

The Valuation Of Discretionary Accruals And Antitrust Merger Investigations

Stephen D. Makar, (Email: makar@uwosh.edu), University of Wisconsin Oshkosh
Pervaiz Alam, (Email: palam@kent.edu), Kent State University

Abstract

This study explores the impact of managerial discretion on the information content of reported earnings. In particular, we extend the prior research by examining the pricing of discretionary accruals for firms subject to antitrust merger investigation. To date, the empirical evidence on managerial discretion and earnings informativeness has been limited, and the pricing of discretionary accruals in the earnings management context of antitrust merger investigations has not been examined. We address this gap in the literature, and provide results that are consistent with our expectations. Specifically, the evidence indicates that investigated firms' discretionary accruals are priced by the stock market, and that such earnings components have incremental information content regarding future profitability. In contrast, as expected, the accruals of non-investigated firms are not value-relevant.

1. Introduction

The merger wave in the U.S. continued at a rapid pace during the 1990s. From 1991 to 1999, the number of mergers tripled from 1529 to 4642 and the total value of these mergers increased from \$169 billion to over \$1.9 trillion (Parker and Balto 2000). While less than three percent of mergers receive an in-depth investigation by the Federal Trade Commission (FTC) and the Department of Justice (DOJ), a large majority of these combining firms face enforcement actions. The FTC and DOJ use antitrust laws to initiate enforcement. These laws are: Clayton Act of 1914 and 1950, Sherman Act of 1890, Hart-Scott-Rodino Act of 1976, and Racketeer Influenced of Corrupt Organization Act of 1970 (Weston et al. 1990). The primary objective of antitrust laws is to preserve fair competition among firms in their respective industries.

The Hart-Scott-Rodino Act of 1976 is incorporated in the Clayton Act as Section 7a. It applies to acquisitions exceeding \$15 million and it requires a 30-day waiting period before merger consummation. The waiting period may be extended by an additional 20 days at the request of either of the regulatory bodies—DOJ or FTC. Before the passage of the Hart-Scott-Rodino Act, the government took remedial measures several years after the consummation of the merger. By that time, it was difficult to establish antitrust violations because of the intermingling of assets of acquiring and target firms. Following the passage of the Hart-Scott-Rodino Act, the DOJ/FTC performs initial merger investigation during the waiting period. After the initial investigation firms' responses may include disposal of assets, partial divestiture, and earnings management to affect the final outcome of the investigation. The DOJ/FTC, of course, investigates only those mergers where the agency believes that the antitrust laws may have been violated. This study investigates whether the post-waiting period discretionary accruals have value-relevance and whether future profitability can be assessed using these discretionary accruals.

Readers with comments or questions are encouraged to contact the authors via email.

2. Background literature

2.1. Valuation of Discretionary Accruals

This study explores the impact of discretionary accruals on the information content of reported earnings for firms subject to antitrust merger investigation. Generally accepted accounting principles (GAAP) rely on accounting accruals to provide earnings information that is useful in business decision-making (Financial Accounting Standards Board, 1978). Such accrual-based earnings information is considered to be useful because the expense is recorded in the period of benefit, rather than the period of cash outlay. Prior studies, however, have documented the manipulation of accounting accruals, where these discretionary accounting choices occur both within and outside the bounds of GAAP (see for example, McNichols and Wilson, 1988).

The impact of discretionary accruals on the information content of earnings is subject to debate. On the one hand, these manipulations could enhance the value-relevance of reported earnings by communicating a manager's private information regarding future profitability (see for example, Watts and Zimmerman, 1986). On the other hand, the flexibility inherent in GAAP may result in opportunistic behavior that distorts reported earnings (see for example, Healy and Palepu, 1993). To date, empirical research on managerial discretion and earnings informativeness has been indirect and mixed, and the information effects of discretionary accruals in particular is relatively unexplored (Subramanyam, 1996).

Guy et al. (1996) and Subramanyam (1996) were among the first to investigate the value-relevance of discretionary accruals. Guay et al. (1996) used market-based tests to investigate whether return-earnings component regression coefficients are consistent with their research hypotheses—firm performance, opportunism, noise. Subramanyam (1996) sampled more than 2800 firms over the 1973-1993 period and reports that discretionary accrual manipulations improve the ability of earnings to reflect the firm's economic value, and thus are priced by an efficient market. Subramanyam (1996) emphasizes, however, that his study is limited to discretionary accruals *on average*, and should not be used to draw inferences regarding opportunistic earnings management. He suggests that future studies sample firms with specific manipulation incentives.

Responding to Subramanyam's (1996) suggestion for a more carefully selected sample, this study contributes to the literature on discretionary accrual pricing by examining the earnings management efforts of firms subject to investigation for antitrust merger violations. To the extent that the discretionary accruals of investigated firms signal a manager's private information regarding the costs of antitrust interference, these manipulations will enhance the value-relevance of reported earnings. In examining the pricing of investigated firms' discretionary accruals, we also answer recent calls for research on the response of investors to earnings management for antitrust purposes (Healy and Wahlen, 1999). Our study is different from Subramanyam (1996) and Guay et al. (1996) with respect to the incentive for earnings management. These studies use aggregate relation between stock returns, discretionary accruals, and non-discretionary earnings. We focus on a specific sample where the incentive for earnings management is clearly present.

2.2. Political Costs and Antitrust Merger Investigations

In its traditional form, the political cost hypothesis predicts that large firms are subject to greater political scrutiny, and thus will be more likely to use discretionary accounting choices to reduce reported earnings (Watts and Zimmerman, 1978). Firm size, however, is a noisy proxy for these government imposed wealth transfers or political costs (Ball and Foster, 1982). Accordingly, more recent research has refined political cost analyses by focusing on specific, government imposed wealth transfers (see for example, trade relief wealth transfers in Jones, 1991 and cable industry deregulation in Key 1997).¹ In particular, discretionary accruals are more prevalent in earnings management settings where political costs are large and are causally linked to reported profits (Cahan, 1992). One such setting is antitrust merger investigations.

Antitrust merger policy in the United States is enforced by the Department of Justice (DOJ) and the Federal Trade Commission (FTC) under Section 7 of the Clayton Act. Antitrust regulators use reported earnings in discerning the competitive impact of a merger (Elzinga, 1989; Baker and Bresnahan, 1992).² Moreover, the costs of such regulatory interference to the merging firms are large. For example, Coate et al. (1995) reported that firms settle their Section 7 cases with antitrust regulators in order to reduce the opportunity costs of delayed merger gains. Other costs associated with antitrust investigations include executive time, legal expenses, penalties, interruptions in productive activity, and direct loss of merger gains due to cancellation of the merger or divestiture of the acquired or existing assets (see for example, Eckbo and Wier, 1985).

Given the magnitude of merger-related political costs and the linkage to profits, investigated firms have a strong incentive to use discretionary accruals to reduce their reported earnings and political costs. To the extent that such accrual manipulations communicate private information regarding the costs of antitrust investigations, the value relevance of reported earnings may be enhanced. Thus, our tests of discretionary accruals consider (1) whether the market prices such manipulations and (2) whether the discretionary accrual component of earnings has incremental information content regarding future profitability. The formal hypotheses pertaining to these tests are detailed next.

3. Research Method

3.1. Hypotheses formulation

In this study, we assume that managers of firms investigated for merger-related antitrust violations are apt to prefer accrual manipulations to accounting method changes in attempting to reduce their reported earnings and political costs. Like prior studies (see for example, Cahan, 1992), we argue that such preferences reflect the relative availability and subtlety of discretionary accruals. Moreover, accruals represent a summary measure of numerous accounting method changes and thus provide a more complete test of discretionary accounting choices (Healy, 1985; Balsam, 1998).

As discussed above, firms subject to investigation for antitrust merger violations have incentive to manipulate accounting accruals. Given the nature of this earnings management context, recent studies argue that such political cost incentives for manipulating accruals extend beyond the initial investigation outcome (Makar and Alam, 1998). In particular, antitrust observers have noted that firms often agree to costly settlements with the DOJ or the FTC in order to expedite the merger, and then deal with alleged antitrust violations later. Coate et al. (1995), for example, observed that investigated firms agree to dispose of contested assets regardless of the underlying legal merits of the regulator's terms. Such asset dispositions impose substantial costs on settling firms, which extend beyond the initial investigation (Eckbo and Wier, 1985). Other case settlements that increase firms' post-investigation political costs include regulatory restrictions on future sales in certain markets and regulatory decrees which prohibit future mergers or require regulatory permission for such acquisitions (Wier, 1983). This study focuses on the information content associated with these post-investigation costs of antitrust merger action.

In dealing with the alleged antitrust violations, investigated firms have incentive to manipulate accruals in order to influence the regulator's subsequent discernment of anticompetitive behavior (Makar and Alam, 1998). Prompted by the substantial economic constraints of divestiture settlements and other post-investigation political costs, firms may introduce income-decreasing discretionary accruals as evidence of the associated economic hardship in subsequent appeals or other ex post regulatory actions.³ We argue that these accrual manipulations may enhance the value relevance of reported earnings by communicating manager's private information regarding the post-investigation costs of antitrust interference.

In light of the post-investigation incentives to manipulate accruals and the accompanying information effects, we define the event period as the year following the initial investigation outcome. As introduced above, our first hypothesis predicts that the discretionary accruals of investigated firms will be priced by the stock market. This hypothesis is consistent with the literature that argues that accruals are predictor of future earnings and that accruals are priced in equity valuation (Barth et al. 1999). To the extent that discretionary accruals have incremental

information content beyond that of other earnings components, the relationship between these manipulations and the changes in firm value will be significant and positive. Moreover, we expect the relationship between investigated firms’ discretionary accruals and the future earnings to be significant and positive, if such accruals signal private information regarding the post-investigation costs of antitrust interference with the merger. Accordingly, the formal hypotheses (in alternative form) are:

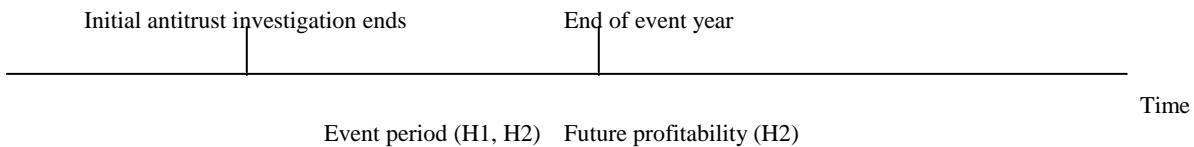
H1a: The discretionary accruals of investigated firms during the event year are positively associated with contemporaneous changes in firm value.

H2a: The discretionary accruals of investigated firms during the event year are positively associated with future profitability subsequent to the event period.

Figure 1 illustrates the event period in relation to these two hypotheses.

Figure 1
The Event Period

The event period is the year following the initial investigation outcome. Hypothesis one (H1) considers the pricing of discretionary accruals during the event year, while hypothesis two (H2) addresses the relation between such event period manipulations and future profitability.



3.2. Sample and Data

The initial sample was drawn from the population of firms investigated for antitrust merger violations under Section 7 of the Clayton Act over the 1973-1992 period. We identified our sample firms using the Commerce Clearing House’s *Trade Cases* and the *Trade Regulation Reporter* as well as information obtained directly from the DOJ and the FTC. Because the event year is the year following the initial case outcome, the sample period begins in 1974 (i.e., the earliest sample observation is a firm whose case ended in 1973). To be included in the final sample, firms were required to appear on Standard and Poor’s *Compustat* database and operate in either the mining or manufacturing sectors (i.e., within the 1000 to 3999 SIC Code range).⁴ The final sample consists of 123 investigated firms, with 71 of these firms settling their case with either the DOJ or the FTC. The remaining 52 investigated firms litigated their case to conclusion. As discussed above, case settlements usually involve divestitures that impose substantial costs on investigated firms. Consistent with this observation, more than 83 percent of the 71 settling firms agreed to partial or full divestitures.

Given the enhanced manipulation incentives and accompanying information effects for settling firms, the results presented below detail both the total sample of 123 investigated firms and the sub-sample of 71 settling firms. Table 1 list the sample firms by year and the number of DOJ investigations initiated in that year obtained from Gallo et al. (2000). The table shows that our sample, which contains both FTC and DOJ investigated firms, is about one-fifth the size of all DOJ investigated firms reported by Gallo et al. (2000). Admittedly, the DOJ investigations provide only a partial coverage of the antitrust enforcement activities. However, their investigative role is an important component of the U.S. antitrust law enforcement.

Table 1
Sample firms and firms investigated by DOJ

Year	Sample Investigations	DOJ Investigations
1973	1	39
1974	4	34
1975	9	32
1976	13	38
1977	6	29
1978	7	34
1979	13	28
1980	6	42
1981	15	16
1982	5	24
1983	7	25
1984	6	20
1985	4	17
1986	3	14
1987	7	17
1988	5	20
1989	1	15
1990	5	29
1991	4	26
1992	2	25
	123	524

DOJ investigations are the number of firms investigated by the Department of Justice and reported by Gallo et al. (2000). The sample firms contain those only firms which were investigated for merger-related antitrust investigation under Section 7 of the Clayton Act whereas the DOJ investigated firms includes all DOJ antitrust cases reported by Gallo et al. (2000).

In light of the traditional assumption that large firms face higher political costs and thus have greater incentive to reduce reported earnings, we select a control sample of non-investigated firms matched to investigated firms' total assets in the period prior to the event year.⁵ This size-matched control sample was drawn from the Manufacturing Sector Master File developed by Hall (1989). The Manufacturing Sector Master File was created at the National Bureau of Economic Research and contains approximately 1200 firms that exited *Compustat* due to mergers or other changes in corporate form.

Table 2 provides event period descriptive statistics about the variables of interest for both the experimental sample of investigated firms and the size-matched control sample of non-investigated firms. Total accruals for both samples, defined as the change in specific working capital accounts (i.e., accounts receivable, inventory, accounts payable, and income taxes payable) less depreciation and deferred tax expenses (see for example, Healy, 1985), are negative on average (i.e., income decreasing) due to depreciation expense. Similarly, both discretionary and non-discretionary accruals (calculated using equation 2 detailed below) are negative on average for all samples. Looking at the settling firm sub-sample in particular, the discretionary accruals are significantly income decreasing (at a .05 one-sided level), consistent with earnings management expectations. This study focuses on the information content of such manipulations, using the models detailed next.

3.3. Research Models

Like recent empirical studies (see for example, DeFond and Jiambalvo, 1994), discretionary accruals are proxied using the ordinary least squares (OLS) coefficients from the following model that is estimated for each two-digit SIC Code and non-investigation year (excluding the event year) over the 1974-1992 sample period.^{6,7}

$$TAA_{jt} = \alpha_j + \beta_{1j} ChgREVA_{jt} + \beta_{2j} PPEA_{jt} + \epsilon_{jt} \tag{1}$$

where

- TAA_{jt} is the total accruals (computed using *Compustat* data item #2 for accounts receivable, #3 for inventory, #70 for accounts payable, #71 for income taxes payable, #14 for depreciation expense, and #50 for deferred tax expense) of firms in industry j for year t .
- $ChgREVA_{jt}$ is the revenues (*Compustat* data item #12) in year t less revenues in year $t-1$ for firms in industry j .
- $PPEA_{jt}$ is the gross property, plant, and equipment (*Compustat* data item #7) of firms in industry j for year t .

Equation (1) is based on Jones (1991) and models the non-discretionary component of total accruals. All variables in the model are deflated by the total assets variable in order to reduce heteroscedasticity.⁸ Discretionary accruals are proxied using the prediction errors (DAC_{jp}) calculated in equation (2), based on coefficients from OLS estimates of equation (1).

$$DAC_{jp} = TAA_{jp} - (a + b_1 \text{ChgREVA}_{jp} + b_2 \text{PPEA}_{jp}) \quad (2)$$

where p is a year index for years included in the event period. Non-discretionary accruals are represented by the term in parenthesis. Thus, equation (2) calculates the difference between actual accruals (TAA) and an estimate of what accruals should be in the absence of earnings management (i.e., non-discretionary accruals), for each investigated firm operating in two-digit SIC Code j .

In testing the first hypothesis that discretionary accruals are priced by the stock market, equation (3) examines the correlation between cumulative changes in firm value and the components of earnings, similar to Subramanyam (1996).

$$\text{CUMRET}_{jp} = \alpha + \lambda_1 \text{OCF}_{jp} + \lambda_2 \text{NDAC}_{jp} + \lambda_3 \text{DAC}_{jp} + \varepsilon \quad (3)$$

where

- CUMRET_{jp} is the cumulative stock returns (using monthly returns from CRSP database) over a twelve-month period for firms in industry j , ending three months after the fiscal year end of event period p .
- OCF_{jp} is the operating cash flows (*Compustat* data item #308) of firms in industry j for event period p .
- NDAC_{jp} is the non-discretionary accruals (computed using equation 2) of firms in industry j for event period p .
- DAC_{jp} is the discretionary accruals (computed using equation 2) of firms in industry j for event period p .

With reference to the first hypothesis that the event-period discretionary accruals of investigated firms are positively associated with contemporaneous changes in firm value, it is anticipated that the estimated coefficient on the DAC variable will be statistically significant and positive for the investigated firms, but not for the size-matched control sample of non-investigated firms.

As Subramanyam (1996) emphasizes, the pricing of discretionary accruals is consistent with two alternative market conditions: (1) market efficiency, if such accruals communicate a manager's private information regarding future profitability; or (2) market inefficiency, if discretionary accruals create distortions in the earnings information. These two alternative conditions are distinguished in our second hypothesis that considers whether investigated firms' discretionary accruals signal private information regarding the future costs of antitrust interference with the merger.

Similar to Subramanyam (1996), we address this second hypothesis both directly, by examining the association between investigated firms' discretionary accruals and future earnings in equation (4), and indirectly, by examining the association between such accruals and changes in dividends in equation (5). With reference to the second hypothesis that investigated firms' event-period discretionary accruals are positively associated with future profitability, it is anticipated that the estimated coefficient on the DAC variable will be statistically significant and positive in both analyses.

$$\text{EARNINGS}_{j,p+i} = \alpha + \delta_1 \text{OCF}_{jp} + \delta_2 \text{NDAC}_{jp} + \delta_3 \text{DAC}_{jp} + \varepsilon \quad (4)$$

where EARNINGS_{j,p+i} is the future earnings measure (using three alternative measures defined below) of firms in industry j for periods $p+i$ ($i = 1$ or 2 years ahead of event period p).

Table 2
Descriptive Statistics

	Mean	Std. Dev.	Median	Maximum	Minimum	%
<i>Panel A: Investigated Firms</i>						
Total accruals	-0.038a	0.061	-0.037	0.151	-0.214	23
Discretionary accruals						
Total sample	-0.017	0.240	-0.002	1.318	-1.142	46
Settling firm sub-sample	-0.015b	0.056	-0.002	0.070	-0.241	47
Non-discretionary accruals	-0.017	0.228	-0.028	1.013	-1.330	30
Non-discretionary income	0.085a	0.248	0.072	1.209	-1.310	86
Net income	0.062a	0.046	0.064	0.178	-0.122	92
Operating cash flows	0.103a	0.072	0.100	0.306	-0.060	94
Returns	0.215a	0.286	0.199	0.827	-0.475	79
<i>Panel B: Non-investigated Firms</i>						
Total accruals	-0.033a	0.075	-0.027	0.179	-0.394	24
Discretionary accruals	-0.009	0.086	-0.003	0.164	-0.586	47
Non-discretionary accruals	-0.024a	0.093	-0.025	0.518	-0.449	31
Non-discretionary income	0.065a	0.102	0.064	0.663	-0.229	85
Net income	0.052a	0.056	0.054	0.216	-0.236	90
Operating cash flows	0.088a	0.088	0.092	0.447	-0.211	91
Returns	0.235a	0.301	0.234	0.968	-0.454	81

Event period descriptive statistics are calculated for variables used in tests of hypotheses, as detailed in Tables 3-5. All variables except cumulative returns (Returns) are deflated by total assets, where the experimental sample of investigated firms (Total sample) includes firms who settled their case with antitrust regulators (Settling firm sub-sample).

- ^a significant at the one-sided .01 level
- ^b significant at the one-sided .05 level

The explanatory variables in equation (4) are the same as those defined in relation to equation (3). The three alternative measures of future earnings are: nondiscretionary income (using operating cash flows from *Compustat* data item #308 plus nondiscretionary accruals from equation 2), net income (using *Compustat* data item #18), and operating cash flows (using *Compustat* data item #308).⁹

In contrast to equation (4), the logit model depicted in equation (5) is a less direct test of the second hypothesis. Specifically, the inherent assumption underlying equation (5) is that managers of investigated firms use dividend changes to signal private information regarding firm value (Subramanyam, 1996).

$$CDIV_{j, p+i} = \alpha + \gamma_1 OCF_{jp} + \gamma_2 NDAC_{jp} + \gamma_3 DAC_{jp} + \varepsilon \tag{5}$$

where $CDIV_{j, p+i}$ is the dividend change measure (using two alternative measures defined below) of firms in industry j for periods $p+i$ ($i = 0$ or 1 year ahead of event period p).

Similar to Subramanyam (1996), the two alternative measures of the dependent variable are: (1) CDIV1 which equals 1 if the annual dividend change is positive (else, indicator variable is 0) and (2) CDIV2 which equals 1 if the annual dividend change is positive (else, indicator variable is 0 if change is negative). The explanatory variables in equation (5) are the same as those defined in equations (3) and (4).

4. Results

4.1. Discretionary accruals and stock returns

Turning to the first hypothesis that the event-period discretionary accruals of investigated firms will be priced in the market, Panel A of Table 3 presents the OLS estimation results for the full model depicted in equation (3).¹⁰ The model is statistically significant (at a .01 level) for the investigated firms. Likewise, all three estimated coefficients are significant (at a .05, two-sided level), indicating that each of these three components of reported earnings has incremental information content. Consistent with alternative hypothesis one, the estimated coefficient on the DAC variable indicates that there is a significant and positive association between investigated firms' discretionary accruals during the event period and cumulative contemporaneous changes in firm value. In contrast, the results for the non-investigated control firms are not significant (at a .05 level), as expected.

4.2. Sensitivity tests

We employ the Jones (1991) model to test hypothesis one. While this model has been used extensively in the contemporary earnings management literature, it is based on the assumption that the non-discretionary component of accruals is correctly identified. In light of this assumption, we provide sensitivity tests to consider the robustness of our results to measurement error. Following recent studies (see for example, Guay et al., 1996), we use the modified Jones model proposed by Dechow et al. (1995) to examine the sensitivity of Table 3 results to revenue manipulations. Like the results of prior studies (see for example, Holthausen et al., 1995; Hall and Stammerjohn, 1997; Key, 1997), our Table 3 results are consistent regardless of the approach taken to estimating discretionary accruals. We also examine the robustness of our results to extreme financial performance, using earnings and cash flow measures (see for example, Dechow et al., 1995). Neither variable is statistically significant (at a .05 level) across the experimental and size-matched control samples. Thus, the firms investigated for antitrust merger violations are not statistically different from the control sample of non-investigated firms in terms of firm performance. See Beneish (1997) for additional discussion of earnings management and extreme financial performance.

To further examine the value relevance of discretionary accruals, Panel B of Table 3 details the OLS estimation results pertaining to equation (3) after omitting the DAC variable. Focusing on these reduced-model results for investigated firms, the adjusted R^2 declines to 5.6%, compared to the 10.2% adjusted R^2 in the full model. As indicated by the Vuong statistic in Panel C, this 4.6% incremental R^2 is statistically significant (at a .01 level). Thus, the full model is significantly better than the reduced model in explaining variations in firm value.¹¹ In sum, Table 3 results indicate that investigated firms' discretionary accruals are priced by the market during the event period and have incremental information content beyond the other components of earnings. Whether such information content pertains to the post-event period earnings is considered in the next section.

Table 3
Cross-sectional Regression Results of Returns and Event Period Earnings Components: Tests of Hypothesis One

	n	AdjR ² %	Estimated Coefficients (t-statistics)			DAC	F-stat
			Intercept	OCF	NDAC		
<i>Panel A: Full Model</i>							
Investigated firms	74	10.2	0.026 (0.392)	2.415 ^a (3.217)	1.816 ^b (1.998)	1.859 ^b (2.088)	3.676 ^a
Non-investigated firms	52	-2.8	0.253 ^a (3.657)	-0.088 (-0.117)	0.769 (0.685)	0.188 (0.173)	0.534
<i>Panel B: Reduced Model</i>							
Investigated firms	74	5.6	0.093 (1.641)	1.149 ^b (2.498)	-0.019 (-0.090)		3.154 ^a
Non-investigated firms	52	-8	0.254 ^a (3.715)	-0.152 (-0.235)	0.594 (1.247)		0.802
<i>Panel C: Full vs. Reduced Model</i>							
Incremental R ² % (Vuong statistic)							
Investigated firms			4.6 ^a (2.049)				

Hypothesis one is tested using cross-sectional estimates of the model expressed in equation (3), for the total sample of investigated firms.

$$CUMRET_{jp} = \alpha + \lambda_1 OCF_{jp} + \lambda_2 NDAC_{jp} + \lambda_3 DAC_{jp} + \varepsilon$$

Where

- CUMRET_{jp} is cumulative returns over 12 month period for firms in industry *j*, ending 3 months after fiscal year end of event period *p*.
- OCF_{jp} is operating cash flows of firms in industry *j* for event period *p*.
- NDAC_{jp} is non-discretionary accruals of firms in industry *j* for event period *p*.
- DAC_{jp} is discretionary accruals of firms in industry *j* for event period *p*.

^a significant at the two-sided .01 level

^b significant at the two-sided .05 level

4.3. Discretionary accruals and future profitability

With regard to the second hypothesis, that the event-period discretionary accruals of investigated firms provide information about future profitability subsequent to the event period, Table 4 details the OLS estimation results for the future earnings model depicted in equation (4).¹² To promote comparisons to Tables 2 and 3, the estimation results are presented for both the total sample and the sub-sample of settling firms. Focusing first on the total sample's one-year-ahead results in Table 4, Panel A, there is some evidence that discretionary accruals communicate private information regarding future earnings, when such earnings are measured using net income (DAC coefficient of 0.491, significant at a .01, two-sided level).

Moving to the settling firm sub-sample in Table 4, Panel A, all three measures of future earnings (non-discretionary income, net income, and operating cash flows) are positively associated with discretionary accruals, as expected. Similar to Sloan (1996), the coefficients of operating cash flows (OCF) suggest that earnings performance attributable to the accrual component of earnings is less persistent than earnings performance attributable to the cash flow component of earnings. Recall that the settling firm sub-sample is dominated by costly divestitures and thus have enhanced manipulation incentives and accompanying information effects. Consistent with alternative hypothesis two, settling firm's discretionary accruals are informative regarding future earnings regardless of the measure of future earnings used: non-discretionary income (DAC coefficient = 1.176, significant at a .01, two-sided level), net income (DAC coefficient = 1.247, significant at a .01, two-sided level), or operating cash flows (DAC coefficient = 0.871, significant at a .05, two-sided level). Finally, the Vuong statistics (significant at .01, one-sided level) indicate that the inclusion of settling firms' discretionary accruals significantly improves the explanatory power of the future earnings models in all cases.

In sum, Table 4, Panel A results suggest that discretionary accruals have incremental information content regarding future earnings, especially for the settling firm sub-sample which is dominated by costly divestitures. In contrast, the results detailed in Table 4, Panel B are mostly insignificant (1996). We conjecture that the insignificant two-year-ahead results are due to the short-term nature of accrual manipulations. Prior studies report that working capital accruals are more susceptible to manipulation (see for example, Kreutzfeldt and Wallace, 1986), where such discretionary accruals pertain to short-term earnings.

Table 5 presents the logit estimation results for the dividend change model depicted in equation (5).¹³ Assuming signaling theory correctly predicts that managers will use changes in dividends to signal future profitability, then information-relevant discretionary accruals should be correlated with such dividend changes. In particular, a positive association between dividend changes and discretionary accruals suggests that the latter accounting information improves the ability of earnings to reflect future profitability.

Turning to Panel A of Table 5, the one-year-ahead results for settling firms are consistent with expectations. Specifically, the estimated coefficients on the DAC variable are positive and significant (at a .05 two-sided level) for both measures of dividend changes (i.e., CDIV1 and CDIV2). While these results are less direct than the future earnings analyses in Table 4, they do offer additional corroborating evidence. The current-year results presented in Table 5, Panel B are also significant (at 0.05 two-sided level) for settling firms, using CDIV1 as the dependent variable. However, the DAC variable is not significant for CDIV2 using current year data.

All together, the results presented in Tables 4 and 5 suggest that the discretionary accruals of investigated firms provide information regarding future profitability. Managers use such accruals to communicate private information regarding the post-investigation costs of antitrust investigations of mergers. In this way, discretionary accruals improve the informativeness of earnings for our sample.

Table 4
Cross-sectional Regression Results of Future Earnings and Event Period Earnings Components: Tests of Hypothesis Two

	n	Adj. R ² %	Estimated Coefficients (t-statistics)			Incr. R ² % DAC	(Vuong stat.)
			Intercept	OCF	NDAC		
<i>Panel A: One-year Ahead</i>							
<u>Non-discretionary income</u>							
Total sample	84	43.9	0.049 ^a (4.271)	0.219 (1.580)	0.734 ^a (4.279)	0.182 (1.037)	-.2 ^a (-77.470)
Settling firm sub-sample	59	27.3	-0.050 (-1.933)	1.336 ^a (4.936)	0.904 ^b (2.651)	1.176 ^a (3.115)	11.2 ^a (24.985)
<u>Net income</u>							
Total sample	84	29.8	0.015 ^b (2.060)	0.554 ^a (6.153)	0.493 ^a (4.424)	0.491 ^a (4.302)	14.6 ^a (95.237)
Settling firm sub-sample	59	45.1	-0.049 ^a (-2.854)	1.317 ^a (7.163)	0.952 ^a (4.093)	1.247 ^a (4.835)	21.3 ^a (32.344)
<u>Operating cash flows</u>							
Total sample	84	9.6	0.051 ^a (3.872)	0.407 ^b (2.580)	0.147 (0.753)	0.252 (1.261)	.5 ^a (29.654)
Settling firm sub-sample	59	24.6	-0.021 (-0.867)	1.162 ^a (4.497)	0.573 (1.760)	0.871 ^b (2.417)	6.3 ^a (20.871)
<i>Panel B: Two-year Ahead</i>							
<u>Non-discretionary income</u>							
Total sample	75	46.1	0.082 ^a (5.111)	-0.006 (-0.035)	0.714 ^a (3.016)	-0.011 (-0.045)	-.7 ^a (-9.047)
Settling firm sub-sample	50	29.0	0.009 (0.317)	0.288 (0.954)	-1.224 ^a (-3.143)	-0.114 (-0.266)	-1.0 ^a (-10.795)
<u>Net income</u>							
Total sample	75	7.7	0.031 ^a (3.468)	0.290 ^a (2.705)	0.240 (1.819)	0.184 (1.369)	1.1 ^a (5.178)
Settling firm sub-sample	50	21.8	0.034 ^a (3.269)	0.081 (0.757)	-0.329 ^b (-2.356)	-0.273 (-1.783)	13.6 ^a (14.373)
<u>Operating cash flows</u>							
Total sample	75	-.6	0.098 ^a (7.130)	0.091 (0.561)	0.023 (0.114)	-0.072 (-0.351)	1.1 ^a (24.852)
Settling firm sub-sample	50	3.0	0.094 ^a (4.923)	0.031 (0.158)	-0.340 (-1.331)	-0.316 (-1.133)	.8 ^a (20.509)

Hypothesis two is tested using cross-sectional estimates of the model expressed in equation (4) for both the total sample of investigated firms and the sub-sample of investigated firms settling their case with antitrust regulators. See Table 3 for definition of explanatory variables. All models are significant at a .01 level (F-test). The Vuong statistic pertains to the full model expressed in equation (4) versus equation (4) after omitting the DAC variable, where a positive (negative) incremental R² indicates an increase (decrease) in explanatory power using the full model.

$$EARNINGS_{j,p+i} = \alpha + \delta_1 OCF_{jp} + \delta_2 NDAC_{jp} + \delta_3 DAC_{jp} + \varepsilon$$

where EARNINGS_{j,p+i} is the future earnings measure of firms in industry *j* for periods *p+i* (*i* = 1 or 2 years ahead of event period *p*).

^a significant at the two-sided .01 level

^b significant at the two-sided .05 level

Table 5
Cross-sectional Regression Results of Dividend Changes and Event Period Earnings Components: Tests of Hypotheses Two
Estimated Coefficients (t-statistics)

	n	Pearson Chi-squared	Intercept	OCF	NDAC	DAC	Log likelihood
<i>Panel A: One-year Ahead</i>							
<u>CDIV1</u>							
Total sample	89	87.127 ^a	-1.115 ^b (-2.343)	8.625 (1.530)	9.276 (1.357)	10.135 (1.492)	2.878
Settling firm sub-sample	63	59.797 ^a	-2.022 ^a (-2.726)	19.284 ^b (2.325)	14.165 (1.620)	21.368 ^b (1.988)	7.399
<u>CDIV2</u>							
Total sample	48	43.948 ^a	-1.169 (-1.297)	30.718 ^b (2.356)	25.523 ^b (2.048)	19.222 (1.592)	8.275
Settling firm sub-sample	41	35.884 ^a	-3.536 ^b (2.506)	47.514 ^a (2.741)	19.732 (1.465)	48.612 ^b (2.519)	13.978
<i>Panel B: Current Year</i>							
<u>CDIV1</u>							
Total sample	89	89.031 ^a	-0.430 (-1.001)	4.064 (0.788)	4.243 (0.668)	4.206 (0.673)	0.636
Settling firm sub-sample	63	61.589 ^a	-1.027 (-1.651)	12.383 (1.766)	10.660 (1.363)	18.090 ^b (1.918)	4.843
<u>CDIV2</u>							
Total sample	59	59.829 ^a	0.005 (0.007)	18.418 (1.880)	23.487 ^b (2.091)	9.499 (0.844)	8.986
Settling firm sub-sample	46	44.177 ^a	-1.173 (-1.228)	21.267 (1.867)	14.023 (1.231)	21.796 (1.484)	4.282

Hypothesis two is tested using cross-sectional estimates of the model expressed in equation (5) for both the total sample of investigated firms and the sub-sample of investigated firms settling their case with antitrust regulators. See Table 3 for definition of explanatory variables. All models are significant at a .01 level (F-test).

$$CDIV_{j, p+i} = \alpha + \gamma_1 OCF_{jp} + \gamma_2 NDAC_{jp} + \gamma_3 DAC_{jp} + \varepsilon$$

where $CDIV_{j, p+i}$ is the dividend change measure (CDIV1 or CDIV2) of firms in industry j for periods $p+i$ ($i = 0$ or 1 year ahead of event period p), where CDIV1 equals 1 if dividend change is positive (or 0, otherwise), and CDIV2 equals 1 if dividend change is positive (or 0, if change is negative).

^a significant at the two-sided .01 level


^b significant at the two-sided .05 level

5. Summary and conclusions

Peltzman (2001) argues that the antitrust law enforcement has declined in the more recent periods. However, the results of Gallo et al. (2000) show that the antitrust enforcement has been fairly consistent over the last fifty years. These studies and the ongoing Microsoft case suggests that antitrust investigations remain a dominant issue in the American business. We investigate an unaddressed issue of the effect of discretionary accounting choices on the information content of reported earnings for firms subject to antitrust merger investigations. To the extent that discretionary accruals signal a manager's private information regarding the future costs of antitrust interference, such accounting choices will enhance the value relevance of GAAP-based reported earnings. Specifically, we hypothesize that the stock market attaches value to the discretionary accruals of firms investigated for antitrust merger violations, and that such earnings components have incremental information content regarding future profitability. Empirically, little is known about the effect of discretionary accruals on earnings informativeness.

The results support our hypotheses, indicating that discretionary accruals are priced and provide information about future profitability. By examining the pricing of discretionary accruals in the context of merger-related antitrust investigations, we provide evidence, which suggests that such market valuations pertain to discretionary accruals that improve the informativeness of reported earnings. In this way, we contribute to the ongoing debate on the uniformity versus flexibility' in GAAP. Accounting policy makers, for example, may find our study useful in evaluating the costs versus benefits of managerial discretion permitted in current GAAP. The U.S. Securities and Exchange Commission in particular, is currently crusading against what it sees as abusive earnings management practices that erode the quality of reported earnings (see for example, SEC Chairman Arthur Levitt, 1998).

6. Suggestions for future research

Our study shows that discretionary accruals for firms under antitrust investigations are value-relevant to the capital markets. On the other hand, the discretionary accruals of control firms are not significant and therefore are not priced by the market. Future research studies should examine whether financial analysts use discretionary accruals in making earnings prediction. For example, it would be interesting to test whether financial analysts view the earnings of investigated versus non-investigated firms differently and that such differences are explained by the magnitude of discretionary accruals. 

Acknowledgements

The second author is grateful for the financial support provided by the Research Council, Kent State University. An earlier version of this paper was presented at the 2001 annual meeting of the Midwest American Accounting Association.

Endnotes

¹ Key (1997) investigated unexpected accruals of firms in the cable television industry during the period the U.S. congress was considering deregulation of the industry. She found that firms in the industry postponed earnings during the period of Congressional investigation.

² While the use of profits in assessing a merger's competitive impact is imperfect, the DOJ and the FTC endure such imprecision given their objective of prohibiting the creation or reinforcement of anticompetitive arrangements (Areeda, 1998). Previous studies support the use of profits in antitrust investigations with reference to the positive correlation between profits and market concentration (see for example, Weiss, 1974). As a recent example, the 1996 proposed merger of Pacificare and FHP International

raised concerns that the increased level of market concentration would allow the combined firm to increase profits without any fear of competition (Gruely and Rundle, 1996).

³ In contrast to such post-investigation manipulations, reducing earnings prior to this initial outcome may work against firms' efforts to expedite the merger. For example, income-decreasing discretionary accruals may hinder the firm's ability to finance the merger (see for example, Erickson and Wang, 1999). With regard to the economic hardship associated with antitrust settlements, Eckbo and Wier (1985) provide evidence of the substantial costs borne by settling firms, due in part to the lost merger gains from divestitures. See Hall and Stammerjohan (1997) for additional discussion of using a defendant's financial condition as evidence of economic hardship in appeals of initial damage awards. Investigated firms are also subject to ex-post settling up by antitrust regulators and/or the courts. Under the Tunney Act, the courts may reject an antitrust settlement that does not reasonably advance the public's interests. See Johnson and Parkman (1991) regarding the significant importance that antitrust regulators place on post-acquisition evidence of anticompetitive behavior.

⁴ The final sample excludes 15 firms operating in the non-mining or non-manufacturing sectors (i.e., outside the 1000-3999 SIC Code range) to control for the extraneous influence of industry specific characteristics. For example, prior studies note the unique accounting choice incentives facing financial institutions (Moyer, 1990).

⁵ Using total assets as a measure of firm size, the matched control sample includes: 53 firms matched at the million dollar level, 30 firms matched at the tens-of-million dollar level, 21 firms matched at the hundreds-of-million dollar level, and 15 firms matched at the billion dollar level. Employing this sample selection procedure, 4 of the 123 investigated firms in the experimental sample were unmatched. Thus, the size-matched control sample consists of 119 non-investigated firms.

⁶ This cross-sectional version of the Jones (1991) model offers a number of advantages over a time series approach, including increased sample size, decreased chance of model misspecification, and increased power (Subramanyam, 1996). For additional discussion of the cross-sectional Jones model, see DeFond and Jambalvo (1994).

⁷ The Jones (1991) model has been used extensively in the contemporary earnings management literature, and is based on the assumption that the non-discretionary component of accruals is correctly identified. The ability of the Jones (1991) model and other accrual models to partition accruals into discretionary and non-discretionary components are still questionable. However, given the current state of knowledge there is no better model than the modified Jones model (Dechow et al. 1995). In light of this assumption, we provide sensitivity tests to consider the robustness of our results to measurement error.

⁸ In cross-sectional estimates of equation (1), industries with fewer than six observations were omitted due to OLS requirements (see for example, Subramanyam, 1996). Sample size is discussed further in endnotes 10, 12 and 13. With regard to model assessment issues, diagnostics used to assess OLS error-term assumptions included: residual plots, normal probability plots, White tests for heteroscedasticity, Shapiro-Wilk tests for nonnormality, and Durbin-Watson tests for autocorrelation. In addition, diagnostics available from the INFLUENCE option in the SAS regression procedure were used in identifying outliers. Referring to these latter diagnostics, nine experimental and size-matched control sample firm-year observations were deemed to be outliers with fundamentally different economic characteristics, and thus were omitted from all analyses.

⁹ Sloan (1996) argues that total accruals possess less predictive ability with respect to future profitability because of a higher degree of subjectivity resulting from managerial discretion and large one-time adjustments.

- ¹⁰ The results presented in Table 3 pertain to all firms that appear in the CRSP database with sufficient data for OLS model estimation (e.g., 74 of the 123 investigated firms have monthly returns data available on CRSP and operate in an industry with at least five other firms). See footnotes 5, 8, 12, and 13 for further discussion of sample size. Excluding investigated firms not settling their antitrust case, the results are similar to those presented in Table 3 (e.g., the DAC estimated coefficient for settling firms is 2.051, significant at .10).
- ¹¹ Vuong (1989) provides a likelihood ratio test that allows selection of the model, which better explains variations in a dependent variable. See Dechow (1994) for additional discussion of this model selection technique.
- ¹² Like Table 3, the total sample results presented in Table 4 pertain to all investigated firms appearing in the CRSP database with sufficient data for OLS model estimation. The sample size for each model is dictated by data availability. For further discussion of sample size, see footnotes 8, 10, and 13.
- ¹³ As in Tables 3 and 4, the sample size for the model estimation in Table 5 is dictated by data availability, where the total sample results pertain to all investigated firms appearing in the CRSP database. For further discussion of sample size, see footnotes 8, 10 and 12.

References

1. Aharony, J. and A. Dotan, "Regular Dividend Announcements and Future Unexpected Earnings: An Empirical Analysis," *Financial Review*, 29 (February), pp. 125-151, 1994.
2. Areeda, P., *Antitrust Analysis: Problems, Text, Cases*, Little Brown and Company: Boston, Massachusetts, 1988.
3. Baker, J.B. and T.F. Bresnahan, "Empirical Methods of Identifying and Measuring Market Power," *Antitrust Law Journal*, 61 (Summer), pp. 3-16, 1992.
4. Ball, R. and G. Foster, "Corporate Financial Reporting: A Methodological Review of Empirical Research," *Journal of Accounting Research*, 20 (Supplement), pp. 161-234, 1982.
5. Balsam, S., "Discretionary Accounting Choices and CEO Compensation," *Contemporary Accounting Research*, 15 (Fall), pp. 231-260, 1998.
6. Barth, M. E., W. H. Beaver, J. R. M. Hand, and W. R. Landsman, "Accruals, Cash Flows, and Equity Values," *Review of Accounting Studies* 3, 205-229, 1999.
7. Beneish, M. D., "Detecting GAAP Violations: Implications for Assessing Earnings Management Among Firms With Extreme Financial Performance," *The Journal of Accounting and Public Policy*, 16 (Fall), pp. 271-309, 1997.
8. Bernartzi, S., R. Michaely, and R. Thaler, "Do Changes in Dividends Signal the Future or the Past?" *The Journal of Finance*, 71 (July), pp. 1007-1034, 1997.
9. Brickley, J. "Shareholders Wealth, Information Signaling, and the Specially Designated Dividend: An Empirical Study," *Journal of Financial Economics*, 12 (August), pp. 187-209, 1983.
10. Cahan, S.F., "The Effect of Antitrust Investigations on Discretionary Accruals: A Refined Test of the Political-Cost Hypothesis," *The Accounting Review*, 67 (January), pp. 77-95, 1992.
11. Coate, M.B., A.N. Kleit and R. Bustamante, "Fight, Fold or Settle? Modeling the Reaction to FTC Merger Challenges," *Economic Inquiry*, 33 (October), pp. 537-551, 1995.
12. Dechow, P.M., "Accounting Earnings and Cash Flows as Measures of Firm Performance: The Role of Accounting Accruals," *Journal of Accounting and Economics*, 18 (July), pp. 3-42, 1994.
13. Dechow, P.M., R.G. Sloan and A.P. Sweeney "Detecting Earnings Management," *The Accounting Review*, 70 (April), pp. 193-225, 1995.
14. DeFond, M.L. and J. Jiambalvo, "Debt Covenant Violation and Manipulation of Accruals," *Journal of Accounting and Economics*, 17 (January), pp. 145-176, 1994.
15. Eckbo, B.E. and P. Wier, "Antimerger Policy under the Hart-Scott-Rodino Act: A Reexamination of the Market Power Hypothesis," *Journal of Law and Economics*, 28 (April), pp. 119-149, 1985.

16. Elzinga, K.G., "Unmasking Monopoly: Four Types of Economic Evidence," in R.J. Lerner and J.W. Meehan, Jr. (eds.), *Economics and Antitrust Policy*, Quorum Books: Westport, Connecticut, 11-37, 1989.
17. Erickson, M. and S. Wang, "Earnings Management by Acquiring Firms in Stock for Stock Mergers," *Journal of Economics and Business*, 27 (April), pp. 149-176, 1999.
18. Financial Accounting Standards Board, *Objectives of Financial Reporting by Business Enterprises*, Norwalk, Connecticut, 1978.
19. Gallo, J., K. Dau-Schmidt, J. Craycraft, C. Parker, "Department of Justice Antitrust Enforcement, 1955-1997: An Empirical Study," *Review of Industrial Organization*, 17 (2000), 75-133.
20. Gruely, B. and R.L. Rundle "FTC Looks Hard at PacificCare's Plan to Buy FHP," *Wall Street Journal*, (October 10), A3, 1996.
21. Guay, W. R., S. P. Kothari, and R. L. Watts "A Market-Based Evaluation of Discretionary Accrual Models," *Journal of Accounting Research*, 34 (Supplement), pp. 83-105, 1996.
22. Hall, B.H., *The Manufacturing Sector Master File: Documentation*, National Bureau of Economic Research: Stanford, California, 1989.
23. Hall, S.C. and W.W. Stammerjohan, "Damage Awards and Earnings Management in the Oil Industry," *The Accounting Review*, 72 (January), pp. 47-65, 1997.
24. Healy, P.M. "The Effect of Bonus Schemes on Accounting Decisions," *Journal of Accounting and Economics*, 7 (April), pp. 85-107, 1985.
25. Healy, P.M. and K.G. Palepu, "The Effect of Firms' Financial Disclosure Strategies on Stock Prices," *Accounting Horizons*, 7 (March), pp. 1-11, 1993.
26. Healy, P.M. and J.M. Wahlen (1999), "A Review of the Earnings Management Literature and Its Implications for Standard Setters," *Accounting Horizons*, 13 (December), pp. 365-383, 1999.
27. Holthausen, R.W., D.F. Larcker and R.G. Sloan, "Annual Bonus Schemes and the Manipulation of Earnings," *Journal of Accounting and Economics*, 19 (February), pp. 29-74, 1995.
28. Johnson, R.N. and A.M. Parkman, "Premerger Notification and the Incentive to Merge and Litigate," *The Journal of Law, Economics and Organizations*, 7 (Spring), pp. 145-162, 1991.
29. Jones, J.J. "Earnings Management during Import Relief Investigations," *Journal of Accounting Research*, 29 (Autumn), pp. 93-228, 1991.
30. Key, K.G., "Political Cost Incentives for Earnings Management in the Cable Television Industry," *Journal of Accounting and Economics*, 23 (November), pp. 309-337, 1997.
31. Kreutzfeldt, R.W. and W.A. Wallace, "Error Characteristics in Audit Populations: Their Profile and Relationship to Environmental Factors," *Auditing: A Journal of Practice & Theory*, 6 (Fall), pp. 20-43, 1986.
32. Levitt, A., "The Numbers Game," *Remarks Delivered at the New York University Center for Law and Business* (September 28), 1998.
33. Lintner, J., "Distribution of Incomes of Corporations Among Dividends, Retained Earnings, and Taxes," *American Economic Review*, 16 (May), pp. 373-388, 1956.
34. Makar, S.D. and P. Alam, "Earnings Management and Antitrust Investigations: Political Costs Over Business Cycles," *Journal of Business Finance & Accounting*, 6 (June/July), pp. 701-720, 1998.
35. McNichols, M. and G.P. Wilson, "Evidence of Earnings Management from the Provision for Bad Debts," *Journal of Accounting Research*, 26 (Supplement), pp. 1-31, 1988.
36. Moyer, S.E., "Capital Adequacy Ratio Regulations and Accounting Choices in Commercial Banks," *Journal of Accounting and Economics*, 13 (July), pp. 123-154, 1990.
37. Parker, R. G. and D.A. Balto, "The Evolving Approach to Merger Remedies," *Antitrust Report* (May), 1-10, 2000.
38. Peltzman, S., "The Decline of Antitrust Enforcement," *Review of Industrial Organization* (19), pp. 49-53, 2001.
39. Sloan, R. "Do Stock Prices Fully Reflect Information in Accruals and Cash Flows About Future Earnings?" *Accounting Review* 71, 3 (July) pp. 289-315, 1996.
40. Subramanyam, K.R. "The Pricing of Discretionary Accruals," *Journal of Accounting & Economics*, 22 (August-December), pp. 249-281, 1996.

41. Vuong, Q.H., "Likelihood Ratio Tests for Model Selection and Non-nested Hypotheses," *Econometrica*, 57 (March), pp. 307-333, 1989.
42. Watts, R.L. and J.L. Zimmerman, *Positive Accounting Theory*, Prentice-Hall: Englewood Cliffs, New Jersey, 1986.
43. Watts, R.L. and J.L. Zimmerman, "Towards a Positive Theory of the Determination of Accounting Standards," *The Accounting Review*, 53 (January), pp. 112-134, 1978.
44. Weiss, L.W., "The Concentration-Profits Relationship and Antitrust," in H.J. Goldschmid, H.M. Mann and J.F. Weston (eds.), *Industrial Concentration: The New Learning*, Little, Brown and Co., Boston, pp. 184-233, 1974.
45. Weston, F. J., Kwang, S. C., and Hoag, *Mergers, Restructuring and Corporate Control*, Prentice-Hall, N.J, 1990.
46. Wier, P., "The Costs of Antimerger Lawsuits," *Journal of Financial Economics*, 11 (April), pp. 207-224, 1983.

Notes

Notes