evaluation. *Working Paper*, University of Washington and University of Washington – Bothell.
- Curtis, A., McVay, S., & Whipple, B., 2014. The disclosure of non-GAAP earnings information in the presence of transitory gains. *The Accounting Review*, 89: 933-958.
- Doyle, J., Lundholm, R., & Soliman, M., 2003. The predictive value of expenses excluded from pro forma earnings. *Review of Accounting Studies*, 8: 145-174.
- Easton, P., & Zmijewski, M., 1989. Cross-sectional variation in the stock market response to accounting earnings announcements. *Journal of Accounting and Economics*, 11: 117-141.
- Francis, J., LaFond, R., Olsson, P., Schipper, K., 2004. Costs of equity and earnings attributes. *The Accounting Review*, 79: 967-1010.
- Guest, N., Kothari, S.P., & Pozen, R., 2017. High non-GAAP earnings predict abnormally high CEO pay. *Working paper*, Massachusetts Institute of Technology.
- Hayn, C., 1995. The information content of losses. *Journal of Accounting and Economics*, 20: 125-153.
- Hemmer, T., & Labro, E., 2008. On the optimal relation between the properties of managerial and financial reporting systems. *Journal of Accounting Research*, 46: 1209-1240.
- Kolev, K., Marquardt, C., & McVay, S., 2008. SEC scrutiny and the evolution of non-GAAP reporting. *The Accounting Review*, 83: 157-184.
- Kothari, S. P., Ramanna, K., & Skinner, D., 2010. Implications for GAAP from an analysis of positive research in accounting. *Journal of Accounting Research*, 50: 246-286.
- Lambert, R., 2010. Discussion of "Implication for GAAP from an analysis of positive research in accounting." *Journal of Accounting Research*, 50: 287-295.

- Matsunaga, S., & Park, C., 2001. The effect of missing a quarterly earnings benchmark on the CEO's annual bonus. *The Accounting Review*, 76: 313-332.
- McInnis, J., 2010. Earnings smoothness, average returns, and implied cost of equity capital. *The Accounting Review*, 85: 315-341.
- McVay, S., 2006. Earnings management using classification shifting: An examination of core earnings and special items. *The Accounting Review*, 81: 501-531.
- Rapoport, M., February 26, 2014. Some companies alter the bonus playbook. *The Wall Street Journal*,  
<http://online.wsj.com/news/articles/SB10001424052702304834704579405411156046356>.  
Accessed September 12, 2014.
- Srivastava, A., 2014. Why have measures of earnings quality changed over time? *Journal of Accounting and Economics*, 57: 196-217.
- Whipple, B., 2015. The great unknown: Why exclude "other" items from non-GAAP earnings calculations in the post-Reg G world? *Working Paper*, University of Georgia.

## APPENDIX A

### Amazon MTurk Data Collection Instructions

This is a **QUALIFICATION TASK** for a research study to extract and record **ANNUAL NON-GAAP EARNINGS PER DILUTED SHARE** data. Correctly extracting and recording this data in 90% of these statements will qualify you for two tasks: *Proxy: Annual Non-GAAP Earnings per Diluted Share*, and *Earnings: Annual Non-GAAP Earnings per Diluted Share*.

### INSTRUCTIONS

Extract and record **ANNUAL NON-GAAP EARNINGS PER DILUTED SHARE**.

Read each excerpt in full record the **ANNUAL NON-GAAP EARNINGS PER DILUTED SHARE** number disclosed for the company in the blank “ANSWER” space provided (see Example 1). Other terms indicating non-GAAP earnings per diluted share could be "adjusted earnings per diluted share," indicating an adjustment from GAAP earnings per diluted share.

Leave the “ANSWER” space blank if you cannot identify the **ANNUAL NON-GAAP EARNINGS PER SHARE** number from the excerpt. This will be the case if you encounter any of the following:

- There is no earnings number in the excerpt.
- The excerpt is a row of numbers without discernable dates to match the numbers.
- There is only information on non-GAAP earnings targets, forecasts, or ranges of targets or forecasts and no information on actual non-GAAP earnings results.
- The excerpt contains quarterly information, and no annual information. Do not record quarterly non-GAAP earnings per share numbers.
- The excerpt contains only annual non-GAAP earnings (unscaled) or annual non-GAAP earnings per basic share.
  - If you cannot tell whether an **ANNUAL NON-GAAP EARNINGS PER SHARE** number is per diluted share or per basic share from the information in the excerpt, record the available number in the “ANSWER” space.

When you encounter more than one **ANNUAL NON-GAAP EARNINGS PER DILUTED SHARE** number in an excerpt, do the following:

- Record the number from the most recent annual period in the “ANSWER” field and record the year in the “NOTES” field.
- If more than one **ANNUAL NON-GAAP EARNINGS PER DILUTED SHARE** number exists in an excerpt **from the same annual period**, record the largest number and explain your choice in the “NOTES” field.

When recording a number in the “ANSWER” space, follow these formatting rules:

- No dollar signs or other currency labels
- Record the number in terms of dollars. “Four cents” should be recorded as 0.04.

**Example 1**

Full year diluted net income per share, excluding per share restructuring and impairment expense, of \$4.35 compared to \$4.25 in 2009

ANSWER:

4.35

NOTES:

**Example 2**

Diluted net income per share of \$0.75, compared to \$0.61 per share in fourth quarter 2009; excluding per share restructuring and impairment expense of \$0.31 and \$0.35, respectively, adjusted net income per share of \$1.06 compared to \$0.96 per share in the fourth quarter of 2009

ANSWER:

NOTES:

**APPENDIX A (CONTINUED)**  
**Amazon MTurk Qualification Test**

**Qualification Test**

- 1) The Company's diluted non-GAAP earnings per share ("EPS") for fiscal year 2013 was \$5.31 per share, significantly above the EPS target that drove the financial objectives portion of the cash incentive program, as established by the Compensation Committee and, in aggregate, the Company also exceeded the target performance for its strategic objectives

ANSWER:

5.31

NOTES:

- 2) With respect to the fiscal year 2013 non-GAAP EPS goal, the minimum non-GAAP EPS target approved by the Compensation Committee that would have resulted in a payout under the 2013 bonus program was \$2.43 per share

ANSWER:

NOTES:

- 3) The non-GAAP net income for fiscal 2009 was \$427 million, or \$1.84 per diluted share, compared to net loss of (\$466) million, or (\$2.07) per share, in fiscal 2008

ANSWER:

1.84

NOTES:

2009

- 4) The amount of bonuses payable under the 2013 bonus program were based on the following: (1) the Company's performance during fiscal year 2013 relative to a non-GAAP EPS target, which constituted 65% of the 2013 bonus program, and (2) the Company's performance relative to strategic objectives, which collectively constituted 35% of the 2013 bonus program

ANSWER:

NOTES:

- 5) Non-GAAP operating profit was \$417 million, or 34% of total revenue, compared to non-GAAP operating loss of (\$568) million, or (66%) of total revenue, in the fourth quarter of fiscal 2008 and non-GAAP operating profit of \$263 million, or 28% of total revenue, in the third quarter of fiscal 2009

ANSWER:

NOTES:

- 6) Delivered non-GAAP operating margin of 29%, resulting in record diluted earnings per share on a non-GAAP basis of \$5.31 per share, more than twice the non-GAAP diluted earnings per share in fiscal year 2012

ANSWER:

NOTES:

- 7) On a non-GAAP basis, which excludes the impact of acquisition-related charges, share-based compensation expense, impairment of goodwill and acquisition-related intangible assets, non-cash economic interest expense associated with the cash-settled convertible note, and related tax adjustments and valuation allowance, fourth-quarter net income was \$277 million, or \$1.18 per diluted share, compared to a net loss of (\$359) million, or (\$1.59) per share, in the fourth quarter of fiscal 2008 and net income of \$176 million, or \$0.75 per diluted share, in the third quarter of fiscal 2009

ANSWER:

NOTES:

- 8) NON-GAAP NET INCOME (LOSS) \$ 277,211 \$ (359,331 ) \$ 427,207 \$ (465,974 )

ANSWER:

NOTES:



- 9) Delivered non-GAAP operating margin of 28%, resulting in record diluted earnings per share on a non-GAAP basis of \$5.60 per share, up 5% from the non-GAAP diluted earnings per share in fiscal year 2013

ANSWER:

NOTES:

- 10) Income (loss) before income taxes 377,256 (1,615,168 ) 503,801 (1,952,374 )

ANSWER:

NOTES:

**APPENDIX B**  
**Variable Definitions**

<u>Name</u>	<u>Description</u>	<u>Source</u>
ANALYSTS	The number of analysts contributing to the I/B/E/S EPS consensus forecast before the earnings announcement. Calculated as the natural log of (1 + the number of analysts). When there is no consensus forecast on I/B/E/S, we assume that the number of analysts contributing is zero. Descriptive statistics present raw values.	I/B/E/S
BM	Book value of equity at fiscal year-end (seq from Compustat) divided by the market value of equity as of the fiscal year-end month (from CRSP, or from Compustat when CRSP data is unavailable).	Compustat CRSP
CAR	Three-day cumulative market-adjusted return surrounding the earnings announcement date. Calculated as the firm's buy-and-hold return over the [-1,+1] window around the earnings announcement date, which is day 0, less the value-weighted market buy-and-hold return over the same window.	CRSP, Compustat
CFO <sub>t+1</sub>	Operating cash flow for the following year. Calculated as operating cash flow for year <i>t+1</i> (oancf from Compustat) scaled by total assets in year <i>t</i> (at from Compustat).	Compustat
INCREMENTAL	Equals "1" if non-GAAP EPS from the annual earnings announcement exceeds the I/B/E/S actual EPS earnings number; "0" otherwise	SEC.GOV 8-K, I/B/E/S
INSTOWN	The proportion of total outstanding shares owned by institutional investors.	Thomson Reuters Institutional Holdings
INTANGIBLES	The ratio of intangible assets (intan from Compustat) to total assets (at from Compustat) as of the fiscal year-end.	Compustat

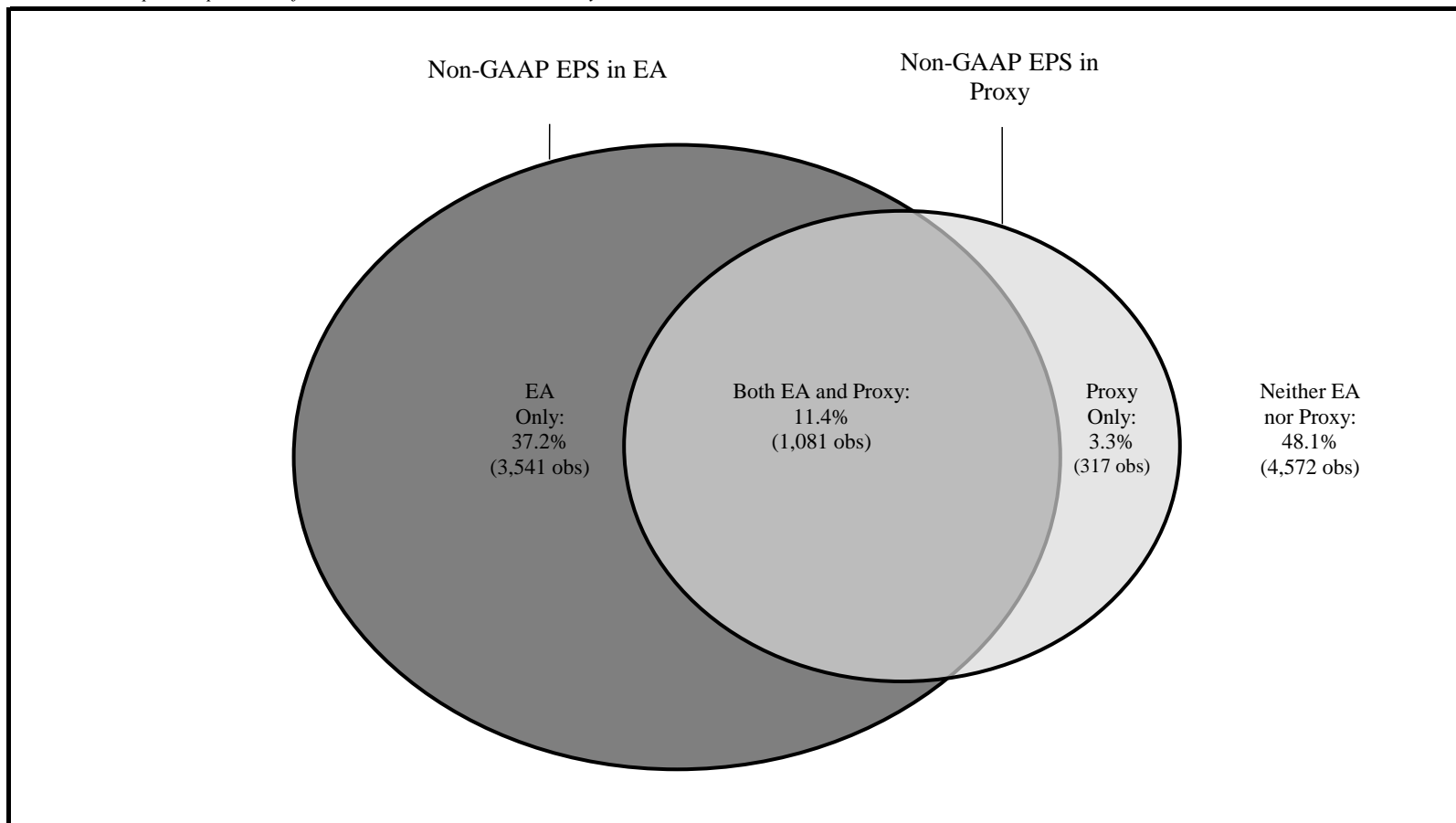
<u>Name</u>	<u>Description</u>	<u>Source</u>
INTERNAL	An indicator for whether the CEO was promoted internal. The variable is set to 1 if the CEO joined the company prior to becoming CEO (based on comparing joined_co and becameceo from Execucomp), and to 0 otherwise.	Execucomp
LITIGATION	Equals "1" for firms in the biotechnology (SIC 2833-2836; 8731-8734), computers (3570-3577; 7370-7374), electronics (3600-3674), and retailing (5200-5961) industries; "0" otherwise.	Compustat
LOSS	Equal "1" if GAAP net income (ni from Compustat) is less than zero; "0" otherwise.	Compustat
NEG GAAP SURPRISE	Equals "1" if the IBES GAAP EPS actual is less than the IBES GAAP EPS forecast; "0" otherwise.	I/B/E/S
NG EA	Equals "1" if the firm reports a non-GAAP EPS measure in the annual earnings announcement for year t, or quarter q of fiscal year t; "0" otherwise.	SEC.GOV 8-K, Lexis/Nexis Academic
NG PROXY	Equals "1" if the firm reports a non-GAAP EPS measure in the proxy statement for year t; "0" otherwise.	SEC.GOV DEF 14A
NONGAAP EARN	Non-GAAP EPS hand-collected from the annual earnings announcement for year t, multiplied by diluted shares outstanding (cshfd from Compustat) and scaled by total assets (at from Compustat)	SEC.GOV 8-K, Compustat
NONGAAP EXCL	Non-GAAP exclusions from the annual earnings announcement for year t. Calculated as GAAP earnings per share less NONGAAP EARN, so that when the firm excludes an expense, NONGAAP EXCL has a negative sign.	SEC.GOV 8-K, Compustat
NONGAAP FE	Non-GAAP EPS from the annual earnings announcement minus the median consensus street EPS forecast closest to the earnings announcement, from I/B/E/S, scaled by price at fiscal year-end.	SEC.GOV 8-K, I/B/E/S, CRSP

<u>Name</u>	<u>Description</u>	<u>Source</u>
RPT LAG	Operating earnings for the following year. Calculated as operating earnings per diluted share in year $t+1$ (oprepsx from Compustat) multiplied by the number of diluted shares outstanding in year $t+1$ (cshfd from Compustat) and scaled by total assets in year $t$ (at from Compustat).	Compustat
	The number of days between earnings announcement date (determined following DellaVigna and Pollet 2009) and fiscal year-end.	Compustat, I/B/e/S
SALES GROWTH	Change in sales, as a proportion of total assets. Calculated as sales in year $t$ (sale from Compustat) less sales in year $t-1$ , scaled by total assets in year $t$ (at from Compustat).	Compustat
SIZE	Natural log of market value of equity as of fiscal year-end month. In the descriptive statistics, raw values are reported (in millions).	CRSP
SPECIAL	Equals "1" if Compustat identifies a non-zero special item (spi from Compustat); "0" otherwise.	Compustat
STDROA	Standard deviation of a firm's return on assets (ib divided by at, from Compustat) over at least two of the past five years.	Compustat
TENURE	Natural log of 1 plus the number of years a CEO has held the position.	ExecuComp

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ork

**FIGURE 1**  
**Non-GAAP EPS Reporting in the Earnings Announcement (EA) and Use for Executive Compensation in the Proxy Statement (Proxy)**

*Panel A: Overlap in the presence of non-GAAP EPS in the EA and Proxy*



This panel presents the proportion of observations in our full sample (9,511 firm-years) containing non-GAAP EPS in the earnings announcement (EA) and in the proxy statement (Proxy).

*Panel B: Overlap in the non-GAAP EPS number reported in the EA and Proxy*

	<b>Number of firm-years</b>	<b>Non-GAAP EPS in both EA and Proxy</b>	<b>Non-GAAP EPS Matches</b>
Full Sample	9,511	1,081	744
NONGAAP EA Sample	2,675	464	298

**TABLE 1**  
**Data Collection Accuracy**

<i>Panel A: Earnings announcements</i>		
	N	% correctly identified
NG EA = 1	30	100.0%
NG EA = 0	30	76.7%
NG EA Overall	60	88.3%
	N	% contain correct number
Non-GAAP EPS	30	90.0%
When identified:		
1 Number	21	90.5%
2 Numbers	5	80.0%
3 Numbers	3	100.0%
4 Numbers	1	100.0%
<i>Panel B: Proxy statements</i>		
	N	% correctly identified
NG PROXY = 1	30	86.7%
NG PROXY = 0	30	93.3%
NG PROXY Overall	60	90.0%
	N	% contain correct number
Non-GAAP EPS	26	73.1%
When identified:		
1 Number	21	81.0%
2 Numbers	5	40.0%

**TABLE 2**  
**Sample Selection**

	Firm-Years	Firms
Firm-Years from Execucomp firms for fiscal years ending in 2009 - 2015	11,061	2,044
Less: missing either Earnings Announcement or Proxy Statement	(1,101)	(89)
Less: REITS (sic code = 6798)	(449)	(85)
Full Sample	<u>9,511</u>	<u>1,870</u>
<hr/>		
Full Sample	9,511	1,870
Less: does not report non-GAAP EPS in Earnings Announcement	(4,889)	(523)
Less: multiple non-GAAP EPS or Proxy numbers	(1,947)	(179)
NONGAAP EA Sample	<u>2,675</u>	<u>1,168</u>

**TABLE 3**  
**Descriptive Statistics**

<i>Panel A: Summary Statistics -- Full Sample</i>				
Variable	N	Mean	Median	Std Dev
<i>NG PROXY</i>	9511	0.15	0	0.35
<i>NG EA</i>	9511	0.49	0	0.50
<i>NG PROXY</i> <sub><i>t-1</i></sub>	7473	0.14	0	0.34
<i>NG EA</i> <sub><i>t-1</i></sub>	7473	0.48	0	0.50
<i>LOSS</i>	9511	0.15	0	0.36
<i>SPECIAL</i>	9511	0.78	1	0.42
<i>SIZE (\$MM)</i>	9031	8,930	2,033	21,674
<i>BM</i>	9465	0.58	0.48	0.48
<i>STDROA</i>	9492	0.06	0.03	0.08
<i>INTANGIBLES</i>	9380	0.20	0	0.20
<i>NEG GAAP SURPRISE</i>	9511	0.14	0	0.34
<i>LITIGATION</i>	9511	0.27	0	0.45
<i>INTERNAL</i>	9450	0.91	1	0.29
<i>TENURE</i>	9394	7.22	5	6.96
<i>Panel B: Summary Statistics -- NONGAAP EA Sample</i>				
Variable	N	Mean	Median	Std Dev
<i>NG PROXY</i>	2675	0.17	0	0.38
<i>NG EA</i>	2675	1.00	1	0.00
<i>NG PROXY</i> <sub><i>t-1</i></sub>	2152	0.15	0	0.36
<i>NG EA</i> <sub><i>t-1</i></sub>	2152	0.71	1	0.46
<i>NONGAAP EARN</i>	2675	0.06	0.05	0.05
<i>NONGAAP EXCL</i>	2675	-0.02	-0.01	0.06
<i>CFO</i> <sub><i>t+1</i></sub>	2098	0.11	0.10	0.08
<i>OPEARN</i> <sub><i>t+1</i></sub>	2098	0.06	0.05	0.06
<i>LOSS</i>	2675	0.14	0	0.35
<i>SIZE (\$MM)</i>	2559	9,510	2,253	24,935
<i>BM</i>	2674	0.56	0.47	0.45
<i>SALES GROWTH</i>	2675	0.03	0.03	0.16
<i>STDROA</i>	2673	0.06	0.03	0.08
<i>SPECIAL</i>	2675	0.85	1	0.36
<i>INTANGIBLES</i>	2641	0.23	0	0.21
<i>NEG GAAP SURPRISE</i>	2675	0.48	0.00	0.50
<i>LITIGATION</i>	2675	0.32	0	0.47
<i>CAR</i>	2559	0.005	0.004	0.069
<i>ANALYSTS</i>	2675	2.20	2	0.83
<i>RPT LAG</i>	2675	40.68	40	12.27
<i>INSTOWN</i>	2675	0.48	0.66	0.41

This table presents descriptive statistics. Variables are defined in Appendix B.



**TABLE 4**  
**Determinants of Non-GAAP EPS Presence in EA and Proxy**

Sample	FULL SAMPLE	
Dependent Variable	NG EA	NG PROXY
	(1)	(2)
<i>Predicted NG PROXY</i>	0.572 *** (0.19)	
<i>Predicted NG EA</i>		0.367 *** (0.12)
<i>LOSS</i>	-0.335 *** (0.11)	-0.192 ** (0.12)
<i>SPECIAL</i>	0.469 *** (0.08)	0.188 *** (0.10)
<i>SIZE</i>	0.017 (0.02)	0.102 *** (0.02)
<i>BM</i>	-0.002 (0.08)	0.094 (0.08)
<i>STDROA</i>	0.603 (0.50)	-0.606 (0.61)
<i>INTANGIBLES</i>	0.585 *** (0.19)	0.438 ** (0.18)
<i>NG EA<sub>t-1</sub></i>	1.513 *** (0.07)	
<i>NEG GAAP SURPRISE</i>	6.616 *** (0.13)	
<i>LITIGATION</i>	0.272 *** (0.09)	
<i>NG PROXY<sub>t-1</sub></i>		1.605 *** (0.08)
<i>INTERNAL</i>		-0.153 (0.13)
<i>TENURE</i>		-0.003 (0.04)
Industry Fixed Effects	Yes	Yes
Year Fixed Effects	Yes	Yes
N	6,831	6,831
N = 1	3,490	1,128
N = 0	3,341	5,703
ROC	0.899	0.892

$$\begin{aligned}
 NG\ EA_{it} = & \beta_0 + \beta_1 \widehat{NG\ PROXY}_{it} + \beta_2 LOSS_{it} + \beta_3 SPECIAL_{it} + \beta_4 SIZE_{it} + \beta_5 BM_{it} \\
 & + \beta_6 STDROA_{it} + \beta_7 INTANGIBLES_{it} + \beta_8 NG\ EA_{it-1} \\
 & + \beta_9 NEG\ GAAP\ SURPRISE_{it} + \beta_{10} LITIGATION_{it} + \sum_{j=1}^J \beta_j IND_t \\
 & + \sum_{k=1}^K \beta_k YEAR_t \varepsilon_{it} \quad (1)
 \end{aligned}$$

$$\begin{aligned}
 NG\ PROXY_{it} = & \beta_0 + \beta_1 \widehat{NG\ EA}_{it} + \beta_2 LOSS_{it} + \beta_3 SPECIAL_{it} + \beta_4 SIZE_{it} + \beta_5 BM_{it} \\
 & + \beta_6 STDROA_{it} + \beta_7 INTANGIBLES_{it} + \beta_8 NG\ PROXY_{it-1} + \beta_9 INTERNAL_{it} \\
 & + \beta_{10} TENURE_{it} + \sum_{j=1}^J \beta_j IND_t + \sum_{k=1}^K \beta_k YEAR_t \varepsilon_{it} \quad (2)
 \end{aligned}$$

This table presents the results of probit regressions that estimate the determinants of non-GAAP use in the earnings announcement and proxy statement, equations (1) and (2). This is the second stage of a two-stage least squares estimation. *Predicted NG Proxy* (*Predicted NG EA*) is calculated using a first-stage OLS regression with *NG PROXY<sub>t-1</sub>*, *INTERNAL*, and *TENURE* (*NG EA<sub>t-1</sub>*, *NEG GAAP SURPRISE*, and *LITIGATION*) as instruments. All variables are defined in Appendix B. Regression coefficients are presented above standard errors. Bootstrapped standard errors are computed by generating 1000 random samples of the same size and estimating both first- and second-stage regressions using each sample. \*, \*\*, and \*\*\* indicate statistical significance at the 10%, 5%, and 1% level, respectively, based on the empirical distribution of estimates.

**TABLE 5**  
**Determinants of Overlap in Non-GAAP EPS between the EA and Proxy**

Sample Dependent Variable	FULL SAMPLE		Require Matches	
	OVERLAP	OVERLAP	OVERLAP	OVERLAP
	(1)	(2)	(3)	(4)
<i>LOSS</i>	-0.070 (0.11)	0.010 (0.12)	-0.145 (0.11)	-0.076 (0.12)
<i>SPECIAL</i>	0.309 *** (0.07)	0.156 * (0.09)	0.224 *** (0.08)	0.072 (0.10)
<i>BM</i>	0.092 * (0.05)	0.029 (0.06)	0.036 (0.06)	-0.025 (0.07)
<i>STDROA</i>	-0.063 (0.32)	-0.289 (0.37)	0.151 (0.42)	-0.051 (0.47)
<i>INTANGIBLES</i>	0.493 *** (0.17)	0.271 (0.19)	0.479 ** (0.20)	0.276 (0.22)
<i>NG PROXY COMPONENT</i>	0.546 *** (0.02)	0.518 *** (0.03)	0.540 *** (0.03)	0.517 *** (0.03)
<i>NG EA COMPONENT</i>	0.224 *** (0.03)	-0.011 (0.03)	0.207 *** (0.03)	-0.019 (0.04)
<i>NG PROXY COMPONENT - NG EA COMPONENT</i>	0.322 ***	0.529 ***	0.333 ***	0.536 ***
Industry Fixed Effects	Yes	Yes	Yes	Yes
Year Fixed Effects	Yes	Yes	Yes	Yes
GAAP-Only Observations Included	Yes	No	Yes	No
N	7,011	3830	6,756	3575
N =1	899	899	644	644
N =0	6,112	2931	6,112	2931
ROC	0.8431	0.7845	0.8479	0.7953

$$\begin{aligned}
 OVERLAP_{it} = & \beta_0 + \beta_1 LOSS_{it} + \beta_2 SPECIAL_{it} + \beta_3 BM_{it} + \beta_4 STDROA_{it} + \beta_5 INTANGIBLES_{it} \\
 & + \beta_6 NG\ PROXY_{COMPONENT}_{it} + \beta_7 NG\ EA_{COMPONENT}_{it} + \sum_{j=1}^J \beta_j IND_j \\
 & + \sum_{k=1}^K \beta_k YEAR_{t\epsilon_{it}}
 \end{aligned} \tag{3}$$

This table presents the results of probit regressions that estimate the determinants of overlap in non-GAAP use between the earnings announcement and proxy statement, equation (3). *OVERLAP* is an indicator set to 1 if both the earnings announcement and the proxy statement contain non-GAAP EPS, and to 0 otherwise. Columns 3 and 4 excludes observations where *NG EA* = 1 and *NG PROXY* = 1 but the non-GAAP EPS numbers do not match. *NG PROXY COMPONENT* (*NG EA COMPONENT*) is the principal component of the variables from Table 4 that are significantly associated with non-GAAP use in the proxy statement (earnings announcement), but not associated with non-GAAP use in the earnings announcement (proxy statement). All variables are defined in Appendix B. Regression coefficients are presented above standard errors, which are clustered by firm and calendar month and year of the earnings announcement (e.g., March 2012). \*, \*\*, and \*\*\* indicate statistical significance at the 10%, 5%, and 1% level, respectively.

**TABLE 6**  
**Non-GAAP Exclusions Persistence and Overlap in Non-GAAP EPS between the EA and Proxy**

Sample	NONGAAP EA Sample		Require Matches	
Dependent Variable	$CFO_{t+1}$	$OPEARN_{t+1}$	$CFO_{t+1}$	$OPEARN_{t+1}$
	(1)	(2)	(3)	(4)
	Prediction			
<i>NONGAAP EARN</i>	0.760 *** (0.05)	0.713 *** (0.04)	0.753 *** (0.05)	0.712 *** (0.04)
<i>NONGAAP EXCL</i>	0.364 *** (0.05)	0.390 *** (0.05)	0.359 *** (0.05)	0.387 *** (0.05)
<i>NONGAAP EARN</i> × <i>NG PROXY</i>	0.093 (0.07)	0.007 (0.06)	0.086 (0.09)	0.032 (0.05)
<i>NONGAAP EXCL</i> × <i>NG PROXY</i> (-)	-0.113 * (0.08)	-0.087 (0.09)	-0.223 *** (0.07)	-0.115 * (0.09)
<i>NG PROXY</i>	-0.008 (0.01)	-0.001 (0.00)	-0.012 * (0.01)	-0.005 (0.00)
<i>LOSS</i>	0.032 *** (0.01)	0.016 *** (0.00)	0.031 *** (0.01)	0.016 *** (0.00)
<i>SIZE</i>	0.002 * (0.00)	0.004 *** (0.00)	0.002 (0.00)	0.004 *** (0.00)
<i>BM</i>	-0.039 *** (0.01)	-0.020 *** (0.00)	-0.040 *** (0.01)	-0.020 *** (0.00)
<i>SALES GROWTH</i>	0.038 *** (0.01)	0.025 ** (0.01)	0.042 *** (0.01)	0.026 ** (0.01)
<i>STDROA</i>	0.021 (0.03)	-0.017 (0.02)	0.019 (0.03)	-0.019 (0.02)
Industry Fixed Effects	Yes	Yes	Yes	Yes
Year Fixed Effects	Yes	Yes	Yes	Yes
N	2,007	2,007	1,888	1,888
Adj. R <sup>2</sup>	0.4345	0.5400	0.4328	0.5420

$$\begin{aligned}
 PERF_{it+1} = & \beta_0 + \beta_1 NONGAAP EARN_{it} + \beta_2 NONGAAP EXCL_{it} \\
 & + \beta_3 NONGAAP EARN_{it} \times NG PROXY_{it} + \beta_4 NONGAAP EXCL_{it} \times NG PROXY_{it} \\
 & + \beta_5 NG PROXY_{it} + \beta_6 LOSS_{it} + \beta_7 SIZE_{it} + \beta_8 BM_{it} + \beta_9 SALES GROWTH_{it} \\
 & + \beta_{10} STDROA_{it} + \sum_{j=1}^J \beta_j IND_i + \sum_{k=1}^K \beta_k YEAR_t \varepsilon_{it} \quad (4)
 \end{aligned}$$

This table presents the results of estimating OLS regressions to test the persistence of non-GAAP exclusions, equation (4). All observations in the table report non-GAAP EPS in the earnings announcement. The dependent variable equals  $CFO_{t+1}$  or  $OPEARN_{t+1}$ . Variables are defined in Appendix B. Column 1 uses all observations in the NONGAAP EA Sample. Column 2 excludes observations where  $NG EA = 1$  and  $NG PROXY = 1$  but the non-GAAP EPS numbers do not match. Regression coefficients are presented above standard errors, which are clustered by firm and calendar month and year of the earnings announcement (e.g., March 2012). \*, \*\*, and \*\*\* indicate statistical significance at the 10%, 5%, and 1% levels (one-sided where there is a prediction, two-sided otherwise), respectively.

**TABLE 7**  
**Aggressive Non-GAAP Reporting and Overlap in Non-GAAP EPS between the EA and Proxy**

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*Panel A: Tests of proportions*

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		(1) NONGAAP EA Sample <i>NG PROXY</i>		(2) Require Matches <i>NG PROXY</i>		
		0	1	0	1	
<b><i>INCREMENTAL</i></b>	0	1,734 80.2%	408 89.5%	1,734 80.2%	267 90.5%	
	1	428 19.8%	48 10.5%	428 19.8%	28 9.5%	
	P-value from Chi-Square test:		0.00		0.00	

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TABLE 7 Continued

<i>Panel B: Probit regressions</i>				
Sample	NONGAAP EA Sample		Require Matches	
Dependent Variable	<i>INCREMENTAL</i>		<i>INCREMENTAL</i>	
	(1)		(2)	
<i>NG PROXY</i>	-0.288 *** (0.09)	-0.056	-0.432 *** (0.11)	-0.077
<i>LOSS</i>	0.201 * (0.12)	0.047	0.202 * (0.11)	0.047
<i>SPECIAL</i>	-0.030 (0.12)	-0.006	-0.028 (0.13)	-0.006
<i>SIZE</i>	-0.146 *** (0.04)	-0.031	-0.150 *** (0.04)	-0.032
<i>BM</i>	0.101 (0.08)	0.022	0.110 (0.09)	0.024
<i>STDROA</i>	0.560 (0.41)	0.120	0.495 (0.41)	0.106
<i>INTANGIBLES</i>	0.021 (0.23)	0.005	0.029 (0.24)	0.006
<i>NG EA<sub>t-1</sub></i>	-0.332 *** (0.10)	-0.077	-0.353 *** (0.11)	-0.082
<i>NEG GAAP SURPRISE</i>	0.110 (0.07)	0.024	0.126 * (0.07)	0.027
<i>LITIGATION</i>	-0.042 (0.09)	-0.009	-0.034 (0.09)	-0.007
Industry Fixed Effects	Yes		Yes	
Year Fixed Effects	Yes		Yes	
N	1,983		1,862	
N=1	341		324	
N=0	1,642		1,538	
ROC	0.7274		0.7343	

$$\begin{aligned}
 EXCEED_{it} = & \beta_0 + \beta_1 NG\ PROXY_{it} + \beta_2 LOSS_{it} + \beta_3 SPECIAL_{it} + \beta_4 SIZE_{it} + \beta_5 BM_{it} \\
 & + \beta_6 STDROA_{it} + \beta_7 INTANGIBLES_{it} + \beta_8 NG\ EA_{it-1} \\
 & + \beta_9 NEG\ GAAP\ SURPRISE_{it} + \beta_{10} LITIGATION_{it} + \sum_{j=1}^J \beta_j IND_i \\
 & + \sum_{k=1}^K \beta_k YEAR_t \varepsilon_{it}
 \end{aligned} \tag{5}$$

This table compares the relation between non-GAAP use in the proxy statement and the likelihood that non-GAAP EPS in the earnings announcement exceeds the value reported by analysts. All observations in the table report non-GAAP EPS in the earnings announcement. *INCREMENTAL* is an indicator set to 1 if non-GAAP EPS reported in the earnings announcement exceeds street EPS available from IBES. Panel A presents univariate proportions and p-values from Chi-square tests. Panel B presents the results of estimating probit regressions, equation (5). Column 2 in both panels excludes observations where *NONGAAP EA* = 1 and *NONGAAP PROXY* = 1 but the non-GAAP EPS numbers do not match. Variables are defined in Appendix B. Regression coefficients are presented above standard errors, which are clustered by firm and calendar month and year of the earnings announcement (e.g., March 2012). \*, \*\*, and \*\*\* indicate statistical significance at the 10%, 5%, and 1% levels, respectively.

**TABLE 8**  
**Market Pricing of Non-GAAP Earnings and Overlap in Non-GAAP EPS between the EA and Proxy**

Sample		NONGAAP EA Sample		Require Matches		NONGAAP EA Sample	
Dependent Variable		CAR		CAR		CAR	
		(1)		(2)		(3)	
	Prediction						
<i>NONGAAP FE</i>		0.035	***	0.035	***	0.034	***
		(0.01)		(0.01)		(0.01)	
<i>NONGAAP FE</i> × <i>NG PROXY</i>	(+)	0.012		0.027	*		
		(0.01)		(0.02)			
<i>NG PROXY</i>		-0.003		-0.013			
		(0.01)		(0.01)			
<i>NONGAAP FE</i> × <i>NG PROXY</i> <sub><i>t-1</i></sub>	(+)					0.029	***
						(0.01)	
<i>NG PROXY</i> <sub><i>t-1</i></sub>						-0.015	**
						(0.01)	
<i>SIZE</i>		0.040	***	0.042	***	0.035	**
		(0.01)		(0.01)		(0.02)	
<i>BM</i>		-0.010		-0.013		-0.014	
		(0.01)		(0.01)		(0.01)	
<i>ANALYSTS</i>		-0.005		-0.005		-0.003	
		(0.01)		(0.01)		(0.01)	
<i>RPT LAG</i>		0.000		0.000		0.000	
		(0.00)		(0.00)		(0.00)	
<i>INSTOWN</i>		0.008		0.010		0.017	*
		(0.01)		(0.01)		(0.01)	
<i>NONGAAP FE</i> × <i>SIZE</i>		-0.046	*	-0.050	**	-0.037	
		(0.02)		(0.03)		(0.03)	
<i>NONGAAP FE</i> × <i>BM</i>		0.014		0.014		0.016	
		(0.02)		(0.02)		(0.02)	
<i>NONGAAP FE</i> × <i>ANALYSTS</i>		-0.002		-0.001		-0.007	
		(0.01)		(0.01)		(0.01)	
<i>NONGAAP FE</i> × <i>RPT LAG</i>		0.000		0.000		-0.001	
		(0.00)		(0.00)		(0.00)	
<i>NONGAAP FE</i> × <i>INSTOWN</i>		-0.004		-0.004		-0.005	
		(0.01)		(0.01)		(0.01)	
Industry Fixed Effects		Yes		Yes		Yes	
Year Fixed Effects		Yes		Yes		Yes	
N		2,533		2,378		2,033	
Adj. R <sup>2</sup>		0.0352		0.0389		0.0374	

$$\begin{aligned}
 CAR_{it} = & \beta_0 + \beta_1 NONGAAP FE_{it} + \beta_2 NONGAAP FE_{it} \times NG PROXY_{it} + \beta_3 NG PROXY_{it} \\
 & + \beta_4 SIZE_{it} + \beta_5 BM_{it} + \beta_6 ANALYSTS_{it} + \beta_7 RPT LAG_{it} + \beta_8 INSTOWN_{it} \\
 & + \beta_9 NONGAAP FE_{it} \times SIZE_{it} + \beta_{10} NONGAAP FE_{it} \times BM_{it} \\
 & + \beta_{11} NONGAAP FE_{it} \times ANALYSTS_{it} + \beta_{12} NONGAAP FE_{it} \times RPT LAG_{it} \\
 & + \beta_{12} NONGAAP FE_{it} \times INSTOWN_{it} + \sum_{j=1}^J \beta_j IND_j + \sum_{k=1}^K \beta_k YEAR_k \varepsilon_{it} \quad (6)
 \end{aligned}$$

This table presents the results of estimating OLS regressions to compare investors' response to the non-GAAP earnings surprise, equation (6). All observations in the table report non-GAAP EPS in the earnings announcement. *CAR* is market-adjusted returns at the earnings announcement date. Variables are defined in Appendix B. In this table, *SIZE* and *BM* are ranked into deciles and scaled between -0.5 and +0.5, and *ANALYSTS*, *RPT LAG*, and *INSTOWN* are standardized to have mean 0. Column 2 excludes observations where *NG EA* = 1 and *NG PROXY* = 1 but the non-GAAP EPS numbers do not match. Column 3 uses *NG PROXY*<sub>*t-1*</sub> in place of *NG PROXY*. Regression coefficients are presented above standard errors, which are clustered by firm and calendar month and year of the earnings announcement (e.g., March 2012). \*, \*\*, and \*\*\* indicate statistical significance at the 10%, 5%, and 1% levels (one-sided where there is a prediction, two-sided otherwise), respectively.