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Earnings Management Using Classification Shifting: An Examination of Core Earnings and Special Items

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ABSTRACT: This paper examines the classification of items *within* the income statement as an earnings management tool. Evidence is consistent with managers opportunistically shifting expenses from core expenses (cost of goods sold and selling, general, and administrative expenses) to special items. This vertical movement of expenses does not change bottom-line earnings, but overstates "core" earnings. In addition, it appears that managers use this earnings management tool to meet the analyst forecast earnings benchmark, as special items tend to be excluded from both pro forma and analyst earnings definitions.

Keywords: *earnings management; earnings components; special items; analyst forecasts.*

Data Availability: *Data are available from public sources identified in the paper.*

I. INTRODUCTION

Earnings management, the misrepresentation or masking of true economic performance, has been the focus of many papers. The bulk of this literature has focused on two general earnings management tools: accrual management and the manipulation of real economic activities. This paper examines a third potential earnings management tool that has been largely ignored to date: the deliberate misclassification of items *within* the income statement (herein referred to as *classification shifting*).

I argue that managers wishing to maximize reported performance might shift expenses down (or revenue up) the income statement to present a picture that is not consistent with

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economic reality. Classification shifting is distinct from accrual management and the manipulation of real activities in several ways. First, classification shifting does not change GAAP earnings; to the extent that financial statement users focus solely on GAAP earnings, classification shifting would be pointless. However, the individual components of the income statement are meant to be informative to financial statement users, facilitating analysis by grouping items with similar characteristics (FASB Accounting Concept No. 5). In general, the closer a line item is to sales, the more permanent this item tends to be (e.g., Lipe 1986; Fairfield et al. 1996). Furthermore, investors appear to recognize this distinction and weight individual line items within the income statement differently (e.g., Lipe 1986; Elliott and Hanna 1996; Francis et al. 1996; Davis 2002; Bradshaw and Sloan 2002).

Next, while all three methods of (income-increasing) earnings management raise expectations of future performance, accrual management and the manipulation of real activities also reduce earnings in future (or past) periods. In contrast, there is no ''settling up'' using classification shifting. Absent additional earnings management, next period's earnings are equal to actual earnings, rather than earnings less the cost of earnings management in the prior period, greatly reducing the cost of this earnings management tool. Finally, GAAP net income does not change, thus limiting the scrutiny of auditors and regulators (Nelson et al. 2002).

To document classification shifting, I focus on the allocation of expenses between core expenses (defined as cost of goods sold and selling, general, and administrative expenses) and special items. I posit that managers wishing to manage core earnings upward will shift expenses that should be classified as core expenses to special items.[1] As an anecdotal example of classification shifting,[2] the SEC determined that Borden, Inc., classified $192 million of marketing expenses as part of a restructuring charge when it should have been included in selling, general, and administrative expenses (Hwang 1994).[3]

For a sample of 76,901 firm-year observations from 1989 to 2003, I decompose firms' core earnings into expected and unexpected components by modeling expected core earnings, in a similar vein as the accrual model (Jones 1991). I find that unexpected core earnings (reported core earnings less predicted core earnings) is increasing in special items.[4] This association is consistent with managers classifying core expenses as special items, increasing both core earnings and income-decreasing special items.

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[1] Alternatively, managers might shift revenue that should be classified as special items upward to be netted against core expenses. For example, IBM netted gains on asset sales against selling, general, and administrative expenses, presenting higher core earnings when instead the gains should have been broken out as special items (Bulkeley 2002).

[2] Additional examples of classification shifting include AmeriServe Food Distribution (which, prior to filing for bankruptcy, classified substantial operating expenses as restructuring charges, allegedly to mask deteriorating financial performance [Sherer 2000]); SmarTalk (which reported a one-time charge in 1997 that improperly included 1997 operating expenses, enabling SmarTalk to falsely inflate 1997 earnings before one-time charges [SEC Accounting and Auditing Enforcement Release No. 1721]; Waste Management (which netted one-time gains against current-period operating expenses [SEC Accounting and Auditing Enforcement Release No. 1405]); and Anicom [which, in 1999, charged over $7.65 million in expenses to a one-time charge, including a bank fee incurred when Anicom violated its working capital loan covenants, a note receivable with accrued interest, charges incurred for enhancement to a computerized inventory control system, and over $2.3 million in accounts receivable write-offs [http://www.sec.gov/litigation/complaints/complr17504.htm]).

[3] Classification shifting is a different use of special items to manage earnings than the interperiod shifting documented in Burgstahler et al. (2002) and Moehrle (2002), who examine accrual management *across time*, using special items and restructuring charges, respectively. These studies do not examine shifting *within* the income statement.

[4] Throughout the paper, positive special items are income-decreasing; Compustat #17 is multiplied by −1. I only examine income-decreasing special items in this paper. Classification shifting using income-increasing special items is left for future research.

While the above finding is consistent with classification shifting, it is also consistent with firms experiencing efficiency gains in the year the special item is recognized by streamlining their operations or divesting unprofitable lines of business; in doing so, these firms might experience an unexpected increase in core earnings. To distinguish between these competing explanations, I examine whether the unexpected core earnings in year t persist into year $t+1$. A reversal of this improvement is more consistent with temporary earnings management, while the continued presence of this improvement is more consistent with economic improvements associated with the special item. I find that the unusually high core earnings associated with special items appear to reverse in the following period.

The classification shifting documented in this paper appears to be significant economically and, thus, a viable tool for managers. Based on my model of expected core earnings, I estimate that approximately 2.2 percent of reported special items, on average, are actually current-period operating expenses that are not transitory, but are opportunistically classified as special.[5] On a per-firm-year basis across the entire sample, this translates into a mean shift of $287 thousand of recurring expenses to special items, an average of roughly one-half cent per share. For firms with income-decreasing special items of at least 5 percent of sales, the estimated mean shifted amount per firm-year is $1.66 million across 8,043 firm-years, translating into almost three cents per share. Moreover, there is ample opportunity to classification shift using special items; 31 percent of the observations in my sample recognize income-decreasing special items in any given year.

It is important to note that my inferences of classification shifting rely on a model of core earnings. This is a necessary research design choice, as special-item firms tend to be performing extremely poorly. On average, these firms have lower core earnings than the Compustat population. To document that unexpected core earnings are increasing with special items requires strong performance controls. In order to adequately control for performance, I include current-year accruals. The inclusion of this variable introduces a possible bias in the model, discussed in greater detail in Section V, and is a limitation of the model and therefore this study.

To provide additional support of my inference of classification shifting, I conduct an array of supplementary tests. First, as with any earnings management mechanism, the net benefits are expected to be greater in some settings than in others. For example, Dechow and Skinner (2000) note that earnings management will likely be greater when the action allows managers to meet the analyst forecast when they otherwise would not. Consistent with classification shifting representing an earnings management tool, I find that classification shifting is more pervasive when it allows the manager to meet the analyst forecast, especially for growth firms (Skinner and Sloan 2002). The amount shifted increases to as much as 16.2 percent of special items.

Next, I examine firms with special items in year $t+1$ and find that the ''reversal'' of unexpected core earnings is significantly muted for these firms, consistent with them once again having the opportunity to shift core expenses to special items and thus maintain the overstated core earnings. Third, I hand-collect the income statements and related footnotes of 190 S&P 500 firms that have income-decreasing special items of at least 5 percent of sales during 1996 to 2000. For this subsample, I split Compustat special items into two

[5] This paper does not argue that investors are naïve or easily misled. It is possible that investors are able to determine that current-period core earnings are unexpectedly high, as is documented in this paper, however the financial statement users cannot ascertain *why* the core earnings are higher than expected. Managers can simply attribute the abnormal performance to economic improvements associated with the special items. In this paper, finding evidence that the unexpectedly high core earnings in year t *reverses* in year $t+1$ allows for *ex post* corroboration of earnings management.

groups: those that are amenable to classification shifting (such as other unusual charges) and those that are not (such as the loss on the sale of an asset). I confirm that only those special items amenable to classification shifting are associated with the unexpectedly high core earnings in year t and the subsequent reversal of this improvement in year $t+1$. Finally, I find that classification shifting is associated with negative returns in the subsequent year, suggesting that investors are surprised when expenses that were previously excluded from core earnings recur.

Classification shifting offers a very attractive earnings management tool. In the context of special items, classification shifting can increase pro forma earnings substantially—nearly three cents per share for firms with income-decreasing special items of at least 5 percent of sales—providing managers with a relatively low-cost tool to meet analyst forecasts.[6] This finding should be informative to analysts, investors, and regulators. Furthermore, the shifting of core expenses to special items examined in this paper is just one of many possible classification-shifting schemes. Managers likely undertake classification shifting using other accounts, such as discontinued operations or research and development—an expense that is associated with future benefits. These actions do not change bottom-line earnings, but can have a significant impact on the expectations of investors and other financial statement users.

The paper proceeds as follows. Section II provides some background and develops the hypotheses. Section III discusses the data and provides descriptive statistics. Section IV introduces the model of core earnings, and Section V describes the tests and results. Section VI concludes and offers avenues for future research.

II. MOTIVATION AND HYPOTHESES

Prior accounting research has documented two main methods of earnings management. The most commonly studied method is accrual management (e.g., Healy 1985; Jones 1991; McNichols and Wilson 1988; Rangan 1998; Teoh et al. 1998; Phillips et al. 2003). Essentially, a manager can borrow earnings from future periods, through the acceleration of revenues or deceleration of expenses, in order to improve current earnings. In addition to the cost of detection, this method of earnings management bears a one-to-one cost of earnings reduction in the future; future-period earnings will be mechanically lower by the net income that was accelerated to current earnings.[7]

A second type of earnings management can occur through the manipulation of real activities, such as providing price discounts to increase sales and cutting discretionary expenditures, such as R&D, to manage earnings (e.g., Baber et al. 1991; Dechow and Sloan 1991; Bushee 1998). Such actions can increase revenues or net income, but they are also costly. For example, cutting R&D spending to manage earnings may result in the loss of future income related to the forgone R&D opportunities. On the other hand, because the

[6] The evidence in this paper supports prior research on pro forma earnings that suggests managers exclude recurring expenses (Doyle et al. 2003). Moreover, while prior research suggests managers use pro forma earnings to meet the analyst forecast (e.g., Lougee and Marquardt 2004; Doyle and Soliman 2005), this paper presents evidence on *how* managers might undertake this activity.

[7] Managers can also use accrual management to overstate current-period expenses (i.e., take a ''big bath''). The overstatement can be used to offset future operating expenses (Burgstahler et al. 2002), or reserves associated with restructuring charges can be reversed into income in future periods (Moehrle 2002). The cost of detection from this type of earnings management is lower than that of the more traditional accrual management. For example, Nelson et al. (2002) find that the use of reserves is a common type of earnings management that is often left unadjusted by auditors if detected. However, the benefits of this type of earnings management are also delayed because it improves *future* net income.

manipulation of real activities is not a GAAP violation, this earnings management tool is expected to have a lower cost of detection than accrual management.

Again, a third potential earnings management tool is the misclassification of items *within* the income statement (classification shifting). Classification shifting bears a relatively low cost: there is no accrual that later reverses, nor are there lost revenues from forgone opportunities. Moreover, because the allocation of expenses to specific accounts can be subjective, auditors might be limited in their ability to verify the appropriate classification, and, because bottom-line income does not change, they might expend less energy on the identification or compulsory adjustments of these accounts (Nelson et al. 2002).[8]

Prior research supports the viability of classification shifting. First of all, without actually misclassifying expenses, managers have been shown to manipulate the *presentation* of the income statement in order to influence perceptions of performance. For example, Kinney and Trezevant (1997) show that managers are far more likely to break out income-decreasing special items than income-increasing special items on the face of the income statement, consistent with managers wishing to highlight the transitory nature of expenses, but not income. This strategic reporting extends to earnings press releases (Schrand and Walther 2000; Bradshaw and Sloan 2002; Bowen et al. 2005). Finally, Davis (2002) finds some evidence that managers of Internet firms gross up both revenues and costs of sales to maximize reported revenues, an especially relevant metric for these firms.

In terms of *classification*, Dye (2002) presents a model where managers attempt to secure the preferred accounting classification (within GAAP) of both real transactions (such as operating versus capital leases) and income statement classifications (such as classifying transitory gains as ordinary income). Empirically, Barnea et al. (1976) conclude that managers use their subjectivity over the classification of borderline expenses that prior to APB No. 30 could be classified as ordinary or extraordinary (such as the loss on the sale of an asset) to present smoother ordinary earnings. Givoly et al. (1999) examine the allocation of income across segments and find evidence that suggests managers shift income to the highest P/E segments, thereby maximizing expected firm value. Weiss (2001) examines the treatment of transitory earnings shocks associated with the 1993 increase in corporate tax rates, and finds that managers are more likely to highlight the income-decreasing effects (consistent with Kinney and Trezevant 1997) and offset current transitory gains with income-decreasing special items in an attempt to maximize future core earnings.[9]

The above research lends credence to the idea that the placement and presentation of expenses within the income statement is a valid earnings management tool for managers. In this paper, I posit that managers *intentionally misclassify* expenses within the income statement—a GAAP violation. Specifically, I argue that managers classify a portion of *core operating expenses* as *special items* in the year that a special item is recognized. This action can alter the perceptions of financial statement users because different income statement

[8] Each of the above earnings management mechanisms affects the actual income statement filed with the SEC. Alternatively, managers might simply exclude recurring expenses from the non-GAAP earnings numbers reported in their press releases (e.g., Doyle et al. 2003; Doyle and Soliman 2005). Clearly this mechanism has a lower cost, but it might also have a lower benefit. While including core expenses in special items offers some degree of camouflage, some pro forma exclusions can be very transparent and thereby treated as recurring by investors. For example, anecdotally, non-special-item exclusions include stock-based compensation expenses, payroll taxes on stock option exercises, and amortization costs. Along these lines, Gu and Chen (2004) find that both First Call analysts and investors appear to include some items in their core earnings calculations that managers excluded in press releases.

[9] Similarly, Cameron and Gallery (2001) find that when firms report income-increasing abnormal items, they tend to recognize offsetting income-decreasing abnormal items.

classifications have different information content for future earnings. Moreover, investors appear to understand the distinction and do not treat line items homogeneously.

To document classification shifting, I focus on the shifting of expenses between core expenses (cost of goods sold and selling, general, and administrative expenses) and special items.[10] There are many possible misclassifications to special items. Large charges, such as those related to restructurings or mergers, offer a great deal of latitude and camouflage. For example, managers can classify normal severance charges as charges resulting from the restructuring or merger. A manager might also allocate a greater percentage of legal costs or other administrative expenses than were actually related to the restructuring or merger to the ''special'' fees. Classification shifting is not, however, limited to these large charges. Many unusual charges might contain misclassified core expenses. Consider Y2K expenses, which might contain the salaries of permanent information technology personnel, or a litigation gain or loss might contain day-to-day legal fees.

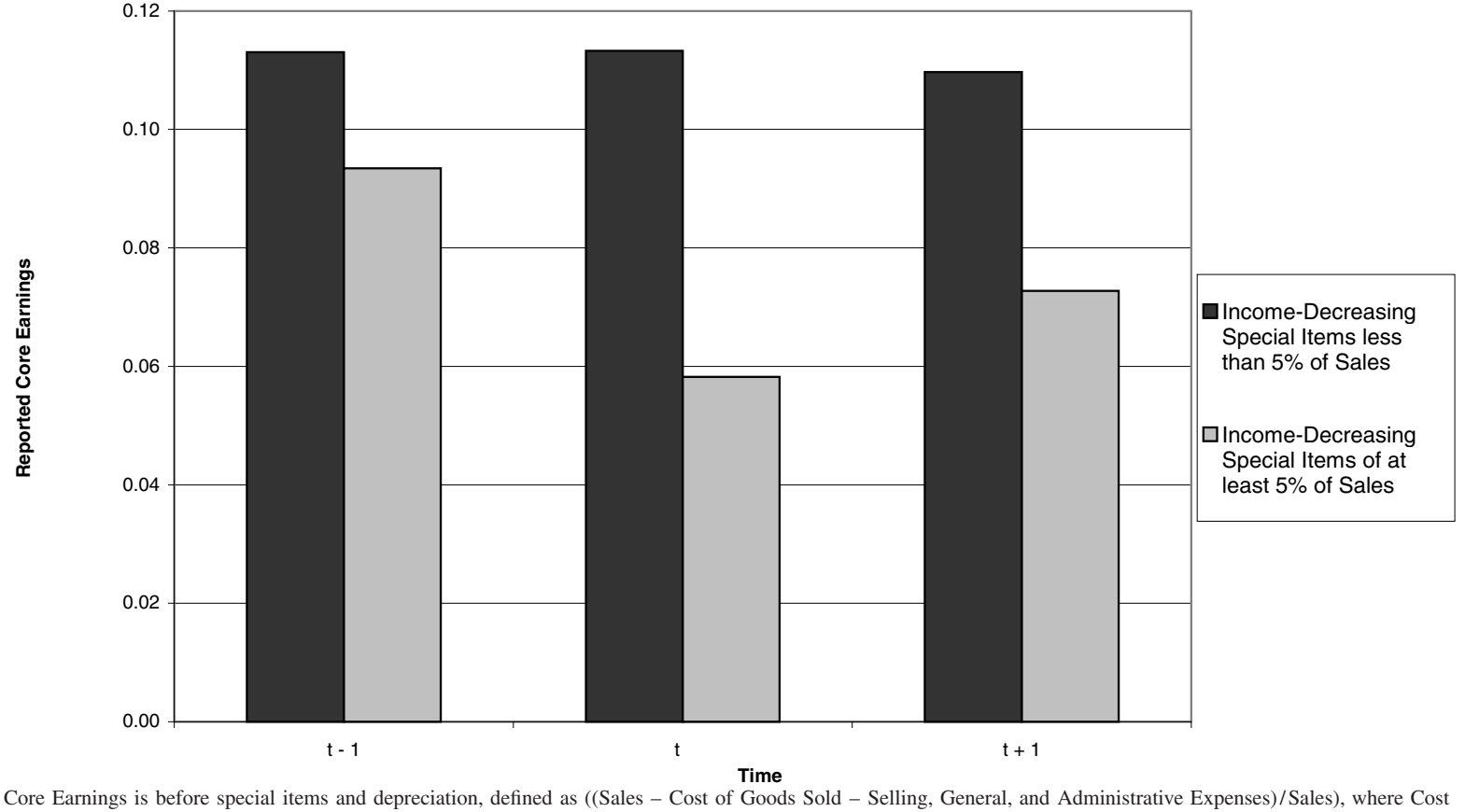
The appropriate categorization of expenses may not be clear-cut to auditors or other outside monitors. While the substantive procedures of auditors might identify unrecorded expenses, in this setting it is not the *recognition*, but merely the *classification*, that is in question. The documentation for expenditures might be too general for the auditor to determine the appropriate classification. Furthermore, while auditors look for abnormal fluctuations in margins and other ratios, special-item firms tend to be declining in performance (see Figure 1); while reported core earnings might be higher than actual core earnings, the reported earnings are likely still below prior-period and industry benchmarks.

Focusing on classification shifting between core expenses and special items offers a powerful test of classification shifting for several reasons. First, core expenses and special items are clearly distinct; core expenses tend to be relatively stable, while special items are by definition unusual or infrequent. Special items have been shown to be highly transitory (e.g., Lipe 1986; Fairfield et al. 1996), and are treated accordingly by investors (e.g., Lipe 1986; Bradshaw and Sloan 2002). Therefore, classification shifting between core expenses and special items, if not fully disentangled by financial statement users, can impact expectations and thus prices. Moreover, special items tend to be excluded from core earnings by both managers (e.g., Lougee and Marquardt 2004) and analysts (e.g., Philbrick and Ricks 1991), and thus classification shifting from core expenses to special items could result in managers *ex post* meeting the analyst forecast when they otherwise would not have met this benchmark. Finally, as noted above, the shifting of expenses between core expenses and special items is viable; managers have subjectivity over the classification of expenses, and the shifting is not expected to raise red flags for outside monitors. This leads to my first hypothesis:

H1: Managers classify core expenses as special.

[10] Specifically, I focus on the association between core earnings and special items. Special items are material events that arise from a firm's ongoing, continuing activities, but that are either unusual in nature or infrequent in occurrence—but not both—and must be disclosed as a separate line item as part of income from continuing operations, or in footnotes to the financial statements (Revsine et al. 2005, 55). Examples of special items include (1) write-downs or write-offs of receivables, inventories, equipment, or intangibles, (2) gains or losses from the sale of equipment or investments, and (3) special one-time charges resulting from corporate restructurings. Compustat combines special items that are broken out on the income statement with those that are solely disclosed in the footnotes. However, successful classification shifting does not require special items to be highlighted on the income statement, as managers may highlight footnoted special items in the press release and/or analysts may exclude these charges from pro forma earnings. For example, in 2001, Cisco Systems Inc. reported a $2.77 billion inventory write-off, which they included in cost of goods sold within the income statement, but which was removed from pro forma earnings in their press release.

FIGURE 1
Graph of Reported Core Earnings for Large Income-Decreasing Special-Item Firms



Core Earnings is before special items and depreciation, defined as ((Sales – Cost of Goods Sold – Selling, General, and Administrative Expenses)/Sales), where Cost of Goods Sold and Selling, General, and Administrative Expenses exclude Depreciation and Amortization, as determined by Compustat.

In particular, I expect unexpected core earnings to be increasing in special items in year t. Furthermore, to ensure that this is due to classification shifting rather than an economic improvement associated with the special item, I expect this improvement to ''reverse'' in year $t+1$ as the core expenses excluded in year t recur in year $t+1$.

Clearly there are costs to classification shifting. In addition to the cost of detection, in general, managers want to avoid raising future expectations of investors or other parties. Therefore, I expect managers to classification shift to a greater degree in periods when the benefits to shifting are greater (holding costs to shifting constant). Benefits are expected to be particularly high when the earnings management allows the manager to meet earnings benchmarks (Dechow and Skinner 2000). The consensus analyst forecast has become the most important earnings benchmark in recent years (Dechow et al. 2003; Brown and Caylor 2005), and this benchmark typically excludes special items and other nonrecurring charges (Philbrick and Ricks 1991).

Moreover, meeting the analyst forecast has been shown to affect capital markets. Firms that meet analyst forecasts have an equity premium (Bartov et al. 2002; Kasznik and McNichols 2002), and missing the analyst forecast can result in a large decline in stock price, especially for high-growth firms (Skinner and Sloan 2002). Thus, the benefits to classification shifting are presumably greater for managers who can use their discretion to meet the analyst forecast, especially in high-growth firms. This leads to my second hypothesis:

H2: Managers classify more core expenses as special in periods when the net benefits to classification shifting are expected to be greater.

In particular, I expect classification shifting to be more pervasive when the shifting allows managers to meet the consensus analyst forecast, especially in high-growth firms.

III. DATA, SAMPLE SELECTION, AND DESCRIPTIVE STATISTICS

Data and Sample Selection

Data are obtained for the years 1988 to 2003 from the 2003 Annual Compustat File, I/B/E/S Split-Unadjusted File, and CRSP Daily Return Tapes.[11] Each firm-year observation is required to have sufficient data to test H1. Observations with sales of less than $1 million are deleted to avoid the creation of outliers, as sales is used as a deflator for the majority of the variables. Also, firms that had a fiscal-year-end change from $t-1$ to t or from t to $t+1$ are deleted to help ensure that years are comparable. Finally, I require a minimum of 15 observations per industry per fiscal year in order to ensure a sufficiently large pool to estimate expected core earnings. Industries are classified following Fama and French (1997); results are not sensitive to the number of required observations or the industry classification scheme. The full sample has 76,901 firm-year observations.

[11] As my measures require one year of lagged data and one year of future data, the actual years examined are 1989–2002. The sample begins in 1988, after Compustat began reporting the newly required Cash From Operations. This allows me to calculate Accruals as Earnings less Cash From Operations as prescribed by Hribar and Collins (2002). This is particularly important in my setting because accruals are measured with error using the balance-sheet approach, especially for firms that have had Merger and Acquisition (M&A) activity (Hribar and Collins 2002), and special items often arise as a result of M&A activity. I assign a zero to special items (#17) if that data item is missing, consistent with Elliott and Hanna (1996). I also re-estimate my main analysis after excluding observations with missing special items. Results are not sensitive to this alternative approach. In addition, I assign a zero to extraordinary items and discontinued operations from the statement of cash flows (#124), which is used to calculate accruals, if that data item is missing.

Descriptive Statistics

Table 1 provides descriptive statistics for the main variables. The mean (median) core earnings for all firms, which by definition is scaled by sales, is 0.070 (0.107).[12] Mean income-decreasing special items as a percentage of sales is approximately 2.7 percent—income-increasing special items are not included in the analysis and have been set to zero.

Table 2 compares firms with and without large income-decreasing special items, where large is defined as 5 percent of sales. Not surprisingly, firms that recognize large income-decreasing special items have significantly lower core earnings than those firms that do not (−0.140 versus 0.095). Firms that undertake large write-offs or corporate restructurings tend to be poor performers (Elliott and Shaw 1988; DeAngelo et al. 1994; Carter 2000).

The change in core earnings from year $t-1$ to year t is significantly more negative for large special-item firms, suggesting that, as conditions worsen, the need for a special item such as an asset write-off or a restructuring increases. The change in core earnings from year t to $t+1$ (i.e., the year following the special item) is significantly more positive for large special-item firms (0.036 versus −0.007). This change is graphically illustrated in Figure 1 and is consistent with Brooks and Buckmaster (1976), who document that mean reversion is stronger for firms with extreme performance. Accruals are significantly more negative for large special-item firms, consistent with DeAngelo et al. (1994). Finally, the analyst forecast error is significantly more negative for large special-item firms, consistent with Abarbanell and Lehavy (2002). Table 3 provides correlations among the main variables and is discussed in the following section.

IV. MEASURING CLASSIFICATION SHIFTING

In Section II, I hypothesize that managers shift core expenses to special items; in this section, I develop a methodology to measure classification shifting. I expect core earnings of special-item firms to be overstated in the year the special item is recognized. I model the level of core earnings, and anticipate unexpected core earnings (reported core earnings less predicted core earnings) in year t to be increasing with special items in year t if managers are classification shifting. As discussed above, an alternative explanation for this association is that core earnings are unexpectedly high due to the immediate benefits of the restructuring charge or some other real economic event. In order to distinguish between real economic changes and the opportunistic behavior of managers, I examine whether the improvement associated with special items in year t reverses in year $t+1$.[13]

To test this part of the hypothesis, I model the *change* in core earnings. I expect the unexpected change in core earnings from year t to $t+1$ to be declining in special items in year t. Thus, operationally, I expect firms that classification shift to have both (1) a higher than expected level of core earnings in year t and (2) a lower than expected change in core

[12] Core earnings is defined as operating income before depreciation and special items scaled by sales. Depreciation is excluded to avoid the accounting effect of an asset write-down, which mechanically reduces depreciation expense. Sales is used as the scalar, rather than total assets, because assets might be systematically misstated for special-item firms. Thus, core earnings is calculated as [(Sales − Cost of Goods Sold − Selling, General, and Administrative Expenses)/Sales], where Cost of Goods Sold and Selling, General, and Administrative Expenses exclude Depreciation and Amortization, as determined by Compustat.

[13] As previously touched upon, if there was a real economic improvement, it is reasonable to expect the core earnings to remain at the improved level, all else equal, while mean reversion would predict a continued upward trend on the core earnings, as special-item firms tend to have core earnings that are below average (see Figure 1). On the other hand, if the unexpectedly high core earnings in the year of the special item were realized by shifting some core expenses to the special item, then special items in year t (which include core operating expenses) should be associated with a systematic decline in core earnings from year t to $t+1$, all else equal, as the previously excluded core expenses recur.

TABLE 1

Panel A: Descriptive Statistics for the Full Sample

Variable	Mean	Median	Standard Deviation	25%	75%
$SALES_t$ (in millions)	1,566.370	132.521	7,263.780	27.746	641.566
$PERCENT\ CHANGE\ IN\ SALES_{t-1,\,t}$	21.6%	9.0%	0.567	−1.8%	27.0%
$CORE\ EARNINGS_t$	0.070	0.107	0.385	0.039	0.196
$\Delta CORE\ EARNINGS_{t-1,\,t}$	0.011	0.001	0.248	−0.027	0.026
$\Delta CORE\ EARNINGS_{t,\,t+1}$	−0.003	0.000	0.210	−0.029	0.025
$UNEXPECTED\ CORE\ EARNINGS_t$	0.001	0.003	0.148	−0.033	0.044
$UNEXPECTED\ CHANGE\ IN\ CORE\ EARNINGS_{t,\,t+1}$	0.001	0.001	0.133	−0.033	0.038
$INCOME\text{-}DECREASING\ SPECIAL\ ITEMS_t$ (in millions)	13.062	0.000	79.669	0.000	0.627
$INCOME\text{-}DECREASING\ SPECIAL\ ITEMS\ AS\ A\ PERCENT\ OF\ SALES_t$	2.7%	0.0%	0.114	0.0%	0.6%
$ACCURALS_t$[a]	−0.104	−0.049	0.282	−0.124	−0.002
$ASSET\ TURNOVER\ RATIO_t$	2.82	1.93	3.36	1.06	3.22
$ANALYST\ FORECAST\ ERROR_t$	−0.016	0.000	0.093	−0.005	0.002

Panel B: Variable Definitions with Corresponding Compustat Data Item Numbers

Variable	Definition
CE_t	Core Earnings (before Special Items and Depreciation), calculated as (Sales − Cost of Goods Sold − Selling, General, and Administrative Expenses) (#13) /Sales (#12), where Cost of Goods Sold and Selling, General, and Administrative Expenses exclude Depreciation and Amortization, as determined by Compustat.
ΔCE_{t+1}	Change in Core Earnings, calculated as $CE_{t+1} - CE_t$.
UE_CE_t	Unexpected Core Earnings is the difference between reported and predicted Core Earnings, where the predicted value is calculated using the coefficients from model (1), as follows, estimated by fiscal year and industry and excluding firm i: $CE_t = \beta_0 + \beta_1 CE_{t-1} + \beta_2 ATO_t + \beta_3 ACCRUALS_{t-1} + \beta_4 ACCRUALS_t + \beta_5 \Delta SALES_t + \beta_6 NEG\_\Delta SALES_t + \varepsilon_t$.
$UE\_\Delta CE_t$	Unexpected Change in Core Earnings is the difference between reported and predicted Change in Core Earnings, where the predicted value is calculated using the coefficients from model (2), as follows, estimated by fiscal year and industry and excluding firm i: $\Delta CE_t = \phi_0 + \phi_1 CE_{t-1} + \phi_2 \Delta CE_{t-1} + \phi_3 \Delta ATO_t + \phi_4 ACCRUALS_{t-1} + \phi_5 ACCRUALS_t + \phi_6 \Delta SALES_t + \phi_7 NEG\_\Delta SALES_t + \nu_t$.
$\%SI_t$	Income-Decreasing Special Items as a Percentage of Sales, calculated as [Special Items$_t$ (#17) × −1]/Sales$_t$(#12)[b] when Special Items are income-decreasing, and 0 otherwise.
$\Delta SALES_t$	Percent Change in Sales, calculated as (Sales$_t$ (#12) − Sales$_{t-1}$)/Sales$_{t-1}$.
$NEG\_\Delta SALES_t$	Percent Change in Sales ($\Delta SALES_t$) if $\Delta SALES_t$ is less than 0, and 0 otherwise.
$ACCRUALS_t$	Operating Accruals, calculated as [Net Income before Extraordinary Items (#123) − Cash From Operations (#308–#124)]/Sales (#12).

(*continued on next page*)

TABLE 1 (Continued)

ATO_t	Asset Turnover Ratio, defined as Sales$_t$ (#12)/((NOA$_t$ + NOA$_{t-1}$)/2), where NOA, or Net Operating Assets, is equal to the difference between Operating Assets − Operating Liabilities. Operating Assets is calculated as Total Assets (#6) less Cash (#1) and Short-Term Investments (#32). Operating liabilities is calculated as Total Assets (#6) less Total Debt (#9 and #34), less Book Value of Common and Preferred Equity (#60 and #130), less Minority Interests (#38). Average net operating assets is required to be positive.
ΔATO_t	Change in Asset Turnover, calculated as $ATO_t - ATO_{t-1}$.
FE_t	Analyst Forecast Error for year t, defined as Actual Earnings as reported by I/B/E/S less the Median I/B/E/S Analyst Forecast.
MB_t	Market-to-Book Ratio, defined as Market Value (#25 × #199) divided by Book Value (#60).

The subscript t represents the year and all variables are firm-specific. All variables are winsorized by year at the extreme 1 percent and 99 percent.

There are a maximum of 76,901 firm-year observations for each variable. Core Earnings is before special items and depreciation and defined as ((Sales − Cost of Goods Sold − Selling, General, and Administrative Expenses)/Sales), where Cost of Goods Sold and Selling, General, and Administrative Expenses exclude Depreciation and Amortization, as determined by Compustat. Unexpected Core Earnings in year t and Unexpected Change in Core Earnings from year t to $t+1$ are the differences between reported and predicted Core Earnings and Change in Core Earnings, respectively, where the predicted values are calculated using the coefficients from models (1) and (2) (shown below), estimated by fiscal year and industry and excluding firm i:

$$CE_t = \beta_0 + \beta_1 CE_{t-1} + \beta_2 ATO_t + \beta_3 ACCRUALS_{t-1} + \beta_4 ACCRUALS_t + \beta_5 \Delta SALES_t + \beta_6 NEG\_\Delta SALES_t + \varepsilon_t \quad (1)$$

$$\Delta CE_t = \phi_0 + \phi_1 CE_{t-1} + \phi_2 \Delta CE_{t-1} + \phi_3 \Delta ATO_t + \phi_4 ACCRUALS_{t-1} + \phi_5 ACCRUALS_t + \phi_6 \Delta SALES_t + \phi_7 NEG\_\Delta SALES_t + \nu_t \quad (2)$$

[a] Note that accruals are scaled by sales. For comparison purposes, I also calculate accruals scaled by beginning of period assets. The mean (median) is −0.054 (−0.049), consistent with the magnitudes in prior research.
[b] Note that I multiply special items by −1 in order to be consistent with the general term special items representing an income-decreasing item.

earnings in year $t+1$. This prediction is opposite to what is expected to occur in the normal course of business as a result of special items. Referring to Figure 1, reported core earnings for large income-decreasing special-item firms fall, on average, in the year the special item is recognized, and improve, on average, in the next year.

I develop a model of expected core earnings, first in levels (to examine year t) and then in changes (to examine year $t+1$). This model attempts to control for economic performance as well as for macroeconomic and industry shocks. To model the level of, and change in, core earnings (CE), I estimate the following models, respectively. Regressions are estimated by industry and fiscal year:

$$CE_t = \beta_0 + \beta_1 CE_{t-1} + \beta_2 ATO_t + \beta_3 ACCRUALS_{t-1} + \beta_4 ACCRUALS_t + \beta_5 \Delta SALES_t + \beta_6 NEG\_\Delta SALES_t + \varepsilon_t \quad (1)$$

$$\Delta CE_t = \phi_0 + \phi_1 CE_{t-1} + \phi_2 \Delta CE_{t-1} + \phi_3 \Delta ATO_t + \phi_4 ACCRUALS_{t-1} + \phi_5 ACCRUALS_t + \phi_6 \Delta SALES_t + \phi_7 NEG\_\Delta SALES_t + \nu_t \quad (2)$$

where each of the variables is described below. Table 1, Panel B, presents the calculation and corresponding Compustat data item numbers of each of the variables.

TABLE 2
Descriptive Statistics for Special Item Subgroups

Variable	Firms without Income-Decreasing Special Items ≥5% of Sales (68,858 observations)		Firms with Income-Decreasing Special Items ≥5% of Sales (8,043 observations)		p-value for Statistical Difference between Firms with and without Special Items ≥5% of Sales under a:	
	Mean	Median	Mean	Median	t-test	Wilcoxon Rank Sum Test
SALES$_t$ (in millions)	1,642.390	143.642	915.509	71.279	0.001	0.001
PERCENT CHANGE IN SALES$_{t-1,\ t}$	21.27%	9.42%	24.1%	3.9%	0.002	0.001
CORE EARNINGS$_t$	0.095	0.111	−0.140	0.042	0.001	0.001
Δ*CORE EARNINGS*$_{t-1,\ t}$	0.013	0.002	−0.001	−0.018	0.004	0.001
Δ*CORE EARNINGS*$_{t,\ t+1}$	−0.007	0.000	0.036	0.015	0.001	0.001
UNEXPECTED CORE EARNINGS$_t$	0.000	0.003	0.005	0.012	0.100	0.001
UNEXPECTED CHANGE IN CORE EARNINGS$_{t,\ t+1}$	0.000	0.001	0.004	0.005	0.013	0.001
INCOME-DECREASING SPECIAL ITEMS$_t$ (in millions)	5.782	0.000	75.389	11.279	0.093	0.001
INCOME-DECREASING SPECIAL ITEMS AS A PERCENT OF SALES$_t$	0.36%	0.00%	22.2%	12.5%	0.001	0.001
ACCURALS$_t$ (scaled by Sales)	−0.070	−0.041	−0.395	−0.212	0.001	0.001
ASSET TURNOVER RATIO$_t$	2.88	1.98	2.30	1.52	0.001	0.001
ANALYST FORECAST ERROR$_t$	−0.011	0.000	−0.055	0.000	0.001	0.001

There are 76,901 firm-year observations for each variable with the exception of *ANALYST FORECAST ERROR,* which has 42,464 firm-year observations. All variables are winsorized at 1 percent and 99 percent.
See variable definitions in Table 1, Panel B.

TABLE 3
Spearman/Pearson Correlation Matrix

	$SALES_t$	$\Delta SALES_t$	CE_t	CE_{t+1}	ΔCE_t	ΔCE_{t+1}	UE_CE_t	$UE\_\Delta CE_{t+1}$	$\%SI_t$	$ACCRUALS_t$	ATO_t	FE_t
$SALES_t$	1.000	−0.038 (0.0001)	0.056 (0.0001)	0.057 (0.0001)	−0.011 (0.0017)	0.000 (0.9348)	0.013 (0.0004)	0.008 (0.0221)	−0.025 (0.0001)	0.025 (0.0001)	0.004 (0.2792)	0.035 (0.0001)
$\Delta SALES_t$	−0.037 (0.0001)	1.000	−0.111 (0.0001)	−0.111 (0.0001)	0.437 (0.0001)	0.004 (0.3167)	−0.036 (0.0001)	−0.035 (0.0001)	0.018 (0.0001)	−0.028 (0.0001)	0.092 (0.0001)	0.042 (0.0001)
CE_t	0.345 (0.0001)	0.133 (0.0001)	1.000	0.798 (0.0001)	0.035 (0.0001)	−0.306 (0.0001)	0.408 (0.0001)	−0.034 (0.0001)	−0.292 (0.0001)	0.435 (0.0001)	−0.058 (0.0001)	0.118 (0.0001)
CE_{t+1}	0.337 (0.0001)	0.071 (0.0001)	0.845 (0.0001)	1.000	−0.003 (0.3505)	0.261 (0.0001)	0.301 (0.0001)	0.310 (0.0001)	−0.227 (0.0001)	0.293 (0.0001)	−0.073 (0.0001)	0.094 (0.0001)
ΔCE_t	−0.019 (0.0001)	0.304 (0.0001)	0.178 (0.0001)	0.129 (0.0001)	1.000	−0.045 (0.0001)	0.452 (0.0001)	−0.006 (0.0887)	−0.016 (0.0001)	0.057 (0.0001)	0.040 (0.0001)	0.051 (0.0001)
ΔCE_{t+1}	−0.031 (0.0001)	−0.071 (0.0001)	−0.191 (0.0001)	0.206 (0.0001)	−0.049 (0.0001)	1.000	−0.134 (0.0001)	0.633 (0.0001)	0.107 (0.0001)	−0.224 (0.0001)	−0.024 (0.0001)	−0.050 (0.0001)
UE_CE_t	0.059 (0.0001)	−0.096 (0.0001)	0.325 (0.0001)	0.274 (0.0001)	0.451 (0.0001)	−0.075 (0.0001)	1.000	0.000 (0.9122)	0.017 (0.0001)	−0.009 (0.0099)	0.001 (0.8035)	0.049 (0.0001)
$UE\_\Delta CE_{t+1}$	0.031 (0.0001)	−0.074 (0.0001)	0.027 (0.0001)	0.254 (0.0001)	−0.005 (0.1655)	0.524 (0.0001)	0.050 (0.0001)	1.000	−0.008 (0.0250)	−0.015 (0.0001)	−0.016 (0.0001)	−0.054 (0.0001)
$\%SI_t$	0.050 (0.0001)	−0.086 (0.0001)	−0.141 (0.0001)	−0.108 (0.0001)	−0.098 (0.0001)	0.067 (0.0001)	0.014 (0.0001)	0.017 (0.0001)	1.000	−0.623 (0.0001)	−0.061 (0.0001)	−0.123 (0.0001)
$ACCRUALS_t$	0.020 (0.0001)	0.201 (0.0001)	−0.034 (0.0001)	−0.108 (0.0001)	0.093 (0.0001)	−0.154 (0.0001)	−0.150 (0.0001)	−0.047 (0.0001)	−0.268 (0.0001)	1.000	0.148 (0.0001)	0.154 (0.0001)
ATO_t	−0.025 (0.0001)	0.132 (0.0001)	−0.366 (0.0001)	−0.372 (0.0001)	0.070 (0.0001)	−0.032 (0.0001)	−0.072 (0.0001)	−0.084 (0.0001)	−0.033 (0.0001)	0.382 (0.0001)	1.000	0.024 (0.0001)
FE_t	0.093 (0.0001)	0.091 (0.0001)	0.115 (0.0001)	0.120 (0.0001)	0.183 (0.0001)	0.025 (0.0001)	0.088 (0.0001)	0.012 (0.0135)	−0.071 (0.0001)	0.049 (0.0001)	0.065 (0.0001)	1.000

There are a maximum of 76,901 firm-year observations. All variables are winsorized at 1 percent and 99 percent. See variable definitions in Table 1, Panel B.

In the *levels* model (model 1), my first variable is lagged core earnings (CE_{t-1}). I include this variable because core earnings tends to be very persistent (note the correlation of 0.80 between core earnings and lagged core earnings in Table 3). Next, I include the asset turnover ratio (ATO_t), as it has been shown to be inversely related to profit margin (e.g., Nissim and Penman 2001), and my definition of core earnings closely parallels profit margin. Note the negative correlation between core earnings and asset turnover in Table 3, consistent with the studies referenced above. For the purpose of this paper, the inclusion of the asset turnover ratio is also important because firms that have large income-decreasing special items are likely to be making changes to their operating strategy, possibly altering their mix of margin and turnover.

Sloan (1996) finds that, holding earnings constant, accrual levels are an explanatory variable for future performance. Specifically, earnings performance attributable to the accrual component of earnings exhibits lower persistence than earnings performance attributable to the cash flow component of earnings. Thus, I include prior-year operating accruals ($ACCRUALS_{t-1}$) in my model of core earnings.

I also include current-year accruals ($ACCRUALS_t$) in my model. Extreme performance is highly correlated with changes in accrual levels (DeAngelo et al. 1994). Specifically, unusually good performance is associated with a large increase in accruals, and unusually poor performance is associated with a large decline in accruals. While it is possible that extreme accruals could be due to accrual management, this paper focuses on earnings management using special items, and therefore controlling for accruals, discretionary or otherwise, allows for a stronger prediction of core earnings.[14]

Although core earnings is scaled by sales, the relation is not expected to be constant because, as sales grow, fixed costs become smaller per sales dollar. Therefore, I include sales growth ($\Delta SALES_t$) as an explanatory variable. I also allow the slope to differ between sales increases and decreases ($NEG\_\Delta SALES_t$) because Anderson et al. (2003) find that costs increase more when activity rises than they decrease when activity falls by an equivalent amount.

To model the *change* in core earnings (model 2), I include both lagged core earnings (CE_{t-1}) and the change in core earnings from year $t-2$ to $t-1$ (ΔCE_{t-1}) to allow the model to vary the degree of mean reversion based on the prior-year's level of core earnings. This is important because mean reversion is typically more extreme in the tails (e.g., Freeman et al. 1982; Fama and French 2000). Inclusion of both levels and changes is also consistent with prior literature that forecasts changes in profitability (e.g., Fama and French 2000; Fairfield and Yohn 2001; Penman and Zhang 2002). I replace the level of asset turnover with the change in asset turnover (ΔATO_t), and retain $ACCRUALS_{t-1}$, $ACCRUALS_t$, $\Delta SALES_t$, and $NEG\_\Delta SALES_t$.

Models (1) and (2) are estimated cross-sectionally by industry and fiscal year. Table 4 provides the mean and median regression results for the model of expected core earnings. The median adjusted R^2 is quite high, at approximately 78 percent, and ranges by industry from 58 percent for Aircrafts to 94 percent for Wholesale (not tabulated).

Referring to Table 4, for the median regression, prior-year core earnings (CE_{t-1}) is a strong predictor of core earnings, as expected, with a coefficient of 0.74 and median p-value of less than 0.0001. The asset turnover ratio (ATO_t) is weakly significant (one-tailed p-value = 0.087) for the median regression, and is only significant in 36 percent of the 599 industry-year regressions. Thus, within industry-years, the asset turnover ratio does not

[14] While I include accruals to control performance, the inclusion of this variable results in a possible bias, which I discuss in detail in Section V.

TABLE 4
Model of Expected Core Earnings—Levels

Independent Variables	Predicted Sign	Dependent Variable: CE_t Mean Coefficient (one-tailed p-value)	Dependent Variable: CE_t Median Coefficient (one-tailed p-value)	Percent Significant (p-value ≤ 0.10, one-tailed test)	Percent with Sign in the Predicted Direction
Intercept		0.04 (0.123)	0.03 (0.044)		
CE_{t-1}	+	0.74 (0.001)	0.74 (0.000)	99.7	99.8
ATO_t	−	−0.003 (0.101)	−0.002 (0.087)	36.2	66.6
$ACCRUALS_{t-1}$	−	−0.18 (0.045)	−0.18 (0.005)	70.6	84.8
$ACCRUALS_t$	+	0.22 (0.041)	0.18 (0.003)	74.0	81.5
$\Delta SALES_t$	+	0.06 (0.062)	0.05 (0.023)	58.4	78.5
$NEG\_\Delta SALES_t$	+	0.27 (0.058)	0.21 (0.019)	62.9	78.8
Adjusted R^2		75.5%	78.1%		

There are 76,901 observations and 599 industry-year regressions. Regressions are estimated by industry and fiscal year, and the p-values shown are based on one-tailed tests for each of the independent variables with the exception of the intercept, which does not have a sign prediction. p-values, rather than t-statistics, are provided due to the varying sample sizes of the specific regressions (which range from 15 to 851 observations). CE_t is Core Earnings, calculated as ($Sales_t$ − Cost of Goods $Sold_t$ − Selling, General, and Administrative $Expenses_t$)/$Sales_t$ where Cost of Goods Sold and Selling, General, and Administrative Expenses exclude Depreciation and Amortization, as determined by Compustat. ATO_t is the asset turnover ratio, defined as $Sales_t/((NOA_t + NOA_{t-1})/2)$, where *NOA*, or Net Operating Assets, is equal to Operating Assets − Operating Liabilities. Operating Assets is calculated as Total Assets − Cash and Short-Term Investments. Operating Liabilities is calculated as Total Assets − Total Debt − Book Value of Common and Preferred Equity − Minority Interests, where average net operating assets is required to be positive. $ACCRUALS_t$ is Operating Accruals, calculated as [(Net Income before Extraordinary Items − Cash From Operations)/Sales]. $\Delta SALES_t$ is the percentage change in sales from year $t-1$ to t $(Sales_t - Sales_{t-1})/(Sales_{t-1})$. $NEG\_\Delta SALES_t$ is $\Delta SALES_t$ if $\Delta SALES_t$ is negative, and 0 otherwise.
All variables are winsorized at 1 percent and 99 percent.
See Table 1, Panel B, for Compustat data item numbers.

appear to be strongly associated with core earnings. This association remains relatively weak in univariate industry-year regressions; 49 percent of the 599 regressions are statistically significant (not tabulated). These weak within-industry results are consistent with Soliman (2004), who finds that the negative relation between asset turnover and profit margin is largely driven by industry association.

Prior-year accruals ($ACCRUALS_{t-1}$) has a coefficient of −0.18, consistent with higher levels of accruals having lower earnings persistence. The positive coefficient of 0.18 on current-year accruals ($ACCRUALS_t$) is also as predicted. Consistent with Anderson et al. (2003), the slope coefficient on sales growth ($\Delta SALES_t$) is significantly larger for firms that experience a sales decline (0.05 versus 0.26, where 0.26 is obtained by summing β_5 and β_6).

Table 5 presents the mean and median regression results for Equation (2), the model of change in core earnings. The median adjusted R^2 is 51.6 percent. For the median

TABLE 5
Model of Expected Core Earnings—Changes

		Dependent Variable: ΔCE_t			
Independent Variables	**Predicted Sign**	**Mean Coefficient (one-tailed p-value)**	**Median Coefficient (one-tailed p-value)**	**Percent Significant (p-value ≤ 0.10, one-tailed test)**	**Percent with Sign in the Predicted Direction**
Intercept		0.02 (0.271)	0.02 (0.121)		
CE_{t-1}	−	−0.16 (0.044)	−0.16 (0.001)	73.5	85.6
ΔCE_{t-1}	−	−0.08 (0.057)	−0.07 (0.023)	63.3	63.6
ΔATO_t	+	0.004 (0.094)	0.003 (0.074)	41.1	64.1
$ACCRUALS_{t-1}$	−	−0.17 (0.045)	−0.15 (0.007)	72.5	87.0
$ACCRUALS_t$	+	0.20 (0.039)	0.19 (0.001)	75.5	85.5
$\Delta SALES_t$	+	0.06 (0.073)	0.04 (0.044)	52.1	75.3
$NEG\_\Delta SALES_t$	+	0.25 (0.056)	0.20 (0.015)	62.6	79.6
Adjusted R^2		51.7%	51.6%		

There are 76,901 observations and 599 industry-year regressions. Regressions are estimated by industry and fiscal year, and the p-values shown are based on one-tailed tests for each of the independent variables with the exception of the intercept, which does not have a sign prediction. p-values, rather than t-statistics, are provided due to the varying sample sizes of the specific regressions (which range from 15 to 851 observations). CE_t is Core Earnings, calculated as (Sales$_t$ − Cost of Goods Sold$_t$ − Selling, General, and Administrative Expenses$_t$)/Sales$_t$, where Cost of Goods Sold and Selling, General, and Administrative Expenses exclude Depreciation and Amortization, as determined by Compustat. ATO_t is the asset turnover ratio, defined as $Sales_t/((NOA_t + NOA_{t-1})/2)$, where *NOA*, or Net Operating Assets, is equal to Operating Assets − Operating Liabilities. Operating Assets is calculated as Total Assets − Cash and Short-Term Investments. Operating Liabilities is calculated as Total Assets − Total Debt − Book Value of Common and Preferred Equity − Minority Interests, where average net operating assets is required to be positive. $ACCRUALS_t$ is Operating Accruals, calculated as [(Net Income before Extraordinary Items − Cash From Operations)/Sales]. $\Delta SALES_t$ is the percentage change in sales from year $t-1$ to t $(Sales_t - Sales_{t-1})/(Sales_{t-1})$. $NEG\_\Delta SALES_t$ is $\Delta SALES_t$ if $\Delta SALES_t$ is negative, and 0 otherwise.
All variables are winsorized at 1 percent and 99 percent.
See Table 1, Panel B, for Compustat data item numbers.

industry-year regression, all of the variables are statistically significant (p-value < 0.10, one-tailed) and have the predicted signs. The level of core earnings is negatively associated with the change in core earnings, consistent with mean reversion (Freeman et al. 1982). The change in core earnings from year $t-2$ to $t-1$ is also negatively associated with the change in core earnings from $t-1$ to t, consistent with Brooks and Buckmaster (1976). The change in the asset turnover ratio is weakly significant in the mean and median regressions; the sign is consistent with the relation found in Penman and Zhang (2002). However, in the majority (59 percent) of the 599 industry-year regressions, this variable is not statistically significant.

Unexpected core earnings and unexpected change in core earnings are the differences between reported and predicted core earnings and change in core earnings, respectively.

The predicted values are calculated using the coefficients from models (1) and (2) above, estimated by fiscal year and industry and excluding firm *i*. Tables 1–3 provide descriptive statistics for these residuals. Referring to Table 3, core earnings and unexpected core earnings are positively correlated (0.41), as are the partitions of the discretionary accrual model. This positive association potentially confounds many studies of earnings management because both partitions (i.e., discretionary and nondiscretionary) are expected to be correlated *in the same direction* with the variable of interest (e.g., McNichols and Wilson 1988; Dechow et al. 1995; McNichols 2000). However, it is important to note that special items are *negatively* correlated with core earnings, while H1 posits a *positive* relation between special items and unexpected core earnings.

V. TEST DESIGN AND RESULTS

Main Analysis

Hypothesis 1 predicts that managers shift core expenses to special items (''classification shift''). As discussed in Section IV, if managers classification shift, then unexpected core earnings in year *t* is expected to be increasing with special items in year *t*, and the unexpected change in core earnings in year *t*+1 is expected to be decreasing with special items in year *t*. These anticipated associations are opposite those expected for actual core earnings, as illustrated in Figure 1. To test H1, I estimate the following regressions:

$$UE\_CE_t = \alpha_0 + \alpha_1 \%SI_t + \varepsilon_t \quad (3a)$$

$$UE\_\Delta CE_{t+1} = \eta_0 + \eta_1 \%SI_t + \nu_{t+1} \quad (3b)$$

where UE_CE_t is unexpected core earnings in year *t*, and $UE\_\Delta CE_{t+1}$ is unexpected change in core earnings in year *t*+1, the difference between reported and predicted core earnings and change in core earnings, respectively, where the predicted values are calculated using the coefficients from models (1) and (2) above, estimated by fiscal year and industry and excluding firm *i*. The variable $\%SI_t$ is defined as income-decreasing special items scaled by sales, both in year *t*. Note that a positive special item corresponds to an income-decreasing special item (income-increasing special items are set to zero); I therefore predict α_1 to be positive and η_1 to be negative. Recall that many other variables were used in the generation of unexpected core earnings, my dependent variable. As such, I do not add additional control variables to Equations (3a) and (3b). In untabulated tests I include industry-specific indicator variables; results are not sensitive to the inclusion of these variables.

I consider three samples in Table 6, (1) all Compustat firms, (2) those firms with nonzero income-decreasing special items, and (3) those firms with income-decreasing special items of at least 5 percent of sales, presented in the first, second, and third columns of results, respectively. Referring to the first column in Table 6, I find that special items are positively associated with unexpected core earnings ($\alpha_1 = 0.022$), as predicted. A one standard deviation increase in special items is expected to result in an increase in unexpected core earnings (scaled by sales) of 25 basis points [0.022 (the coefficient from Table 6) multiplied by 0.114 (the standard deviation of income-decreasing special items for this sample)]. Not surprisingly, as the sample is narrowed down to focus on those firms that have greater opportunity to classification shift, the adjusted R^2 of the models increases monotonically. For those firms with special items of at least 5 percent of sales, a one standard deviation increase in special items is expected to result in an increase in unexpected core earnings of 63 basis points.

TABLE 6
Regression of Unexpected Core Earnings and Future Unexpected Change in Core Earnings on Special Items as a Percentage of Sales

Independent Variables	Predicted Sign	Dependent Variable = UE_CE_t: All Compustat Firms	Non-Zero Income-Decreasing Special Items	Income-Decreasing Special Items ≥ 5% of Sales
Intercept		0.000	0.003	−0.000
		(0.26)	(2.18)	(−0.07)
$\%SI_t$	+	0.022	0.017	0.022
		(4.61)	(3.06)	(2.39)
Adjusted R^2		0.03%	0.04%	0.06%

Independent Variables	Predicted Sign	Dependent Variable = $UE\_\Delta CE_{t+1}$: All Compustat Firms	Non-Zero Income-Decreasing Special Items	Income-Decreasing Special Items ≥ 5% of Sales
Intercept		0.001	0.001	0.010
		(2.45)	(5.42)	(3.47)
$\%SI_t$	−	−0.010	−0.018	−0.025
		(−2.24)	(−3.67)	(−3.20)
Adjusted R^2		0.01%	0.05%	0.11%
Number of Observations		76,901	23,743	8,043
Standard Deviation of $\%SI_t$		0.114	0.193	0.286

The sample consists of 76,901 firm-year observations, t-statistics are shown in parentheses. Unexpected Core Earnings in year t (UE_CE_t) and Unexpected Change in Core Earnings from year t to $t+1$ ($UE\_\Delta CE_{t+1}$) are the differences between reported and predicted Core Earnings and Change in Core Earnings, respectively, where the predicted values are calculated using the coefficients from models (1) and (2) (shown below), estimated by fiscal year and industry and excluding firm i:

$$CE_t = \beta_0 + \beta_1 CE_{t-1} + \beta_2 ATO_t + \beta_3 ACCRUALS_{t-1} + \beta_4 ACCRUALS_t + \beta_5 \Delta SALES_t + \beta_6 NEG\_\Delta SALES_t + \varepsilon_t \quad (1)$$

$$\Delta CE_t = \phi_0 + \phi_1 CE_{t-1} + \phi_2 \Delta CE_{t-1} + \phi_3 \Delta ATO_t + \phi_4 ACCRUALS_{t-1} + \phi_5 ACCRUALS_t + \phi_6 \Delta SALES_t + \phi_7 NEG\_\Delta SALES_t + \nu_t \quad (2)$$

CE_t is Core Earnings, calculated as (Sales$_t$ − Cost of Goods Sold$_t$ − Selling, General, and Administrative Expenses$_t$)/Sales$_t$ where Cost of Goods Sold and Selling, General, and Administrative Expenses exclude Depreciation and Amortization, as determined by Compustat. ATO_t is the asset turnover ratio, defined as $Sales_t$/(($NOA_t + NOA_{t-1}$)/2), where NOA is Net Operating Assets, and is defined in Table 1, Panel B. $ACCRUALS_t$ is Operating Accruals, calculated as [(Net Income before Extraordinary Items − Cash From Operations)/Sales]. $\Delta SALES_t$ is the percentage change in sales from year $t-1$ to t ($Sales_t - Sales_{t-1}$)/($Sales_{t-1}$). $NEG\_\Delta SALES_t$ is $\Delta SALES_t$ if $\Delta SALES_t$ is negative, and 0 otherwise. $\%SI_t$ is income-decreasing special items as reported by Compustat (where positive specials item are income-decreasing and income-increasing special items are set to zero) scaled by sales, both in year t.
All variables are winsorized at 1 percent and 99 percent.
See Table 1, Panel B, for Compustat data item numbers.

Referring to the results for Equation (3b), presented in the lower half of Table 6, as predicted, special items in year t are negatively associated with the unexpected change in core earnings in year $t+1$ ($\eta_1 = -0.010$). This translates into a reversal of 12 basis points (-0.010×0.114) in year $t+1$ for a one standard deviation increase in $\%SI_t$ for the full sample, and of 72 basis points for those firms with special items of at least 5 percent of sales. Overall, the results are consistent with managers classifying some core expenses as special in the year a special item is recognized.

Serial Special Items

In the above analysis for the full sample, a one standard deviation increase in special items corresponds to core earnings that are 25 basis points higher than expected, but these special items only predict a ''reversal'' of 12 basis points in year $t+1$. It is important to note, however, that the reversal is expected to be smaller in the presence of interperiod shifting (Burgstahler et al. 2002). For example, if the manager shifted \$100 of year t operating expenses and \$25 of year $t+1$ operating expenses to the special item in year t, only \$75 of the \$100 would ''recur'' in year $t+1$. In addition, my tests provide a *lower bound* on the amount of expenses shifted to special items, as my model only picks up temporary shifting. Eastman-Kodak, for example, had ''nonrecurring'' losses in ten out of 12 years (Serwer 2002). They could simply classify the same nontransitory expenses as special *each year*. Approximately 16 percent of my sample firms recognize income-decreasing special items in both year t and year $t+1$. I expect the reversal to be lower when there is a special item in year $t+1$, because the manager can simply misclassify the expenses again. To provide evidence on how much lower the reversal is in these cases, I estimate the following regression:

$$UE\_\Delta CE_{t+1} = \omega_0 + \omega_1 \%SI_t + \omega_2 SI\_IND_{t+1} + \omega_3 \%SI_t \times SI\_IND_{t+1} + \varepsilon_{t+1} \qquad (4)$$

where SI_IND_{t+1} is an indicator variable that is equal to 1 if the firm has a special item in year $t+1$, and 0 otherwise. The results in Table 7 show that after controlling for serial special items (or the opportunity to classification shift in year $t+1$), the actual reversal of shifted expenses is higher when firms do not report a special item in year $t+1$ (for the full sample, $\omega_1 = -0.026$ as compared to $\eta_1 = -0.010$ in Table 6). In contrast, when the firm has a special item in year $t+1$, the reversal is zero, on average, for the full sample; $\omega_1 + \omega_3$ is not statistically different from zero.

Compustat Special Items

A limitation of the above analyses is the use of Compustat special items, which groups many types of special items together. These include items that are not susceptible to classification shifting, such as asset write-downs, and items that are more amenable to classification shifting, such as restructuring charges other than asset write-downs or merger-related costs. While I use Compustat special items in order to conduct a large sample study, I also hand-collect data for a subset of firms. If the results in Table 6 are evidence of classification shifting, then I expect the results to be stronger when only the special items amenable to misclassification are used.

To select my subsample, I identify all firms that were in the S&P 500 from 1996 to 2000 and had income-decreasing special items, as reported by Compustat, of at least 5 percent of sales, resulting in 190 firm-years. For this sample of firms, I examine 10-Ks and

TABLE 7
Regression of Future Unexpected Change in Core Earnings on Special Items as a Percentage of Sales and Repeat Special Items

		Dependent Variable = $UE\_\Delta CE_{t+1}$		
Independent Variables	**Predicted Sign**	**All Compustat Firms**	**Non-Zero Income-Decreasing Special Items**	**Income-Decreasing Special Items ≥ 5% of Sales**
Intercept		0.000	0.004	0.007
		(0.60)	(2.53)	(1.64)
$\%SI_t$	−	−0.026	−0.045	−0.053
		(−3.58)	(−5.23)	(−3.64)
SI_IND_{t+1}	?	0.003	0.004	0.008
		(2.46)	(2.12)	(1.31)
$\%SI_t \times SI\_IND_{t+1}$	+	0.022	0.039	0.036
		(2.56)	(3.66)	(2.08)
Adjusted R^2		0.02%	0.17%	0.28%
Number of Observations		76,901	23,743	8,043

The sample consists of 76,901 firm-year observations, t-statistics are shown in parentheses. Unexpected Change in Core Earnings from year t to $t+1$ ($UE\_\Delta CE_{t+1}$) is the difference between reported and predicted Change in Core Earnings, where the predicted values are calculated using the coefficients from model (2) (see Table 5), estimated by fiscal year and industry and excluding firm i. $\%SI_t$ is income-decreasing special items as reported by Compustat (where positive specials item are income-decreasing and income-increasing special items are set to zero) scaled by sales, both in year t. SI_IND_{t+1} is an indicator variable that is equal to 1 if special items in year $t+1$ are non-zero, and 0 otherwise.
All continuous variables are winsorized at 1 percent and 99 percent.
See Table 1, Panel B, for additional data definitions and Compustat data item numbers.

earnings announcements and record the type of transitory charge.[15] Next, I form two subsets of special items, those that are susceptible to classification shifting and those that are not. I consider PP&E write-offs, goodwill write-offs, and losses on asset sales to be unsusceptible to classification shifting (*%SI_NOT_SHIFTABLE*). All other special items are considered to be susceptible to classification shifting (*%SI_SHIFTABLE*). If the PP&E write-offs, goodwill write-offs, or losses on asset sales are not clearly broken out from susceptible charges, then I classify the entire charge as susceptible. I estimate the following regressions and provide the results in Table 8:

$$UE\_CE_t = \lambda_0 + \lambda_1 \%SI\_SHIFTABLE_t + \lambda_2 \%SI\_NOT\_SHIFTABLE_t + \varepsilon_t \quad (5a)$$

$$UE\_\Delta CE_{t+1} = \varphi_0 + \varphi_1 \%SI\_SHIFTABLE_t + \varphi_2 \%SI\_NOT\_SHIFTABLE_t + \upsilon_{t+1} \quad (5b)$$

Consistent with classification shifting, λ_1 is positive and significant, while φ_1 is negative and significant ($\lambda_1 = 0.27$, $\varphi_1 = -0.13$). In economic terms, a one standard deviation increase in $\%SI\_SHIFTABLE_t$ is expected to increase unexpected core earnings in year t by 243 basis points (0.27×0.09) and decrease the unexpected change in core earnings in year $t+1$ by 117 basis points (-0.13×0.09), where 0.09 is the standard deviation of

[15] Note that in terms of presentation, nearly every firm breaks out the charge on the income statement and in the press release, as noted in prior research (e.g., Kinney and Trezevant 1997; Bowen et al. 2005).

TABLE 8
Regression of Unexpected Core Earnings and Future Unexpected Change in Core Earnings on Special Items as a Percent of Sales, where Special Items are Classified as "Shiftable" or "Not Shiftable" Based on Type

Independent Variables	Predicted Sign	UE_CE_t	Predicted Sign	$UE\_\Delta CE_{t+1}$
Intercept		0.025		0.024
		(2.69)		(2.47)
$\%SI\_SHIFTABLE_t$	+	0.268	−	−0.132
		(4.43)		(−2.11)
$\%SI\_NOT\_SHIFTABLE_t$	?	0.024	?	0.181
		(0.34)		(2.53)
Adjusted R^2		8.52%		5.10%
Number of Observations		190		190

The sample consists of 190 firm-year observations from 1996–2000, where the sample firms are in the S&P 500 in each corresponding year and had income-decreasing Compustat special items of at least 5 percent of sales in that year. t-statistics are shown in parentheses. Unexpected Core Earnings in year t (UE_CE_t) and Unexpected Change in Core Earnings from year t to $t+1$ ($UE\_\Delta CE_{t+1}$) are the differences between reported and predicted Core Earnings and Change in Core Earnings, respectively, where the predicted values are calculated using the coefficients from models (1) and (2) (see Tables 4 and 5), estimated by fiscal year and industry and excluding firm i. $\%SI\_NOT\_SHIFTABLE_t$ represents special items reported by the firm that were either an asset write-off (excluding inventory and receivable write-offs) or a loss on the sale of an asset, scaled by sales in the same year. All other special items that are reported by the firm are classified as $\%SI\_SHIFTABLE_t$ and are also scaled by sales.
All variables are winsorized at 1 percent and 99 percent.
See Table 1, Panel B, for additional data definitions and Compustat data item numbers.

$\%SI\_SHIFTABLE_t$. Also consistent with my conclusion of classification shifting, λ_2 is statistically insignificant. In other words, only special items that are susceptible to classification shifting experience unusually high core earnings in year t. Interestingly, φ_2 is positive and significant; special items that are not susceptible to classification shifting are associated with higher than expected changes in core earnings in the next year, instead of the reversal associated with special items that are susceptible to classification shifting. This result is consistent with real economic improvements as a result of special items, after controlling for the effects of classification shifting. Overall, a finer partition of special items into those that are susceptible to classification shifting and those that are not improves the power of the tests and corroborates the results from the larger Compustat sample.

Incentives to Meet the Analyst Forecast

Hypothesis 2 predicts that classification shifting will be more pervasive in periods when the firm has greater net benefits to classification shifting; specifically, when the classification shifting allows the manager to meet the analyst forecast. To test this hypothesis, I attempt to identify firms that would not have met the analyst forecast without classification shifting. I expect to find a greater degree of classification shifting by these firms than by the average firm. I classify firms that *ex post* met the analyst forecast by zero or one cent (*JUSTMET*)

as those firms that would not have met the analyst forecast absent classification shifting.[16] In Table 9, I present the results for the following regressions:

$$UE\_CE_t = \gamma_0 + \gamma_1 \%SI_t + \gamma_2 JUSTMET_t + \gamma_3 \%SI \times JUSTMET_t + \varepsilon_t \quad (6a)$$

$$UE\_\Delta CE_{t+1} = \theta_0 + \theta_1 \%SI_t + \theta_2 JUSTMET_t + \theta_3 \%SI_t \times JUSTMET_t + \upsilon_{t+1} \quad (6b)$$

The results are consistent with managers classification shifting to a greater degree when doing so allows them to meet the analyst forecast. A one standard deviation increase in special items is expected to increase unexpected core earnings (scaled by sales) by an *additional* 31 basis points and have a subsequent reversal of an additional 34 basis points.[17]

TABLE 9
Regression of Unexpected Core Earnings and Future Unexpected Change in Core Earnings on Special Items as a Percent of Sales and Just Meeting the Analyst Forecast

Independent Variables	UE_CE_t	$UE\_\Delta CE_{t+1}$	UE_CE_t	$UE\_\Delta CE_{t+1}$
Intercept	−0.008	0.002	−0.008	0.002
	(−7.80)	(2.36)	(−8.03)	(2.55)
$\%SI_t$	0.015	−0.003	0.014	−0.003
	(1.95)	(−0.41)	(1.90)	(−0.38)
$JUSTMET_t$	0.017	−0.001	0.017	−0.001
	(12.77)	(−1.01)	(12.39)	(−0.86)
$HIGH\ MB_t$			0.003	−0.001
			(1.93)	(−0.89)
$\%SI_t \times JUSTMET_t$	0.027	−0.029	−0.000	−0.019
	(2.41)	(−2.85)	(−0.01)	(−1.77)
$\%SI_t \times JUSTMET_t \times HIGH\ MB_t$			0.148	−0.053
			(6.76)	(−2.72)
Adjusted R^2	0.48%	0.04%	0.60%	0.06%
Number of Observations	42,464	42,464	42,464	42,464

The sample consists of 42,464 firm-year observations, 20,606 firms that just met the analyst forecast, and 4,800 high market-to-book firms that just met the analyst forecast. t-statistics are shown in parentheses. Unexpected Core Earnings in year t (UE_CE_t) and Unexpected Change in Core Earnings from year t to $t+1$ ($UE\_\Delta CE_{t+1}$) are the differences between reported and predicted Core Earnings and Change in Core Earnings, respectively, where the predicted values are calculated using the coefficients from models (1) and (2) (see Tables 4 and 5), estimated by fiscal year and industry and excluding firm i. $\%SI_t$ is income-decreasing special items as reported by Compustat (where positive specials item are income-decreasing and income-increasing special items are set to zero) scaled by sales, both in year t. $JUSTMET_t$ is an indicator variable that is equal to 1 if the annual I/B/E/S analyst forecast error for year t is 0 or 1 cent, and 0 otherwise. *HIGH MB* firms are those in the highest quintile with respect to market-to-book ratio in year t.
All continuous variables are winsorized at 1 percent and 99 percent.
See Table 1, Panel B, for additional data definitions and Compustat data item numbers.

[16] As a second approach, in results not tabulated, I compare my estimate of classification shifting (e.g., 2.2 percent of special items) to the analyst forecast error (adjusting the forecast error to represent pre-tax dollars). If the estimate of classification shifting is greater than the forecast error, in pre-tax dollars, then I classify that firm as having used classification shifting to meet the analyst forecast. Results under this alternative identification procedure also strongly support the notion that managers use classification shifting to meet the analyst forecast, especially in high-growth firms.

[17] The incremental basis points are calculated by multiplying the coefficients on the interaction terms (0.027 and –0.029) by the standard deviation of special items for I/B/E/S firms (0.116).

Moreover, this finding is not an artifact of firm performance; if *JUSTMET* is replaced with an indicator variable representing all firms that met the analyst forecast versus those firms that ''just'' met the analyst forecast, then the interaction terms in both regressions are insignificant (not tabulated).

Some firms have a greater incentive than others to meet the analyst forecast. For example, Skinner and Sloan (2002) find that there is a severe price penalty for growth firms that miss the analyst forecast. I examine whether classification shifting is more pervasive for growth firms that I expect have used classification shifting to meet the analyst forecast. Following Skinner and Sloan (2002), I consider high-growth firms to be those in the highest quintile with respect to market-to-book ratio. The final two columns of results in Table 9 confirm the position that managers of high-growth firms classification shift more than the average firm manager in order to meet the analyst forecast. A one standard deviation increase in special items is expected to incrementally increase unexpected core earnings by 172 basis points and have a subsequent incremental reversal of 62 basis points for firms that are in the top quintile with respect to market-to-book ratio and that just met the analyst forecast. These findings provide strong evidence that managers classification shift to meet the analyst forecast, especially when they are managers of growth firms.

Stock Price Implications of Classification Shifting

One incentive to manage earnings is to temporarily maximize stock price (e.g., Rangan 1998; Teoh et al. 1998; Bartov and Mohanram 2004). Therefore, it is informative to determine whether investors are negatively surprised when the expenses that are shifted from core expenses in year t recur as core expenses in year $t+1$. As discussed in footnote 5, investors might be able to identify the abnormally high core earnings in year t, but cannot distinguish the origin, either a real economic improvement related to the special item or classification shifting. It is the recurrence of previously excluded expenses in year $t+1$ that *ex post* identifies the source of the unexpected core earnings. To investigate whether investors are surprised when expenses that were previously excluded from core earnings recur, I examine subsequent market-adjusted returns. Specifically, I estimate the following for I/B/E/S firms:[18]

$$RET\_1YR_{t+1} = \Psi_0 + \Psi_1 UE\_CE_t + \Psi_2 \%SI_t + \Psi_3 UE\_CE_t \times \%SI_t + Controls_t + \nu_{t+1} \quad (7)$$

where RET_1YR_{t+1} is the one-year-ahead market-adjusted, buy-and-hold return, inclusive of dividends, beginning four months after the end of fiscal year t, and continuing for one year.[19] I control for several known risk factors and anomalies, market value of equity, book-to-market ratio, beta, accruals, and momentum. I transform each of the independent variables to its scaled decile rank following Bernard and Thomas (1990). Deciles are formed monthly to avoid look-ahead bias. To control for cross-sectional correlation in the regression

[18] Because I find the amount of classification shifting increases dramatically to meet the analyst forecast, I focus on only those firms followed by I/B/E/S in this analysis to increase the power of my tests. If I consider all firms, results lose statistical significance.

[19] I do not require that firms have data for $t+1$ to be included in this test, as the worst classification shifters may simply fail during year $t+1$. In the event of a delisting, the delisting return (which is adjusted for the delisting bias documented in Shumway [1997]) is compounded with the abnormal return from the beginning of the portfolio formation to the delisting. The proceeds are then reinvested and earn the market return for the remainder of the 12-month period.

residual, I estimate the regression separately for each of the 14 years in my sample, and then construct t-statistics using the 14 sets of coefficient estimates, in a similar vein to Fama and MacBeth (1973).

In results not tabulated, I find that Ψ_3 is negative and weakly statistically significant ($\Psi_3 = -0.096$; t = 1.80). This coefficient can be interpreted as the hedge return from a portfolio created to optimize on the information in the variable, after controlling for the other variables in the regression (Bernard and Thomas 1990). Thus, the hedge return on classification shifting is 9.6 percent. Moreover, these subsequent negative returns are more pervasive in the later years of the study, the time period when pro forma earnings became more of a focal point for investors (Bradshaw and Sloan 2002). One-year-ahead abnormal returns are −19.1 percent (t = 2.01) from 1996 to 2002. Thus, there is some evidence that investors do not fully disentangle classification shifting and are negatively surprised when previously shifted expenses recur as core expenses.[20]

Real Economic Actions as an Alternative Explanation

In this paper, evidence of classification shifting is presented by documenting that unexpected core earnings is increasing in special items in year *t*, but that this increase reverses in the following year. It is possible, however, that managers elect to cut discretionary spending, such as R&D or advertising expenditures, when their performance is extremely negative. If this cut is temporary, then the ''reversal'' that I document might simply be the recurrence of these expenses, which were, in fact, not made in year *t*. Thus, because special items and poor performance are correlated, it is possible that I am merely picking up these non-opportunistic cuts of discretionary expenditures rather than classification shifting.

I address this alternative explanation two ways. First, I estimate Equations (3a) and (3b) by performance quintile (not tabulated). If my findings merely reflect discretionary spending cuts in poorly performing firms, then I would expect to only find results in the lowest quintiles of performance. However, evidence of classification shifting is present throughout the performance quintiles, mitigating the likelihood that the effect is purely performance driven. Second, I control directly for changes in research and development expenditures to proxy for discretionary spending. Results are not sensitive to the inclusion of this control variable. Thus, it does not appear that discretionary spending cuts are driving the relation between core earnings and special items.

Model Specification as an Alternative Explanation

The model of core earnings developed in Section IV includes current-year accruals as an indicator of extreme performance. This variable is important because special-item firms tend to experience extreme negative performance. However, part of the accruals in year *t* may be due to the accrual portion of the year *t* special item. In the extreme, if accruals are entirely special items, then the residual from my model would be orthogonal to special items and there would be no bias. In actuality, however, accruals are comprised of both ''normal'' accruals and ''special item'' accruals. Both of these accruals are expected to be associated with performance. However, the association with performance may not be equal for both types of accruals, while my model is restricted to treat all types of accruals the same. Thus, if special item accruals are more or less associated with performance than

[20] Note that this finding does not conflict with prior research. Burgstahler et al. (2002) find that special items are weakly associated with *positive* future returns right around subsequent earnings announcements. Doyle et al. (2003) find that special items are not associated with one-year-ahead abnormal returns. I find that the portion of special items I suspect are, in fact, core expenses are negatively associated with future returns, after controlling for the main effect of special items, which is weakly positive ($\Psi_2 = 0.063$; t = 1.42).

''normal'' accruals, then the residuals from my models might vary systematically with accrual special items.

In this section, I re-estimate core earnings and next year's change in core earnings under three alternate specifications, presented in the first three columns of results in Table 10. The first alternate specification (*no accruals*) excludes accruals from the models entirely. The second specification (*accruals = CE − CFO*) includes accruals before special items,

TABLE 10
Regression of Alternate Core Earnings and Future Change in Core Earnings Metrics on Special Items as a Percentage of Sales

Independent Variables	Pred. Sign	UE_CE_t No Accruals in the Model	UE_CE_t Accruals = $CE - CFO$	UE_CE_t Accruals = $NI - CFO - SI\_ACC$	UE_CE_t Accruals = $NI - CFO$
Intercept		0.006	0.004	0.002	0.000
		(11.04)	(7.54)	(2.83)	(0.26)
$\%\ SI_t$	+	−0.174	−0.069	−0.032	0.022
		(−36.43)	(−16.88)	(−6.94)	(4.61)
Adjusted R^2		1.70%	0.37%	0.06%	0.03%

Independent Variables	Pred. Sign	$UE\_\Delta CE_{t+1}$ No Accruals in the Model	$UE\_\Delta CE_{t+1}$ Accruals = $CE - CFO$	$UE\_\Delta CE_{t+1}$ Accruals = $NI - CFO - SI\_ACC$	$UE\_\Delta CE_{t+1}$ Accruals = $NI - CFO$
Intercept		−0.000	−0.000	0.001	0.001
		(−0.34)	(−0.64)	(0.94)	(2.45)
$\%\ SI_t$	−	0.060	0.052	0.010	−0.010
		(13.49)	(12.96)	(2.45)	(−2.24)
Adjusted R^2		0.23%	0.22%	0.01%	0.01%

The sample consists of 76,901 firm-year observations, t-statistics are shown in parentheses. Unexpected Core Earnings in year t (UE_CE_t) and Unexpected Change in Core Earnings from year t to $t+1$ ($UE\_\Delta CE_{t+1}$) are the differences between reported and predicted Core Earnings and Change in Core Earnings, respectively, where the predicted values are calculated using the coefficients from models (1) and (2) (shown below), estimated by fiscal year and industry and excluding firm i:

$$CE_t = \beta_0 + \beta_1 CE_{t-1} + \beta_2 ATO_t + \beta_3 ACC\_VAR_{t-1} + \beta_4 ACC\_VAR_t + \beta_5 \Delta SALES_t + \beta_6 NEG\_\Delta SALES_t + \varepsilon_t \quad (1)$$

$$\Delta CE_t = \phi_0 + \phi_1 CE_{t-1} + \phi_2 \Delta CE_{t-1} + \phi_3 \Delta ATO_t + \phi_4 ACC\_VAR_{t-1} + \phi_5 ACC\_VAR_t + \phi_6 \Delta SALES_t + \phi_7 NEG\_\Delta SALES_t + \nu_t \quad (2)$$

where ACC_VAR is equal to the following:

No Accruals in the Model:	ACC_VAR is set equal to zero,
Accruals = $CE - CFO$:	ACC_VAR is calculated as [(Core Earnings − Cash From Operations)/Sales],
Accruals = $NI - CFO + SI\_ACC$:	ACC_VAR is calculated as [(Net Income before Extraordinary Items − Cash From Operations + Accrual Special Items[a])/Sales],
Accruals = $NI - CFO$:	ACC_VAR is calculated as [(Net Income before Extraordinary Items − Cash From Operations)/Sales].

[a] I roughly estimate accrual special items to be the sum of Compustat data items #213 (Loss [Gain] on sale of assets) and #217 (Funds from Operations, Other [which includes Reorganization Costs and Special Items]). This value is winsorized at net special items (Compustat data item #17) and set to 0 if net special items are income-increasing.

All variables are winsorized at 1 percent and 99 percent.

See Table 1, Panel B, for additional data definitions and Compustat data item numbers.

where accruals are equal to the difference between core earnings (*CE*) and cash from operations (*CFO*). Essentially, this treats all special items as accruals. The third specification (*accruals = NI − CFO − SI_ACC*) attempts to back out only those special items that are expected to be accruals, rather than all special items; accruals are equal to net income before extraordinary items (*NI*) less cash from operations (*CFO*), and accrual special items (*SI_ACC*).[21] Finally, for comparison purposes, the fourth column of results (*accruals = NI − CFO*) is the complete model.

I regress these three sets of alternate dependent variables on special items. Results for the full sample are no longer consistent with classification shifting. Rather, the performance effect appears to swamp any evidence of shifting; in each alternate setting, special items and unexpected core earnings are negatively associated, and special items and unexpected change in next year's core earnings are positively associated (consistent with mean reversion). To pursue the explanation that the model is weak as a result of inadequately controlling for performance, I re-estimate the main regression and include an indicator variable for non-negative core earnings (as these firms should be less subject to the strong performance effect). As supporting evidence, in each of the three alternative specifications I find a positive and significant coefficient in the initial amount of shifting and a negative and significant coefficient on the subsequent reversal (not tabulated). For example, using the model that excludes accruals entirely, $\alpha_1 = -0.152 + \alpha_3 = 0.193$, for a net shifting of 0.041 for firms with non-negative core earnings.

Referring to Table 11, results continue to support classification shifting when I focus on those special items that are amendable to shifting. In the first column, which does not have accruals in the model, special items that are amenable to classification shifting (''shiftable'') are weakly positively associated with contemporaneous earnings ($\alpha_1 = 0.092$; t = 1.44; one-tailed p-value of 0.076) and there is a strong negative ''reversal'' in the subsequent year ($\gamma_1 = -0.263$; t = −3.51). In results not tabulated, if I examine only those firms with non-negative core earnings, then the results strengthen considerably ($\alpha_1 = 0.123$; t = 2.05; $\gamma_1 = -0.259$; t = −3.71), again supporting the notion that accruals are a performance control. Overall, the results in Table 11 indicate evidence of classification shifting, regardless of model used.

Results also support the existence of classification shifting when I examine those firms that just met the analyst forecast, especially for high market-to-book ratio firms (not tabulated). The interaction terms on *%SI × JUSTMET* and *%SI × JUSTMET × HIGH MB* are significantly positively associated with contemporaneous unexpected core earnings and significantly negatively associated with the unexpected change in core earnings in year $t+1$.[22] In sum, the models that do not include total accruals appear to do an inadequate job of controlling for performance, although some evidence of classification shifting remains. As discussed in Section I, since controlling for performance is a necessity of my model, I subject the results to additional subtests to corroborate my findings. However, at the end of the day, the reliance on an imperfect model is a limitation of my study.

[21] I roughly estimate accrual special items to be the sum of Compustat data items #213 (Loss [Gain] on sale of assets) and #217 (Funds from Operations, Other [which includes Reorganization Costs and Special Items]). This value is winsorized at net special items (Compustat data item #17) and set to zero if net special items are income-increasing.

[22] The total amount of initial shifting often remains negative in both settings. For example, when accruals are excluded from the model entirely, $\gamma_1 = -0.223 + \gamma_3 = 0.048$ for a net shifting of −0.175, as the main effect continues to be swamped by performance.

TABLE 11
Regression of Alternate Core Earnings and Future Change in Core Earnings Metrics on Special Items as a Percent of Sales, where Special Items are Classified as "Shiftable" or "Not Shiftable" Based on Type

Independent Variables	Pred. Sign	UE_CE_t No Accruals in the Model	UE_CE_t Accruals = $CE - CFO$	UE_CE_t Accruals = $NI - CFO - SI\_ACC$	UE_CE_t Accruals = $NI - CFO$
Intercept		0.037	0.026	0.023	0.025
		(3.66)	(2.86)	(2.52)	(2.69)
$\%SI\_SHIFTABLE_t$	+	0.092	0.099	0.198	0.268
		(1.44)	(1.69)	(3.38)	(4.43)
$\%SI\_NOT\_SHIFTABLE_t$	?	−0.293	−0.338	−0.036	0.024
		(−4.02)	(−5.05)	(−0.55)	(0.34)
Adjusted R^2		8.33%	13.06%	5.13%	8.52%
Independent Variables	**Pred. Sign**	$UE\_\Delta CE_{t+1}$ **No Accruals in the Model**	$UE\_\Delta CE_{t+1}$ **Accruals =** $CE - CFO$	$UE\_\Delta CE_{t+1}$ **Accruals =** $NI - CFO - SI\_ACC$	$UE\_\Delta CE_{t+1}$ **Accruals =** $NI - CFO$
Intercept		0.037	0.025	0.024	0.024
		(3.17)	(2.25)	(2.87)	(2.47)
$\%SI\_SHIFTABLE_t$	−	−0.263	−0.206	−0.133	−0.132
		(−3.51)	(−2.89)	(−2.28)	(−2.11)
$\%SI\_NOT\_SHIFTABLE_t$	?	0.276	0.252	0.218	0.181
		(3.24)	(3.11)	(3.29)	(2.53)
Adjusted R^2		10.99%	8.70%	7.69%	5.10%

The sample consists of 190 firm-year observations from 1996–2000, where the sample firms are in the S&P 500 in each corresponding year and had income-decreasing Compustat special items of at least 5 percent of sales in that year. $\%SI\_NOT\_SHIFTABLE_t$ represents special items reported by the firm that were either an asset write-off (excluding inventory and receivable write-offs) or a loss on the sale of an asset, scaled by sales in the same year. All other special items that are reported by the firm are classified as $\%SI\_SHIFTABLE_t$ and are also scaled by sales.
All variables are winsorized at 1 percent and 99 percent.
See Table 10 for a description of the alternate dependent variables.

VI. CONCLUSION

This paper examines the classification of items within the income statement as an earnings management tool. Unlike accrual management or the manipulation of real activities, classification shifting does not change bottom-line earnings and, thus, does not reverse in future periods or invite the same level of scrutiny by auditors and regulators. However, individual line items have different information content for future earnings and, correspondingly, for investors.

I examine classification shifting between core expenses (cost of goods sold and selling, general, and administrative expenses) and special items. Using a model of core earnings, analogous to that of the accrual model, I find that unexpected core earnings are increasing in special items in the year of the special item, and this unexpectedly high performance *reverses* in the following year. Furthermore, I find this shifting to be more pervasive when it allows the manager to meet the analyst forecast, as special items tend to be excluded from this earnings benchmark.

Overall, the evidence of classification shifting is compelling: (1) unexpected core earnings are increasing with special items in year t, but this improvement reverses in the following period; (2) the unexpected improvement only reverses if there are no special items present in year $t+1$, otherwise managers appear to classification shift again in year $t+1$, thereby maintaining the inflated core earnings; (3) these results hold only for those special items that, upon inspection, appear to be amenable to classification shifting; (4) these results are stronger for firms that just met the analyst forecast, and stronger yet for growth firms that just met the analyst forecast; and (5) there is some evidence that classification shifting is associated with negative returns in the subsequent year, suggesting that investors are negatively surprised when expenses that were previously excluded from core earnings recur.

There are many possible avenues for future research. First, the current paper relies on an imperfect model of core earnings; while this model is a first step to documenting classification shifting, improvements of this model might be examined in future studies. Future research might also further explore the negative abnormal returns documented herein by perhaps focusing on incentives to shift or by examining whether these returns vary cross-sectionally, for example with the sophistication of investors.

It is also possible that managers classification shift to a greater degree preceding equity issuances (Rangan 1998; Teoh et al. 1998) or when the valuation multiple on earnings is higher—such as for profit versus loss firms (Hayn 1995) or for those firms with high P/E ratios. In addition to capital market incentives, managers might wish to meet the analyst forecast in order to maximize their cash bonus (Matsunaga and Park 2001), sell their shares (Richardson et al. 2004; McVay et al. 2006), or maximize their compensation in general, as compensation committees tend to shield managers from income-decreasing transitory charges (Dechow et al. 1994; Gaver and Gaver 1998). These settings are left for future research.

The classification shifting documented in this paper is part of a much larger phenomenon of earnings management using income-statement classification (e.g., Barnea et al. 1976; Givoly et al. 1999; Davis 2002). There are many additional settings of classification shifting that future research might investigate. For example, managers might shift core expenses to expense classifications other than special items, such as R&D, which is valued differently than other core operating expenses (e.g., Lev and Sougiannis 1996; Aboody and Lev 2000), or non-operating expenses and discontinued operations, which are also excluded

from analysts' forecasts (e.g., Abarbanell and Lehavy 2002).[23] Managers might also shift expenses across segments to hide abnormal profits (e.g., Berger and Hann 2003; Botosan and Stanford 2005) or allay investor concerns about certain segments. Each of these actions can mislead investors about the performance and proper valuation of a company.

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[23] For example, Nektar Therapeutics announced on March 1, 2005 that they would restate $27.6 million in expenditures from 2002–2004 that they had originally classified as R&D, but which should have been classified as Selling, General, and Administrative.

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