**Ex-ante and Ex-post Accounting Conservatism, Asset Recognition**

**and Asymmetric Earnings Timeliness**

**Peter F. Pope and Martin Walker\***

\* Lancaster University and University of Manchester, respectively.

We are grateful to Jim Ohlson for many helpful suggestions. We acknowledge the financial support of the Economic and Social Research Council (award number R000237663) and the excellent research assistance provided by Steve Lin. Please do not quote. Comments welcome. Address for correspondence: Peter F. Pope, International Centre for Research in Accounting, Lancaster University, Lancaster, LA1 4YX, UK. E-mail: [P.Pope@Lancaster.ac.uk](mailto:P.Pope@Lancaster.ac.uk).

**Ex-ante and Ex-post Accounting Conservatism, Asset Recognition**

**and Asymmetric Earnings Timeliness**

The conservatism principle is central to many current debates over accounting policy and regulation. It states that “possible errors in measurement be in the direction of understatement rather than overstatement of net income and net assets” (APB Statement 4, 19xx). Conservatism in accounting affects financial statements along two main dimensions. First, it reduces the user relevance of the balance sheet because the values of assets (and book equity) are understated relative to economic values. We refer to this dimension as *ex ante conservatism*. Second, accounting conservatism distorts the income measurement process by deferring the recognition of increases in economic values until realization occurs, while encouraging accelerated recognition of losses in anticipation of future adverse events. We refer to this dimension as *ex post conservatism*.[[1]](#footnote-1) Recent accounting research has examined both dimensions of accounting conservatism, without defining or distinguishing between them. In this paper we demonstrate the theoretical and empirical links between the two dimensions of accounting conservatism and show that there is a trade-off between the two. The dual dimensionality of accounting conservatism has potentially important implications for attempts to evaluate differences in accounting conservatism across GAAP regimes or across firms within a GAAP regime.

GAAP and the accounting policy choices made by firms within GAAP define when current transactions associated with uncertain future cash flows lead to the recognition of assets or liabilities and when they will lead to recognition of current period charges against income. They also define the rates at which the values of recognized assets and liabilities will change due to the passage of time, e.g. the amortization rates applied to assets. Theoretical research by Feltham and Ohlson [1995, 1996] and Ohlson and Liu [1999] explains the tendency of market values to exceed book equity values as a consequence of accounting conservatism – characterized in terms of accounting amortization rates exceeding expected economic depreciation rates. Ex ante conservatism pre-commits a firm to accounting for assets and liabilities on the basis of a pessimistic prognosis of the expected future cash flows, if the level of uncertainty of cash flows is sufficiently high. An extreme form of ex ante conservatism is when investments trigger expense recognition, rather than asset recognition, for example in accounting for research and development expenditures or advertising expenditure. The consequence of ex ante accounting conservatism is that book equity value is expected to be lower than the market value of equity, particularly when future cash inflows have high uncertainty.

Empirical work on ex post conservatism documents that earnings display asymmetric timeliness with respect to bad and good news. Basu (1997) and Pope and Walker (1999) estimate that the speed of recognition of bad news is approximately twice the speed of recognition of good news for US firms. Research also confirms the relatively fast recognition of bad news in earnings for several other international GAAP regimes, although there are differences in the estimated magnitude of the asymmetry (Pope and Walker, 1999; and Ball, Kothari and Robin, 1999). Further, Basu (1997) and Ball, Kothari and Robin (2001?) show that reductions in earnings are more transitory than earnings increases. Overall, these results are consistent with negative news concerning future cash flows being recognized earlier than positive news. However, the asymmetric timeliness literature does not anticipate the interaction between ex ante conservatism and ex post conservatism.

Ex ante conservatism limits the degree of expected ex post conservatism. In particular, the expected magnitude of asset write-downs associated with bad news will reduce as the degree of ex ante conservatism increases. Ceteris paribus, when the proportion of market value accounted for by recognized assets is relatively low, a decrease in market value (bad news) is less likely to be attributable to assets currently recognized on the balance sheet. In the extreme, if assets have not been recognized then any impairment of their economic values cannot be recognized in accounting income. We predict that firms and industries with relatively high levels of ex ante conservatism assets will display lower asymmetric timeliness in earnings and relatively low sensitivity of earnings to bad news.

Our empirical results support this hypothesis. We find strong evidence of the predicted cross-sectional variation in the degree of asymmetric earnings timeliness for firms reporting under US GAAP: when unrecorded goodwill is relatively high, the degree of asymmetry in the recognition of bad news and good news is relatively low. The magnitudes of the intra-GAAP differences in asymmetric earnings timeliness across book-to-market deciles are substantially larger than the cross-GAAP differences documented by Ball, Kothari and Robin (1999) and Pope and Walker (1999). These findings suggest that any comparison of asymmetric earnings timeliness should consider th einteraction between ex ante conservatism and ex post conservatism.

## The remainder of the paper is organized as follows. In section 1 we discuss the potential influence of ex ante conservatism on ex post conservatism, with reference to existing theoretical models. We also provide two heuristic explanations of our key testable hypothesis. In section 2 we describe the data and report the empirical results. Finally, in section 3, we conclude.

## Dimensions of Conservative Accounting

## There is no general model of firm valuation which rigorously embodies both ex-ante and ex-post conservatism. Moreover we are not optimistic about the prospects of any such model ever being produced. Ex-post conservatism, introduces an awkward non-linearity into the relation between accounting numbers and share prices, which effectively rules out the possibility of modeling the phenomenon using the Linear Information Dynamics approach which has been developed by Ohlson and his co-authors. In similar vein, the models available for modeling ex-post conservatism cannot be easily extended to incorporate an analysis of ex-ante conservatism, because such an analysis requires careful treatment of the dynamic link between earnings, book values, and dividends. Because of the limitations of the existing modeling frameworks we approach the problem in a heuristic fashion by considering partial adjustments to two basic models. We first examine an heuristic extension of the Feltham and Ohlson model of ex-ante conservatism, to capture the first order interaction with ex-post conservatism, and then we present an intuitive explanation of why and how the Pope and Walker (1999) model of ex-post conservatism might be sensitive to ex-ante conservatism. We draw comfort from the observation that both approaches lead to broadly similar empirical conclusions.

The Feltham and Ohlson Model (1995b)

The unbiased accounting model of Ohlson (1995) assumes that abnormal earnings fluctuate around zero. On average abnormal earnings equal zero, and book value equals market value. Liu and Ohlson (1999), and many others, have noted that, on average, market values tend to exceed book values, so there must be something missing from the Ohlson (1995) model. Recognising this problem, Feltham and Ohlson (1995b) developed a model that incorporates a notion of conservative accounting. Specifically they allow the rate of accounting depreciation on fixed assets to be higher than the “true” economic rate of depreciation. In the interest of making this paper self-contained, appendix A provides a brief summary of the Feltham and Ohlson model. Given the assumptions and definitions outlined in the appendix Feltham and Ohlson derive the following key proposition:-

# Proposition FO: Given that firm value equals the present value of net cash flows (PVCF), linear cash flow information dynamics (CFDE), clean surplus accounting for operating assets (CSR), and a fixed ex-ante depreciation policy (DP)



This result is a special case of proposition 5 in Feltham and Ohlson (1995b). This special case assumes that a constant reducing balance depreciation policy is applied to all the firms operating assets. In an extension of this result Feltham and Ohlson admit the possibility of event driven depreciation, but they assume that any such event driven depreciation is symmetrical with respect to good and bad news. When one attempts to allow for asymmetry in the event driven depreciation policy, their model becomes more realistic, but it also becomes non-linear and no longer amenable to analytical solution.

The valuation formula (FO) is analogous to the famous Ohlson (1995) unbiased accounting valuation formula but it includes four new adjustments.

1. A multiple of opening book value, *oat-1*, that corrects for the cumulative effects of past conservative accounting. This term will be zero if accounting is unbiased ex-ante.
2. A multiple of current investment, *cit*, that corrects for the news in the current level of investment about level of future investment. This term will be zero if the net present value of future projects is zero.
3. A multiple of the other information about future abnormal earnings from existing assets.
4. A multiple of other information about the future level of future investment opportunities. This term will be zero if the expected net present value of future investment projects is zero.

The first adjustment is especially important for this paper. In particular it is helpful to note that the parameter α2 is simply the difference between the present value of the depreciation stream arising from *oat-1*, calculated at time point t, using the ex-ante conservative depreciation rate (i.e. 1-*δ*) minus the present value of the stream of depreciation that would have arisen if the same assets had been amortised at the economic rate of depreciation (i.e. 1*-γ*). This adjustment ensures that the sum of the second and the third terms are identically equal to the present value of abnormal earnings given unbiased accounting. This point reflects a vitally important property of the model i.e. the value of the firm is independent of the choice of depreciation formula.

For present purposes a key property of the model is the relation it implies between goodwill (i.e. the difference between market value and book value) and the level of ex-ante conservatism (captured by the depreciation parameter (1-*δ*)). This particular issue is not explicitly analysed by Feltham and Ohlson, but one can easily show that their model implies the following additional proposition:

Proposition 1

*Given the assumptions of the Feltham and Ohlson (1995b) model, and assuming all the parameters except δ are constant, the difference between market value and book value is strictly negatively related to the accounting parameter δ.* See Appendix for proof.

We can exploit this proposition to examine the implication of introducing a change of accounting regime into the model. We employ this heuristic modelling device, because it enables us to identify the first order effects of ex-post conservatism within the Feltham and Ohlson world.

Suppose that, up to time point t, the company has adopted a constant depreciation policy as in the Feltham and Ohlson model. Now suppose that, at time point t, a requirement is introduced that requires firms to account for fixed assets on a lower of cost or market value basis. This is achieved by re-valuing assets at the start of the year, and writing off any shortfall between opening book value and opening market value directly against shareholders funds i.e. as a “dirty surplus” capital charge that does not affect reported profits in year t. From year t onwards a charge for the current year is debited against reported earnings to the extent that closing book value exceeds closing market value. Intuitively this can be interpreted as a kind of special charge, related to the idea that assets should be written down if their market value falls short of their book value. We can express these special charges as follows:





where *oat-1* and *oat* are, respectively, the opening and closing operating assets that would have been reported under the Feltham and Ohlson accounting rules. *rv* is the “dirty surplus” capital charge that would be required as a result of implementing the new accounting regime, and sc is the special charge that would be levied against earnings in year t under the new, “lower of cost or market” value accounting regime.

Here both rv and sc are assumed to be zero so long as market value exceeds the book value that would have been reported under the Feltham and Ohlson accounting regime. If market value is less than the Feltham and Ohlson book value then we assume that the difference between market value and the Feltham and Ohlson book value is written off entirely.

Given the non-linear nature of the rv and sc functions one can no longer derive a precise analytical formula for the valuation equation. In order to demonstrate the *first order* effects of the change in the accounting regime we consider a particular scenario in which, in the absence of the special charge, the book value would remain constant between time point t-1 and time point t. Note, crucially, that if this is true for one value of δ then it must be true for any other value.

Proposition 2. *Given the assumptions of the Feltham and Ohlson (1995b) accounting model, and assume that book value under the Feltham and Ohlson model would be constant between time point t-1 and time point t. Then, when a special charge is introduced in year t, the likelihood of observing an asymmetric relation between the deflated earnings for year t and the stock price relative for year t is negatively related to the level of ex-ante conservatism.*

Proof

Assuming a constant, Feltham and Ohlson regime, book value between time point t-1 and time point t there are only four logically possible scenarios.

1. Vt greater than oat and Vt-1 greater than oat-1.

In this scenario there will be no revaluation at time t-1 and no special charge at time t. The empirical relation between returns and deflated earnings will be symmetric and linear.

1. Vt greater than oat and Vt-1 less than oat-1.

In this scenario the assets will be re-valued downward at time point t-1 but there will be no special charge. Vt will increase (since, by assumption, Vt>oat = oat-1>Vt-1). In this scenario the relation between stock returns and deflated earnings will be linear. As in scenario 1, there will be no ex-post conservatism effect.

1. Vt less than oat and Vt-1 less than oat-1.

In this scenario rv will equal Vt-1 – oat-1 and the special charge will be sc=min(0,Vt-Vt-1). Thus in this scenario there will be an asymmetric relation between the time t over t-1 price relative and deflated earnings. Share price increases will not be matched by positive special charges, but share price falls will be matched by corresponding special charges.

1. Vt less than oat and Vt-1 greater than oat-1.

In this scenario there is no revaluation at time point t-1, but share price falls and, if it falls far enough, a special charge arises. In this case the special charge can be expressed, informatively, as

sc= min(0,(Vt-Vt-1)+(Vt-1-oat-1))

The special charge will be zero so long as the fall in share price is less than (Vt-1-oat-1). Beyond this point the special charge increases dollar for dollar with the fall in price.

From this analysis we see that an asymmetric relation between reported earnings and share price changes arises in period t if and only if Vt is less than oat. Given that higher levels of ex-ante conservatism reduce the probability of Vt being less than oat we see that the likelihood of observing an asymmetric response to bad news will be negatively associated with ex-ante conservatism.

**The Pope and Walker Model**

Pope and Walker (1999) present a model, which captures the essential features of ex-post earnings conservatism. The model defines permanent (i.e. economic) earnings as:



with



where pt is the share price at time t and k is one over the cost of equity capital. Permanent earnings are assumed to follow a random walk, and all earnings are paid out as dividends. Intuitively permanent earnings are equal to the maximum dividend that can be paid out at the end of the year without lowering the value of the equity.

A key feature of the model is the relation between permanent earnings and reported earnings.



where



Here et+  represents positive net shocks to permanent earnings and et- negative net shocks. θ 0 is a parameter representing the extent to which positive shocks are under-recognised. If θ 0 = 0, then all positive shocks are recognised immediately. If θ 0 = 1, then no positive shocks are recognised in current earnings. The empirical evidence reported in Basu (1997) and Pope and Walker (1999) shows that θ0 is typically significantly greater than zero i.e. good news tends to be under-recognised in reported earnings. γ0 represents the extent to which bad news shocks are over-recognised in earnings. If reported earnings were unbiased, γ0 would be equal to zero. On the other hand, if the wealth effect of a negative shock is immediately written off as a loss, then γ0 will be equal to (k-1). Finally, Vt represents the effect of the gradual reversals of prior period accounting conservatism shocks on reported earnings, which by assumption, are not correlated with current period shocks.

Equations (1), (2), and (3) together yield the following empirical model,



where



In this model, the sensitivity of reported earnings to good news is the parameter associated with Rt i.e. (1-θ0)/k. We refer to this parameter as β1. Similarly, the incremental sensitivity of earnings to bad news is the parameter associated with Rt Dt i.e. (θ 0 + γ0)/k. We refer to this parameter as β2.  The sum of β1 and β2 is the total sensitivity of earnings to bad news i.e. (1+γ0)/k. For the purposes of this paper the main parameter of interest is β2. This parameter measures the extra proportion of any current year reduction in market value that, relative to a permanent earnings benchmark, is over-recognised in reported earnings.

## The Pope and Walker model assumes that the under-recognition of good news or the over-recognition of bad news depends only on the sign and magnitude of the current period shock to permanent earnings. In practice the extent of any current period conservatism may depend on the “stock” of conservatism the firm has already accumulated relative to the current level of permanent earnings.

A firm’s stock of conservatism is defined, recursively, as



## The stock of conservatism at time t is the difference between permanent earnings and reported earnings summed over the life of the firm up to time t. In each year if permanent earnings exceeds reported earnings then the stock of conservatism increases. If the stock of conservatism of a firm is already high (say several times higher than permanent earnings) then managers may be able to persuade their accountants/auditors that there is no need for any further over/under-recognition of earnings in the current period. Thus, it seems reasonable to argue that the likelihood of observing an asymmetric relation between current deflated earnings and current period price relative is negatively related to the stock of cumulated conservatism. Therefore our main empirical hypothesis is that β2 will be higher for high book to market firms than for low book to market firms.

2. Research Design

Our main hypothesis is that the incremental bad news sensitivity of earnings to returns depends on the stock of ex-ante conservatism inherited from the past. We use the market to book value of the firm at the start of the year as our proxy for the level of ex-ante conservatism. We estimate equation (4) cross-sectionally for the 15 years 1985 to 1999. Each annual cross-sectional regression is partitioned by the start of year book to market decile. Firms with the lowest 10% of book to market ratios are placed in decile 1, and firms with the highest 10% of book to market ratios are placed in decile 10. The annual regression estimates produce 15 independent annual estimates of the main parameters of interest, notably the incremental bad news sensitivity parameter. In the interest of avoiding potential problems of inference arising from heteroscedasticity and/or cross-sectional dependence, in the annual regressions, all our hypothesis tests are based on the 15 independent annual parameter estimates along the lines suggested by Bernard (1987)). We also implement the extended version of the Pope and Walker (1999) model that examines the pattern of response of deflated earnings to current period and three periods of lagged returns. This model provides further information about the speed of incorporation of good and bad news into earnings.

## 3. Data and Descriptive Statistics

Our sample is based on U.S. accounting data from *Compustat* and stock returns data from *CRSP*. The sample includes all industrial firms listed on the NYSE, AMEX, and NASDAQ with data available in *Compustat*. We exclude banking, financial, and insurance firms. Observations with extreme returns scaled earnings in the top and botton 1% of the annual distributions were deleted.

Table 1 reports the full sample descriptive statistics for the main variables of the study. The mean value of EPS is close to zero, just over one percent. But this variable is highly negatively skewed, indicating that the arithmetic mean is not a reliable measure of central tendency for this variable. The median value is 4.36%. This value is quite a bit lower than the value reported in Pope and Walker. This is probably due to the increasing importance of high technology firms in the sample, that have a tendency to report very low earnings during the early part of their life cycles. It also interesting to contrast the high negative skewness of the deflated earnings variable with the high positive skewness of the price relative variable. One should not be surprised to find a non-linear relation between such pairs of variables.

The distribution of the earnings yield variable across book to market deciles is also interesting. In particular we note that the deflated earnings distribution for decile 10 exhibits greater variation than the other deciles i.e. higher standard deviation, higher range, and higher inter quartile range. Decile 10 also has a negative mean value, possibly due to the presence of large negative transitory items.

## 4. Results

As background to the main results we first ran the main regression without partitioning by market to book. This allows our results to be directly compared with the original results of Basu (1997) and Pope and Walker (1999). The results, reported in Table 2, show that the bad news slope dummy is positive in every year, ranging from a minimum value of 0.15 to a maximum value of 0.38. There is a peak in the value of this parameter in 1991, and no discernible time trend. These results are similar in magnitude to those reported by Basu (1997) and Pope and Walker (1999), but, unlike Basu (1997) these results do not support the hypothesis that bad news sensitivity has increased in the 1990s. The level of bad news sensitivity seems to have been fairly level since 1995. On the other hand there is some, slight, evidence that good news sensitivity has decreased in the 1990’s. This could be due to the increasing preponderance of technology stocks in the sample from 1990 onwards.

Table 3 summarises the main regression results produced by partitioning the year by year regressions by opening book to market deciles. The results provide remarkably strong support for our main hypothesis. There is an almost monotonic relation between the incremental bad news slope dummy, β2, and book to market decile. The incremental bad news sensitivity for decile 10 is two and a half times greater than the corresponding value for decile 1. Comparing this result with table 2 we see that the cross-sectional range of this parameter, 0.156 to 0.429, by book to market decile is actually greater than its time series range in the un-partitioned regressions.

Figure 1, presents a graph of the bad news returns parameters against book to market decile. A strong positive relation between the two variables is clearly evident. Table 4 reports the year by year bad news slope parameters for deciles 1 and 10 for all 15 years. The bad news slope parameter for decile 10 is greater than the corresponding decile 1 value in all 15 years. A formal test for the difference in the mean values of the decile 10 and decile 1 parameters produced a t value of 6.274, which is significant at the 1 percent level (two-tailed).

Table 5 reports a summary of the regression results generated by the “extended” Pope and Walker (1999) model that shows the pattern of response of earnings to current and three years past returns. These results reveal a marked difference between high book to market firms and low book to market firms with respect to the responsiveness of earnings to both good and bad news. Focusing first on bad news it is clear that decile 10 firms exhibit a high level of contemporaneous response to bad news. The mean incremental bad news current response is 0.343 with a t value of 6.677. This contrasts markedly with the corresponding statistic for decile 1 which is only 0.037 (t value 2.841). The results also indicate that decile 10 firms exhibit a full response to bad news in the year the bad news occurs. This is very different from the decile 1 firms where the bad news response parameter is of the same order of magnitude with lags of one year and two years as the contemporaneous response. Thus it appears to take longer for the full effect of bad news to feed through for decile 1 firms than decile 10.

Turning now to good news, it can be seen that the earnings of decile 1 firms exhibit no significant response to contemporaneous good news. The mean response parameter although positive, is not significantly different from zero. A significant response to good news does occur one year later. Recall that these firms are the high market to book firms with high levels of ex-ante conservatism. Such firms significantly delay the incorporation of good news into reported earnings. On the other hand, we see that decile 10 firms exhibit a contemporaneous response of current earnings to good news that is highly significant at the 1% level. The same is true of deciles 6 to 8. The earnings of high book to market firms respond more rapidly than the earnings of low book to market firms with respect to contemporaneous news. A slightly puzzling feature of the results in table 5 is the general decline in the good news responses at lag 3 compared to lag 1. This effect is inconsistent with the original Pope and Walker theory.

**Concluding Remarks**

This paper draws a conceptual distinction between ex-ante and ex-post conservatism. This distinction is crucial in understanding the different notions of conservatism that have figured prominently in the recent research literature. In particular we have argued that the scope for ex-post conservatism, of the Basu variety, is likely to be constrained by the extent of ex-ante conservatism. This distinction could prove helpful in explaining why some GAAP regimes, such as Germany, which have historically enjoyed a reputation for conservatism, appear to score “badly” according to the Basu type measures of conservatism. Certainly it is logically possible for a regime that is highly conservative ex-ante, to have very low Basu type measures of conservatism.

We argue that it is difficult to produce a complete analytical model that simultaneously accounts for ex-ante and ex-post conservatism. On the basis of heuristic arguments we have predicted that the asymmetric responsiveness of earnings to bad news is likely to vary with indicators of ex-ante conservatism. Using book to market as a proxy for ex-ante conservatism, the empirical work detects a strong positive relation between book to market and the asymmetric responsiveness of earnings to bad news.

## Appendix A

**Key Elements of the Feltham and Ohlson (1995b) Model**

**Basic Notation**

R = 1 + r (R = 1 plus the discount rate)

cr = net operating cash receipts before capital investment

ci = capital investment

c = cr – ci

V = Present Value of the firm

Assumptions of the Model

i) V is equal to the discounted present value of future cash flows i.e.



ii) Linear Cash Flow Information Dynamics (CFDE)



Note that these information dynamics imply that the cash inflows from investing ci at time t are expected to be κγτ-1ci at time t+τ. It is easy to show that the Net Present Value of this investment is:



iii) The following **accounting relations** are assumed true by definition

*Clean surplus relation for operating assets*

*oat+1 = oat + cit+1 – depnt+1* (CSR)

Where *oa* denotes operating assets and *depn* denotes accounting depreciation.

*Accounting deprecation*

*depnt+1 = (1- δ)oat*(DP)

Note that the economic rate of depreciation in this model is (1-γ). Accounting is said to be conservative if (1-*δ*) exceeds (1- γ).

*Operating Earnings*

ox = cr - depn

*Abnormal operating earnings*



## Proof of Proposition 1.

## Proposition 1 can be expressed symbolically as follows:

## 

## Since the model implies that market value is independent of accounting policy A.1 can be expressed as requiring.

## 

## Intuitively this states that the reported level of operating assets will increase as the book rate of accounting depreciation decreases (recall that the rate of depreciation is one minus δ). The reader might well believe that this proposition is so obviously true that no proof is required. Nevertheless we believe it is of interest to see how such comparative static propositions can be formally established for the Feltham and Ohlson (1995b) model. In effect we show how the comparative statics of accounting policies under conditions of perfect certainty can be extended to the Feltham and Ohlson model.

## Formal Proof of Proposition 1.

## Since value is not affected by accounting policy the total derivative of valuation equation (FO) (see Proposition A above) with respect to *δ* must equal zero i.e.

## 

## The information dynamics of the model imply that the long run stationary growth rate of the firm is *ω* minus one. Thus, on average, *oat* is equal to *ωoat-1*. Hence:-

## 

## Now recall the definition of abnormal operating earnings i.e.

## 

## Differentiating this with respect to *δ* yields

## 

## Making use of (A.4) this simplifies to

## 

## Substitute (A.7) into (A.3) and make use of (A.4) again to yield

## 

## This in turn simplifies to

## 

## Since ω is greater than or equal to one, and δ is less than one this term is unambiguously positive except for firms for which the long run expected level of operating assets is zero. QED.References

Ball, R., Kothari, S.P., and Robin, A. “The Effects of Institutional Factors on Properties of Accounting Earnings: International Evidence.” Working Paper, University of Rochester, October 1997.

Basu, S. “The Conservatism Principle and The Asymmetric Timeliness of Earnings.” *Journal of Accounting and Economics* 24, 1997, 3-37.

Feltham, G. and Ohlson, J. (1995a) “Valuation and Clean Surplus Accounting for Operating and Financial Activities.” *Contemporary Accounting Research* 11 (Spring) pp. 689-731.

Feltham, G. and Ohlson, J. (1995b) “ Uncertainty Resolution and The Theory of Depreciation Measurement.” *Journal of Accounting Research* Vol 34 (Autumn) pp. 209-234.

Givoly, D, and Hayn, C. (2000) “The changing time-series properties of earnings, cash flows and accruals: Has financial reporting become more conservative?” *Journal of Accounting and Economics* 29 pp. 287-320.

Liu, J. and Ohlson, J. (1999) “The Feltham and Ohlson Model (1995): Empirical Implications.” Mimeo Stern School of Busness, N.Y.U., and Anderson School of Management, U.C.L.A..

Ohlson, J. (1995) “Earnings, Book Values, and Dividends in Equity Valuation.” *Contemporary Accounting Research* 11 (Spring) pp. 661-687.

Pope, P.F., and Walker, M. (1999) “International Differences in the Timeliness, Conservatism and Classification of Earnings.” *Journal of Accounting Research*, 1999, Supplement pp.53-98.

**Table 1:** Descriptive Statistics

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  |  | Mean | S.D. | Min | Q1 | Median | Q3 | Max |
| *Full Sample* | Et/Pt-1 | 0.011 | 0.144 | -1.973 | -0.018 | 0.047 | 0.084 | 0.367 |
| (n=48,885) | Rett | 0.138 | 0.592 | -0.924 | -0.223 | 0.054 | 0.355 | 7.423 |
| *Distribution of earnings* | *by book-to-market portfolio* |  |  |  |  |  |  |  |
|  | Low | -0.026 | 0.111 | -1.080 | -0.064 | 0.003 | 0.039 | 0.300 |
|  | 2 | 0.004 | 0.101 | -0.764 | -0.023 | 0.035 | 0.059 | 0.282 |
|  | 3 | 0.019 | 0.098 | -0.752 | 0.002 | 0.046 | 0.070 | 0.328 |
|  | 4 | 0.026 | 0.107 | -0.982 | 0.009 | 0.055 | 0.079 | 0.346 |
|  | 5 | 0.026 | 0.118 | -1.168 | 0.010 | 0.056 | 0.085 | 0.337 |
|  | 6 | 0.037 | 0.113 | -1.346 | 0.016 | 0.065 | 0.092 | 0.331 |
|  | 7 | 0.033 | 0.130 | -1.114 | 0.011 | 0.067 | 0.098 | 0.367 |
|  | 8 | 0.030 | 0.147 | -1.592 | 0.003 | 0.067 | 0.107 | 0.360 |
|  | 9 | 0.009 | 0.176 | -1.410 | -0.035 | 0.054 | 0.110 | 0.345 |
|  | High | -0.051 | 0.248 | -1.973 | -0.131 | 0.025 | 0.105 | 0.358 |

**Table 2.**

**Year by Year Regressions of Deflated Earnings on**

**Positive and Negative Price Relatives From 1985 to 1999**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Year | Intercept | Bad News Dummy | Return | Return Times  Bad News Dummy |
| 1985 | 0.057 | -0.030 | 0.054 | 0.264 |
| 1986 | 0.046 | -0.014 | 0.062 | 0.224 |
| 1987 | 0.057 | 0.025 | 0.035 | 0.236 |
| 1988 | 0.057 | -0.004 | 0.080 | 0.218 |
| 1989 | 0.062 | -0.008 | 0.028 | 0.255 |
| 1990 | 0.072 | 0.023 | -0.025 | 0.351 |
| 1991 | 0.032 | -0.036 | 0.015 | 0.381 |
| 1992 | 0.033 | -0.015 | 0.039 | 0.155 |
| 1993 | 0.035 | -0.012 | 0.023 | 0.238 |
| 1994 | 0.049 | 0.013 | 0.036 | 0.199 |
| 1995 | 0.054 | -0.018 | -0.007 | 0.239 |
| 1996 | 0.045 | -0.004 | 0.015 | 0.203 |
| 1997 | 0.037 | -0.022 | 0.033 | 0.165 |
| 1998 | 0.041 | 0.011 | 0.001 | 0.203 |
| 1999 | 0.027 | 0.034 | -0.016 | 0.259 |

**Table 3.**

**Mean Values of Year by Year Regression Estimates by Book to Market Decile**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Book/Market Decile** | **Intercept** | **Bad News Intercept Dummy** | **Return**  **β1** | **Bad News Slope Dummy times Return**  **β2** |
| 1 | 0.018 | -0.006 | -0.020 | 0.156 |
| 2 | 0.036 | 0.002 | 0.004 | 0.138 |
| 3 | 0.050 | 0.009 | 0.009 | 0.180 |
| 4 | 0.053 | 0.009 | 0.021 | 0.185 |
| 5 | 0.056 | 0.013 | 0.021 | 0.247 |
| 6 | 0.065 | -0.005 | 0.008 | 0.227 |
| 7 | 0.061 | 0.005 | 0.037 | 0.303 |
| 8 | 0.057 | 0.003 | 0.042 | 0.328 |
| 9 | 0.040 | -0.004 | 0.063 | 0.356 |
| 10 | -0.003 | -0.014 | 0.057 | 0.429 |

Notes. The table shows the mean values of the year by year regression estimates from 1985 to 1999.

Table 4

Year by Year Bad News Slope Parameters for Book to Market Deciles 1 and 10

|  |  |  |  |
| --- | --- | --- | --- |
| Year | Bad News Slope Decile 1 | Bad News Slope Decile 10 | Decile 10  Minus  Decile 1 |
| 1985 | 0.136 | 0.397 | 0.261 |
| 1986 | 0.037 | 0.136 | 0.099 |
| 1987 | 0.221 | 0.503 | 0.281 |
| 1988 | 0.109 | 0.306 | 0.197 |
| 1989 | -0.007 | 0.509 | 0.516 |
| 1990 | 0.326 | 0.722 | 0.396 |
| 1991 | 0.305 | 0.962 | 0.657 |
| 1992 | 0.189 | 0.272 | 0.084 |
| 1993 | 0.181 | 0.464 | 0.283 |
| 1994 | 0.095 | 0.311 | 0.216 |
| 1995 | 0.207 | 0.388 | 0.181 |
| 1996 | 0.051 | 0.528 | 0.476 |
| 1997 | 0.153 | 0.244 | 0.091 |
| 1998 | 0.168 | 0.322 | 0.155 |
| 1999 | 0.173 | 0.380 | 0.207 |
|  |  |  |  |
| Mean | 0.156 | 0.429 | 0.273 |
|  |  |  |  |
| Std. Error | 0.024 | 0.053 | 0.044 |
|  |  |  |  |
| t value | 6.582 | 8.151 | 6.274 |

**Table 5: Summary of Year by Year Regressions of Deflated Earnings Yield on Current Return and Three Years Lagged Returns.**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Statistic | Book to market  Decile | Intercept | Bad News  Dummy | R01 | R12 | R13 | R34 | DR01 | DR12 | DR23 | DR34 | Adjusted R Square | NOBS |
| Mean | 1 | 0.025 | -0.037 | 0.004 | 0.047 | 0.034 | 0.027 | 0.037 | 0.034 | 0.029 | 0.021 | 0.427 | 0.377 |
| tvalue |  | 3.057 | -4.101 | 0.677 | 6.459 | 3.367 | 2.208 | 2.841 | 3.236 | 1.272 | 0.825 |  |  |
| mean | 2 | 0.044 | -0.015 | 0.011 | 0.061 | 0.060 | 0.027 | 0.063 | 0.031 | 0.020 | 0.083 | 0.528 | 0.499 |
| tvalue |  | 4.044 | -1.124 | 2.388 | 5.884 | 5.419 | 1.953 | 3.822 | 1.747 | 0.826 | 2.585 |  |  |
| mean | 3 | 0.051 | -0.002 | 0.017 | 0.065 | 0.071 | 0.049 | 0.094 | 0.034 | 0.020 | 0.060 | 0.469 | 0.440 |
| tvalue |  | 6.789 | -0.374 | 3.157 | 7.279 | 7.483 | 5.527 | 6.564 | 2.204 | 0.812 | 3.290 |  |  |
| mean | 4 | 0.049 | 0.002 | 0.018 | 0.101 | 0.065 | 0.077 | 0.140 | -0.013 | 0.045 | 0.015 | 0.535 | 0.511 |
| tvalue |  | 11.820 | 0.224 | 2.210 | 12.682 | 5.498 | 5.546 | 3.693 | -0.899 | 2.055 | 0.603 |  |  |
| mean | 5 | 0.042 | -0.004 | 0.019 | 0.108 | 0.114 | 0.068 | 0.154 | -0.006 | -0.029 | -0.005 | 0.531 | 0.509 |
| tvalue |  | 10.215 | -0.900 | 2.697 | 11.288 | 10.618 | 12.217 | 8.241 | -0.401 | -1.950 | -0.367 |  |  |
| mean | 6 | 0.056 | 0.000 | 0.031 | 0.104 | 0.087 | 0.061 | 0.150 | 0.003 | 0.029 | 0.035 | 0.519 | 0.498 |
| tvalue |  | 11.129 | 0.058 | 3.856 | 12.512 | 6.069 | 3.315 | 5.907 | 0.226 | 1.218 | 1.137 |  |  |
| mean | 7 | 0.045 | 0.006 | 0.049 | 0.121 | 0.126 | 0.084 | 0.238 | 0.013 | -0.031 | -0.016 | 0.542 | 0.523 |
| tvalue |  | 12.779 | 1.176 | 5.085 | 7.594 | 10.410 | 6.589 | 5.058 | 0.725 | -1.604 | -0.875 |  |  |
| mean | 8 | 0.048 | 0.010 | 0.061 | 0.121 | 0.080 | 0.081 | 0.262 | -0.008 | 0.025 | -0.011 | 0.491 | 0.470 |
| tvalue |  | 7.083 | 1.325 | 8.558 | 5.537 | 4.741 | 6.841 | 7.696 | -0.258 | 1.110 | -0.577 |  |  |
| mean | 9 | 0.041 | -0.005 | 0.081 | 0.165 | 0.129 | 0.052 | 0.279 | -0.041 | -0.056 | 0.016 | 0.469 | 0.446 |
| tvalue |  | 5.034 | -0.654 | 6.397 | 14.310 | 11.992 | 2.895 | 6.765 | -1.808 | -2.639 | 0.636 |  |  |
| mean | 10 | 0.033 | -0.013 | 0.081 | 0.171 | 0.132 | 0.094 | 0.343 | -0.031 | -0.044 | -0.040 | 0.400 | 0.373 |
| tvalue |  | 3.530 | -2.487 | 4.807 | 4.464 | 5.936 | 5.018 | 6.677 | -0.753 | -1.374 | -2.043 |  |  |

Figure 1

1. An alternative nomenclature might be *event-driven conservatism*. [↑](#footnote-ref-1)