Disagreement over the persistence of earnings components: evidence on the properties of management-specific adjustments to GAAP earnings

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Abstract We examine disagreement between management and Thomson Datastream over the persistence of earnings components. Using income statement and footnote disclosures, we identify the source and properties of disputed items. Disagreements typically reflect opaque reporting practices (for example, in the case of transitory operating items) and restrictive classification rules (for example, in the case of discontinued operations). Incremental and relative value relevance tests suggest that the majority of management-specific adjustments reflect appropriate classification of earnings components by insiders. Nevertheless, evidence consistent with strategic disclosure does emerge for a subset of management adjustments.

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1 Introduction

Interest in non-GAAP earnings reporting increased dramatically following the disclosure of supplementary earnings metrics by some U.S. firms in their quarterly press releases (Bradshaw and Sloan 2002; Doyle et al. 2003; Bhattacharya et al. 2003; Lougee and Marquardt 2004; Marques 2006).[1] Despite concern over the quality of such metrics (Turner 2000; Business Week 2001), studies using hand-collected data reveal that non-GAAP earnings disclosures often conform precisely to sustainable earnings proxies derived by analysts and other sophisticated financial statement users, suggesting that non-recurring earnings components are often transparently transitory.[2] If non-GAAP earnings merely adjust for transitory items that are transparently observable to financial statement users then the costs and benefits of such disclosures are unclear.

Differences between the adjustments made by management and analysts do occur in a significant fraction of cases, however (Bhattacharya et al. 2003; Marques 2006). Yet few studies have explicitly analyzed the properties of earnings components over which management and analysts disagree. A notable exception is Marques (2006), who decomposes the difference between GAAP earnings and non-GAAP earnings into two parts: the disparity between GAAP earnings and IBES actual earnings and any incremental difference attributed to management. Results reveal a stark difference between the market's assessment of adjustments made by IBES and the incremental adjustments made by management. Whereas investors view analysts' adjustments as an appropriate elimination of transitory items, they view incremental adjustments attributable to management as an inappropriate exclusion of recurring items. These findings support Lougee and Marquardt's (2004) evidence that strategic disclosure aimed at presenting firm performance in a favorable light represents an important determinant of non-GAAP earnings reporting. The alternative view is that such metrics more accurately reflect insiders' private information regarding the firm's true earnings power (Bhattacharya et al. 2003).

Our paper aims to shed new light on non-GAAP earnings reporting. Like Marques (2006) we focus on discrepancies between management and analysts over the classification of earnings components. However, our analysis differs from Marques' in several respects. Most notably, whereas Marques (2006) analyses the aggregate difference between non-GAAP earnings and IBES actual earnings, we identify the source of disagreement and examine the properties of each disputed component separately. Our disaggregated approach reflects the fact that discrepancies between management and analysts can arise for two distinct reasons: management may exclude additional earnings components beyond those omitted by analysts; or

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[1] We use the nomenclature ''non-GAAP'' earnings (or EPS) throughout the paper when referring to supplementary earnings metrics disclosed by management. While prior U.S. research often labels such disclosures ''pro forma earnings'', our tests relate to the U.K. where the term pro forma earnings is not used.

[2] Bhattacharya et al. (2003) report that non-GAAP earnings correspond to IBES actual earnings in approximately 65% of cases. Such is the level of correspondence that several studies use IBES actuals as a proxy for management-reported non-GAAP earnings (Brown and Sivakumar 2003; Doyle et al. 2003; Doyle and Soliman 2004; Landsman et al. 2006).

analysts may exclude supplementary items retained by management. Pooling both types of exclusions into an aggregate measure of disagreement can lead to ambiguous conclusions regarding managements' reporting incentives. For example, evidence that aggregate disagreements are value relevant implies inappropriate exclusion of recurring items by management if incremental exclusions are unique to insiders. On the other hand, if exclusions are unique to analysts, then results are more consistent with management correctly identifying and *including* recurring items that analysts inappropriately classify as transitory. The distinction is important because prior research provides evidence consistent with both scenarios. For example, Matsumoto (2002), Burgstahler and Eames (2003) and Doyle and Soliman (2004) document how management appears to use non-GAAP earnings to strategically meet and manage analysts' earnings per share (EPS) forecasts. Meanwhile, Doyle et al. (2003) and Landsman et al. (2006) show that analysts' exclusions (GAAP earnings minus IBES actual earnings) are forecast and value relevant, suggesting that analysts incorrectly exclude persistent earnings components.

Using a sample of non-GAAP EPS disclosures made by U.K. firms from 1993 to 2001, we identify disagreement between management and Thomson Datastream over the treatment of earnings components. We focus on Thomson's recurring earnings metric rather than on IBES actual earnings because the latter does not facilitate item-by-item reconciliation to GAAP earnings whereas the Thomson number does. For the 45% of sample cases where management and Thomson differ in their adjustments to GAAP earnings, we use income statement and footnote disclosures to manually reconcile adjustments made by each party. ''Management exclusions'' are defined as items excluded from earnings by management but not by Thomson. Conversely, ''management inclusions'' represent reversals by management of items excluded by Thomson. Our approach combines features of Gu and Chen (2004), who examine the properties of non-recurring earnings components included and excluded by First Call analysts, and Brown and Sivakumar (2003), who compare operating earnings reported by managers and analysts with a recurring earnings proxy derived by Standard and Poor's.

Descriptive statistics reveal that although non-operating items represent a large fraction of total exclusions in our sample, they account for a disproportionately small fraction of disputed cases. The underlying nature of non-operating gains and losses supplemented by clear income statement disclosure appears to render such items transparently transitory, thereby reducing the scope for disagreement. Instead, disagreements center on operating items and discontinued operations where the idiosyncratic nature of gains and losses combined with opaque disclosure create confusion over the persistence of certain items.[3] Decomposing net disagreements, we find that managers reverse Thomson exclusions almost twice as often as they exclude additional items beyond those omitted by Thomson, and the majority (71%) of these reversals involve management adding back losses. These findings are inconsistent with claims that management-specific adjustments to GAAP earnings typically reflect opportunism aimed at presenting firm performance in a more favorable light.

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[3] Doyle et al. (2003) present evidence that analysts' classification errors are largely confined to operating items. In particular, they partition the difference between GAAP EPS and IBES actual EPS into special (non-operating) items and other (operating) exclusions and find that recurring exclusions are confined to the latter category where financial statement disclosures are especially opaque (Doyle et al. 2003: 151).

Our analysis of the incremental value and forecasting relevance of management-specific adjustments suggests that disagreement typically reflects managers' superior ability to correctly classify earnings components. Aggregate management exclusions are value and forecast irrelevant, indicating that managers identify additional transitory earnings components overlooked by Thomson. In contrast, management inclusions are incrementally value and forecast relevant, suggesting that managers correctly identify and retain recurring earnings components misclassified by Thomson as transitory. A broadly similar story emerges when we decompose adjustments into net gains and losses. Excluded gains and losses are both value irrelevant whereas included losses are highly value relevant. Evidence consistent with strategic disclosure does emerge in relation to included gains, however, which on average are found to be value irrelevant. Such cases represent less than 10% of the non-GAAP disclosure sample and approximately 20% of disputed adjustment cases. Therefore while the evidence suggests that some firms may use non-GAAP earnings disclosures to artificially boost reported performance, opportunism does not appear to characterize our data on average.

Our analysis offers novel insights relevant to the growing body of research on non-GAAP earnings reporting. Most notably, we investigate the specific source(s) of disagreement between management and outsiders over the properties of earnings components. The benefits of this approach are twofold. First, we can implement tests capable of clearly distinguishing between adjustments driven by opportunism and those that reflect managers' superior information about the persistence of earnings components. Contrary to Marques (2006), we find management-specific adjustments often reflect appropriate elimination (inclusion) of transitory (permanent) items. Second, we can provide evidence on the sources of disagreement. Our findings suggest that disagreements often reflect opaque and ambiguous reporting practices such as inadequate disclosure of information on non-recurring operating items and a restrictive definition of discontinued operations. A further distinguishing feature of our analysis is its U.K. focus. Regulations governing non-GAAP earnings reporting in the U.K. differ from those in the U.S. in several important respects. In particular, Financial Reporting Standard No. 3: *Reporting Financial Performance* (FRS 3) permits U.K. firms to report supplementary EPS numbers on the face of the income statement alongside GAAP EPS. To ensure transparency, however, firms are required to reconcile non-GAAP EPS to the corresponding GAAP number by way of a note to the income statement. It is these disclosures (which until recently were unavailable in the United States) that facilitate our disaggregated analysis of disputed earnings components. In addition, while FRS 3 seeks to improve the transparency with which non-recurring earnings components are reported, several factors combine to restrict disclosure clarity and consistency (Davies et al. 1999). Scope for confusion over the persistence of certain items makes the United Kingdom an attractive experimental setting in which to explore the properties of disputed adjustments to GAAP earnings.

The remainder of paper proceeds as follows. The next section reviews the origins and governance of non-GAAP earnings in the U.K., paying particular attention to the provisions of FRS 3. Section 3 describes our sample and data. Section 4 reviews the method we use to decompose disagreement, and Section 5 presents evidence on the informativeness of disputed earnings components. Section 6 concludes.

2 Earnings reporting in the U.K.

Before the introduction of FRS 3 in June 1993, GAAP EPS in the U.K. was viewed as the primary statistic for business valuation and performance measurement (e.g., Smith 1992: 63). According to the Accounting Standards Board (1992), this led to naïve interpretations of financial performance by investors and widespread earnings manipulation by management. The Board responded by issuing FRS 3, a key theme of which is that the concept of sustainable earnings is too subjective to be calculated on a standardized basis. FRS 3 therefore shifts attention away from a mechanistic pre-occupation with a single earnings number by de-emphasizing GAAP EPS. This is achieved by calculating EPS *after* charging all transitory items and discontinued operations. The resulting all-inclusive definition of earnings ensures that in most cases the figure merely serves as starting point for further analysis. Not surprisingly, Lin and Walker (2000) find that GAAP EPS computed under FRS 3 is significantly less informative than a proxy for permanent earnings.

In recognition of the potential problems of using GAAP EPS for valuation and performance measurement, FRS 3 allows management the option of reporting additional non-GAAP EPS metrics on the face of the income statement alongside the GAAP number. Non-GAAP disclosures give management the opportunity to report a customized view of performance and highlight important firm-specific earnings streams. These disclosures form part of the audited financial statements, and to maintain transparency a full reconciliation to GAAP EPS is required.

In addition to changing how EPS is defined and reported, FRS 3 also restructured the income statement with the aim of improving the clarity with which earnings components are reported. Key innovations included disaggregating results into continuing operations, acquisitions, and discontinued operations and separate disclosure (below operating profit and interest) of three categories of non-operating item: gains and losses on disposals of operations, costs of fundamental reorganization and restructuring, and gains and losses on the sale of fixed assets.[4]

While these structural changes are designed to improve transparency, considerable room for confusion remains. First, disclosure rules conflate certain recurring and non-recurring activities. For example, discontinued operations under FRS 3 are exactly that: operations discontinued (sold or ceased permanently) in the financial year or shortly after the year-end.[5] Operations failing to satisfy this condition are automatically classified as part of continuing operations in spite of their non-recurring nature. Similarly, *all* gains and losses on asset disposals are automatically excluded from operating profit following the requirement to report such transactions in a separate category below operating profit. Firms engaged in fixed asset trading (for example, bars in the case of a brewer or oil acreage in the case of an oil company) are therefore prohibited from including a potentially important stream of recurring earnings in operating profits. Second, management possesses significant

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[4] See Lin and Walker (2000) and Walker and Louvari (2003) for further details of FRS 3.

[5] The U.K. approach contrasts with APB 30 in the United States and International Accounting Standard No. 35, both of which allow operations to be classified as discontinued as soon as a detailed formal plan for disposal has been adopted and announced or when the enterprise has already contracted for the disposal.

discretion over the positioning of earnings components. For example, although FRS 3 requires fundamental restructuring and reorganization costs be disclosed below the operating profit line, it provides no guidance on distinguishing fundamental activities from non-fundamental ones. Consequently, whether restructuring and reorganization charges are disclosed as part of operating profit or reported separately below operating profit is a highly subjective exercise that depends on management's judgment (Davies et al. 1999: 1513). More generally, since neither FRS 3 nor U.K. Company Law formally define ''operating profit'' the decision on whether to exclude a transaction from operating profit depends on management's definition of operating activities. Discretion over the classification of non-recurring items as either operating or non-operating is important because it partly determines the transparency with which they are reported. In particular, whereas key non-operating items are separately and transparently disclosed on the face of the income statement, no standardized reporting method exists for transitory operating components. The result is often inconsistent and opaque disclosure of these items (Davies et al. 1999: 1513). Non-GAAP EPS disclosures provide management with a means of cutting through this confusion by stripping out ambiguous earnings components. Critics, however, argue that managers use such disclosures to further obscure the distinction between transitory and recurring earnings components.

Walker and Louvari (2003) provide preliminary evidence on the factors motivating U.K. firms to disclose non-GAAP EPS. They conclude that the probability of non-GAAP EPS disclosure is driven by two factors: the general disclosure attitude of the firm (that is, transparent versus opaque) and the desire to present a more favorable earnings profile (i.e., transforming GAAP losses in non-GAAP profits). While Walker and Louvari's (2003) evidence suggests that opportunistic motives may drive non-GAAP EPS reporting in the U.K., they do not examine the properties of excluded items or how these adjustments correspond to those made by other informed parties.

3 Sample, data, and descriptive statistics

3.1 Sample selection

We hand-collect non-GAAP EPS disclosures from firms' published financial statements at three time points: calendar years 2001 and 1996, plus firms' first financial statements published after the introduction of FRS 3 in June 1993. The sample frame at each time point comprises the 500 largest London Stock Exchange-listed non-financial firms ranked by market capitalization. Firms domiciled outside the U.K., firms whose primary results are reported in a foreign currency, and firms without earnings data on Thomson Datastream are excluded (with replacement). Some of our tests also use IBES data, resulting in the loss of 199 observations. Details of our sample selection procedure are reported in panel A of Table 1. The proportion of firms reporting non-GAAP EPS increased monotonically during the sample period. By 2001 three-quarters of sample firms disclosed non-GAAP EPS compared with 40% in 1993/94. Whereas non-GAAP earnings reporting in the

United States is largely confined to high-tech industries (Bhattacharya et al. 2003; Johnson and Schwartz 2005; Lougee and Marquardt 2004), non-GAAP reporters in the United Kingdom are drawn from a broad cross-section of industries. Untabulated results reveal 28 (out of 30) Datastream level-4 non-financial industry groups are represented in the 2001 discloser group, with no single industry accounting for more than 11% of the sample.

Items excluded from GAAP EPS by management are summarized in panel B. Non-operating items (in particular gains and losses on sale or termination of operations, gains and losses on fixed asset disposals, and fundamental restructuring and reorganization costs) account for a large fraction of excluded items. Management also excludes a range of operating items including asset impairments, merger and acquisition costs, and other items (both specified and unspecified).[6] The dramatic rise in the number of firms adding back goodwill amortization in 2001 reflects the introduction of FRS 10: *Goodwill and Intangible Assets* in December 1998 and its requirement to capitalize and amortize purchased goodwill. While many adjustment categories in panel B are clearly transitory others are less obviously so.

3.2 Non-GAAP earnings and the presence of transitory earnings components

As a precursor to our analysis of disagreement, this section explores why U.K. firms report non-GAAP EPS and presents preliminary evidence on the characteristics of managements' adjustments. FRS 3 allows non-GAAP EPS reporting to help management isolate persistent earnings components. We therefore expect the propensity for non-GAAP EPS disclosure to be higher when GAAP earnings contain a significant transitory element. Table 2 presents evidence on the properties of GAAP EPS relative to two recurring earnings proxies, conditional on management's decision to disclose non-GAAP EPS. Our first recurring earnings proxy is actual EPS reported by IBES (Bradshaw and Sloan 2002; Brown and Sivakumar 2003; Doyle et al. 2003; Bhattacharya et al. 2003; Landsman et al. 2006; Marques 2006). Our second proxy is Thomson Datastream EPS before all non-recurring items. Similar to the procedure used by Standard and Poor's and documented by Brown and Sivakumar (2003), Thomson analysts use financial statement disclosures to identify non-recurring earnings components.[7] We define

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[6] Other specified operating items comprise a broad class of components including fixed asset and goodwill impairments, costs associated with acquisitions and demergers, aborted acquisition costs, compensation for loss of office, costs associated with integration, reorganization, restructuring, rationalization and redundancy, provisions against loans to associate undertakings, pension scheme credits, exploration costs written off, and foreign currency gains.

[7] Although Thomson provides few details of the specific process used to identify non-recurring earnings components, comparison of Thomson's non-recurring items with those classified as ''exceptional'' in firms' financial statements reveals material differences. Thomson therefore appears to take its own view on the persistence of earnings components rather than relying exclusively on classifications provided by management. Further, total non-recurring items identified by Thomson include transactions reported by management within both non-operating and operating profit, indicating that Thomson's adjustment process recognizes the discretion afforded to U.K. management over the positioning of transitory items. Thomson scrapped its Datastream Company Accounts service in April 2004 and as a result no longer reports this definition of non-recurring items.

Table 1 Sample selection method and characteristics of earnings components excluded by management

Panel A: sample selection

	Sample years[a]			Pooled sample
	1994	1996	2001	
Firms disclosing non-GAAP EPS	195	264	354	813
Firms not disclosing non-GAAP EPS	305	236	146	687
	500	500	500	1500
Less:				
Firms with missing IBES actual EPS or price data	(39)	(27)	(133)	(199)
Final sample	461	473	367	1301
Sample firms partitioned by disclosure type				
Firms disclosing non-GAAP EPS	181	253	278	712
Firms not disclosing non-GAAP EPS	280	220	89	589
	461	473	367	1301

Panel B: classification of excluded items

	% of firms disclosing non-GAAP EPS[b]			
Excluded item category	1994	1996	2001	Pooled
Below operating profit (i.e., non-operating activities)				
Profit (loss) on sale or termination of operations	47.0	48.6	45.7	47.1
Profit (loss) on sale of fixed assets or investments	34.8	29.6	27.7	30.2
Reorganization, restructuring and integration costs	19.3	29.6	41.7	31.7
Other special gains (losses)	10.5	11.9	15.1	12.8
Other non-operating adjustments	2.8	6.3	10.4	7.0
Exceptional dividend, interest or taxation	3.9	4.3	1.4	3.1
Within operating profit (i.e., operating activities)				
Amortization of goodwill	0.6	0.0	74.1	29.1
Impairment, diminution or write-off of goodwill	0.6	0.0	9.4	3.8
Revaluation or impairment of fixed assets	8.8	5.5	13.7	9.6
Acquisition and merger/demerger costs	1.1	3.6	5.8	3.8
Other specified exceptional costs	9.4	14.6	22.3	16.3
Other unspecified exceptional items	5.0	3.2	7.2	5.2
Other				
Discontinued operations	5.5	4.3	3.6	4.4
Provisions	2.2	2.4	6.1	3.8
Adjustment of weighted no. of shares	0.6	1.6	0.4	0.8

[a] In each sample year, all U.K.-domiciled non-financial firms in the Datastream active and inactive files with earnings data reported in pounds sterling are ranked by year-end market capitalization and the top 500 selected

[b] Column totals exceed 100% because management exclude multiple items from GAAP earnings

Table 2 Comparison of three measures of EPS partitioned according to whether non-GAAP EPS is disclosed

Panel A: descriptive statistics

	EPS metric[a]			p-value for difference[b]	
	GAAP	TD	IBES	GAAP vs. TD	GAAP vs. IBES
Non-disclosers (N = 589)					
Mean	19.79	20.67	22.37	0.230	0.086
Std	31.33	23.61	39.93		
Median	16.80	16.46	17.00	0.002	0.142
Disclosers (N = 712)					
Mean	13.94	21.43	21.64	0.001	0.001
Std	31.14	19.97	20.45		
Median	14.63	18.21	18.89	0.001	0.001

Panel B: value relevance

Model:[c] $P_t = \alpha_0 + \alpha_1 BVPS_t + \alpha_2 EPS_t^k + \varepsilon_t$

EPS metric	α_0	α_1	α_2	Adj-R^2	Vuong test:[d]	
					Z-stat	p-value
Non-disclosers (N = 589)						
GAAP	227.61	0.432	3.320	0.431	–	–
TD	184.94	0.340	6.247	0.486	–1.33	0.183
IBES	240.31	0.490	1.779	0.395	0.91	0.363
Disclosers (N = 712)						
GAAP	226.15	0.490	3.027	0.378	–	–
TD	126.24	0.260	8.631	0.586	–4.57	0.001
IBES	131.89	0.282	8.094	0.565	–3.50	0.001

Table 2 continued

Panel C: predictability

Model:[c] $OCF_{t+1} = \beta_0 + \beta_1\, EPS_t^k + \eta_t$

EPS metric	β_0	β_1	Adj-R^2	Vuong test[d]	
				Z-stat	p-value
Non-disclosers ($N = 564$)					
GAAP	23.64	1.022	0.383	–	–
TD	8.65	1.699	0.599	−2.40	0.016
IBES	30.70	0.584	0.206	1.14	0.253
Disclosers ($N = 680$)					
GAAP	37.67	0.772	0.270	–	–
TD	8.23	1.882	0.679	−9.09	0.001
IBES	11.59	1.717	0.620	−4.40	0.001

[a] Earnings per share (EPS) metrics are as follows: GAAP is the EPS figure mandated by FRS 3; TD is EPS from recurring operations derived by Thomson Datastream; IBES is actual EPS reported by IBES. All EPS numbers refer to basic EPS measured on an unadjusted basis

[b] Probability values for tests of paired differences in means and medians

[c] Variable definitions are as follows: P is stock price measured 3 months after the fiscal year-end; BVPS is book value of shareholders' funds per share; EPS^k is earnings per share computed for metric k (k = GAAP, TD, and IBES EPS); and OCF is operating cash flow per share

[d] Vuong's (1989) Z-statistic testing the difference in adjusted R^2 values from non-nested models. For each disclosure partition (disclosers and non-disclosers), Z-statistics compare the adjusted R^2 obtained from the GAAP EPS model with the corresponding value from either the IBES EPS model or the TD EPS model

Thomson recurring earnings as net income minus total non-recurring items identified by Thomson and goodwill amortization.

Panel A of Table 2 reports summary statistics for GAAP, Thomson and IBES EPS. Differences among the three metrics are trivial for non-disclosers (medians differ by less than half a pence). In contrast, GAAP EPS differs statistically and economically from Thomson and IBES EPS for non-GAAP EPS disclosers. The disparity is consistent with the presence of material transitory items in GAAP earnings for firms that disclose non-GAAP EPS. This is confirmed by the evidence reported in panels B and C: GAAP EPS for the discloser group exhibits significantly lower explanatory power for prices (panel B) and one-period-ahead operating cash flow (panel C) compared with our two recurring earnings proxies. Evidence that GAAP earnings lack value and forecasting relevance in the presence of transitory items is consistent with research stretching back to Lipe (1986). By comparison, GAAP earnings for non-disclosers display similar value relevance to the IBES and Thomson metrics, suggesting the absence of large non-recurring items.

If non-GAAP EPS numbers merely adjust for transparently transitory items that financial statement users could easily reverse themselves then the benefits of such disclosures are unclear. Table 3 compares non-GAAP EPS with the Thomson and IBES values. A significant level of agreement over the treatment of transitory items is evident across the three metrics. Management adjustments conform exactly to those made by Thomson (IBES) in 55 (69) percent of cases.[8] Full consensus between management, Thomson and IBES exists in 41% of all cases where non-GAAP EPS is disclosed. This level of agreement suggests that the task of identifying non-recurring earnings components is often relatively straightforward, presumably because such items are unambiguously transitory. Similar levels of agreement between non-GAAP earnings and IBES earnings have been documented in the United States (Bhattacharya et al. 2003; Marques 2006).

Despite substantial consensus over the identity of non-recurring items, discrepancies between management and external parties are evident in a significant fraction of cases (45% for Thomson and 31% for IBES).[9] These cases represent uncertainty over the distinction between recurring and transitory earnings components. This disagreement could reflect an attempt by management to mislead investors by misclassifying permanent and transitory items. Alternatively, it could reflect managers' informational advantage in classifying potentially ambiguous earnings components. The remainder of the paper seeks to distinguish between these two competing explanations.

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[8] Greater consensus between management and IBES is consistent with (a) IBES analysts' superiority at identifying non-recurring earnings components compared with other sophisticated financial statement users (Brown and Sivakumar 2003) and (b) analysts' reliance on management guidance regarding the incidence and magnitude of non-recurring items.

[9] One could also treat as disagreements those cases where Thomson (IBES) reports adjustments to GAAP earnings but managers do not disclose a non-GAAP figure. Marques (2006) includes such cases in her analysis. We do not follow this route because the focus of our paper is on cases where managers make an explicit decision to report a competing earnings number to GAAP earnings. Although the question of why managers choose *not* to disclose non-GAAP earnings is an interesting one (particularly when transitory items exist), this issue lies beyond the scope of our paper.

Table 3 Comparison of non-GAAP EPS reported by management with EPS metrics reported by Thomson Datastream and IBES

Three-way EPS comparisons[a]		Pairwise comparisons[b]			
MAN vs. TD vs. IBES		MAN vs. TD		MAN vs. IBES	
	Total	Agree	Disagree	Agree	Disagree
MAN = TD = IBES	294	294	–	294	–
MAN = TD ≠ IBES	101	101	–	–	101
MAN = IBES ≠ TD	199	–	199	199	–
MAN ≠ TD = IBES	6	–	6	–	6
MAN ≠ TD ≠ IBES	112	–	112	–	112
	712	395	317	493	219

[a] Earnings per share (EPS) metrics are as follows: MAN is the non-GAAP EPS figure reported by management; TD is EPS from recurring operations derived by Thomson Datastream; IBES is actual EPS reported by IBES

[b] Comparisons between the value of non-GAAP EPS reported by management and the corresponding values computed by Thomson and IBES, respectively. The columns headed ''agree'' report the frequencies of cases where MAN = TD and MAN = IBES. The columns headed ''disagree'' report the frequencies of cases where MAN ≠ TD and MAN ≠ IBES. All EPS comparisons are performed on an unadjusted basis

4 Disagreement

Discrepancies between non-GAAP EPS and other recurring earnings proxies can occur for two reasons. First, management may exclude *additional* gains and losses beyond those omitted by outsiders. Second, management may choose *not* to exclude certain gains and losses omitted by outsiders. Failure to distinguish between these sources of disagreement confounds management's reporting incentives. To illustrate, consider the case where non-GAAP earnings exceed IBES earnings by $1 million. On one hand, this discrepancy may arise because management has excluded an additional $1 million loss beyond IBES. Accordingly, evidence that this adjustment is value relevant suggests classificatory earnings management (that is, a recurring loss has been inappropriately excluded). On the other hand, the $1 million difference could reflect management reversal of an IBES-excluded gain. In this scenario, evidence that the adjustment is value relevant suggests that management correctly identified and included a recurring gain that IBES misclassified as transitory. We therefore disaggregate disagreements into management inclusions and exclusions.

4.1 Disaggregation method

Identifying the sources of disagreement between management and outsiders requires complete information on adjustments made by both parties. FRS 3's requirement for a full reconciliation between GAAP and non-GAAP EPS ensures transparency of management's adjustments. IBES EPS represents an obvious candidate against which to compare management's adjustments. Unfortunately, IBES does not

provide information on analysts' individual adjustments to GAAP earnings, making it impossible to reconcile cases of disagreement on an item-by-item basis. As an alternative we focus on Thomson's measure of recurring earnings.

For the 317 cases of disagreement between the non-GAAP and Thomson earnings metrics reported in Table 3, we use the following procedure to reconcile earnings components classified by Thomson as non-recurring with items excluded from GAAP EPS by management. We first map aggregate non-recurring operating and non-operating items reported by Thomson onto individual income statement items using footnote disclosures. The resulting list of items classified by Thomson as non-recurring is then compared with the list of items excluded from GAAP EPS by management using reconciliation disclosures mandated by FRS 3. Items in both lists represent transitory items over which management and Thomson agree, while transactions unique to one list represent cases of disagreement. Items unique to Thomson's list are transactions excluded by Thomson but included by management in its non-GAAP figure. We label these items ''management inclusions'' and distinguish between included gains and losses. Conversely, items unique to management's list are transactions excluded by management but not Thomson. We label these items ''management exclusions,'' again distinguishing between gains and losses.[10] Further details of our reconciliation method are provided in an appendix. Our approach is similar to Gu and Chen (2004), who distinguish between transitory earnings components included and excluded by First Call analysts.

4.2 Summary statistics

Panel A of Table 4 presents descriptive statistics on the items about which management and Thomson disagree. The median value for net adjustments (management exclusions minus management inclusions) is positive: non-GAAP EPS is typically less than Thomson EPS in the presence of disagreement. However, net adjustments are left-skewed by cases where non-GAAP EPS exceeds Thomson EPS by a relatively large amount. (Further analysis of panel A reveals that this left-skewness is due to instances where management excludes very large losses beyond Thomson.) Decomposing net adjustments reveals that managers tend to reverse Thomson exclusions almost twice as often as they exclude additional items beyond Thomson. Loss items represent the primary source of disagreement. Of the 236 cases where managers reverse Thomson exclusions, 168 (71%) relate to losses.

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[10] Two further practical considerations concerning the reconciliation process are worthy of note. The first involves the treatment of taxation. While Thomson reports all non-recurring items on a pre-tax basis, the approach used by firms is mixed: some report reconciliation items on a pre-tax basis with the aggregate tax effect disclosed separately while others report reconciliation items net of tax. The task of reconciling Thomson adjustments with management adjustments is relatively straightforward when the tax treatment is consistent. For cases where the treatment differs, we restated management exclusions to a pre-tax basis using footnote disclosures. The second complication involves the treatment of goodwill amortization. While non-GAAP EPS often excludes goodwill amortization, Thomson's recurring earnings metric is computed *before* deducting goodwill. To ensure comparability between the two metrics, we adjusted the Thomson number to a pre-goodwill amortization basis using the adjustments reported by management. This procedure ensures that in no case does the treatment of goodwill amortization account for disagreement between Thomson and management.

Table 4 Characteristics of incremental adjustments made by management beyond adjustments made by Thomson

Panel A: descriptive statistics (pence per share)

	Incremental management adjustments beyond Thomson						
	Net adjustments[a]	Inclusions			Exclusions		
		Gains	Losses	Total	Gains	Losses	Total
Mean	-0.018	1.321	-2.705	-1.570	2.683	-5.521	-3.007
Std	7.636	1.915	7.889	6.994	4.591	9.278	8.958
Median	0.091	0.758	-0.887	-0.260	1.158	-1.721	-0.814
N[b]	317	66	168	236	38	86	124

Panel B: classification of management exclusions and inclusions beyond Thomson

Earnings component	% of firms[c]		Z-stat for difference[d]
	Agree	Disagree	
Management exclusions ($N = 124$)			
Non-operating activities			
Profit (loss) on sale or termination of operations	56.6	1.6	-11.15
Profit (loss) on sale of fixed assets or investments	34.2	11.3	-5.05
Reorganization, restructuring and integration costs	37.4	4.8	-7.09
Other special gains (losses)	15.3	0.8	-4.40
Other non-operating adjustments and adjustments to associate profits	8.0	2.4	-2.22
Exceptional dividend, interest or taxation	0.7	14.5	8.05
Operating activities			
Impairment, diminution or write-off of goodwill	2.6	6.5	2.22
Revaluation or impairment of fixed assets or investments	9.4	10.5	0.38

Table 4 continued

Earnings component	% of firms[c]		Z-stat for difference[d]
	Agree	Disagree	
Acquisition, merger and demerger costs	3.7	4.0	0.16
Other specified exceptional costs	15.5	20.2	1.29
Other unspecified exceptional items	4.3	9.7	2.45
Other			
Discontinued operations	0.8	21.0	10.06
Provisions	2.9	8.1	2.75
Adjustment of weighted no. of shares	0.0	4.8	5.33
Management inclusions (N = 236)			
Non-operating activities			
Profit (loss) on sale or termination of operations	68.6	6.8	−15.50
Profit (loss) on sale of fixed assets or investments	40.6	12.8	−7.50
Reorganization, restructuring and integration costs	9.2	1.7	−3.75
Other special gains (losses)	19.9	5.6	−4.99
Other non-operating adjustments and adjustments to associate profits	11.9	20.5	3.04
Operating activities[e]	57.3	71.4	3.64

[a] Net adjustments are defined as exclusions minus inclusions. A positive (negative) value for net adjustments means that non-GAAP earnings are lower (higher) than Thomson recurring earnings

[b] The sum of total inclusions (236) plus total exclusions (124) exceeds the total number of disagreement cases because some firms make both types of incremental adjustment

[c] For exclusions, 124 cases (81 exclusion-only cases plus 43 cases involving both exclusions and inclusions) involve management excluding additional items beyond Thomson (Disagree subsample) compared with 588 where management exclusions are replicated by Thomson (Agree subsample). For inclusions, 236 cases (193 inclusion-only cases plus 43 cases involving both inclusions and exclusions) involve management reversals of Thomson exclusions (Disagree subsample) compared with 476 where management do not add back Thomson exclusions (Agree subsample). Column totals exceed 100% because managers adjust for multiple items

[d] Z-stat for the difference in sample proportions between Agree and Disagree relate to a proportional Z- test (Newbold, 1988)

[e] Disaggregation of operating inclusions into individual components is not possible in all cases due to insufficient disclosure

Further, included losses tend to be larger in magnitude relative to included gains. These results do not support the view that disagreement reflects management efforts to present firm performance in a more favorable light.

Conversely, 86 out of 124 management-specific exclusions (70%) involve losses, and the magnitude of the mean (median) excluded loss exceeds the corresponding value for excluded gains. These adjustments are consistent with management seeking to boost reported earnings by classifying recurring losses as transitory (McVay 2006). Alternatively, these adjustments may represent appropriate exclusion of transitory losses that Thomson misclassifies as recurring.

Panel B of Table 4 presents evidence on earnings-component adjustments about which management and Thomson either agree or disagree. Of the 712 cases where non-GAAP earnings are disclosed, 124 involve management excluding additional items beyond Thomson (Disagree), compared with 588 where management exclusions are replicated by Thomson (Agree). The top part of panel B reports the percentage of observations in each subsample where a particular earnings component is excluded. Differences in exclusion percentages are evidence that earnings component exclusions are not evenly distributed across the two subsamples. (Column totals sum to greater than 100% because managers often exclude more than one item.) For example, gains and losses on termination of operations are excluded from GAAP earnings by management and Thomson in almost 57% of agreement cases. In contrast, the same item accounts for less than 2% of cases where managers make incremental exclusions beyond Thomson [difference in proportions is significant at the 1% level using a proportional Z-test (Newbold 1988)]. Disagreement over the treatment of gains and losses on termination of operations therefore appears to be a relatively rare event in the U.K. With the exception of the dividend, interest and taxation item, all other non-operating categories are also significantly underrepresented in the disagreement subsample. One explanation for this pattern is that the underlying nature of most non-operating items, coupled with FRS 3's transparent disclosure requirements, creates little room for confusion over the persistence of such components. Instead, a disproportionate number of exclusion disagreements appear to center on operating earnings components whose persistence is difficult to determine due to their idiosyncratic nature or poor disclosure (for example, other unspecified exceptional operating items). Discontinued operations also account for a disproportionately large number of disagreement cases, most likely reflecting ambiguities caused by FRS 3's restricted definition of what discontinued activities may comprise.

The bottom part of panel B presents a similar analysis for management inclusions. Of the 712 cases where non-GAAP earnings are disclosed, 236 involve management reversals of Thomson exclusions (Disagree), compared with 476 where management do not add back Thomson exclusions (Agree). Only rarely do managers reverse Thomson-excluded non-operating items. Instead, operating items account for the majority of reversals. Overall, panel B indicates that disputes between management and Thomson are more likely to reflect idiosyncratic earnings components whose persistence is difficult for outsiders to gauge, opaque disclosure (non-recurring operating items), or restrictive classification rules (discontinued operations).

5 Properties of contested items

This section presents results of tests exploring management's reporting incentives in the event of disagreement. We conduct valuation and predictability tests designed to shed light on the informativeness of incremental management adjustments beyond Thomson. Our tests are based on the following decomposition of GAAP earnings:

$$GAAPEPS \equiv MANEPS + TNONREC + MANEXCL - MANINCL + GTM \quad (1)$$

where *GAAPEPS* is EPS under FRS 3, *MANEPS* is non-GAAP earnings disclosed by management, *TNONREC* is total non-recurring items identified by Thomson, *MANEXCL* is additional aggregate management exclusions beyond *TNONREC*, and *MANINCL* is aggregate items classified by Thomson as non-recurring but included by management in *MANEPS*. All non-recurring items are measured on a pre-tax basis. Finally, *GTM* represents the net of goodwill amortization excluded by management, plus aggregate tax and minority interests on excluded earnings components.

5.1 Incremental value and forecasting relevance

We examine the incremental value relevance of disputed items by substituting Eq. 1 into a standard book value and earnings valuation regression (Collins et al. 1997):

$$\begin{aligned} Price_{it} = &\delta_0 + \delta_1 BVPS + \delta_2 MANEPS_{it} + \delta_3 TNONREC_{it} \\ &+ \delta_4 MANEXCL_{it} - \delta_5 MANINCL_{it} + \delta_6 GTM_{it} + \upsilon_{it} \end{aligned} \quad (2)$$

where *Price* is stock price per share measured 3 months after the fiscal year-end; *BVPS* is book value of shareholders' funds per share; i and t are firm and time subscripts, respectively; υ is the regression residual; and all remaining variables are as defined in Eq. 1 and measured on a per share basis. All variables are scaled by lagged price to reduce heteroskedasticity.[11] If incremental adjustments are driven by management's superior knowledge of recurring and non-recurring items then the estimated coefficient on *MANINCL* in model (2) will be negative and significant while the coefficient on *MANEXCL* will be value irrelevant. Conversely, if strategic disclosure drives these adjustments then *MANEXCL* will be value relevant whereas *MANINCL* will be insignificant. (Assuming that opportunism is best reflected in income-increasing adjustments, such effects should be especially apparent for excluded losses and included gains.)

We also examine the incremental forecasting relevance of management exclusions and inclusions using the following prediction model for 1-year-ahead and aggregate 2-year-ahead operating cash flow:

$$\begin{aligned} CFO_{it+n} = &\gamma_0 + \gamma_1 MANEPS_{it} + \gamma_2 TNONREC_{it} \\ &+ \gamma_3 MANEXCL_{it} - \gamma_4 MANINCL_{it} + \gamma_5 GTM_{it} + \mu_{it} \end{aligned} \quad (3)$$

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[11] We also estimated all models using unscaled data (Barth and Kallapur 1996). None of the key inferences are affected.

where *CFO* is operating cash flow per share measured over period $t + n$ (where n is either one year or aggregate two years); μ is the regression residual; and all remaining variables are as defined in regression (2). If management correctly excludes additional non-recurring items overlooked by Thomson then *MANEXCL* should have no ability to forecast future cash flow. If management correctly reverses Thomson exclusions of recurring items then *MANINCL* should display predictive ability.

Results for models (2) and (3) are reported in Table 5. The top and bottom 1% of observations are excluded in each model to reduce the impact of outliers. Valuation tests are reported in columns 2–5. Coefficient estimates on *BVPS* and *MANEPS* are positive and significant in all models as expected. The estimated coefficient on *TNONREC* is statistically zero in M1, consistent with Thomson correctly classifying these items as non-recurring. Incremental management exclusions are also insignificant, suggesting that on average managers identify additional transitory earnings components overlooked by Thomson analysts. Conversely, management inclusions are incrementally value relevant (two-tailed *p*-value < 0.05). Moreover, the coefficient estimate on *MANINCL* (-4.26) is similar in magnitude to the multiple on *MANEPS* (4.99).[12] These findings suggest that managers correctly identify and retain recurring earnings components misclassified by Thomson as transitory. Model M2 disaggregates total Thomson non-recurring items into operating and non-operating elements. Non-operating items are insignificant. However, the coefficient on operating activities is positive and significant, suggesting that Thomson incorrectly classifies some recurring operations as transitory. The significant coefficient estimate on *MANINCL* reflects this mistake: managers correctly retain recurring items in non-GAAP EPS that Thomson mistakenly considers transitory.

Models M3 and M4 decompose management-specific inclusions and exclusions into net gains and losses. Although excluded gains are marginally significant, the positive coefficient estimates support neither the opportunistic nor informative view. Excluded losses are insignificant and the point estimates are close to one, consistent with these items being transitory. Included losses are incrementally value relevant in both models with coefficient estimates similar in magnitude to *MANEPS*. Management correctly includes recurring losses that Thomson mistakenly considers non-recurring. These findings support the view that non-GAAP EPS disclosures reflect management's superiority at partitioning earnings components into recurring and non-recurring categories. Nevertheless, evidence consistent with strategic disclosure of non-GAAP EPS is apparent for included gains, where the valuation multiple is statistically insignificant. These results suggest that management sometimes retains transitory gains in *MANEPS* in an effort to boost reported performance.

The remaining columns in Table 5 report predictability results. Findings are generally consistent with the valuation results. In aggregate, management-specific exclusions have no incremental explanatory power for future operating cash flows

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[12] From Eq. 2 and consistent with Marques (2006), the expected coefficient sign on *MANINCL* is negative for included items that are value relevant.

Table 5 Coefficient estimates and model summary statistics for incremental value relevance tests of management-specific adjustments to non-GAAP EPS

Variables[c]	Valuation models[a]				Predictability models (1yr ahead)[b]				Predictability models (aggr. 2yr ahead)[b]			
	M1	M2	M3	M4	M5	M6	M7	M8	M9	M10	M11	M12
Intercept	0.705 (0.001)	0.714 (0.001)	0.693 (0.001)	0.696 (0.001)	0.034 (0.001)	0.036 (0.001)	0.032 (0.001)	0.034 (0.001)	0.085 (0.003)	0.088 (0.004)	0.079 (0.009)	0.085 (0.006)
BVPS	0.116 (0.015)	0.114 (0.023)	0.134 (0.005)	0.128 (0.010)								
MANEPS	4.989 (0.001)	5.131 (0.001)	4.870 (0.001)	4.999 (0.001)	1.673 (0.001)	1.678 (0.001)	1.685 (0.001)	1.669 (0.001)	3.367 (0.001)	3.373 (0.001)	3.428 (0.001)	3.382 (0.001)
TNONREC	0.320 (0.319)		0.429 (0.159)		−0.020 (0.773)		0.012 (0.858)		−0.124 (0.501)		0.013 (0.942)	
TDEXC_OP		1.928 (0.004)		1.415 (0.014)		0.232 (0.102)		0.098 (0.439)		0.196 (0.688)		0.290 (0.549)
TDEXC_NOP		0.220 (0.627)		0.346 (0.435)		0.017 (0.868)		0.079 (0.444)		0.157 (0.576)		0.351 (0.202)
MANEXCL	2.501 (0.150)	2.191 (0.213)			0.262 (0.515)	0.133 (0.743)			0.767 (0.492)	0.330 (0.769)		
MANEXCL+			8.383 (0.051)	8.975 (0.039)			−0.154 (0.869)	−0.104 (0.912)			2.974 (0.390)	3.819 (0.276)
MANEXCL−			1.345 (0.225)	1.289 (0.251)			−0.043 (0.865)	−0.097 (0.699)			0.145 (0.815)	−0.058 (0.926)
MANINCL	−4.257 (0.015)	−5.107 (0.006)			−1.856 (0.001)	−2.031 (0.001)			−3.499 (0.007)	−3.563 (0.008)		
MANINCL+			4.820 (0.171)	4.514 (0.380)			0.989 (0.202)	1.101 (0.344)			2.414 (0.252)	2.220 (0.527)

Table 5 continued

Variables[c]	Valuation models[a]				Predictability models (1yr ahead)[b]				Predictability models (aggr. 2yr ahead)[b]			
	M1	M2	M3	M4	M5	M6	M7	M8	M9	M10	M11	M12
MANINCL$^-$			−4.058	−4.845			−1.663	−1.720			−2.978	−3.060
			(0.012)	(0.004)			(0.001)	(0.001)			(0.006)	(0.007)
GTM	4.361	3.402	4.152	3.017	0.443	0.465	0.277	0.331	0.968	1.260	0.880	1.625
	(0.001)	(0.015)	(0.001)	(0.027)	(0.121)	(0.123)	(0.323)	(0.275)	(0.306)	(0.244)	(0.353)	(0.135)
Adj R^2	0.343	0.349	0.355	0.360	0.457	0.463	0.437	0.438	0.295	0.296	0.295	0.300
N	291	288	299	295	276	273	284	280	212	209	218	214

Tests are based on the 317 cases where the non-GAAP EPS figure reported by management differs from recurring EPS computed by Thomson Datastream. Two-tailed probability values are reported in parentheses

[a] The dependent variable in the valuation models is price per share, measured 3 months after the fiscal year-end, scaled by lagged price. The top and bottom 1% of observations for each variable are excluded to reduce the impact of outliers

[b] The dependent variable is 1-year-ahead (1yr ahead) or aggregate one plus 2-years-ahead (aggr. 2yr ahead) operating cash flow per share, scaled by lagged price. The top and bottom 1% of observations for each variable are excluded to reduce the impact of outliers

[c] Variable definitions are as follows: BVPS is book value of shareholders' funds; MANEPS is non-GAAP earnings disclosed by management; TNONREC is aggregate non-recurring items classified by Thomson; MANEXCL is aggregate additional items excluded by management from GAAP EPS beyond TNONREC; MANINCL is aggregate items included by management in MANEPS despite these items being classified in TNONREC by Thomson; and GTM is represents goodwill amortization excluded by management from GAAP EPS, aggregate tax on all earnings components excluded by either management or Thomson, and minority interests. All variables are measured on a per share basis and scaled by lagged price

whereas the coefficient on *MANINCL* is significant and similar in magnitude to the multiple on *MANEPS*. Decomposing exclusions, neither gains nor losses are significant, suggesting that both components are transitory. Included losses on the other hand are highly significant suggesting that these items represent recurring earnings components. Once again, these results suggest that management-specific adjustments reflect insiders' superior knowledge concerning the true persistence of earnings components. As with our valuation results, however, opportunistic considerations are more consistent with inclusion of forecast irrelevant incremental gains.

Overall, findings reported in Table 5 suggest that management-specific adjustments to GAAP earnings more likely reflect insiders' superior knowledge of the persistence of earnings components.[13] However, when aggregate management inclusions are further decomposed into gains and losses, evidence of opportunism emerges in relation to the treatment of transitory gains. Therefore, while U.K. non-GAAP earnings disclosures typically reflect management's ability to identify recurring components of net income, a significant minority of adjustments appear to be driven by efforts to present firm performance in a more favorable light.

5.2 Conditioning on IBES adjustments

Net disagreements between management and Thomson may be decomposed into adjustments that correspond with IBES and those that conflict with IBES. Marques (2006) finds that investors typically view IBES adjustments as an appropriate elimination of transitory items. Given the high level of correspondence between non-GAAP earnings and IBES actual earnings in our sample (69%, Table 3), it is possible that the results in Table 5 are driven by the subset of incremental management adjustments that match those made by IBES. In other words, management-specific adjustments may be adding little information beyond IBES.

We address this issue by constructing an indicator variable (*IBESADJ*) that takes the value of one where non-GAAP EPS equals IBES actual EPS and zero otherwise. *IBESADJ* captures the subset of management-Thomson disputes where management's adjustments match those made by IBES. We then interact*IBESADJ* with *MANEXCL* and *MANINCL* in regressions (2) and (3). The main effect coefficients on *MANEXCL* and *MANINCL* in these extended models capture the value and forecasting relevance of management-specific adjustments that differ from IBES adjustments, while the *MANEXCL* × *IBESADJ* and *MANINCL* × *IBESADJ* interaction terms capture the incremental effects associated with IBES-consistent adjustments.

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[13] We examined the robustness of these results across sample years. Since the number of observations available for separate annual regressions is small, we reestimated the models reported in Table 5 using combinations of any two sample-years (i.e., 1993/4 and 1996, 1993/4 and 2001, and 1996 and 2001). Untabulated regression results for all 2-year combinations are consistent with those reported in Table 5 using the full sample. In particular, the estimated coefficient on *MANEXCL* is always insignificant, whereas *MANINCL* is always negative and generally significant. Since 1993/4 was the first year under FRS 3, we also tested for the presence of adoption-period effects by interacting the management inclusion and exclusion variables with a 1993/4 indicator variable. No systematic differences for the 1993/4 period are apparent.

Table 6 Evidence on disagreements between management and Thomson conditional on IBES adjustments

Variable[c]	Valuation model[a]	Predictability models[b]	
		1-yr CFO	Agg. 2-yr CFO
Intercept	0.699 (0.001)	0.033 (0.001)	0.085 (0.004)
BVPS	0.116 (0.015)		
MANEPS	5.079 (0.001)	1.698 (0.001)	3.395 (0.001)
TNONREC	0.309 (0.337)	−0.029 (0.680)	−0.111 (0.553)
MANEXCL	3.210 (0.142)	0.197 (0.681)	0.573 (0.687)
MANEXCL × IBESADJ	−0.900 (0.797)	0.448 (0.591)	0.646 (0.777)
MANINCL	−8.138 (0.007)	−2.651 (0.001)	−4.358 (0.010)
MANINCL × IBESADJ	5.643 (0.112)	1.170 (0.125)	2.011 (0.410)
GTM	4.208 (0.002)	0.456 (0.117)	1.025 (0.300)
Adj R^2	0.344	0.459	0.291
N	291	276	212

Tests are based on the 317 cases where the non-GAAP EPS figure reported by management differs from recurring EPS computed by Thomson Datastream. Two-tailed probability values are reported in parentheses

[a] The dependent variable in the valuation model is price per share, measured 3 months after the fiscal year-end, scaled by lagged price. The top and bottom 1% of observations for each variable are excluded to reduce the impact of outliers

[b] The dependent variable is 1-year-ahead (1yr CFO) or aggregate one plus 2-years-ahead (Agg. 2yr CFO) operating cash flow per share, scaled by lagged price. The top and bottom 1% of observations for each variable are excluded to reduce the impact of outliers

[c] *IBESADJ* is an indicator variable taking the value of one where *MANEPS* is equal to IBES actual EPS and zero otherwise. All remaining variables are defined in Table 5. All variables are measured on a per share basis and scaled by lagged price

Results reported in Table 6 suggest that management adjustments beyond IBES are informative about the persistence of earnings components. The *MANEXCL* and *MANINCL* main effect coefficient estimates capturing adjustments by management that differ from IBES are entirely consistent with those in Table 5, while the interaction effects capturing the incremental properties of IBES-consistent adjustments are insignificant at the 5% level. Management adjustments beyond Thomson are therefore associated with similar value and forecasting relevance irrespective of whether they correspond to adjustments made by IBES.

5.3 Relative value and forecasting relevance

If management adjustments beyond Thomson are informative about recurring earnings on average, then non-GAAP earnings should be more representative of permanent earnings than the corresponding Thomson number. We compare the relative value relevance of non-GAAP earnings and Thomson recurring earnings to determine which measure has the higher explanatory power for prices. Following Brown and Sivakumar (2003), we modify the standard book value and earnings valuation model by decomposing net income into recurring earnings and residual components:

$$Price_{it} = \varpi_0 + \varpi_1 BVPS + \varpi_2 RECUR_{it} + \varpi_3(NI_{it} - RECUR_{it}) + \xi_{it}, \quad (4)$$

where *Price* is stock price per share measured 3 months after the fiscal year-end; *BVPS* is book value of shareholders' funds per share; *RECUR* is either non-GAAP EPS or Thomson recurring EPS; *NI* is GAAP net income per share according to FRS 3; *i* and *t* are firm and time subscripts, respectively; ξ is the regression residual. We compare the adjusted R^2 values from regression (4) estimated for each of our two recurring earnings proxies using a Vuong (1989) test. We also compare the coefficient estimates on *RECUR* using a *t*-test to determine if either earnings measure is associated with a higher valuation multiplier (Collins et al. 1997; Brown and Sivakumar 2003). We also use a similar approach to assess the relative ability of each recurring earnings measure to explain one-period-ahead operating cash flow.

Results reported in Table 7 provide no evidence that management-specific adjustments systematically obscure the distinction between transitory and recurring earnings components: in no case is the adjusted R^2 or multiplier for non-GAAP earnings *less* than the corresponding Thomson value. Instead, non-GAAP earnings explain greater variation in prices ($p < 0.05$) and future operating cash flow ($p < 0.10$) compared with Thomson recurring earnings. The valuation and forecasting multipliers on non-GAAP earnings are also larger than the corresponding multipliers on Thomson recurring earnings ($p < 0.10$). These results, although statistically moderate, provide further evidence that disputes between management and Thomson over adjustments to GAAP income typically reflect management's

Table 7 Evidence on the relative value and forecasting relevance of non-GAAP and Thomson earnings in the presence of disagreement

	N	Intercept	BVPS	RECUR	NI-RECUR	Adj-R^2
Valuation model[a]						
MAN	292	0.690	0.144	5.246	0.866	0.293
TD	292	0.768	0.156	4.101	0.755	0.255
p-value for difference[b]				0.081		0.036
Forecasting model[a]						
MAN	288	0.034		1.835	0.047	0.317
TD	288	0.064		1.427	−0.028	0.258
p-value for difference[b]				0.028		0.062

[a] The dependent variable in the valuation model is price per share, measured 3 months after the fiscal year-end, scaled by lagged price. The dependent variable in the forecasting model is operating cash flow per share scaled by lagged price. Explanatory variables, all scaled by lagged price, are as follows: *BVPS* is book value of shareholders' equity per share; *RECUR* is either non-GAAP EPS (MAN) or Thomson recurring EPS (TD); and *NI-RECUR* is the difference between net income per share and either non-GAAP EPS or Thomson recurring EPS. The top and bottom 1% of observations for all variables in each regression model are excluded to reduce the impact of outliers

[b] Probability values for *RECUR* relate to a *t*-test comparing the difference in regression coefficients between the model estimated using non-GAAP EPS and the corresponding model estimated using Thomson recurring EPS. Probability values for Adj-R^2 refer to a Vuong test comparing the difference in adjusted R^2 values between the model estimated with non-GAAP EPS and the corresponding model estimated with Thomson recurring EPS

superior ability to isolate recurring earnings components. The findings also suggest that any reduction in value and forecasting relevance due to strategic inclusion of transitory gains (see previous section) is outweighed by the inclusion of recurring losses and the exclusion of additional transitory items.

6 Summary and conclusions

Prior research demonstrates that non-GAAP earnings reported by management often conform to sustainable earnings proxies derived by analysts. If non-GAAP earnings merely adjust for earnings components that are unambiguously transitory then the costs and benefits of such disclosures are unclear. However disparities between adjustments made by management and analysts do occur in a substantial number of cases. These cases are interesting because they reflect disagreement over the persistence of earnings components. On the one hand, disputed items could reflect attempts by management to mislead investors by misclassifying permanent and transitory items. Alternatively, the disagreement could reflect managers' informational advantage in classifying ambiguous earnings components.

We examine the causes of disagreement about the persistence of earnings components by comparing non-GAAP earnings in the U.K. with Thomson Datastream's measure of recurring earnings. Where the two earnings metrics differ, we use mandated income statement and footnote disclosures to identify the source and properties of disputed items. We find that disagreements are not randomly distributed across earnings components. Whereas non-operating items represent a large fraction of all adjustments made to GAAP earnings by management and Thomson, they account for a disproportionately small fraction of disputed cases. Instead, disagreements occur more frequently for operating items and discontinued operations where the idiosyncratic nature of gains and losses, combined with opaque disclosure, create room for confusion over the persistence of certain items.

Incremental value and forecasting relevance tests suggest that the majority of management-specific adjustments reflect appropriate classification of earnings components by insiders. Nevertheless, evidence consistent with strategic disclosure does emerge for the subset of adjustments where managers reverse Thomson-excluded gains. However, such cases represent less than 10% of the non-GAAP disclosure sample and only 20% of disputed adjustment cases, indicating that although some firms appear to use non-GAAP earnings disclosures to artificially boost reported performance, opportunism does not appear to characterize our data on average. This conclusion is supported by relative value and forecasting relevance tests, which indicate that any reduction in value and forecasting relevance due to strategic inclusion of transitory gains is outweighed by the inclusion of recurring losses and the exclusion of additional transitory items.

Our findings make several contributions to the literature on non-GAAP earnings reporting. First, we focus on the subset of disputed adjustments. These cases are interesting because they enable us to construct relatively sharp tests of management's reporting incentives. Second, we extend Marques (2006) by identifying the specific sources of disagreement and examining the properties of each disputed

component separately. Like Marques (2006), we find some evidence of opportunistic reporting. But more often management-specific adjustments reflect appropriate classification of earnings components. Third, we extend work by Walker and Louvari (2003) on non-GAAP reporting in the United Kingdom by examining the properties of management adjustments relative to adjustments made by other informed parties.

Appendix: description of reconciliation method

Non-GAAP earnings numbers are hand-collected from firms' financial statements and reconciled with Thomson Datastream recurring earnings (item #210). Item #210 equals GAAP net income (#625) minus total non-recurring items (net of tax and minority interests) identified by Thomson (#194). Thomson decomposes #194 as follows:

$$
\begin{aligned}
\#194 =&[(\#1079 - \#1080 + \#1081 + \#1082 + \#1091 - \#1090) - \#981] \\
&+ (\#989 - \#1097)
\end{aligned}
$$

(A1)

where #1079 is gains and losses on termination of operations; #1080 is reorganization and restructuring costs; #1081 is gains and losses on the sale of fixed assets; #1082 is other special gains and losses; #1091 is other non-operating adjustments; #1090 is adjustments to associate profits; #981 is net non-recurring operating losses before tax; #989 is total tax adjustments; and #1097 is minority interests in non-operating items.

Items in [.] in Eq. A1 are compared with management's adjustments to GAAP earnings using mandated footnote disclosures reconciling non-GAAP earnings with earnings computed under GAAP. Disagreement between management and Thomson over the classification of earnings components occurs when the values reported in management's list of adjustments to GAAP earnings do not match those contained in Thomson's list.

Incremental inclusions by management

Items unique to Thomson's list of non-recurring items represent transactions that management elected *not* to exclude from GAAP earnings despite Thomson having

classified the item as transitory (that is, management effectively reverse Thomson adjustments). We label these as ''management inclusions,'' an example of which is illustrated by Nurdin and Peacock PLC for the financial year ending December 31 (all figures in £000):

Non-GAAP earnings			Thomson recurring earnings	
GAAP earnings		21877	*Item #625*	21877
Less Thomson operating items (pre-tax)				
Net deficit on revaluation	−147			
Permanent diminution in fixed asset value	−779			
Provision for compensation for loss of office	−346			
Total non-recurring operating items		(−1272)	Item #981 (× − 1)	(−1272)
Less Thomson non-operating items (pre-tax)				
			Item #1079	0
			Item #1080 (× − 1)	0
Loss on sale of fixed assets	−550		Item #1081	−550
			Item #1082	0
Gain on sale of current asset investment	438		Item #1091 – #1090	438
		(−112)		(−112)
Less: tax and minority interests		(660)	Item #989 – #1097	(660)
Thomson non-recurring earnings		22601	Item #210	22601
Management reversal of Thomson exclusions				
Provision for compensation for loss of office	−346			
Gain on sale of current asset investment	438			
Aggregate management inclusions		92		
Reversal of tax and minority interests effects		479		
Non-GAAP earnings		23172		

Incremental exclusions by management

Items unique to management's list represent components excluded from GAAP earnings by management *in addition* to items excluded by Thomson. We label these ''management exclusions'', an example of which is illustrated by W. H. Smith Group PLC for the financial year ending June 1, 1996 (all figures in £000):

Non-GAAP earnings		Thomson recurring earnings	
GAAP earnings	−200300	*Item #625*	−200300
Less agreed operating items (pre-tax)			
Redundancy and associated costs	−16600		
Fixed asset write-offs	−9400		
Property costs	−30400		
Other operating costs	−24600		
Total non-recurring operating items	(−81000)	Item #981 (× − 1)	(−81000)
Less agreed non-operating items (pre-tax)			
Loss on sale of operations	−151300	Item #1079	−151300
		Item #1080 (× − 1)	0
Loss on sale of land and buildings	−9100	Item #1081	−9100
		Item #1082	0
		Item #1091 − #1090	0
Total non-recurring non-operating items	(−160400)		(−160400)
Less: tax and minority interests	(29300)		(29300)
Thomson non-recurring earnings	11800	Item #210	11800
Less additional management exclusions			
Stock provisions and write offs	−42000		
Discontinued operations	−10100		
Aggregate management exclusions	(−52100)		
Less: additional tax and minority interests	(400)		
Non-GAAP earnings	63500		

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