European Accounting Review

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Version of record first published: 28 Feb 2011.

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ABSTRACT   Following the work of Basu in 1997, the excess of the sensitivity of accounting earnings to negative share return over its sensitivity to positive share return (the Basu coefficient) has been interpreted as an indicator of conditional accounting conservatism. Although this interpretation is supported by substantial evidence that the Basu coefficient is associated with likely demands for conservatism, concerns have arisen that it may reflect factors not directly related to conservatism, and that this may adversely affect its validity as an indicator of that phenomenon. We argue that evidence on the validity of the Basu coefficient as an indicator of conditional conservatism can be obtained by disaggregating earnings into components, classifying those components by whether or not they are likely to be affected by conditional conservatism, and examining whether the Basu coefficient arises primarily from components likely to be affected by conditional conservatism. We implement this procedure for UK firms reporting under *FRS 3: Reporting Financial Performance* from 1992 to 2004. Although a substantial proportion of the Basu coefficient emanates from cash flow from operating and investing activities (CFOI), which cannot directly reflect accounting conservatism, its incidence across other components of earnings is predominantly within those components likely to be affected by conditional conservatism. Also, although the bias documented by Patatoukas and Thomas in 2009 is present in all of our aggregate earnings measures, it is heavily concentrated in the CFOI component of earnings and largely absent from components classified as likely to be affected by conditional conservatism. With the important caveat that researchers should test the robustness of their results to the exclusion of the element of the Basu coefficient due to cash flows, our findings are consistent with the conditional conservatism interpretation of the coefficient.

1.   Introduction

Basu (1997) defines accounting conservatism as a tendency on the part of accountants 'to require a higher degree of verification for recognizing good news than bad news in financial statements' (p. 4), resulting in accounting earnings being more timely in its recognition of bad news than in its recognition of good news. This news-dependent conservatism that gives rise to asymmetric timeliness in earnings is sometimes termed 'conditional conservatism' (Beaver and Ryan, 2005). Basu (1997) proposes as an indicator of conditional conservatism the excess of the sensitivity of earnings to contemporaneous negative share return, indicative of bad news, over its sensitivity to contemporaneous positive share return, indicative of good news. Here, we term this excess 'the Basu coefficient'. Many studies have reported that the Basu coefficient is associated with contracting-cost-related items and other items predicted to be associated with conditional conservatism, consistent with it being a reliable indicator of that phenomenon (Pope and Walker, 1999; Ball *et al.*, 2000, 2008a, 2008b; Givoly and Hayn, 2000; Sivakumar and Waymire, 2003; Beekes *et al.*, 2004; Krishnan, 2005; Pae *et al.*, 2005; Bushman and Piotroski, 2006; Lobo and Zhou, 2006; Ahmed and Duellman, 2007; Roychowdhury and Watts, 2007; Beatty *et al.*, 2008; LaFond and Roychowdhury, 2008; LaFond and Watts, 2008; Zhang, 2008). However, there are grounds to question the conditional conservatism interpretation of the Basu coefficient. Dietrich *et al.* (2007) argue that partitioning share-return and earnings data by the sign of share return can give a positive Basu coefficient even in the absence of accounting conservatism. Patatoukas and Thomas (2009) report that association between return volatility and the probability of a loss can cause a bias in the Basu coefficient large enough to induce an apparent sensitivity difference for lagged earnings with respect to return, which cannot be due to conditional conservatism. Givoly *et al.* (2007) suggest that the Basu coefficient is sensitive to factors such as clustering of news, the nature of economic events and firms' disclosure policies. The positive sensitivity difference for operating cash flow with respect to return, reported by Basu (1997), Ball *et al.* (2000) and Dietrich *et al.* (2007), also suggests that the Basu coefficient may be due to factors other than conservatism. There have been a number of responses to critiques of the conditional conservatism interpretation of the coefficient. Ball *et al.* (2010) analyse econometric properties of the coefficient in light of the properties of accounting and conclude that the coefficient is a valid indicator of conditional conservatism. They also observe that managers' remedial response to bad news might cause asymmetry in the sensitivity of cash flow to bad news and good news; such asymmetry would not be directly due to accounting conservatism. Ryan (2006) observes that the study of conditional conservatism requires a measure of asymmetric timeliness of earnings and that, despite possible faults, the Basu coefficient is a dominant candidate for such a measure. He calls for researchers to synthesise the Basu measure of conditional conservatism with their knowledge of its limitations. In summary, there is extensive evidence consistent with the conditional

conservatism interpretation of the Basu coefficient, there is some cause for concern with regard to this interpretation, and there is reason for researchers of conservatism to persevere with the Basu coefficient, with due recognition of its limitations.

In this study, we argue that evidence on the validity of the Basu coefficient as an indicator of conditional conservatism can be obtained by disaggregating earnings into its components, classifying those components by reference to accounting regulation and practice into those that are likely to be affected by conditional conservatism and those that are not, and examining whether the Basu coefficient arises primarily from components likely to be affected by conditional conservatism. If the Basu coefficient arises primarily from earnings components likely to be affected by conditional conservatism, this would represent evidence in support of the conditional conservatism interpretation of the coefficient. If it arises from earnings components independently of whether they are likely to be affected by conditional conservatism or only (or mostly) from components unlikely to be affected, this would cast further doubt on the conditional conservatism interpretation of the coefficient.[1] Although our procedure involves some subjectivity in classification of earnings components by whether they are likely to be affected by conditional conservatism, our detailed reference to accounting regulation and practice significantly limits the degree of subjectivity involved.

We implement this procedure for a sample of UK firms from 1992 to 2004, which is the interval during which *FRS 3: Reporting Financial Performance* (ASB, 1992) was in force. In our data, a large proportion of the Basu coefficient arises from cash flow from operating and investing activities (CFOI), which could reflect asymmetry in response of cash flow to bad news and good news but cannot directly reflect conditional conservatism. However, for components of earnings other than CFOI, the incidence of the sensitivity difference in our data is predominantly consistent with a conditional conservatism interpretation. Also, although the bias documented by Patatoukas and Thomas (2009) is present in all of our aggregate earnings measures, it is heavily concentrated in the CFOI component of earnings and largely absent from components classified as likely to be affected by conditional conservatism. With the important caveat that researchers should test the robustness of their results to the exclusion of the element of the Basu coefficient due to cash flows, our findings are consistent with the conditional conservatism interpretation of the coefficient.

The remainder of this study is organised as follows. Section 2 describes the earnings components considered, and states our beliefs with regard to whether or not individual earnings components are likely to be affected by conditional conservatism. Section 3 describes the sensitivity-difference measure used in the analysis. Section 4 describes the sample and data. Section 5 reports the results. Section 6 concludes.

2. Decomposition of the Basu Coefficient: Earnings Components

In this section, on the basis of a review of UK accounting regulation and practice for years from 1992 to 2004, we classify UK earnings components during that

interval into items that are likely or not likely to be affected by conditional conservatism.[2] The interval from 1992 to 2004, during which *FRS 3* was in force, provides a relatively stable income-reporting regime, with a relatively rich and transparent disclosure of income components that were well documented by a major financial database.[3]

In Section 2.1 we provide an overview of UK earnings components reported under *FRS 3* from 1992 to 2004, and give details of our decomposition of earnings. In Section 2.2, we state our expectations with regard to which components are likely or not likely to be affected by conditional conservatism.

2.1. *Earnings Components under FRS 3: Reporting Financial Performance*

FRS 3 required firms to report operating profit, to include the separately disclosed results of continuing operations, acquisitions and discontinued operations (paragraph 14). The following three items, classified as 'Special Items' by Datastream, were reported separately in the income statement as exceptional items outside operating profit (paragraphs 19 and 20): (i) profits or losses on the sale or termination of an operation; (ii) costs of fundamental reorganisation or restructuring having a material effect on operations; (iii) profits or losses on disposal of fixed assets. Other exceptional items were reported under the headings to which they related (paragraph 19), which could include 'operating profit'. *FRS 3* defined 'extraordinary items' as relating to 'highly abnormal events or transactions that fall outside the ordinary activities of a reporting entity and which are not expected to recur' (paragraph 48). Such items were expected to be of extreme rarity, and no examples were given in the standard. The standard introduced a requirement for a Reconciliation of Movements in Shareholders' Funds, nested within which was a Statement of Recognized Gains and Losses (paragraphs 56–59). Taken together, these two statements reflected all movements in shareholders' funds. These included accounting gains and losses not reported within net income, termed 'dirty surplus flows' in this study. The principal dirty surplus flows were as follows: prior-period adjustments; foreign-currency translation differences; revaluation gains and losses; goodwill write-offs (net of goodwill written back on disposals), until the elimination by *FRS 10: Goodwill and Intangible Assets* (ASB, 1997) for accounting periods ending on or after 23 December 1998 of the write-off to equity of goodwill; actuarial gains and losses recognised in respect of pension schemes after *FRS 17: Retirement Benefits* (ASB, 2000a), for which adoption became mandatory for accounting periods ending on or after 22 June 2003. Items reported as dirty surplus flows under *FRS 3* also included various unusual items, including items described in the financial statements as 'other' or similar.

Our decomposition of earnings is based on earnings components reported under *FRS 3* and some cash-flow components reported under *FRS 1: Cash Flow Statements* (ASB, 1991), as reported by Datastream. Our classification of earnings components by reference to whether they are likely to be affected by

conditional conservatism is based on our review of accounting regulation and practice, and not on whether the components are likely to be subject to contracting-related demand for conditional conservatism. Therefore, we do not limit our analysis to earnings components likely to be the focus of such contracting-related demands. Our decomposition is with respect to clean surplus earnings, which comprises all recognised gains and losses. Periodic clean surplus earnings is defined as follows (firm subscripts are suppressed):

$$CSE_t = B_t - B_{t-1} + D_t - N_t \tag{1a}$$

where CSE_t is clean surplus earnings for period t, B_t and B_{t-1} are the book value of equity shareholders' funds at the end of period t and period $t-1$, respectively, D_t and N_t are distributions to shareholders and share issues, respectively, reported as movements in shareholders' funds in the financial statements in period t.[4] Our decomposition of earnings is described in (1b). For each item, the notation used in some tables is given in parentheses (firm and time subscripts are suppressed):

Cash flow from operating and investing activities (CFOI)(*CFOI*)
+ Investing accruals (including depreciation)(*IA*)
+ Change in accounts receivable (Δ*AR*)
+ Change in inventory (Δ*Inv*)
+ (−Change in accounts payable (Δ*AP*))
+ Other operating accruals (*OOA*)

= Operating profit (*OP*)
+ Special and other non-operating items (*Special* + *ONO*)
+ Interest income less interest expense (*Int*)

= Pre-tax income (*Pretax*)
+ (−Taxation (*Tax*))

= Post-tax income (*Posttax*)
+ Extraordinary items (*Extra*)
+ (−Minority interest and preference dividends (*Minpref*))

= Net income (*Netinc*)
+ Dirty surplus flows: prior-period adjustment (*PPA*)
+ Dirty surplus flows: foreign-currency translation adjustment (*FCT*)
+ Dirty surplus flows: revaluation gains and losses (*Rev*)
+ (−Dirty surplus flows: goodwill written off to equity,
   net of goodwill written back on disposals (*GW*))
+ Dirty surplus flows: other dirty surplus flows (*ODSF*)

= Clean surplus earnings(*CSE*).   (1b)

Because of the possibility that cash flow from operations might be affected by conservatism-related accounting choices with regard to the categorisation of expenditures as 'operating' or 'investing', our cash-flow measure is CFOI rather than cash flow from operations. We therefore include in our decomposition a measure of investing accruals that comprises both depreciation and the capitalisation of fixed assets and intangibles.

The return measure used in this study articulates with the distributions and share issues reported as movements in shareholders' funds in the financial statements, and is defined as follows:

$$R_{it} = \frac{V_{it} - V_{i,t-1} + D_{it} - N_{it}}{V_{i,t-1}} \tag{2}$$

where R_{it} is the share return for firm i for the accounting period ended at time t, V_{it} ($V_{i,t-1}$) is the market value of equity shareholders' funds of firm i at the end of accounting period t ($t-1$), and D_{it} and N_{it} are distributions to shareholders and share issues, respectively, as previously defined. In order to ensure consistency with the book value of equity shareholders' funds, the market value of equity shareholders' funds is stated net of the creditor for equity shareholders' dividends in the corresponding balance sheet.

2.2. Expectations Regarding Conditional-Conservatism-Induced Asymmetric Timeliness in Earnings Components

Throughout the interval covered by this study, the prudence concept was explicitly recognised in UK GAAP. *SSAP 2: Disclosure of Accounting Policies* (ASC, 1971) gave it the status of a 'fundamental accounting concept', and required that 'provision is made for all known liabilities (expenses and losses) whether the amount of these is known with certainty or is a best estimate in the light of the information available' (part 2, paragraph (d)). For accounting periods ending on or after 22 June 2001, *SSAP 2* was superseded by *FRS 18: Accounting Policies* (ASB, 2000b). This reflected some evolution in the prudence concept, with a move to restrict the deliberate understatement of assets and gains and the deliberate overstatement of liabilities and losses. This evolution of the prudence concept had already been reflected in the previously issued *Statement of Principles for Financial Reporting* (ASB, 1999b), of which an exposure draft had initially been issued in 1995, in *FRS 3*, which restricted provisions arising on termination of operations to cases where obligations had been incurred, and in *FRS 12: Provisions, Contingent Liabilities and Contingent Assets* (ASB, 1998), which prohibited the recognition of provisions other than for a present obligation as a result of a past event. In summary, the concept of prudence was explicitly embedded within UK GAAP for the interval covered by this study, although the interval saw a process of evolution in the concept aimed at restricting the opportunities for earnings management.

We now identify those earnings components that we believe likely to be affected by the conditional conservatism that the Basu coefficient is conventionally aimed to detect, and those that we believe are not likely to be affected. Our earnings decomposition in (1b) includes five earnings measures: operating profit, pre-tax income, post-tax income, net income and clean surplus earnings. These earnings measures themselves are not the focus of this study, and are not dealt with below, but the results of prior research suggest that positive Basu coefficients will be observed for these five earnings measures. Also, since taxation is determined largely by pre-tax income, we do not consider this item, but expect to observe a Basu coefficient of opposite sign to that observed for pre-tax income. For a similar reason, in that part of the item is associated with an element of post-tax income, we do not consider minority interest and preference dividends.

We list below the earnings components that we classify as likely to be affected by conditional-conservatism-induced asymmetric timeliness, giving our reasoning in each case.

- *Investing accruals (including depreciation). FRS 15: Tangible Fixed Assets* (ASB, 1999a, paragraphs 34–41) provides some scope for managerial judgement with regard to the categorisation of outflows as expenses or as additions to fixed assets, particularly where items might be expensed as 'repairs and maintenance' or capitalised as 'enhancements'. Also, there is scope for revisions in estimates of the useful economic life and residual value of fixed assets to be reflected in depreciation charges.[5]
- *Change in accounts receivable*. Accounts receivable are subject to provisions that can reduce their book value to below initial carrying value, but they cannot be written up to above their initial carrying value.
- *Change in inventory. SSAP 9: Stocks and Long-Term Contracts* (ASC, 1975), which was in force throughout the interval examined, required that inventory should normally be stated at the lower of cost and net realisable value (paragraph 26). Profit could only be taken on long-term contracts where there was reasonable certainty about the outcome (paragraph 29). Under this regime, inventories are more likely to be written down in response to bad news than to be written up in response to good news.
- *Other operating accruals*. This component includes all operating accruals other than depreciation and changes in receivables, inventories and accounts payable. It mainly comprises items arising from litigation, impairments, disposals and non-fundamental reorganisation, reported as exceptional items within operating profit. Timely recognition of losses in respect of such items, together with the limited scope for the recognition of corresponding gains, is one of the most likely sources of conditional conservatism.
- *Special and other non-operating items*. This component includes items relating to termination and reorganisation of operations and disposal of fixed assets, required by *FRS 3* to be reported as exceptional items outside operating

profit and reported as 'Special Items' by Datastream, plus other non-operating items including items of an exceptional nature and the share of results of associated companies and joint ventures. Although UK accounting standards aimed to restrict over-provisioning for exceptional losses, the prudence considerations reflected in *SSAP 2* and *FRS 18* would still have induced a tendency to recognise losses in a more timely fashion than gains in respect of such items.[6]

- *Revaluation gains and losses*. For accounting periods ending on or after 23 March 2000, asset revaluations in the UK were governed by *FRS 15*, which codified much of pre-existing practice with regard to revaluation. Throughout the interval covered by this study, revaluation gains and revaluation losses, to the extent that the losses were reversals of previously recognised revaluation gains, were recognised as dirty surplus flows in the Statement of Recognized Gains and Losses. In light of the prudence concept, there is scope for asymmetric timeliness in the recognition of gains and losses.
- *Goodwill*. During the first half of the interval covered by this study, until the introduction in 1998 of *FRS 10*, the vast majority of UK firms wrote off purchased goodwill directly to equity. Subsequent to *FRS 10*, direct write-off to equity was prohibited, and this component comprised only the write-back on disposal of goodwill previously written off to equity. Scope existed for managerial judgement with respect to the value to be attributed to the net assets of acquired subsidiaries, and therefore with respect to the component of the purchase price of subsidiaries to be written off as goodwill.

As some of the items listed above are more likely than others to be affected by conditional conservatism, it is helpful to provide some indication of the rank ordering of the items by their likelihood of being affected by conditional conservatism. Because they include exceptional items, the components termed 'other operating accruals' and 'special and other non-operating items' are the most likely items to be affected, and we rank them first equal. Because of the relative significance of the items and the subjectivity involved in valuing them, we rank third equal the change in accounts receivable and the change in inventory. We rank investing accruals fifth. We rank sixth equal the dirty-surplus-flow items: revaluation gains and losses and goodwill.

We now list the earnings components believed not likely to be affected by conditional conservatism.

- *CFOI*. Our measure of this item is equal to operating cash flow less net cash outflows on fixed assets and intangible assets, reported in the *FRS 1* statement of cash flows. This item is free of any conservatism effect arising from the categorisation of expenditures as 'operating' or 'investing'.
- *Change in accounts payable*. Accounts payable are not written up (written down) in response to bad (good) news.

- *Interest income less interest expense*. Conditional conservatism could arise in respect of this item if gearing and/or the interest income and cost reflected in the income statement respond contemporaneously to news, and the responses to bad news and good news are asymmetric. There is some possibility of this. However, it takes some time for gearing levels to adapt to changing circumstances, and there are constraints on the extent to which accounting income can reflect contemporaneous changes in yields.
- *Extraordinary items*. As defined in the UK prior to *FRS 3* and as defined in some other regimes, this item would be one of the most likely sources of conditional conservatism. However, *FRS 3* introduced an extremely restrictive definition of 'extraordinary items', limiting the category to highly abnormal events or transactions of extreme rarity outside the ordinary activities of the firm.[7]
- *Prior-period adjustment. FRS 3* defined prior-period adjustments very restrictively such that they 'are rare and limited to items arising from changes in accounting policies or from the correction of fundamental errors' and, importantly, excluded adjustments to estimates made in prior periods (paragraph 60). Although prior-year adjustments relating to changes in accounting policies might provide a route by which conditional conservatism might affect this category, such items were predominantly mandated by changes in accounting standards.
- *Foreign-currency translation difference*. This item arises through changes in the reporting-currency value of currencies in which subsidiaries prepare their financial statements, and its effect is primarily with respect to the opening balance sheet of those subsidiaries.
- *Other dirty surplus flows*. This category includes sundry items of which we traced a sample to the financial statements. On the basis of our selective inspection of items in this category, we do not believe that it likely to be affected by conditional conservatism.

3. The Sensitivity-Difference Measure Used in this Study

We measure sensitivity differences for our earnings measures and our earnings components using regression model (3), due to Basu (1997):

$$X_{it} = \alpha_1 + \alpha_2 DUM_{it} + \beta_1 R_{it} + \beta_2 R_{it} \times DUM_{it} + \varepsilon_{it} \qquad (3)$$

where X_{it} is an earnings measure or an earnings component for firm i for the accounting period ended at time t, scaled by beginning-of-period market value, R_{it} is the share return for firm i for the accounting period ended at time t as previously defined, DUM_{it} is a dummy variable that takes the value of one where R_{it} is negative, and zero otherwise, the α and β terms are regression coefficients, and ε_{it} is the error term. In (3), the focus of interest is β_2. This is the excess of the sensitivity of earnings or of an earnings component to negative contemporaneous share returns over its sensitivity to positive contemporaneous share returns. Where X_{it} is an earnings measure, β_2 is the Basu coefficient. A significant

positive value for β_2 for an earnings measure is conventionally interpreted as evidence of conditional-conservatism-induced asymmetric timeliness in that earnings measure. Where X_{it} is an earnings component, β_2 is the sensitivity difference for that component. Because the explanatory variables in model (3) are the same for all earnings measures and components thereof and because the components of each earnings measure add up to that earnings measure, the sum of the sensitivity differences for all components of an earnings measure is equal to the Basu coefficient for that earnings measure. This adding-up feature facilitates analysis of the contribution of earnings components to the aggregate Basu coefficient. Regression model (3) is estimated using pooled cross-sectional and time-series data from 1992 to 2004. Following Petersen (2008) and Gow *et al.* (2009), test statistics are based on standard errors that allow for clustering both by firm and by time.

4.   Decomposition of the Basu Coefficient: Sample and Data

Our data are drawn from the universe of quoted UK industrial firms that reported in accordance with *FRS 3* at any time from 1992 to 2004. Our sample construction is summarised in Table 1 panel A. From Datastream, we collect data for 12,250 firm-years for which there is a complete set of the required balance-sheet, income-statement and cash-flow-statement items.[8] We investigate by reference to published financial statements all firm-year cases in which the absolute value of shareholder-fund movements not clearly identified by Datastream exceeds 1% of the absolute value of beginning-of-period shareholders' funds. All items investigated are assigned to an appropriate category of clean surplus earnings or categorised as an issue or distribution of equity capital. In 453 cases, data limitations prevent us from classifying movements that are greater than 1% of opening shareholders' funds, and these cases are eliminated. Unidentified items of less than 1% of opening shareholders' funds that are not individually investigated are treated as either prior-period adjustments or other dirty surplus flows, depending on how they arise. Furthermore, in order to avoid the effect of hidden dirty surplus flows arising from merger accounting (pooling-of-interests accounting), the few firms within our sample that engaged in merger accounting are eliminated. This results in the loss of 138 firm-year cases. We delete as outliers 868 firm-year cases for which share return or any accounting data item as scaled by beginning-of-period market value falls within the most extreme 1% of the distribution. These procedures leave 10,791 firm-year cases. The distribution of data by years from 1992 to 2004 is given in Table 1 panel B. This panel also gives details of the distribution of our data-set by broad industry category.

   Details of the Datastream data items used to construct the earnings components and other variables in our data-set are given in Table 2. For CFOI, investing accruals (including depreciation), change in accounts receivable, change in inventory and change in accounts payable, the data items are as reported in the Statement of Cash Flows. We define 'other operating accruals' as the element of the difference between operating profit and reported operating cash

Table 1. Sample

Panel A: Data collection	Firm-years
Firm-years reporting earnings components under *FRS 3: Reporting Financial Performance* from 1992 to 2004 for which the required data were available in Datastream.	12,250
Less: firm-years for which data limitations prevent classification of items making up more than 1% of the periodic change in the Datastream-reported book value of shareholders' funds.	(453)
Less: firm-years eliminated due to the use of merger accounting (pooling of interests accounting).	(138)
	11,659
Less: firm-years deleted as outliers (cases for which share return or any accounting data item as scaled by beginning-of-period market value falls within the most extreme 1% of the distribution).	(868)
Total number of firm-years used in the study	10,791

Panel B: Distribution of firm-years by year end and by broad industry group	Firm-years
By year end:	
1992 [see note]	23
1993 [see note]	533
1994	884
1995	947
1996	993
1997	1,042
1998	1,057
1999	989
2000	894
2001	947
2002	966
2003	918
2004 [see note]	598
Total number of firm-years used in the study	10,791
By broad industry group:	
Electronics, computers, media and pharmaceuticals	3,197
Service and retail	2,826
Other industrial	4,768
Total number of firm-years used in the study	10,791

Note: In order for a firm-year to be included in our data, the financial statements had to be prepared in accordance with *FRS 3: Reporting Financial Performance*. This standard became mandatory for UK listed firms for accounting periods ending on or after 22 June 1993, so the number of firm-year cases in our data is fewer for 1993 than for subsequent years. A few firms adopted the standard for their 1992 year end. The discontinuation by Datastream of the accounting data series used for this study resulted in the availability of fewer firm-years for 2004 than for previous years.

flow not accounted for by above-mentioned categories of operating accruals. This largely comprises items reported as exceptional items within operating profit. We define 'special and other non-operating items' as the element of the difference between pre-tax income and operating profit not accounted for by interest

Table 2. Variables and data items

Variables	Datastream data items
Cash flow from operating and investing activities (CFOI) (*CFOI*)	DS1015 − DS1026 − DS1029
Investing accruals (including depreciation) (*IA*)	DS1026 + DS1029 − DS976
Change in accounts receivable (Δ *AR*)	DS448
Change in inventory (Δ *Inv*)	DS445
− Change in accounts payable (Δ *AP*)	−DS417
Other operating accruals (*OOA*)	(DS993 − DS1015) −(DS448 + DS445 − DS417 − DS976)
Operating profit (*OP*)	DS993
Special and other non-operating items (*Special + ONO*)	DS154 − (DS993 + DS2408)
Interest income less interest expense (*Int*)	DS2408
Pre-tax income (*Pretax*)	DS154
− Taxation (*Tax*)	−DS203
Post-tax income (*Posttax*)	DS623
Extraordinary items (*Extra*)	DS193
− Minority interest and preference dividends (*Minpref*)	−(DS176 + DS181)
Net income (*Netinc*)	DS1087
Dirty surplus flows (*DSF*):	
= prior-period adjustment (*PPA*)	= DS1106 less prior-period DS1107 (as adjusted after investigation of significant differences between opening shareholders' funds and prior-period closing shareholders' funds reported by Datastream)
+ foreign-currency translation difference (*FCT*)	+ DS1098
+ revaluation gains and losses (*Rev*)	+ DS1099
− goodwill write-offs (*GW*)	−(DS1102 − DS1103)
+ other dirty surplus flows (*ODSF*)	+ (DS1100 + DS1104) (as adjusted after investigation of cases where movements in shareholders' funds reported by Datastream did not add to the Datastream-reported change in shareholders' funds or where Datastream classified items as 'other changes in shareholders' funds')
Clean surplus earnings (*CSE = Netinc + DSF*)	DS1087 + *DSF*
Market value of shareholders' funds (*V*)	DSHMV − DS382
Dividends net of capital issues (*D-N*)	DS187 − DS1101

(*Continued*)

Table 2. Continued

Variables	Datastream data items
Share return, before scaling $(V_t - V_{t-1}) + (D_t - N_t)$	$\Delta(\text{DSHMV} - \text{DS382}) + (\text{DS187} - \text{DS1101})$
	(Note: Market value of shareholders' funds is stated net of the dividend creditor (DS382))

Note: All movements in shareholders' funds are categorised as either a component of clean surplus earnings or as a transaction with shareholders (distribution or issue of capital). Datastream data items are as follows, as described in the Datastream documentation:

- DS154   Pre-tax profit
- DS176   Minority interests
- DS181   Preference dividend for period
- DS187   Ordinary dividends
- DS193   Extraordinary items
- DS203   Total tax charge
- DS382   Dividends payable
- DS417   Change in creditors (as reported in Statement of Cash Flows)
- DS445   Change in stocks and work in progress (as reported in Statement of Cash Flows)
- DS448   Change in debtors (as reported in Statement of Cash Flows)
- DS623   Published after-tax profit
- DS976   Total depreciation and amortisation of fixed assets (as reported in Statement of Cash Flows)
- DS993   Operating profit
- DS1015   Cash inflow − operating activities (as reported in Statement of Cash Flows)
- DS1026   Net payments for fixed assets (as reported in Statement of Cash Flows)
- DS1029   Net payments for intangibles (as reported in Statement of Cash Flows)
- DS1087   Profit for financial year
- DS1098   Currency translation difference
- DS1099   Revaluation adjustments
- DS1100   Other recognised gains/losses for the year
- DS1101   Capital issues
- DS1102   Goodwill on acquisitions
- DS1103   Goodwill on disposals
- DS1104   Other changes in shareholders' funds
- DS1106   Opening shareholders' funds
- DS1107   Closing shareholders' funds
- DS2408   Net interest charges (multiplied by −1 to give interest income less interest expense)
- DSHMV   Market value of shareholders' equity.

We define 'other operating accruals' as the element of the difference between operating profit and reported operating cash flow not accounted for by other categories of operating accruals. This largely comprises items reported as exceptional items within operating profit. We define 'special and other non-operating items' as the element of the difference between pre-tax income and operating profit not accounted for by interest income less interest expense. This includes the items classified as 'Special Items' by Datastream (DS1083), other non-operating items of an exceptional nature and other non-operating items.

income less interest expense. This includes the items classified as 'Special Items' by Datastream (DS1083), other non-operating items of an exceptional nature and other non-operating items. Table 3 reports descriptive statistics for earnings components and share returns. With the exception of extraordinary items, for which there are only nine non-zero cases, all earnings components listed in Table 3 have more than one thousand non-zero cases.

Table 3. Descriptive statistics

	N	Mean	St. dev.	Min	Q1	Median	Q3	Max
Panel A: Earnings components								
CFOI	10,791	0.064	0.181	−1.241	−0.009	0.068	0.138	1.341
IA	10,791	0.000	0.093	−0.732	−0.024	0.001	0.027	0.631
Δ AR	10,791	0.016	0.100	−0.729	−0.009	−0.009	0.038	0.735
Δ Inv	10,791	0.008	0.075	−0.567	−0.004	0.000	0.016	0.565
− Δ AP	10,791	−0.014	0.107	−0.807	−0.038	−0.007	0.015	0.769
OOA	10,791	−0.006	0.058	−0.652	−0.005	0.000	0.003	0.619
OP	10,791	0.068	0.175	−1.229	0.023	0.097	0.153	1.123
Special + ONO	10,791	−0.002	0.092	−1.228	0.000	0.000	0.006	1.542
Int	10,791	−0.018	0.034	−0.304	−0.027	−0.009	0.001	0.098
Pretax	10,791	0.048	0.200	−1.506	0.009	0.090	0.141	1.357
− Tax	10,791	−0.027	−0.033	0.525	0.005	0.026	0.042	0.397
Posttax	10,791	0.021	0.182	−1.516	0.002	0.063	0.101	1.210
Extra	10,791	0.000	0.004	−0.077	0.000	0.000	0.000	0.298
− Minpref	10,791	−0.002	0.018	−0.520	0.000	0.000	0.000	0.132
Netinc	10,791	0.019	0.181	−1.534	0.001	0.061	0.099	1.210
PPA	10,791	−0.002	0.033	−0.768	0.000	0.000	0.000	0.823

FCT	10,791	−0.002	0.016	−0.192	−0.001	0.000	0.000	0.188
Rev	10,791	0.002	0.032	−0.542	0.000	0.000	0.000	0.655
− *GW*	10,791	−0.011	0.126	−1.933	0.000	0.000	0.000	1.674
ODSF	10,791	0.000	0.012	−0.416	0.000	0.000	0.000	0.318
CSE	10,791	0.006	0.201	−2.032	−0.030	0.047	0.093	1.693

Panel B: Share returns

Return (*R*) < 0	4,854	−30.6%	22.6%	−89.8%	−45.3%	−26.1%	−12.0%	0.0%
Return (*R*) > 0	5,937	49.7%	57.1%	0.0%	14.1%	32.3%	62.9%	451.2%
Return (*R*) all cases	10,791	13.6%	60.1%	−89.8%	−22.8%	4.9%	36.3%	451.2%

Notes:
[a]Data are for UK industrial firms from 1992 to 2004, as reported under *FRS 3: Reporting Financial Performance*.
[b]All earnings components are scaled by beginning-of-period market value of equity shareholders' funds.
[c]*CFOI* is cash flow from operating and investing activities (CFOI), *IA* is investing accruals (comprising net payments for fixed assets and intangibles less depreciation), *Δ AR* is change in accounts receivable, *Δ Inv* is change in inventories, *Δ AP* is change in accounts payable (descriptive statistics are for change in accounts payable times −1), *OOA* is other operating accruals, *OP* is operating profit, *Special + ONO* is special and other non-operating items, *Int* is interest income less interest expense, *Pretax* is pre-tax income, *Tax* is taxation (descriptive statistics are for taxation times −1), *Posttax* is post-tax income, *Extra* is extraordinary items, *Minpref* is minority interest and preference dividends (descriptive statistics are for minority interest and preference dividends times −1), *Netinc* is net income, *PPA* is prior-period adjustment, *FCT* is foreign-currency translation difference, *Rev* is revaluation gains and losses, *GW* is goodwill write-off less write-back (descriptive statistics are for goodwill write-off less write-back times −1), *ODSF* is other dirty surplus flows, *CSE* is clean surplus earnings.

5.   Decomposition of the Basu Coefficient: Results

5.1. Main Results

Table 4 reports results from the standard Basu (1997) regression model (3) for clean surplus earnings and its components. All components for which a positive value reduces earnings (change in accounts payable, taxation, minority interest and preference dividends and goodwill write-offs) are multiplied by -1, so the reported regression coefficients for all components add to the corresponding coefficients for relevant earnings measures. Table 5 summarises whether the results in Table 4 are consistent with the conditional conservatism interpretation of the Basu coefficient. In Table 5, the items classified as likely to be affected by conditional conservatism are listed in rank order by reference to our judgement as to their likelihood of being affected.

The results reported in Table 4 for aggregate earnings measures are consistent with those of prior studies. The Basu coefficient (β_2) from model (3) is positive and significantly different from zero for all of the earnings measures (operating profit, pre-tax income, post-tax income, net income and clean surplus earnings), with the *t*-statistics for these β_2 coefficients all being in excess of 10. A similar result, of opposite sign, is reported for taxation, which is highly negatively correlated with pre-tax income, and for minority interest and preference dividends, which contains an element that is negatively correlated with post-tax income.

For the seven items believed to be affected by conditional-conservatism-induced asymmetric timeliness, the Basu coefficient is positive and significantly different from zero in six cases: investing accruals (β_2: 0.035, *t*-statistic: 3.42); change in accounts receivable (β_2: 0.031, *t*-statistic: 4.23); change in inventory (β_2: 0.029, *t*-statistic: 3.44); other operating accruals (β_2: 0.043, *t*-statistic: 4.50); special and other non-operating items (β_2: 0.034, *t*-statistic: 2.78); revaluation gains and losses (β_2: 0.005, *t*-statistic: 2.19). The only one of these seven items for which the sensitivity difference is not positive and significantly different from zero is goodwill (β_2: -0.002, *t*-statistic: -0.35). However, there was a major change in the treatment of this item from 1998, when *FRS 10* prohibited the previously predominant practice of writing off goodwill to equity; from 1998 this item comprised only write-backs on disposal of previously written off goodwill. We therefore estimate model (3) for goodwill separately for the intervals before and after the change. We find that the β_2 coefficient for goodwill is positive and significantly different from zero for 1992–97 but not for 1998–2004. In Table 5, we therefore interpret the result for this item as consistent with the conditional conservatism interpretation of the Basu coefficient. Therefore, for all seven of the components believed to be affected by conditional conservatism, the results are consistent with the conditional conservatism interpretation of the Basu coefficient. However, within this group, there is only weak evidence of association between the magnitude of the β_2 coefficients and our judgements as to the likelihood that components are affected by conservatism: although the five highest ranked items have much higher β_2 coefficients than the two lowest ranked

Table 4. Results from estimation of the sensitivity-difference-measurement regression model (3)

Dependent variables (X)	α_1	α_2	β_1	β_2	Adj. R^2 (%)
CFOI (*CFOI*)	0.105	−0.020	−0.024	0.207	5.74
	(18.89)**	(−3.07)**	(−1.94)	(9.51)**	
Investing accruals (*IA*)	0.005	−0.001	−0.000	0.035	0.69
	(−0.57)	(−0.02)	(−0.02)	(3.42)**	
Change in accounts receivable (*Δ AR*)	0.017	0.001	0.020	0.031	2.86
	(4.86)**	(0.23)	(5.54)**	(4.23)**	
Change in inventory (*Δ Inv*)	0.012	−0.001	0.001	0.029	0.87
	(4.58)**	(−0.23)	(0.53)	(3.44)**	
− Change in accounts payable (*Δ AP*)	−0.020	0.007	−0.009	−0.026	1.49
	(−7.34)**	(2.34)*	(−3.68)**	(−4.28)**	
Other operating accruals (*OOA*)	−0.002	0.006	0.000	0.043	1.82
	(−1.88)	(3.92)**	(0.60)	(4.50)**	
Operating profit (*OP*)	0.117	−0.008	−0.012	0.319	14.74
	(18.75)**	(−0.97)	(−0.66)	(10.61)**	
Special etc. (*Special + ONO*)	0.001	0.002	0.002	0.034	0.63
	(0.89)	(0.65)	(0.82)	(2.78)**	
Interest income less interest expense (*Int*)	−0.018	−0.000	0.001	−0.005	0.04
	(−17.01)**	(−0.36)	(0.44)	(−0.89)	
Pre-tax income (*Pretax*)	0.100	−0.006	−0.009	0.348	14.00
	(15.32)**	(−0.72)	(−0.60)	(10.88)**	
− Taxation (*Tax*)	−0.035	0.006	−0.002	−0.038	11.92
	(−31.89)**	(5.60)**	(−0.62)	(−10.76)**	
Post-tax income (*Posttax*)	0.065	−0.000	−0.011	0.310	12.27
	(11.53)**	(−0.07)	(−0.91)	(10.62)**	
Extraordinary items (*Extra*)	0.000	−0.000	−0.000	−0.001	0.06
	(1.21)	(−1.36)	(−0.65)	(−1.22)	
− Minority etc. (*Minpref*)	−0.003	−0.001	0.000	−0.005	0.21
	(−7.61)**	(−0.85)	(0.52)	(−5.48)**	
Net income (*Netinc*)	0.062	−0.001	−0.011	0.304	12.09
	(11.25)**	(−0.12)	(−0.90)	(10.44)**	
Prior-period adjustment (*PPA*)	−0.001	−0.000	−0.001	0.002	−0.00
	(−1.10)	(−0.26)	(−1.40)	(0.74)	
Foreign-currency translation difference (*FCT*)	−0.002	−0.000	0.000	−0.001	−0.02
	(−2.53)*	(−0.49)	(0.33)	(−0.46)	
Revaluation gains and losses (*Rev*)	0.002	0.001	0.000	0.005	0.04
	(3.19)**	(2.08)*	(0.08)	(2.19)*	
− Goodwill (*GW*)	−0.010	0.001	−0.013	−0.002	0.46
	(−1.97)*	(0.42)	(−1.40)	(−0.35)	
Other dirty surplus flows (*ODSF*)	−0.000	−0.000	0.001	−0.000	0.04
	(−0.72)	(−0.63)	(2.01)*	(−0.79)	
Clean surplus earnings (*CSE*)	0.051	0.001	−0.024	0.308	8.51
	(7.62)**	(0.08)	(−2.81)**	(10.79)**	

(*Continued*)

Table 4. Continued

Dependent variables (X)	α_1	α_2	β_1	β_2	Adj. R^2 (%)
Sum of all conservatism items	0.025 (3.60)**	0.009 (1.10)	0.010 (1.56)	0.175 (5.73)**	3.02
Sum of all non-conservatism items (except CFOI)	−0.041 (−14.34)**	0.007 (2.18)*	−0.008 (−2.46)**	−0.031 (−4.47)**	1.30

Notes:
[a]The results reported above are from the estimation of the following pooled cross-section time-series regression model:

$$X_{it} = \alpha_1 + \alpha_2 DUM_{it} + \beta_1 R_{it} + \beta_2 R_{it} \times DUM_{it} + \varepsilon_{it} \qquad (3)$$

where X_{it} is an earnings measure or component for firm i for the accounting period ended at time t, scaled by the market value of equity shareholders' funds at the beginning of that period; R_{it} is the share return for the accounting period ended at time t; DUM_{it} is a dummy variable that takes the value of one when R_{it} is negative, and zero otherwise; the α and β terms are regression coefficients; ε_{it} is the error term. β_2 is the Basu coefficient where X_{it} is an earnings measure, and is the sensitivity difference for that component where X_{it} is an earnings component. *t*-statistics are given in parentheses. * (**) denotes significance at the 5% (1%) level in a two-sided test. Following Petersen (2008) and Gow *et al.* (2009), our test statistics are based on two-way cluster-robust standard errors. The number of cases is 10,791. The data used in the regression models in respect of change in accounts payable, taxation, minority interest and preference dividends and goodwill write-offs are multiplied by −1. Thus, the coefficients for these earnings components can be added to those of all other components to give the coefficients for the relevant earnings measures.
[b]The sum of all conservatism items is the sum of all items judged to be affected by conditional conservatism: Investing accruals (*IA*) + Change in accounts receivable (*Δ AR*) + Change in inventory (*Δ Inv*) + Other operating accruals (*OOA*) + Special and other non-operating items (*Special + ONO*) + Revaluation gains and losses (*Rev*) − Goodwill (*GW*). The sum of all non-conservatism items (except CFOI) is the sum of all items except CFOI judged not to be affected by conditional conservatism: − Change in accounts payable (*Δ AP*) + Interest income less interest expense (*Int*) + Extraordinary items (*Extra*) + Prior-period adjustment (*PPA*) + Foreign-currency translation difference (*FCT*) + Other dirty surplus flows (*ODSF*).

items (revaluation gains and losses; goodwill), the coefficient for goodwill for 1992–97 only is larger than those of the five highest ranked items (see note b to Table 5).

Of the seven items believed not to be affected by conditional conservatism, the sensitivity difference is positive and significantly different from zero in only one case: CFOI (β_2: 0.207, *t*-statistic: 9.51). Not only is this coefficient highly statistically significant, it is also large relative to the Basu coefficients for the earnings measures for which results are reported in Table 4, which fall in the range 0.304–0.348.[9] As CFOI cannot be directly affected by accounting-conservatism-induced asymmetric timeliness, the effect observed here may be due to asymmetric response of cash flow to bad news and good news but cannot be directly due to conditional conservatism. This result for CFOI, together with similar results

Table 5. Summary of inferences from sensitivity differences reported in Table 4

	β_2 coefficient	Percentage of total β_2 coefficient	β_2 coefficient in model (3) positive and significantly different from zero?	Consistent with conditional conservatism interpretation of Basu coefficient?
Items believed to be affected by conditional conservatism (listed in rank order):				
Other operating accruals (*OOA*) (1st equal)	0.043	14.0%	Yes	Yes
Special and other non-operating items (*Special + ONO*) (1st equal)	0.034	11.0%	Yes	Yes
Change in accounts receivable (*Δ AR*) (3rd equal)	0.031	10.1%	Yes	Yes
Change in inventory (*Δ Inv*) (3rd equal)	0.029	9.4%	Yes	Yes
Investing accruals (*IA*) (5th)	0.035	11.4%	Yes	Yes
Revaluation gains and losses (*Rev*) (6th equal)	0.005	1.6%	Yes	Yes
− Goodwill (*GW*) (6th equal)	−0.002	−0.7%	No	Yes
	0.175	56.8%		(See note b)
Items believed not to be affected by conditional conservatism:				
Cash flow:				
CFOI (*CFOI*)	0.207	67.2%	Yes	No
Items other than CFOI believed not to be affected by conditional conservatism:				
− Change in accounts payable (*Δ AP*)	−0.026	−8.4%	No	Yes
Interest income less interest expense (*Int*)	−0.005	−1.6%	No	Yes
Extraordinary items (*Extra*)	−0.001	−0.3%	No	Yes
Prior-period adjustment (*PPA*)	0.002	0.6%	No	Yes
Foreign-currency translation difference (*FCT*)	−0.001	−0.3%	No	Yes
Other dirty surplus flows (*ODSF*)	−0.000	−0.0%	No	Yes
	−0.031	−10.0%		
Other items:				
− Taxation (*Tax*)	−0.038	−12.4%		
− Minority int. and preference dividends (*Minpref*)	−0.005	−1.6%		
	−0.043	−14.0%		
Total	0.308	100.0%		

Notes:

[a]The information tabulated is based on the β_2 coefficients from regression model (3) reported in Table 4.

[b]The β_2 coefficient for goodwill is not positive and significantly different from zero for the data-set as a whole. However, because of the fundamental change in the accounting for goodwill brought about by *FRS 10* from 1998, we also estimate model (3) separately for the interval 1992–97, during which direct write-off of goodwill to equity was standard practice in the UK, and for the interval from 1998 to 2004, during which such write-offs were not permitted and movements within this category comprised only write-backs on disposal. The β_2 coefficient on goodwill is positive and significantly different from zero in the first interval (β_2: 0.056, *t*-statistic: 2.33), but not in the second. We interpret this result as consistent with the conditional conservatism interpretation of the Basu coefficient.

reported by other studies in respect of cash-flow measures, suggests that, where the Basu coefficient is used to measure conditional accounting conservatism, it may be advisable to test the robustness of results to the exclusion of the element of the coefficient due to cash flows. For the other six items believed not to be affected by conditional conservatism, in no case is the sensitivity difference positive and significantly different from zero: change in accounts payable (β_2: -0.026, *t*-statistic: -4.28); interest income less interest expense (β_2: -0.005, *t*-statistic: -0.89); extraordinary items (β_2: -0.001, *t*-statistic: -1.22); prior-period adjustment (β_2: 0.002, *t*-statistic: 0.74); foreign-currency translation difference (β_2: -0.001, *t*-statistic: -0.46); other dirty surplus flows (β_2: -0.000, *t*-statistic: -0.79). The only one of these β_2 coefficients that is significantly different from zero is that for change in accounts payable. We investigate this coefficient in light of the possibility that it arises in part because of association between accounts payable and other components of working capital. We find that the β_2 for the residuals from a regression of change in accounts payable on change in accounts receivable and change in inventories is not significantly different from zero. This suggests that the significant negative sensitivity difference for change in accounts payable is due to association between accounts payable and other components of working capital rather than to any underlying sensitivity difference for that item.[10]

As the aggregate of all items classified as likely to be affected by conditional conservatism is a potential focus for studies of conditional conservatism, we also report at the foot of Table 4 the coefficients and test statistics for that aggregate, along with corresponding statistics for the aggregate of all items classified as not likely to be affected by conditional conservatism except for CFOI. The β_2 coefficients and *t*-statistics for these two items are, respectively: β_2: 0.175, *t*-statistic: 5.73; β_2: -0.031, *t*-statistic: -4.47.

In summary, the results reported above suggest that researchers using the Basu coefficient as an indicator of conditional conservatism should test the robustness of their results to the exclusion of the element of the coefficient due to cash flows, but are otherwise consistent with the conditional conservatism interpretation of the coefficient.

5.2. Test of Robustness of Results to the Bias Documented by Patatoukas and Thomas (2009)

As mentioned in the introduction, Patatoukas and Thomas (2009) report that association between return volatility and the probability of a loss can cause a bias in the Basu coefficient large enough to induce an apparent sensitivity difference for lagged earnings with respect to return, which cannot be due to conditional conservatism. In light of the evidence of such a bias in the Basu coefficient, we examine whether the sensitivity differences reported in this study may be due to that bias. We do so by replicating for our earnings measures and earnings components a test that Patatoukas and Thomas (2009) implemented

for earnings. This involves re-estimating our regression model (3) for each earnings measure and earnings component, using as the dependent variables the lagged earnings measures and components in place of the contemporaneous earnings measures and components, and examining whether β_2 coefficients for lagged earnings measures and lagged earnings components with respect to contemporaneous share returns are significant. For this lagged-dependent-variable procedure, we eliminate the first case for each firm and those cases for which the previous-period case is deleted as an outlier, giving a reduced data-set of 8,386 cases. In order to allow comparison of the lagged-dependent-variable results with the contemporaneous-dependent-variable results reported in Tables 4 and 5 and with the contemporaneous-dependent-variable results for the reduced data-set, Table 6 reports three sets of β_2 coefficients (sensitivity differences). Column 2 gives the β_2 coefficients from regression model (3) for the complete data-set as reported in Table 4 ($n = 10{,}791$); column 3 reports the corresponding coefficients where the dependent variable is a lagged earnings measure or earnings component for the reduced data-set ($n = 8{,}386$); column 4 reports the corresponding coefficients where the dependent variable is a contemporaneous earnings measure or earnings component for the reduced data-set ($n = 8{,}386$). From comparison of columns 2 and 4, it can be seen that estimation of the contemporaneous-dependent-variable version of regression model (3) gives very similar results for the full data-set and the reduced data-set. We now consider the lagged-dependent-variable results reported in column 3. Consistent with Patatoukas and Thomas (2009), the β_2 coefficients for all of our lagged earnings measures are positive and significantly different from zero. This is supportive of the Patatoukas and Thomas (2009) argument that the Basu coefficient for aggregate earnings is significantly affected by a bias not directly related to accounting conservatism. However, the sensitivity difference for lagged earnings in our data is heavily concentrated in lagged CFOI. The β_2 coefficient for CFOI is 0.186 (*t*-statistic: 8.48) and that for clean surplus earnings is 0.195 (*t*-statistic: 11.51). Also, of the seven earnings components that we classify as likely to be affected by conditional conservatism, including goodwill for 1992–97, investing accruals is the only one that has a sensitivity difference for the lagged component that is positive and significantly different from zero (β_2: 0.021, *t*-statistic: 3.03). For the other six components classified as likely to be affected by conditional conservatism, including other operating accruals and special and other non-operating items which are particularly likely to be affected, the β_2 for the lagged component is not significantly different from zero.

In our data, the non-conditional-conservatism bias documented by Patatoukas and Thomas (2009) does not appear to be an important cause of the sensitivity differences for those earnings components likely to be affected by conditional conservatism, but it does appear to be an important cause of the sensitivity difference for CFOI, which cannot be directly due to conditional conservatism. This is supportive of our inference that, subject to the need to test the robustness of results to the exclusion of the element of the Basu coefficient due to cash

Table 6. Evidence on sensitivity differences for earnings components and the Patatoukas and Thomas (2009) bias

Dependent variables (X)	β_2 coefficients as reported in Table 4	β_2 coefficients for the reduced data-set	
	Contemporaneous dependent variables	Lagged dependent variables	Contemporaneous dependent variables
CFOI (*CFOI*)	0.207	0.186	0.183
	(9.51)**	(8.48)**	(8.27)**
Investing accruals (*IA*)	0.035	0.021	0.039
	(3.42)**	(3.03)**	(3.29)**
Change in accounts receivable	0.031	−0.011	0.041
(*Δ AR*)	(4.23)**	(−1.43)	(5.01)**
Change in inventory (*Δ Inv*)	0.029	0.012	0.031
	(3.44)**	(1.41)	(3.64)**
− Change in accounts payable	−0.026	0.002	−0.032
(*Δ AP*)	(−4.28)**	(0.27)	(−4.55)**
Other operating accruals (*OOA*)	0.043	0.019	0.041
	(4.50)**	(1.90)	(4.70)**
Operating profit (*OP*)	0.319	0.229	0.303
	(10.61)**	(7.38)**	(12.66)**
Special and other non-operating	0.034	0.012	0.038
items (*Special + ONO*)	(2.78)**	(1.55)	(2.64)**
Interest income less interest	−0.005	−0.009	−0.003
expense (*Int*)	(−0.89)	(−2.10)*	(−0.49)
Pre-tax income (*Pretax*)	0.348	0.232	0.338
	(10.88)**	(8.91)**	(13.98)**
− Taxation (*Tax*)	−0.038	−0.035	−0.041
	(−10.76)**	(−10.07)**	(−13.23)**
Post-tax income (*Posttax*)	0.310	0.197	0.297
	(10.62)**	(8.38)**	(13.76)**
Extraordinary items (*Extra*)	−0.001	0.000	−0.001
	(−1.22)	(0.76)	(−1.28)
− Minority int. and preference	−0.005	−0.001	−0.003
dividends (*Minpref*)	(−5.48)**	(−0.91)	(−4.69)**
Net income (*Netinc*)	0.304	0.196	0.293
	(10.44)**	(8.13)**	(13.52)**
Prior-period adjustment (*PPA*)	0.002	−0.002	0.004
	(0.74)	(−1.23)	(1.31)
Foreign-currency translation	−0.001	−0.001	−0.000
difference (*FCT*)	(−0.46)	(−1.07)	(−0.24)
Revaluation gains and losses	0.005	0.003	0.007
(*Rev*)	(2.19)*	(0.64)	(3.04)**
− Goodwill (*GW*) (see note b)	−0.002	−0.001	−0.012
	(−0.35)	(−0.04)	(−1.03)

(Continued)

Table 6. Continued

Dependent variables (X)	β_2 coefficients as reported in Table 4	β_2 coefficients for the reduced data-set	
	Contemporaneous dependent variables	Lagged dependent variables	Contemporaneous dependent variables
Other dirty surplus flows (*ODSF*)	−0.000 (−0.79)	0.000 (0.12)	−0.001 (−1.39)
Clean surplus earnings (*CSE*)	0.308 (10.79)**	0.195 (11.51)**	0.291 (11.96)**
Sum of all conservatism items	0.175 (5.73)**	0.055 (3.55)**	0.185 (6.34)**
Sum of all non-conservatism items (except CFOI)	−0.031 (−4.47)**	−0.010 (−0.96)	−0.033 (−4.65)**

Notes:
[a]This table reports β_2 coefficients (sensitivity differences) from the following versions of regression model (3):
Column 2: where the dependent variable is a contemporaneous earnings measure or earnings component, for the complete data-set as reported in Table 4 (number of cases = 10,791);
Column 3: where the dependent variable is a lagged earnings measure or earnings component, for all cases for which results are reported in Tables 4 and 5 except the first case for each firm and those cases for which the previous-period case is deleted as an outlier (number of cases = 8,386);
Column 4: where the dependent variable is a contemporaneous earnings measure or earnings component, for all cases for which results are reported in Tables 4 and 5 except the first case for each firm and those cases for which the previous-period case is deleted as an outlier (number of cases = 8,386).
* (**) denotes significance at the 5% (1%) level in a two-sided test. Following Petersen (2008) and Gow *et al.* (2009), our test statistics are based on two-way cluster-robust standard errors. The data used in the regression models in respect of change in accounts payable, taxation, minority interest and preference dividends and goodwill write-offs are multiplied by −1. Thus, the coefficients for these earnings components can be added to those of all other components to give the coefficients for the relevant earnings measures.
[b]The β_2 coefficient for goodwill for the interval 1992–97, during which direct write-off of goodwill to equity was standard practice in the UK, is positive and significantly different from zero when contemporaneous goodwill is regressed on contemporaneous return (corresponding to columns 2 and 4 above), but not when lagged goodwill is regressed on contemporaneous return (corresponding to column 3 above).

flows, our findings are consistent with the conditional conservatism interpretation of the coefficient.

6. Conclusion

The Basu coefficient, which measures the excess of the sensitivity of accounting earnings to negative share returns over its sensitivity to positive share returns, is widely used as an indicator of conditional-conservatism-induced asymmetric timeliness in the recognition within earnings of bad news and good news. Support for the conditional conservatism interpretation of the coefficient is

found in the extensive evidence that it is associated with factors predicted to be associated with conditional conservatism. However, there are grounds for concern that the Basu coefficient may reflect things other than conditional accounting conservatism, and that this might interfere with its interpretability as an indicator of that phenomenon.

In this study, we argue that evidence on the validity of the Basu coefficient as an indicator of conditional conservatism can be obtained by disaggregating earnings into components, classifying those components by whether or not they are likely to be affected by conditional conservatism, and examining whether or not the Basu coefficient arises primarily from components classified as likely to be affected by conditional conservatism. We then implement this procedure for a sample of UK firms reporting under *FRS 3: Reporting Financial Performance* in periods from 1992 to 2004. With the notable exception of CFOI, for which we report a large and statistically significant positive sensitivity difference, and when consideration of goodwill write-offs is limited to the time from 1992 to 1997 only, the sensitivity difference for each earnings component classified as likely (unlikely) to be affected by conditional conservatism is (is not) positive and significantly different from zero. By measuring the sensitivity differences for lagged earnings measures and earnings components with respect to contemporaneous share returns, we also seek evidence as to whether sensitivity differences reported in this study may be the artefact of the non-conservatism bias documented by Patatoukas and Thomas (2009). We find that the bias documented by Patatoukas and Thomas (2009) is present in all of our aggregate earnings measures, but that it is heavily concentrated in the CFOI component of earnings and largely absent from components of earnings that we classify as likely to be affected by conditional conservatism. Our result for CFOI, together with similar results reported by other studies and our test for the Patatoukas and Thomas (2009) bias, suggests that, where the Basu coefficient is used to measure conditional accounting conservatism, it may be advisable to test the robustness of results to the exclusion of the element of the coefficient due to cash flows. Otherwise, the results of this study are consistent with the conditional conservatism interpretation of the coefficient.

Our results are subject to a number of caveats. First, although our results are supportive of the conditional conservatism interpretation of the Basu coefficient, they do not rule out the possibility that the sensitivity differences in non-cash-flow components of earnings might be due in part to factors other than conditional conservatism, such as those referred to in the introduction to this study. Second, our inferences are conditional on some relatively strong assumption regarding the classification of components as likely and not likely to be affected by conditional conservatism, although we should emphasise that this classification is based on a detailed review of accounting regulation and practice during the interval covered by the study. Third, we have limited our focus to the plausibility of the conditional conservatism interpretation of the Basu coefficient in light of accounting regulation and practice with regard to earnings

components, and have not sought to address economic or behavioural determinants of conditional conservatism.

Acknowledgements

Notes

[1]Some analysis related to that proposed and carried out in this study has been done previously, but at a less detailed level than in this study. By comparing the sensitivity difference for indirectly measured cash flows with that for earnings, Basu (1997) infers that the Basu coefficient is primarily due to the accruals component of earnings rather than to the cash-flow component. Also, using a number of news proxies including abnormal share return, Ball and Shivakumar (2006) report that total accruals and total working capital accruals are more sensitive to bad news than to good news.

[2]The start of the interval coincides with the introduction of *FRS 3*, which was mandatory for accounting periods ending on or after 22 June 1993 and ends with the discontinuation by the Datastream financial database of the accounting data series used in this study, which coincides approximately with the time at which UK listed firms were required to adopt International Financial Reporting Standards (IFRSs) and ceased to report in accordance with *FRS 3*. UK listed firms were required to adopt IFRSs for accounting periods starting after 1 January 2005.

[3]Prior to *FRS 3*, the reporting of income components was significantly less uniform than under *FRS 3*, particularly in the case of gains and losses reported outside net income; after the introduction of IFRSs, there were changes in the reporting of income, including with regard to items that were classified as 'exceptional items' under *FRS 3* (see *FRS 3* and Ernst and Young LLP, 2008, chap. 3).

[4]To the extent that share issues are recorded at prices different from market value, for example, as a result of employees exercising options, clean surplus earnings as defined in (1a) does not conform to what Christensen and Feltham (2003) call 'super clean surplus'. When share issues are recorded at a price other than market value, it will usually be at a discount reflecting the dilutive effect of the transaction, resulting in clean surplus earnings being larger than 'super clean surplus' earnings. This non-conservative aspect of accounting is not addressed in this study.

[5]*FRS 15*, which superseded *SSAP 12: Accounting for Depreciation* (ASC, 1977) for accounting periods ending on or after 23 March 2000, prohibited the previously permitted recognition as an exceptional item of the entire accumulated depreciation effect of a change in estimated asset life. Since this change affected an item categorised within 'other operating accruals', it did not materially affect our measure of depreciation.

[6]See Ernst and Young LLP (1999, chap. 22, pp. 1500–1503) for discussion of possible conflict between *FRS 3* and *SSAP 2* with regard to provisions.

[7]In our data-set comprising 10,791 firm-years, there are only nine firm-years where extraordinary items are not equal to zero. Examination of these cases confirmed that they arose from events of a highly abnormal nature, including events associated with related-party transactions.

[8]Cases excluded from this set include those where there is a significant discrepancy between the Datastream-reported operating profits given by the income statement and the Datastream-reported operating profits given by the statement of cash flows, and some cases of multiple

classes of shares in issue where we are unable to satisfy ourselves as to the consistency between balance-sheet data and market-value data.

[9]When model (3) is amended in order to include reported operating cash flows instead of CFOI, the β_2 coefficient on reported operating cash flows is positive and of a similar magnitude to that for CFOI, and is significantly different from zero.

[10]As a robustness test, we follow Roychowdhury and Watts (2007) by estimating a version of model (3) augmented to include beginning-of-period book-to-market-ratio interaction terms. Also, in light of the scope under *FRS 1* for non-operating exceptional items and other operating accruals to reflect compensating items arising from cash flows relating to non-operating exceptional items, we estimate model (3) for the aggregate of (i) other operating accruals and (ii) special and other non-operating items. (See Ernst and Young LLP (1999, pp. 1740–1741) for discussion of what was regarded as a controversial treatment by *FRS 1* of cash flows relating to some non-operating exceptional items.) Our inferences are robust to these tests.

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