

**Managing Earnings Using Classification Shifting:
Evidence from Quarterly Special Items**

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ABSTRACT: This paper examines whether and when managers shift core expenses to special items to inflate current core earnings. McVay (2006) concludes that, on an annual basis, managers opportunistically shift core expenses, resulting in a *positive* relation between unexpected core earnings and the amount of negative special items. However, Barua and Cready (2008) argue that McVay's (2006) findings may be the result of a research design problem. When controlling for potential model misspecification, Barua and Cready (2008) find a *negative* relation between unexpected core earnings and negative special items, consistent with a performance-driven relation. Using McVay's (2006) core earnings expectation model, but modified based on suggestions of Barua and Cready (2008), we first document a negative relation between unexpected core earnings and negative special items for the overall sample, consistent with arguments in Barua and Cready (2008). However, when we split the sample, we document a positive relation between unexpected core earnings and negative special items in the fourth fiscal quarter and when firms are profitable. We do not detect evidence of classification shifting for firms that just meet or beat analysts' forecasts or prior period earnings. Our results confirm the importance of controlling for model specification as suggested by Barua and Cready (2008). In addition, finding evidence consistent with shifting core expenses to negative special items for subsamples where it is more likely to be occurring supports McVay's (2006) conclusion that managers shift income.

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I. INTRODUCTION

Our paper is motivated in three ways. First, we are interested in the timing of income classification shifting. McVay (2006) hypothesizes that managers have incentives to report core expenses (defined as cost of goods sold and selling, general, and administrative expenses) as negative special items in an attempt to inflate core profitability. Managers are motivated to manage earnings in this way because market participants may be particularly interested in core earnings (or pro forma earnings) rather than bottom-line GAAP earnings (Bradshaw and Sloan, 2002; Gu and Chen, 2007; Kinney and Trezevant, 1997). By shifting core expenses to negative special items, the firm increases core earnings, while bottom-line net income remains unaffected.¹ To provide evidence of classification shifting, McVay (2006) documents a positive relation between negative special items and unexpected core annual earnings. In other words, as negative special items increase, the firm tends to report higher than expected core earnings. We investigate the extent to which income shifting is more likely to occur in the fourth quarter versus the first three quarters of a firm's fiscal year.

Second, we are interested in identifying the conditions under which managers are more likely to use income shifting. We investigate this issue around three earnings thresholds. First, we investigate whether income shifting is more likely to occur for profitable quarters relative to loss quarters. Second, we examine whether income shifting is more likely to be present when the firm just meets or beats analysts' forecasts. Third, we determine whether shifting occurs when the firm just meets or beats earnings of the same quarter in the prior year.

¹ Unlike income classification shifting, accrual manipulation and real activities management affect reported bottom-line GAAP earnings.

Finally, we are interested in adding to the debate between McVay (2006, 2008) and Barua and Cready (2008). Barua and Cready (2008) point out that McVay's (2006) evidence of classification shifting may be nothing more than a research design problem. Barua and Cready (2008) discuss that since McVay (2006) uses total accruals (which include negative special item accruals) to estimate expected core earnings, the *positive* relation between unexpected core earnings and negative special items is mechanical. Specifically, by including the accrual component of negative special items in total accruals, her expectation of core earnings is biased downward, leading to unexpected core earnings that are biased upward. This creates a mechanical positive relation between unexpected core earnings and the amount of negative special items that has nothing to do with classification shifting.²

In fact, when McVay (2006) excludes accruals from the core earnings expectation model, she observes a *negative* relation between unexpected core earnings and negative special items. A negative relation is consistent with findings of prior studies, which document that when firms perform poorly (i.e. core earnings being lower than expected), they tend to have large asset write-offs and restructuring charges, which are part of negative special items (Elliot and Shaw, 1988; DeAngelo et al., 1994; Carter, 2000). Thus, there is debate as to whether the relation between special items and unexpected core earnings is driven by McVay's (2006) shifting effect versus Barua and Cready's (2008) performance effect. Our use of quarterly data and earnings thresholds helps add to this debate by testing for the existence of income shifting in subsamples where shifting, if occurring, is expected to be more or less pronounced.

Using the model of expected core earnings in McVay (2006) but modified based on suggestions in Barua and Cready (2008), we find evidence that Barua and Cready's (2008)

² The induced mechanical relation between unexpected core earnings and special items is discussed in more detail in the next section.

performance effect dominates the overall sample. That is, when unexpected core earnings are more positive (i.e., the firm has better than expected earnings performance), there tend to be fewer negative special items. This leads to a negative relation between unexpected core earnings and negative special items, as predicted by Barua and Cready (2008). However, we find that the negative relation between unexpected core earnings and negative special items becomes less negative (or even positive in some instances) in the fourth quarter or for profitable firm quarters. Finding greater evidence of classification shifting in subsamples where classification shifting is more likely to be present provides support for McVay's (2008) conclusion that shifting occurs. However, we do not detect evidence of classification shifting for firms that just meet or beat analysts' forecasts or prior period earnings.

In the next section, we develop our hypotheses. In section III, we discuss the data, sample, and descriptive statistics. Section IV details the measurement of unexpected core earnings, and Section V presents main results. Section VI concludes the paper.

II. HYPOTHESES

Earnings management has been the subject of considerable academic research. Evidence of managers engaging in earnings management through accrual manipulation has been shown in many different contexts, for many different accruals, and in response to many managerial incentives (see Healy and Wahlen, 1999, for a literature review). A second channel through which earnings could be manipulated is real activities management, such as providing discounts to customers to temporarily increase sales and cutting research and development expense (e.g. Baber et al., 1991; Bushee 1998; Gunny, 2005; Roychowdhury, 2006). In the case of accrual management, once managers use discretion to manage earnings in the current period, it is the

case that this manipulation will reverse in future periods. In addition, accrual management involves potential accounting fraud that brings about litigation risk to the firm.

In the case of real activities management, managers can offer temporary price discounts to increase sales, cut discretionary expenditures such as research and development and advertising, or overproduce to reduce cost of goods sold (Roychowdhury, 2006). However, real activities manipulation sacrifices firms' future economic benefits, even though this approach introduces less litigation risk to the firm.

McVay (2006) investigates a third form of earnings management. She tests whether managers manipulate *core* earnings. Because analysts and investors typically focus on core earnings, as opposed to bottom-line net income, McVay (2006) predicts that managers use classification shifting to improve reported core earnings, defined as sales minus cost of goods sold and selling, general and administrative expenses. She finds evidence to support her hypothesis. Specifically, McVay (2006) finds that managers opportunistically shift core expenses to negative special items, and investors act surprised in the following period when these expenses are shifted back into core earnings in the following year.

Classification shifting is a relatively new but important area of research that focuses on core earnings management. To the extent that investors fixate on core earnings instead of bottom-line GAAP earnings, managers may employ classification shifting to fool financial statement users by manipulating earnings numbers within the income statement. This is because financial statement users appear to recognize and distinguish the closeness to sales of individual line items and weigh them differently (e.g. Lipe 1986; Fairfield et al. 1996; Francis et al. 1996).³ Various studies document that analysts and investors in fact pay more attention to "street" or pro forma earnings as defined by managers and view them as more value-relevant (Bradshaw and

³ The closer a line item is to sales, the more permanent this item tends to be.

Sloan 2002; Bhattacharya et al. 2004; Gu and Chen 2004). Bradshaw and Sloan (2002) show that the market responds to street earnings more than traditional GAAP earnings and that managers have taken a proactive role in defining street earnings when communicating to investors. Thus, it is likely that managers take advantage of the market's focus on core earnings instead of bottom-line GAAP earnings to misclassify some core expense items in the income statement.

McVay (2006) concludes that misclassification exists, and it is more pervasive when managers *ex ante* have strong incentives to manipulate core earnings so that the reported core earnings would just meet or beat analysts' forecasts. Furthermore, unexpected core earnings tend to reverse in the following year, which surprises investors and rules out the possibility of a true economic improvement of the firm. However, Barua and Cready (2008) attribute McVay's (2006) results to a mechanical relation brought about by her core earnings expectation model.

McVay (2006) measures unexpected core earnings using a core earnings expectation model, similar to the accrual expectation model (Jones 1991). Expected core earnings for a given firm are measured based on the relation between reported core earnings and a number of firm performance measures (e.g., prior period core earnings, asset turnover, change in sales, current period accruals, and prior period accruals) for all other firms in the same industry. Unexpected core earnings are then measured as the firm's reported core earnings minus expected core earnings. She relates unexpected core earnings to negative special items and finds that as negative special items increase, unexpected core earnings increase as well. She concludes that this positive relation provides evidence of classification shifting, i.e. managers shift core expenses to negative special items so that reported core earnings are higher than those derived from the expectation model.

Barua and Cready (2008) offer a competing explanation for the positive relation between unexpected core earnings and negative special items. They argue that McVay (2006)'s results are due to model misspecification. Specifically, they argue that including the current period accrual component of negative special items in the expectation model biases expected core earnings downward so that unexpected core earnings (i.e., reported core earnings less expected core earnings) are biased upward. In this case, the observed positive relation between negative special items and unexpected core earnings is mechanically created.

To show this, Barua and Cready (2008) re-estimate the main classification shifting model (McVay 2006, Table 6) by accrual quintile. They interact the accrual coefficients estimated from the expectation model with negative special items. Next, they control for the accrual expectation effect by inserting this interaction term into McVay's (2006) main model. They find that the positive relation reported by McVay (2006) is due to the interaction term of accrual coefficient and negative special items. Additionally, they report that controlling for the accrual special item expectation effect, the relation between unexpected core earnings and negative special items becomes *negative* and significant. This suggests that the relation between negative special items and unexpected core earnings is a performance-driven effect, and not a classification shifting effect. When firms perform poorly (i.e. core earnings being lower than expected), they tend to have more negative special items. Barua and Cready (2008) conclude that the findings in McVay (2006) are due to this spurious correlation because the core earnings expectation model is defined, in part, as a function of current period special item accruals.⁴

⁴ McVay (2006, Table 10) shows that after eliminating current period accruals from the core earnings expectation model, the relation between unexpected core earnings and negative special items is reversed (from 0.022 in the main test to -0.174). This is contradictory to her classification shifting hypothesis and consistent with results reported by Barua and Cready (2008).

In sum, the literature on classification shifting is relatively new and whether managers manage core earnings by shifting core expenses to special items remains unclear. We add to this literature by using quarterly data, as opposed to annual data in McVay (2006) and Cready and Barua (2008), and partition the sample based on earnings thresholds. To rule out the possibility of the mechanical relation noted by Barua and Cready (2008), we eliminate current period accruals from the core earnings expectation model. It is likely that the overall relation between unexpected core earnings and negative special items includes both classification shifting and a performance-driven effect. However, for certain firms and in certain quarters, classification shifting may be more prevalent because of greater managerial incentives. Breaking down the data by specific quarters and by different levels of managerial incentives gives us a better understanding of whether and when classification shifting is more likely to occur.

Our motivation for using quarterly data comes from prior literature which suggests that earnings management is more likely to occur in the fourth quarter. Givoly and Ronen (1981) suggest that managers' actions appear to be consistent with fourth-quarter earnings management designed to obtain a smooth annual earnings series, while the first three fiscal quarters' earnings show extreme deviations from the norm. Evidence of potential greater earnings management in the fourth quarter includes Jeter and Shivakumar (1999), who find that earnings were managed more in the fourth quarter than in interim quarters. Jacob and Jorgensen (2007) provide evidence that managers' attempts to avoid negative earnings surprises are not observable when they use an alternative fiscal year end other than the reported fiscal year end. This result indirectly suggests that the fourth quarter earnings increase that leads to non-negative surprises in reported annual earnings is due to earnings management in the fourth quarter. In addition, Das et al. (2007) examine earnings reversal in the fourth quarter. They find that firms performing poorly in

interim quarters attempt to increase earnings in the fourth quarter to achieve a desired level of annual earnings. They also find that the frequency of reversals in the fourth quarter is significantly higher than the expected frequency in the absence of earnings management. These findings together support the notion that earnings management is more likely to occur in the fourth quarter when the fiscal year ends. In addition, since most accounting-based performance measures used in bonus and compensation schemes are based on annual results rather than quarterly results, managers are motivated more to manage earnings so that they would meet or beat annual earnings benchmarks toward the end of the fiscal year. Therefore, if firms engage in classification shifting, one would expect to see more evidence of this effect (as opposed to the performance-driven effect) in the fourth quarter. This leads to our first hypothesis.

H1: Managers shift core expenses to negative special items more in the fourth fiscal quarter.

We then investigate under what conditions managers are more likely to shift core expenses to negative special items. We investigate three conditions: profitable firm-quarters versus loss firm-quarters, quarters in which the firm just meets or beats analysts' forecasts versus other firm-quarters, and quarters in which the firm just meets or beats earnings of the same quarter in the prior year versus other firm-quarters. First, we expect to observe greater classification shifting for profitable quarters. The intuition for this expectation is based on prior research which shows that the sensitivity of prices to earnings information decreases as profitability decreases (e.g., Hayn 1995; Burgstahler and Dichev 1997a; Barth et al. 1998; and Collins et al. 1999). In other words, investors will be less fixated on earnings performance (and

perhaps more on net asset values) as earnings become negative. If managers understand investors' reduced attention to earnings information during loss firm-quarters, then incentives to shift income are reduced. Barua et al. (2006) extend Brown (2001) and find that firms with profits before accruals management are more likely than firms with losses before accruals management to meet or exceed earnings benchmarks when pre-managed earnings are below those benchmarks. This provides evidence that *ex post* profitable firms are more likely to have *ex ante* managed earnings. We hypothesize the following.

H2: Managers shift core expenses to special items more during profitable firm-quarters than during loss firm-quarters.

Next, we examine income shifting in settings where managers may be more likely to use shifting as a way to meet earnings benchmarks. There are clear market incentives for meeting versus missing the analyst forecast threshold (Kasznik and McNichols 2000 and many others). Dechow and Skinner (2000) find that earnings management will likely be greater when such actions allows managers to meet or beat analysts' forecasts when they otherwise would not. On a quarterly basis, Bartov et al. (2002) find that firms meeting or beating analysts' earnings expectations enjoy a higher return over the quarter than firms that fail to meet these expectations. They find that the equity premium to firms meeting or beating expectations is only marginally affected by whether reported quarterly earnings are genuine or are the result of earnings or expectation management. Therefore, the *ex post* equity premium following quarterly earnings announcements provides an *ex ante* incentive for managers to manipulate earnings numbers. Therefore, we expect that managers of the firms with earnings that *ex post* just meet or beat

consensus analysts' forecasts are the ones who *ex ante* are more likely to have engaged in core earnings management through classification shifting. This leads to our third hypothesis.

H3: Managers shift core expenses to special items more when quarterly earnings just meet or beat analysts' forecast.

For similar reasons, we test whether managers may use classification shifting to report quarterly core earnings that meet or just exceed core earnings of the same quarter in the prior year. This could occur because managers have incentives (e.g., stock premium, bonuses, reputation, job security, etc.) to avoid quarterly earnings decreases. These incentives are consistent with evidence of earnings management found in prior research (Burgstahler and Dichev 1997b; Degeorge et al. 1999; Payne and Thomas 2003). Our fourth hypothesis is stated below.

H4: Managers shift core expenses to special items more when quarterly core earnings just meet or beat core earnings of the same quarter in the prior year.

III. DATA, SAMPLE SELECTION, AND DESCRIPTIVE STATISTICS

Data are collected for the years 1988 to 2006 from Compustat Industrial Quarterly File. Analysts' forecast data are obtained from I/B/E/S Detail File. Each firm-quarter observation is required to have sufficient data to calculate variables in model (1) and model (2), as discussed below. Following McVay (2006), we eliminate firm-quarter observations that have annual sales of less than \$1 million. We also exclude firms that had a change in fiscal year from t-1 to t to

ensure that years are comparable. Further, a minimum of 15 observations per industry-year-quarter is required in order to ensure a sufficiently large sample to estimate expected core earnings. Industry classification is based on Fama and French (1997). The full sample consists of 165,883 firm-quarter observations. The subsample with available consensus analysts' forecasts has 60,332 firm-quarters.

Table 1 lists the definitions of variables used in the analyses, while Table 2 provides descriptive statistics for these variables. The mean (median) core earnings, for all firm-quarters, scaled by sales, is 0.03 (0.09). The mean (median) of negative special items is 1.73 (0.00) millions. The mean (median) of negative special items as a percentage of sales is 2.18 (0.0) percent. Income-increasing special items are set to zero and not included in the analysis. The mean (median) unexpected core earnings deflated by sales is 0.001 (0.003). The mean (median) consensus analysts' forecast error is -0.006 (0.005). Because McVay (2006) uses annual data whereas we use quarterly data, descriptive statistics for the variables in the analyses may not be directly comparable to hers. Table 3 presents correlations among main variables and is discussed in the following section.

IV. MEASURING UNEXPECTED CORE EARNINGS

Using quarterly data, model (1) is estimated within each industry-year-quarter to measure expected core earnings for firm i .

$$CE_t = \beta_0 + \beta_1 CE_{t-1} + \beta_2 ATO_t + \beta_3 ACCRUALS_{t-1} + \beta_4 \Delta SALES_t + \beta_5 NEG_ \Delta SALES_t + \varepsilon_t \quad (1)$$

CE_t is core earnings, calculated as Sales (#2) – Cost of Goods Sold (#30) – Selling, General, and Administrative Expenses (#1). ATO_t is the asset turnover ratio, defined as $Sales_t / ((NOA_t + NOA_{t-1}) / 2)$, where NOA, or Net Operating Asset, is Operating Assets minus Operating Liabilities. Operating Assets are calculated as Total Assets (#44) less Cash and Short-Term Investments (#36). Operating Liabilities are calculated as Total Assets (#44) less Total Debt (#45 and #51), less Book Value of Common and Preferred Equity (#55 and #56), less Minority Interest (#53). Average NOA is required to be positive. $ACCRUALS_{t-1}$ are lagged Accruals, calculated as Net Income Before Extraordinary Items (#8) minus Cash From Operations (#1). $\Delta SALES_t$ is Percentage Change in Sales, calculated as $(SALES_t - SALES_{t-1}) / SALES_{t-1}$. $NEG_ \Delta SALES_t$ is $\Delta SALES_t$ if $\Delta SALES_t$ is less than 0, and 0 otherwise.

Model (1) is a variant of the one used by McVay (2006). Lagged core earnings are included because prior research finds that core earnings tend to be persistent.⁵ Since the asset turnover ratio (ATO_t) tends to be inversely related to profit margins (Nissim and Penman, 2001) and the definition of core earnings closely parallels profit margins, we include asset turnover ratio in the model.⁶ Sloan (1996) finds that accrual levels are an explanatory variable for future performance, so we use lagged operating accruals ($ACCRUALS_{t-1}$) as a control for current period performance.⁷ Because the accrual component of negative special items is part of current period total accruals, but not of the lagged accruals which controls for firm performance, we keep lagged accruals in the model. Following McVay (2006), we also include changes in sales and allow different slopes for sales increases and decreases. The reason for this is that, even though core earnings are scaled by sales, as sales grow, fixed costs become smaller per sales

⁵ In Table 3, the Spearman (Pearson) correlation between core earnings and lagged core earnings is 0.79 (0.75).

⁶ In Table 3, the Spearman (Pearson) correlation between ATO and core earnings is -0.07 (0.04).

⁷ In Table 3, the Spearman (Pearson) correlation between $ACCRUALS_{t-1}$ and CE_t is -0.29 (-0.27).

dollar. Those costs increase more when activity rises than they decrease when activity falls by an equivalent amount (Anderson et al. 2003).

We obtain coefficients for model (1) using all observations in a particular industry-year-quarter excluding firm i . Expected core earnings for firm i is measured using these coefficients multiplied by the actual values of the variables in the model for firm i . This model controls for the macroeconomic and industry shocks as well as the seasonal effect on expected core earnings. We then obtain unexpected core earnings, calculated as the difference between reported and expected core earnings, where reported earnings are calculated as sales minus cost of goods sold and selling, general, and administrative expenses.

V. TEST DESIGN AND RESULTS

The main test of this study is done using the following model:

$$UE_CE_t = \alpha_0 + \alpha_1 \%NSI_t + \varepsilon_t \quad (2)$$

where, UE_CE_t is unexpected core earnings, calculated as the reported core earnings minus expected core earnings estimated from model (1). $\%NSI_t$ is negative special items (#32) as a percentage of sales. Negative special items are special items multiplied by -1, where special items are income-decreasing. Income-increasing special items are set to zero (McVay, 2006).

If the estimated coefficient on $\%NSI_t$ (α_1) is positive, then classification shifting has a dominating effect, i.e. as negative special items increase, unexpected core earnings increase. In other words, managers shift core expenses to negative special items so that reported core earnings would be above expectations. If the estimated coefficient is negative, then firm

performance would be the dominating effect. In other words, when negative special items increase, unexpected core earnings actually decrease. This would be consistent with prior literature that firms incurring large write-offs or corporate restructuring charges tend to be poor performers (Elliot and Shaw, 1988; DeAngelo et al., 1994; Carter, 2000). However, observing either a positive (as in McVay (2006)) or a negative (as in Barua and Cready (2008)) coefficient from an overall sample average does not necessarily exclude the possibility that both effects exist.

In the previous section, we discuss how managers' incentives are likely to affect their decision to manage earnings through classification shifting. The first hypothesis predicts that shifting is more pervasive in the fourth quarter because managers have stronger incentives towards the end of the fiscal year. Thus, we expect that the relation between unexpected core earnings and negative special items will be more positive (or less negative) for fourth quarter observations, compared to observations for the first three quarters.

Table 4 presents the results of model (2) using both full sample and subsamples with observations from the fourth quarter and those from the first three quarters. The first column of results shows that for the full sample, the estimated coefficient on $\%NSI_t$ (α_1) is -0.12, with a t-statistic of -28.09, indicating a strong performance-dominated relation. This is inconsistent with McVay's (2006, Table 6) main analysis, but is consistent with the findings in her additional analysis using the expectation model without accruals (Table 10, column 1). The negative sign is also consistent with Barua and Cready's (2008) findings that the relation is largely performance-driven. However, the full sample includes firms with different characteristics in terms of management's incentives and includes observations from different quarters. As we have argued in the previous section, observing a negative sign or a positive sign does not completely rule out the possibility of the existence of the other effect.

We divide the full sample into two subsamples and use model (2) to test H1, which predicts that classification shifting is more prevalent in the fourth quarter. The results (Table 4, columns 2 and 3) show a less negative coefficient for the fourth quarter subsample compared to the subsample for the first three quarters. Recall that a more positive (or less negative) relation between unexpected core earnings and special items is evidence of more classification shifting. Comparing the coefficients of -0.1122 for the fourth quarter and -0.1426 for the first three quarters indicates that classification shifting is more pervasive in the fourth quarter.⁸ The difference between the two estimated coefficients (0.0305) is significant ($t = 3.45$). This result provides support for H1 that classification shifting is more pervasive in the fourth quarter, even though the performance-driven effect is still the dominating factor.

For the next set of tests, we split the sample based on reported earnings relative to benchmarks. H2, H3, and H4 predict that classification shifting is more prevalent in subsamples with positive earnings, that just meet or beat analysts' forecasts, or that just meet or beat earnings in the same quarter of the prior year, respectively. In particular, the coefficients on $\%NSI_t$ is expected to be more positive (or less negative) for subsamples with observations that have these characteristics. To measure profit versus loss, we use net income before extraordinary items (Compustat item #8). We use I/B/E/S Detailed taped to determine whether firms just meet or miss analysts' forecasts. The analyst forecast is the last available individual analyst forecast before quarterly earnings are announced. Firms reporting a forecast error equal to \$0.00 or \$0.01 are considered to just meet or beat analysts' forecasts. This results in approximately 25% of our quarterly observations being classified as just meeting or beating analysts' expectations. For the

⁸ In untabulated results, we also note that negative special items are more common in the fourth quarter. The magnitude of negative special items (scaled by sales) in the fourth quarter is 4.46%, compared to only 1.78% in the first three quarters. We also find that negative special items are reported for 27% of the fourth quarter observations, compared to only 13% of the observations for the first three quarters.

prior period earnings benchmark, we use reported core earnings that are between \$0.00 and \$0.01 (scaled by sales) of prior period earnings. This constitutes approximately 15% of our quarterly observations.

Results for H2 – H4 are presented in Tables 5 – 7. In Table 5 for fourth quarter observations, the coefficient of %NSI is 0.1935 (-0.0520) for profitable (loss) firm-quarters, and the difference is positive and significant. For observations from the first three quarters, the coefficient on %NSI is 0.0770 (-0.0954) for profitable (loss) firm-quarters. This difference is also positive and significant. These results support H2 that managers of firms that *ex ante* have stronger incentives in the sense that they report positive earnings are more motivated than other managers to use classification shifting as a tool to improve reported core earnings.

It is also worth noting in Table 5 that the relation between unexpected core earnings and negative special items is significantly *positive* for profitable firm-quarters, especially those in the fourth quarter. This is consistent with classification shifting being the dominant effect for these observations. The fact that the coefficient is more positive (or less negative) in the fourth quarter than in the first three quarters for both profitable firms and loss firms is consistent with the first hypothesis that managers are more likely to manage earnings using classification shifting in the fiscal year-ending quarter.

Table 6 reports tests of firm-quarters that just meet or beat analysts' forecast versus other firm-quarters. Recall that H3 predicts that classification shifting should be more likely for firm-quarters where reported earnings just meet or beat analysts' forecasts. We do not find evidence consistent with this. For fourth quarter observations that just meet or beat, the relation between unexpected core earnings and negative special items is positive (0.0124) but not significant. For fourth quarter observations that do not just meet or beat analysts' forecast, the relation becomes

negative (-0.0246), but the difference in coefficients across the two samples is not significantly different ($t = 1.17$). Furthermore, the difference in coefficients between the just-meet-or-beat sample and the not-just-meet-or-beat sample is not significant ($t = 0.49$) for observations in the first three quarters. Therefore, we find no evidence that classification shifting is more likely to be employed by managers attempting to meet or beat analysts' forecasts, which is inconsistent with the predictions of H3.

In Table 7, we split the full sample into the subsample with firm-quarter earnings that just meet or beat earnings in the same quarter of previous year and the subsample with firm-quarter earnings that do not just meet or beat prior period earnings. Just meeting or beating earnings in the same quarter of the previous year is defined as the difference between quarterly core earnings this year and the previous year being greater than or equal to zero but not greater than 1% (scaled by sales). Managers of firms with earnings that *ex post* just meet or beat earnings in the same quarter of previous year are expected to have had stronger incentives *ex ante* to shift core expenses to special items, especially in the fourth quarter, than managers of firms with earnings that do not just meet or beat prior period earnings.

Table 7 provides no support for H4. For fourth quarter observations, the relation between unexpected core earnings and negative special items is significantly more negative for the just-meet-or-beat sample than for the not-just-meet-or-beat sample. The more negative coefficient is consistent with the relation being a performance-driven effect rather than income classification shifting. The same is true for observations from the first three quarters. The relation between unexpected core earnings and negative special items is significantly more negative for the sample of firms that just meet or beat previous period earnings.

VI. CONCLUSION

This paper addresses the issue of whether and when managers use classification shifting to manage core earnings. Core earnings are an important number on which investors and analysts tend to fixate. The benefits of having a higher than expected core earnings are documented in the literature. The current debate of whether managers shift core expenses to income-decreasing special items is inconclusive. McVay (2006) documents the positive relation between unexpected core earnings and negative special items, concluding that managers do shift core expenses to special items to improve core earnings. She further demonstrates that managers with stronger incentives are more likely to use classification shifting to boost core earnings. However, Barua and Cready (2008) argue that McVay's (2006) findings are based on a misspecified core earnings expectation model and the model introduces a mechanical positive relation between unexpected core earnings and income-decreasing special items. Controlling for this effect, Barua and Cready (2008) find a negative correlation between unexpected core earnings and negative special items, suggesting that firm performance is the dominating factor in the relation. Both studies use annual data to examine the relation based on the full sample.

This study attempts to address the issues raised by these two studies, i.e. whether classification shifting in fact exists and the extent to which it drives the relation between unexpected core earnings and negative special items. Using quarterly data allows us to investigate the degree of classification shifting based on managers' incentives and the time dimension of the shifting. Using McVay's (2006) core earnings expectation model, but modified based on recommendations of Barua and Cready (2008), we find evidence that, while classification shifting and firm performance both affect the relation between unexpected core earnings and special items, classification shifting is more likely in the fourth quarter. This is

consistent with the results of prior research that earnings management is more likely in the fourth quarter (Givoly and Ronen 1981; Jeter and Shivakumar 1999; Jacob and Jorgensen 2007; Das et al. 2007).

In addition, we find greater evidence of classification shifting for profitable firm-quarters compared to loss firm-quarters. These results are consistent with managers having more incentive to shift income when investors are likely giving more weight to earnings performance (e.g., Hayn 1995; Burgstahler and Dichev 1997a; Barth et al. 1998; Collins et al. 1999; Barua et al. 2006). However, we do not find evidence consistent with income classification shifting for samples of firms that just meet or beat analysts' forecasts or prior period earnings. Either managers do not use classification shifting as a means to manage earnings in these instances or our tests and/or our model of expected core earnings are not able to detect this effect.

Clearly, the extent, timing, and incentives under which managers may engage in classification shifting is an important area of research. While accrual manipulation and real activities management have been extensively investigated in the literature, income classification shifting represents a viable opportunity for managers to manipulate reported earnings. To the extent that managers may fool investors by shifting core expenses to negative special items, it is important for researchers to better understand the effects on investors, auditors, regulators, and other market participants. Because this area of research is relatively new, there is ample opportunity for future research to explore the settings under which classification shifting occurs and to improve upon models to measure expected core earnings or core expenses. McVay (2006) provides a benchmark model for heading in this direction, while Barua and Cready (2008) highlight the importance of model specification.

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TABLE 1
Variable Definitions with Corresponding Compustat Data Item Numbers

Variable	Definition
CE _t	Core Earnings, calculated as Sales (#2) – Cost of Goods Sold (#30) – Selling, General, and Administrative Expenses (#1);
UE_CE _t	Unexpected Core Earnings, calculated as the reported Core Earnings (CE _t) minus the expected core earnings estimated from Model (1), estimated by industry, fiscal year, and fiscal quarter and excluding firm <i>i</i> : $CE_t = \beta_0 + \beta_1 CE_{t-1} + \beta_2 ATO_t + \beta_3 ACCRUALS_{t-1} + \beta_4 \Delta SALES_t + \beta_5 NEG_ \Delta SALES_t + \varepsilon_t$
%NSI _t	Negative Special Items As A Percentage of Sales (#2). Negative Special Items are Special Items (#32) multiplied by -1, where Special Items are income-decreasing, and are set to zero where Special Items are income-increasing.
ΔSALES _t	Percentage Change in Sales, calculated as (SALES _t (#2) - SALES _{t-1})/SALES _{t-1} ;
NEG_ΔSALES _t	Percentage Change in Sales (ΔSALES _t) if ΔSALES _t is less than 0, and 0 otherwise.
ACCRUALS _t	Accruals, calculated as Net Income Before Extraordinary Items (#8) minus Cash From Operations (#1);
ATO _t	Asset Turnover Ratio, defined as Sales _t /((NOA _t + NOA _{t-1})/2), where NOA _t , or Net Operating Asset, is Operating Assets minus Operating liabilities. Operating Assets is calculated as Total Assets (#44) less Cash and Short-Term Investments (#36). Operating Liabilities is calculated as Total Assets (#44) less Total Debt (#45 and #51), less Book Value of Common and Preferred Equity (#55 and #56), less Minority Interest (#53). Average NOA is required to be positive;
FE _t	Analyst Forecast Error, defined as Actual Earnings as reported by I/B/E/S less the last available individual analyst forecast before the quarterly earnings announcement.