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Conservatism and Accruals: Are They Interactive?

Evidence from the Greek Capital Market

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Abstract

A large body of accounting research in the past has documented the existence of conservatism and timeliness of income recognition as distinct factors which affect the returns-earnings relation. However, earnings are not the only measure of financial performance that is affected by conservatism. The aim of this paper is to examine the impact of conservatism on accrual measures and drivers, in the Greek capital market between 1998 and 2004. Results indicated that conservatism has a significant impact on accrual measures (Total and non-discretionary accruals) but not on accrual drivers (earnings, sales, change in sales and property, plant and equipment). These findings suggest that common accrual models are misspecified, thus future research must consider the impact of conservatism in accrual models.

Keywords: Conservative accounting, Timeliness of income recognition, Accrual models, Market-based accounting research, Greece

1. Introduction

In this paper I examine the effect of timeliness and conservatism on accruals measures and earnings components, used as explanatory variables in accrual models, in the Greek accounting setting. Greece is a code law country and adopts the historic cost accounting procedure for recording, valuating and measuring firms' assets, liabilities, income and expenses. This practically means that the Greek accounting system can be characterized as a conservative-tax driven accounting system, since financial entities report only realised income but on the other hand they anticipate all losses (Hevas and Siougle, 2006).

Under globalized and highly volatile financial markets, as they are today, financial information could be proved useful for minimizing the uncertainty concerning future earnings. On a case like this, managers always hold valuable information about a firm's value and functions. In the case when the manager's return is related with the level of reported earnings, then they will logically conceal any relative information from the financial statements that would have a negative impact on their compensation. (Basu, 1997)

This situation refers to the case of conservatism in income recognition, where a financial announcement considered being negative, tends to be realized faster than an announcement that has a positive impact on investor's equity. Conservatism has inclined accounting theory and practice for centuries. As Basu (1997) argues, "historical records from early 15th century trading partnerships show that accounting in the medieval Europe was conservative". Conservatism relates to the situation in which if accounting was unregulated, then counterparties would agree that the accounting numbers used in financial statements, indicating their transactions, would be determined conservatively.

The sources of conservatism may be detected on the fact that investors as well as regulatory authorities may be more concerned in receiving bad news than good news in order to detect problem areas and to take rational investment decisions. Also accountants find bad information from business managers more plausible than good news. Moreover conservatism may arise from different legal and accounting environments among countries. (Ball et al, 2000)

However, someone must consider the case that conservatism has a significant impact on accruals and the way that accruals are measured. Ball and Shivakumar (2006) argue that cash flows are realised only when they occur thus are not contemporaneously affected by conservatism. Accrual models have received great attention by researchers worldwide. Accruals are defined as the difference between accounting earnings and cash flows (or cash flows from operations). Large positive accruals designate that earnings figures are higher compared to cash flows generated by the firm. This difference is caused by managers' decisions as to when and how much revenues and costs must be disclosed. Many studies have argued that firms with high accruals (thus earnings are higher than cash flows) perform worse, by means of stock returns, compared to firms with low accruals (Sloan, 1996; Houge and Loughran, 2000; Hribar, 2000; Xie, 2001).

The above finding could be attributed in two reasons. The first is the autonomy that generally accepted accounting principles (GAAP) provide to managers regarding the level and the timing of the disclosure of revenues and expenses. The second is the slow reaction of the market to value relevant events. A large body of studies (Abarbanell and Bushee, 1998; Piotroski, 2000; Thomas and Zhang, 2001) have documented that the market responds with a delay or under reacts to some value relevant information that occur in the market. Alternatively, this timeliness could be observed in information contained in accruals as well.

The aforementioned fact has been widely documented by many researchers such as Dechow et.al (1995), Guay et.al (1996), Young (1999), Thomas and Zang (2000) and Moreira and Pope (2006). They all suggest that accruals models like Jones (1991) are misspecified, imprecise in estimating discretionary accruals and they perform poorly in terms of forecasting accuracy and explanatory power. Under this framework, our aim is to seek empirical evidence regarding the impact of conservatism on accrual measures and drivers within the Greek accounting setting. Despite the fact that the aforementioned issue has received great attention from researchers, the majority of studies on this field have focused on well developed capital markets creating a gap on the literature of less developed and organized stock markets. The Greek accounting setting can be characterized by moderate tax and financial accounting conformity, moderate use of accruals, low importance of the capital market and weak corporate governance. Therefore, the present study adds to the existing literature by examining the issue of accruals conservatism within the context of an emerging capital market like Greece. To our knowledge, this the first study which considers the aforementioned issues in the Greek accounting setting. Following Moreira and Pope (2006), we believe that accrual drivers will be unaffected by conservatism, since they are originated on a realization basis, but on the contrary accrual measures are expected to be influenced by conservatism.

Our results partially verify the results by Moreira and Pope (2006). Accrual measures (Total and non-discretionary accruals) are affected by conservatism but not such effect can be verified for the discretionary accruals. Additionally, accrual drivers are all significantly and negatively affected by conservatism, something which confirms the accounting realization principle.

The rest of the paper is organized as follows. The next section presents a brief discussion on the Greek accounting setting, followed by a review of relative literature. Section 4 describes the research framework while section 5 presents the data selection procedure alongside with some descriptive statistics of the sample variables. Section 6 illustrates the empirical results and finally the last section is dedicated to concluding remarks and fruitful ways for future research.

2. The Greek accounting setting

An extensive amount of research on the past has examined the earnings-return relation within countries of different accounting regimes. Greece has many significant differences from other developed markets since it is classified within the emerging Asian and Near East accounting regime (alongside with India, Indonesia, Korea, Malaysia, Philippines, Thailand and Turkey). The Greek accounting setting can be characterized by moderate tax and financial accounting conformity, moderate use of accruals, low importance of the capital market and weak corporate governance. On the contrary, countries such as US and the UK (Classified within the North American and Anglo-Saxon accounting regimes) can be regarded as highly developed markets with low tax and financial accounting conformity, very high use of accruals, high importance of the capital market and very strong corporate governance. *(*Francis et.al, 2000; Defond and Hung, 2004; Myring, 2006*)*

Being more specific, Greece is a code law country and its accounting system (originating from the French accounting system) adopts the historic accounting principle for the valuation of assets, liabilities, revenues and expenses. The main consequence of this principle is that the financial statements and the balance sheet especially, do not present the fair value of the firm's assets. This creates problems in the depreciation and amortization of assets, distribution of dividends and in the estimation of deferred taxation and in many other accounting issues. There is a long debate whether the historical cost accounting procedure is beneficial or detrimental for the informational relevance of the financial statements, since those who are in favour of that method argue that the market value of assets is actually a synthetic estimation of their value and it will not help the accounting valuation due to the changes of the market values over time. The historical cost accounting procedure was embedded in the Greek legislation through the EU 4th directive and the only differentiation was made by the tax code 2065/92, which stated that firms are obliged to revaluate their asset every four years.

The Greek accounting system can be characterized as conservative and tax oriented. This means that losses and expenses are realized immediately in the financial statements, even if they are not accrued but the relative provision has been made, while profits are incorporated into the financial statements when they occur *(*Meigs and Meigs, 1988*)*.

Finally, the Greek GAAP designates the regulatory framework for timely financial reporting of the publicly listed firms. Greek firms are obliged to publish their financial statements by the 161st day after the end of the fiscal year. There is no requirement for any preliminary announcements or press release of earnings earlier from the publication dates. Ansah

and Leventis (2006) document that the 28 per cent of publicly listed firms in Greece report their financial statements within the first 60 days of the time horizon, while the 35 per cent of the firms make use of the whole time period of 161 days. Overall Greek firms need, on average, 131 days to report their financial statements after the fiscal year-end. Thus conservatism and timeliness of income recognition consist two fruitful avenues for research within the Greek accounting setting.

3. Literature review & testable hypothesis

The majority of the studies on accrual models are being concentrated on the detection of potential fraudulent activity and the quality of the published financial statements. Under this framework, many researchers made efforts to decompose overall accruals between the non-discretionary component, which captures the impact of business conditions, and the discretionary component which reflects managerial choices. Jones (1991) was the first who attempted to make that distinction, followed by DeFond and Jiambalvo (1994), who estimated non-discretionary accruals as a function of changes in sales and the level of property, plant and equipment.

Jones (1991) model has been extensively used in the literature, despite its disadvantages but since there is no other plausible model it is used as a benchmark for research in this field. Jones (1991) model is based on a simple OLS regression including accruals used as the dependent variable and one or more earnings components as the independent variables. (Earnings, sales, property plant and equipment etc). The main characteristic of these earnings components is that they are expected to be recognised according to the realization principle. In other words, by the time they occur there is no doubt about their amounts, thus they are expected to remain unaffected by conservatism.

Additionally, Basu (1997), Pope and Walker (1999), Ball et.al (2000) and Moreira and Pope (2006) document that the asymmetric affect of conservatism impacts earnings through accruals (short-term and long-term accruals). These findings are justified by the fact that bad news is recognized immediately after they become expected, but on the contrary good news is recognized when they become realized. Taking into consideration the empirical findings discussed above, we expect that accrual measures will be asymmetrically affected by conservatism, while the opposite will stand for accrual drivers. This expectation is formed in the following hypothesis:

H_1: The contemporaneous timeliness of good and bad news is expected to affect accrual measures but not accrual drivers.

4. Research design & variables selection

In order to examine the impact of conservatism over accruals and earnings components we used an adjustment of the model used in Moreira and Pope (2006).

$$\mathbf{X_t/P_{t-4} = b_1 + b_2*D_{it} + b_3* R_{it} + b_4*R_{it}*D_{it} + e_{it}} \quad (1)$$

where X is one at a time each of earnings components and accrual measures, P is the fiscal year end closing price, $R=(P_t–P_{t-1})/P_{t-4}$ and D is a dummy variable taking the value of one (1) if R_{it} is negative and zero (0) otherwise and $R_{it}*D_{it}$ is the product of R_{it} and D_{it}. Coefficient b_3 is the indicator of earnings response to good news. As argued in Pope and Walker (1999) and Moreira and Pope (2006) this coefficient is expected to be positive and its size is determined by the speed at which good news is recognized in earnings. The sum of coefficients b_3 and b_4 is the indicator of earnings response to bad news. If conservatism impacts asymmetrically on earnings, coefficient b_4 is expected to be positive.

The variable X as we mentioned previously is one at a time the accrual measures and the earnings components used as drivers in the accrual models. The main accruals measures used in our research are the total accruals (change in current assets minus change in current liabilities minus depreciation), discretionary and non-discretionary accruals. Since Moreira and Pope (2006) and Ball and Shivakumar (2006) argue that discretionary and non-discretionary accruals are measured with error, we include these measures into model one (1) in order to test directly the impact of conservatism in those measures.

For this reason we used the cross-sectional variation of the Jones (1991) model as it was modified by DeFond and Jiambalvo (1994). This model estimates non-discretionary accruals as a function of changes in sales and the level of property, plant and equipment by estimating the following OLS equation:

$$\mathbf{ACC_{it} / TA_{t-1} = \alpha(1/ TA_{t-1}) + \beta(\Delta Sales_{it}/ TA_{t-1}) + \gamma(PPE_{it}/ TA_{t-1}) + e_{it}} \quad (2)$$

Where:

ACC_{it} is total accruals defined as above

$\Delta Sales_{it}$ is the change in net sales ($Sales_{it} – Sales_{it-1}$)

PPE_{it} is the level of property plant and equipment for each year

Non-discretionary accruals (NDAC) are defined as the fitted values from equation two (2):

$$NDAC_{it} / TA_{it-1} = \hat{\alpha}(1/TA_{it-1}) + \hat{\beta}(\Delta SALES_{it} / TA_{it-1}) + \hat{\gamma}(PPE_{it} / TA_{it-1}) \quad (2\alpha)$$

and the discretionary accruals are defined as the residuals from estimating equation one (1):

$$DAC_{it} = ACC_{it} / TA_{it-1} - \hat{\alpha}(1/TA_{it-1}) + \hat{\beta}(\Delta SALES_{it} / TA_{it-1}) + \hat{\gamma}(PPE_{it} / TA_{it-1}) \quad (2\beta)$$

The cross-sectional model has been used for a number of important reasons. First of all, the cross-sectional model generates and uses more observations, thus increasing the validity of the parameters estimations. Also controls for the effect of non-stationarity, something that the time series model cannot and finally the cross-sectional model increases the power of tests that examine time-series behaviour in discretionary accruals (see also Subramanyan, 1996).

Moreover the earnings components which we selected as the accrual drivers are sales, the change in sales, end of year's property plant and equipment and earnings excluding taxes and discontinued operations. All variables are deflated by the fourth lag market value as in Pope and Walker (1999).

5. Data & descriptive statistics

Our sample consists of 101 companies, all listed in the Athens Stock Exchange, with full annual data of reported earnings and stock prices during the period 1998-2004. Data were collected from the Athens Stock Exchange database. The initial sample contained 112 companies with full data for the period under investigation but we restricted it to companies with December fiscal year-end limiting the final number to 101. The following table 1 contains an analytical presentation of the data selection procedure.

INSERT TABLE 1 HERE

We use per share values of earnings and returns in order to reduce heteroscedasticity on the error terms (see also Barth et.al, 1992; Kothari and Zimmerman, 1995). The earnings variable is annual earnings excluding taxes, extraordinary items and discontinued operations, scaled by the market value four periods ago (As in Pope and Walker, 1999). Return variable is measured over the fiscal year. Annual stock returns, exclusive of dividends, are used and the earnings and price data are adjusted for stock splits, stock dividends and stock issues. No further trimming of the sample was conducted since we did not want to lose observations and affect the final results.

We have used annual financial data since quarterly data has the disadvantage being available for a shorter time period and make the analysis more complicated introducing a relative measurement error on the estimates (Dechow et.al, 1998). The following table 2 includes some descriptive statistics of the accrual measures and drivers variables used for the evaluation of model one (1). As we can see the mean of all variables is higher than the median suggesting that the distribution of the data is positively skewed. Additionally, the standard deviation in all variables is higher compared to the mean. Also the 75 per cent of the firms have a return up to 45 cents and earnings yield up to 17 cents. However, we cannot say the same for firms in the 1st quartile where the earnings yield is close to zero and the return is negative. Finally, the median of total accruals is zero and negative for the discretionary and non-discretionary components but on the contrary accrual drivers have a median which is higher than earnings.

INSERT TABLE 2 HERE

Table 3 displays the correlations among the main variables. Pearson correlations are below the diagonal and Spearman correlations above the diagonal. As we can see the earnings variable is significantly and positively associated with property, plant and equipment and sales since these variables are strongly related in accounting terms. Accruals measures are highly correlated and in some cases it reaches up to 76 per cent. Finally, returns are highly and significantly correlated with all accrual measures (the highest is with non-discretionary accruals 54.4 per cent) but the opposite stands for earnings and change in sales (Returns and change in sales are negatively associated). It seems that accrual measures do have incremental information that can affect returns or put it another way stock market prices accruals more intensively compared to earnings and its components.

INSERT TABLE 3 HERE

6. Empirical results

In this section we will present the empirical findings from estimating model one (1), which is an adjusted version of the Pope and Walker (1999) model. Our aim is to examine the impact of good and bad news on earnings, accrual measures and drivers. The relative results are presented on table 4. We report pooled regression results for the period 1998-2004, but our focus is on the coefficients of good and bad news. The column "GN=BN" indicates the results of a test for the difference of coefficients of good and bad news.

INSERT TABLE 4 HERE

As we can see the coefficient of good news (b_3) is positive and significant in all variables except the change in sales. Total accruals show the highest timelines compared to the other variables (2.46), followed by property plant and equipment and sales. However, earnings seem to be less timely compared to its components and judging from the fact that the coefficient of bad news is negative and is statistically different from b_3 in a conventional level we can argue that

the earnings variable is unaffected by conservatism. This finding is inconsistent to Pope and Walker (1999), Basu (1997) and Moreira and Pope (2006) and needs to be addressed by future research in terms of different methods for the estimation of the earnings variable or the relative informativeness of earnings components (below the line items) in the issue of conservatism.

Regarding our accrual measures, total accruals and non-discretionary accruals are positively and significantly affected by conservatism. Especially, total accruals yield the highest coefficient of bad news among the three measures (1.17) followed by non-discretionary accruals (0.002). However, discretionary accruals are also positively affected by conservatism but the test for the difference in the coefficients of good and bad news did not provide significant evidence. This means that timeliness and conservatism have an equal impact on discretionary accruals. These findings partially verify our main hypothesis that conservatism affects accrual measures and most severely total accruals.

Finally, regarding our accrual drivers the coefficient of bad news is negative and significant in all earnings components. As in the case of earnings, accrual drivers remain unaffected by conservatism. This evidence support the intuition that accrual drivers are originated on a realization basis, thus are not expected to be asymmetrically affected by conservatism. Overall we can argue that our results are consistent to Moreira and Pope (2006) and our insight that the asymmetric impact of conservatism in the Greek accounting setting holds only for accrual measures and not for accrual drivers used as independent variables in accrual models. This evidence suggests that accrual models are misspecified and their estimates may contain a measurement error if conservatism is not taken under consideration. If someone does not make specific control for conservatism on the right hand side of equation two (2), and since accrual drivers are expected to be unaffected by conservatism, the intercept and the error term tend to pick up such effects, thus accrual measures are expected to contain a measurement error. (See also Moreira and Pope, 2006).

7. Concluding remarks & future research

In the present study we perform an empirical investigation on the relative timeliness of accrual measures and drivers used as independent variables in accrual models, regarding the effect of conservatism. Following Moreira and Pope (2006), we hypothesized that accrual drivers (sales, change in sales and property plant and equipment) are unaffected by conservatism since they are generated according to the realization basis. On the contrary, accrual measures (total, discretionary and non-discretionary accruals) are expected to be asymmetrically affected by conservatism because bad news are recognized immediately after they become expected, but on the contrary good news are recognized when they become realized. Thus we expect that accrual measures will be asymmetrically affected by conservatism.

In order to test empirically the aforementioned intuition we selected a sample of 101 companies all listed in the Athens Stock Exchange for the period 1998-2004. We applied Basu (1997) linear model under the adjustments made by Pope and Walker (1999) and estimate it including one at a time each accrual measure and driver.

Our results are partially consistent to Moreira and Pope (2006). Being more specific, the impact of good news on accrual measures and drivers is positive and significant (except change in sales). However, earnings seem to be less timely compared to its components and since the coefficient of bad news is negative and is statistically different from the coefficient of good news in a conventional level we can argue that the earnings variable is unaffected by conservatism.

Moreover, total accruals and non-discretionary accruals are positively and significantly affected by conservatism. However, discretionary accruals are also positively affected by conservatism but not significantly. This means that timeliness and conservatism have an equal impact on discretionary accruals. Finally, regarding our accrual drivers the coefficient of bad news is negative and significant in all earnings components. As in the case of earnings, accrual drivers remain unaffected by conservatism. Overall we can argue that our results are consistent to Moreira and Pope (2006) and our insight that the asymmetric impact of conservatism in the Greek accounting setting holds only for accrual measures and not for accrual drivers used as independent variables in accrual models.

Consequently, future research needs to take in to consideration the impact of conservatism into accrual measures in order to construct more effective and accurate accrual models, which in turn will be proved useful in the efforts for the creation of more efficient earnings quality measures.

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Table 1. Sample selection procedure

Firms listed in the Athens Stock Exchange (ASE)	247
Less: Financial Services Firms	(43)
Remaining non-financial firms	204
Less: Firms with incomplete stock price data	(96)
Non-financial firms with full stock price data	108
Less: Non-December fiscal year end firms	(7)
Firms included in the final sample	101

Table 2. Descriptive statistics for the sample variables over the period 1998-2004.

Variables	N	Mean	St. Deviation	Quartile 1	Median	Quartile 3
R_{it}	707	-0.058	12.08	-0.814	-0.055	0.451
$EARN/P_{t-4}$	707	0.569	3.56	0.00	0.019	0.176
$TACC/P_{t-4}$	707	0.47	105.17	-0.13	0.00	0.02
$DACC/P_{t-4}$	707	0.103	2.67	-0.053	-0.006	0.010
$NDACC/P_{t-4}$	707	0.032	0.337	-0.024	-0.005	0.0036
PPE/P_{t-4}	707	3.10	15.26	0.019	0.208	1.29
$SALES/P_{t-4}$	707	5.58	21.58	0.043	0.50	2.87
$\Delta SALES/P_{t-4}$	707	0.19	17.7	-0.002	0.009	0.24

The sample consists of 101 firms listed on Athens Stock Exchange, which have available data for the whole period of research. Only firms with December fiscal year-end are included in the sample. Earnings variable is annual earnings excluding taxes and earnings from discontinued operations. Return is the market return covering the year under investigation. Earnings and Returns are adjusted for stock splits and dividends. All variables are divided by the fourth lag of market value as in Pope and Walker (1999). Accruals are estimated as the change in current assets minus the change in current liabilities minus the depreciation expense. Discretionary and non-discretionary accruals are measured using the cross-sectional variation of the Jones (1991) model

Table 3. Pearson-Spearman correlations for sample variables over the period 1998-2004 (Pearson correlations below the diagonal-Spearman correlations above the diagonal).

	EARN	PPE	SALES	ΔSALES	R	ACC	DAC	NDAC
EARN	1	0.574**	0.574**	0.583**	0.407*	-0.013	-0.023	-0.160**
		(0)	(0)	(0)	(0)	(0.727)	(0,548)	(0)
PPE	0.523**	1	0.888**	0.393*	-0.093	-0.171*	-0.238**	-0.416**
	(0)		(0)	(0)	(0.014)	(0)	(0)	(0)
SALES	0.381**	0.489**	1	0.504**	-0.066	-0.146*	-0.233*	-0.35*
	(0)	(0)		(0)	(0.078)	(0)	(0)	(0)
ΔSALES	-0.142**	0.095*	0.386**	1	0.089**	-0.027	-0.112*	-0.111**
	(0)	(0.012)	(0)		(0.018)	(0.469)	(0.003)	(0.003)
R	0.093*	0.03	-0.004	-0.234**	1	0.116**	0.006	0.556**
	(0.014)	(0.422)	(0.923)	(0)		(0.002)	(0.866)	(0)
ACC	-0.356**	0.046	0.011	0.015	0.216**	1	0.555**	.0162**
	(0)	(0.222)	(0.78)	(0.691)	(0)		(0)	(0)
DAC	-0.014	0.348**	0.089*	0.086*	0.319**	0.759**	1	-0.084**
	(0.715)	(0)	(0.018)	(0.022)	(0)	(0)		(0.025)
NDAC	0.152**	0.205**	0.012	-0.399**	0.544**	0.494**	0.523**	1
	(0)	(0)	(0.759)	(0)	(0)	(0)	(0)	

The sample consists of 101 firms listed on Athens Stock Exchange, which have available data for the whole period of research. Only firms with December fiscal year-end are included in the sample. EΔR is annual earnings per share, excluding taxes and discontinued operations, and R is the market return at the end of the fiscal year for each firm. Earnings and Returns are adjusted for stock splits and dividends. PPE is the property and plant equipment at the end of the fiscal year. Sales and Δsales are the sales revenue and the change of the sales revenue at the end of the fiscal year. ACC, DAC and NDAC are the total accruals, discretionary accruals and non-discretionary accruals respectively. Discretionary and non-discretionary accruals are measured using the cross-sectional variation of the Jones (1991) model. (p values in the parenthesis, * significant at a=5%, ** significant at a=1%, 2-tailed test).

Table 4. Impact of good and bad news on accrual measures and drivers (Pooled regressions, period 1998-2004)

Variables	b_1	b_2	b_3 (GN)	b_4	$b_3 + b_4$(BN)	GN=BN	Adj.R^2	D-W stat
$EARN/P_{t-4}$	0.257	0.197	0.07*	-0.09*	-0.02	*	2.9%	2.01
	(1.22)	(0.70)	(4.66)	(-4.12)				
$TACC/P_{t-4}$	-3.83	3.06	2.46*	-1.29**	1.17	*	4.8%	2.00
	(-0.62)	(0.37)	(5.54)	(-1.87)				
$DACC/P_{t-4}$	-0.34*	0.33**	0.13*	-0.12*	0.01	=	17.1%	1.97
	(-2.34)	(1.71)	(12.09)	(-7.62)				
$NDACC/P_{t-4}$	-0.001	-0.018	0.023*	-0.021*	0.002	*	42.2%	2.02
	(-0.12)	(-0.9)	(21.55)	(-12.51)				
PPE/P_{t-4}	2.17*	-0.09	0.23*	-0.46*	-0.23	*	2.6%	1.99
	(2.42)	(-0.08)	(3.55)	(-4.60)				
$SALES/P_{t-4}$	4.86*	-0.29	0.16**	-0.42*	-0.26	*	0.8%	2.02
	(3.78)	(-0.17)	(1.80)	(-2.94)				
$\Delta SALES/P_{t-4}$	1.81**	-0.94	-0.58*	0.53*	-0.05	*	8%	1.97
	(1.78)	(-0.69)	(-7.86)	(4.65)				

T statistics are in the parenthesis (* significant at a = 1%, **significant at a =5%). **Model:** $X_t/P_{t-4} = b_1 + b_2*D_{it} + b_3* R_{it} + b_4*R_{it}*D_{it} + e_{it}$. X_t is one at a time each of earnings and accruals components, scaled by the stock price four periods ago. Return variable is measured as firms market return over the fiscal year. D_{it} is a dummy variable taking the value of 1 if R_{it} is negative and zero otherwise and $R_{it}*D_{it}$ is the product of R_{it} and D_{it}. D-W is the Durbin-Watson statistic. GN is the coefficient of good news and BN ($b_3 + b_4$) is the coefficient of bad news. "*" means that the coefficients are statistically different from each other at less than 5%. "=" indicates that the coefficients are not statistically different from each other.