

The Perceived Earnings Quality Consequences of Announcements to Voluntarily Adopt the Fair Value Method of Accounting for Stock-Based Compensation

John D. Phillips*
University of Connecticut

Karen Teitel
College of the Holy Cross

August 23, 2007

* Contact Author

John D. Phillips, University of Connecticut, School of Business, 2100 Hillside Road Unit 1041, Storrs, CT 06269-1041, 860-486-2789, john.phillips@business.uconn.edu

We would like to thank Frank Heflin, Stan Veliotis, Mike Willenborg, and workshop participants at the 2002 American Accounting Association Annual Meeting and the University of Connecticut for their helpful suggestions. The financial support of the University of Connecticut School of Business and the May and Stanley Smith Charitable Trust is greatly appreciated.

The Perceived Earnings Quality Consequences of Announcements to Voluntarily Adopt the Fair Value Method of Accounting for Stock-Based Compensation

Abstract

We identify 113 firms that between July and December, 2002, announced plans to voluntarily adopt the fair value method of accounting for stock-based compensation. We investigate whether such announcements increased the perceived earnings quality of these firms' earnings. Answering this research question provides evidence consistent with conservative accounting choices signaling higher earnings quality. Employing the long window earnings response coefficient as our surrogate for perceived earnings quality, we find evidence consistent with an increase in perceived earnings quality for these firms relative to a control set of firms that in 2002 did not announce plans to adopt the SFAS 123 stock-based compensation recognition provisions.

The Perceived Earnings Quality Consequences of Announcements to Voluntarily Adopt the Fair Value Method of Accounting for Stock-Based Compensation

I. Introduction

We examine whether firms' announcements to voluntarily adopt the fair value method of accounting for stock-based compensation led to increases in their perceived earnings quality. Specifically, we identify 113 firms (hereinafter referred to as "recognizing firms") that between July and December, 2002, announced plans to voluntarily adopt the fair value method. Next, we investigate whether the recognizing firms' long window earnings response coefficient, our surrogate for the market's perception of earnings quality (e.g., Ghosh and Moon, 2005), is higher for the two years beginning after the period July 1, 2002 through December 31, 2002 (hereinafter the "announcement period") than for the two years ending prior to such period.¹

Investigating whether the recognizing firms' announcements to voluntarily adopt the fair value method of accounting for stock-based compensation led to changes in market participants' perceived earnings quality is important because it leads to a better understanding of how market participants react to firms' conservative accounting choices. Whereas prior research has investigated the market's reactions to the recognizing firms' actual announcements (Aboody et al., 2004a; Robinson and Burton, 2004), our study is the first to directly link these announcements to changes in perceived earnings quality.

Prior to interim periods or years ending before June 15, 2005, SFAS 123 made recognition of employee stock option (ESO) expense using the fair value method optional and required non-recognizing firms to disclose in the financial statement footnotes earnings per share

¹ Our search resulted in a potential sample of 150 firms, but we eliminate from our study nine foreign firms, nineteen firms with missing data, and nine firms that switched yearends. Aboody et al. (2004a) identify 155 firms that announced plans to recognize employee stock option (ESO) expense in 2002 and early 2003. 134 (21) of their sample firms made their announcements in 2002 (2003). We focus only on the 2002 announcers because we investigate the earnings quality of post-announcement earnings.

amounts calculated as if the fair value method had been used (FASB, 1995).² In 2002, a number of highly-publicized accounting scandals were blamed, at least in part, on the incentives created by executive stock options (e.g., Becker, 2002). Consequently, from July through December of 2002, approximately 150 - 155 firms announced that they would begin recognizing ESO expense according to the fair value method outlined in SFAS 123. Aboody, et al. (2004a) identify 155 firms that made such announcements in 2002 and early 2003 and found that these firms experienced positive abnormal returns around the announcement dates. Similarly, Robinson and Burton (2004) found that a sample of voluntary adopters experienced significantly positive abnormal returns during the three-day period surrounding the announcement dates. Aboody et al. (2004a) argue that these firms' voluntary adoptions of the SFAS 123 recognition provisions signaled higher earnings quality. The voluntary adopters' positive stock price effects documented in Aboody et al. (2004a) and Robinson and Burton (2004), however, are not linked to these firms' earnings. We directly test the effect of the recognizing firms' announcements on the long window earnings response coefficient, our surrogate for perceived earnings quality.

We test whether the recognizing firms' *perceived* earnings quality increased from the pre-announcement period to the post-announcement period. Importantly, we do not test whether the ESO expense recognition pursuant to SFAS 123 improved *actual* earnings quality; i.e., we do not test whether the recognizing firms' post-announcement earnings including the ESO expense are actually more persistent or more predictable than in the pre-announcement period. Moreover, we employ a differences-in-differences research design that focuses on the recognizing firms' changes in perceived earnings quality relative to a control set of firms that did not voluntarily

² Aboody et al. (2004a) report that only five publicly-traded firms chose to recognize ESO expense in the income statement prior to 2002. Accordingly, 150-155 firms announcing plans to do so represents a substantial increase in the number of firms recognizing ESO expense and suggests a fundamental change in the financial reporting environment.

adopt the SFAS 123 recognition provisions in 2002, thereby helping to mitigate self-selection bias.

Our results are consistent with an increase in the recognizing firms' perceived earnings quality subsequent to their announcements to adopt the SFAS 123 recognition provisions. We find that the increase in the recognizing firms' long window earnings response coefficient from the pre-announcement period to the post-announcement period is significantly greater than that of the control firms. Examining pre- and post-announcement periods' earnings persistence, a measure of actual earnings quality, and earnings response coefficients for the recognizing and control firms sheds light on the recognizing firms' motivation for voluntarily adopting the SFAS 123 recognition provisions. Although we find no significant differences between the recognizing and control firms' earnings persistence in both the pre- and post-announcement periods, we find that the recognizing firms' long window earnings response coefficient is significantly lower than that of the control firms in the pre-announcement period. In the post-announcement period, after the recognizing firms' significantly greater increase in the long window earnings response coefficient, the recognizing and control firms' long window earnings response coefficients are not significantly different from one another. Our results are thus consistent with the recognizing firms' voluntarily recognizing ESO expense, a conservative accounting choice, to send a credible signal of higher earnings quality to market participants and then having market participants act on that signal.

Our study makes several contributions. First, our study contributes to the stream of research addressing accounting for ESOs (e.g., Dechow et al., 1996; Espahbodi et al., 2002; Aboody et al., 2004b), directly adding to the findings in Aboody et al. (2004a) and Robinson and Burton (2004). Our results are consistent with the recognizing firms' successfully signaling that

their pre-announcement period earnings quality was actually higher than perceived by market participants. Neither Aboody et al. (2004a) nor Robinson and Burton (2004) document this motivation for the recognizing firms' voluntary adoption of the ESO recognition provision nor do they document an increase in their perceived earnings quality. Second, we add to the stream of research that addresses voluntary accounting choices (see Fields, Lys and Vincent, 2001 for a review of this literature). In particular, we add to the literature that addresses the effects of conservative accounting choices (e.g., Ahmed et al., 2002). In contrast to prior studies that examine accruals which reverse over time, the choice to recognize ESO expense results in the persistent understatement of net income and thus provides a more powerful test of the consequences of conservative accounting choices. Third, our research also contributes to research that addresses disclosure versus recognition (e.g., Bernard and Schipper, 1994; Aboody, 1997; Barth et al., 2003; Aboody et al., 2004b) because SFAS 123 required disclosure of ESO expense and pro forma earnings per share when firms chose not to recognize ESO expense in the income statement (FASB, 1995).

The paper proceeds as follows. The next section develops the hypothesis investigated in this study. The third section presents the model and data utilized to test this hypothesis. Section four provides the sample selection process, including the selection of a control group of firms that did not voluntarily announce plans to recognize SFAS 123 expense in 2002. Section five presents the results, and we conclude in section six.

II. Hypothesis Development

In an April, 2002 column written for the Washington Post, Berkshire Hathaway CEO, Warren Buffet, states "Companies that expense options will develop a reputation for being

believable, for not hyping things, and will be valued more than those whose CEO is flim-flamming [investors]” (Buffet, 2002 A19).³ Consistent with Buffet’s comments, Aboody et al. (2004a) argue that a conservative accounting choice such as expensing ESOs serves as a signal of higher earnings quality to motivate their investigation of the voluntary adopters’ announcement period stock price effects. Hughes and Levine (2003) formalize this argument and develop a signaling model in which there is an adverse selection problem between firms and their creditors. High quality firms are able to choose a conservative accounting method and still have earnings sufficient to avoid debt covenant violations and satisfy other accounting-based contracts, whereas low quality firms are unable to mimic this strategy. The choice to recognize ESO expense using the fair value method is a conservative accounting choice because doing so unambiguously results in lower net income.

Consistent with the signaling benefits of a conservative accounting choice, Aboody et al. (2004a) indirectly test whether firms’ announcements to voluntarily recognize ESO expense signaled higher earnings quality to market participants. Aboody et al. (2004a) argue that even though ESO expense is already disclosed in the footnotes, these announcements provide a credible signal of earnings quality that lowers information asymmetry between the firm and market participants. This reduced information asymmetry reduces the firm’s risk premium, which, in turn, increases the firm’s stock price (e.g., Bartov and Bodnar, 1996). Consistent with this argument, Aboody et al. (2004a) find that the recognizing firms experienced abnormal positive stock returns around the announcement dates. The positive stock market reactions to the recognizing firms’ announcements, however, are not related to the recognizing firms’ earnings.

³ Indeed, six of the seven companies for which Buffet is a director elected to voluntarily adopt the fair value method of accounting for ESOs (Aboody et al., 2004a).

Accordingly, to directly investigate the perceived earnings quality effects of these announcements, we test the following hypothesis (stated in the alternative):

Hypothesis: The recognizing firms' perceived earnings quality increases after their announcements in 2002 to voluntarily adopt the SFAS 123 recognition provisions.

III. Research Design

In our investigation of the perceived earnings quality consequences of announcements to voluntarily adopt the fair value method of accounting for ESOs, we use the long window earnings response coefficient as a surrogate for earnings quality (e.g., Schipper and Vincent, 2003; Ghosh and Moon, 2005) and estimate the following differences-in-differences model:

$$R_{it} = \lambda_0 + \lambda_1 \Delta E_{it} + \lambda_2 POST_t + \lambda_3 \Delta E_{it} * POST_t + \lambda_4 RECOGNIZE_i + \lambda_5 \Delta E_{it} * RECOGNIZE_i + \lambda_6 POST_t * RECOGNIZE_i + \lambda_7 \Delta E_{it} * POST_t * RECOGNIZE_i + v_{it} \quad (1)$$

where R_{it} is the cumulative market adjusted return using the equal-weighted market index for the twelve month period ending three months after fiscal year end; ΔE_{it} is the change in income before extraordinary items, discontinued operations, and changes in accounting principles from year t-1 (annual *Compustat* data item *IB*) scaled by market value of equity at the end of the third month after year t-2 fiscal year end (monthly *Compustat* data item *MKVALM*). We test the hypothesis that the recognizing firms' announcements to adopt the SFAS 123 recognition provisions, not the actual recognition of ESO expense in the income statement, signals higher earnings quality. Accordingly, we use income before changes in accounting principles and add back any recognized SFAS 123 ESO expense to calculate our earnings measure for the recognizing firms to ensure that recognized SFAS 123 ESO expense is excluded in the post-announcement period firm-years. Doing so makes post-announcement earnings comparable to earnings for all other firm-years.

$POST_t$ is an indicator variable set equal to one for the two fiscal years beginning after the announcement period and zero for the two fiscal years ending before the announcement period; and $RECOGNIZE$ is an indicator variable set equal to one if the firm announced plans in 2002 to voluntarily recognize stock option expense pursuant to SFAS 123 and zero otherwise.

The coefficient on ΔE_{it} , λ_1 , represents the earnings response coefficient for the control firms in the fiscal years ended prior to July 2002. We expect a positive sign on this coefficient. We have no prediction regarding the sign on λ_3 , the coefficient on $\Delta E_{it} * POST_t$, which represents the change in the earnings response coefficient for the control firms in the fiscal years beginning after December 2002. Including this variable helps control for changes in the return-earnings relation for all firms attributable to factors other than the announcements to voluntarily adopt the SFAS 123 recognition provisions. The coefficient on $\Delta E_{it} * RECOGNIZE_i$, λ_5 , represents the recognizing firms' incremental earnings response coefficient in the fiscal years ended prior to their announcements to voluntarily adopt the SFAS 123 recognition provisions. We have no prediction regarding the sign of this coefficient. Finally, consistent with our hypothesis we predict a positive sign on λ_7 , the coefficient on $\Delta E_{it} * POST_t * RECOGNIZE_i$, which captures the incremental change in the earnings response coefficient for a recognizing firm relative to being a control firm in the fiscal years ending before and beginning after the announcement period.

IV. Sample Selection

The purpose of this study is to examine the perceived earnings quality implications of the recognizing firms' announcements to voluntarily adopt the fair value method of accounting for stock-based compensation during the period between July and December 2002. A search of corporate press releases and business news articles on the Dow Jones News Services Database (now Factiva) results in a potential sample of 150 recognizing firms. Because the focus of this

study is on financial reporting issues under U.S. GAAP, nine foreign firms were excluded to avoid inconsistencies in financial reporting. An additional nineteen firms were eliminated due to data unavailability during the four-year window surrounding the announcement period resulting from the occurrence of mergers, restatements, or bankruptcy filings during the pre- and post-announcement periods. Finally, we exclude nine firms that changed yearends during the pre- or post-announcement periods. Including these firms would have resulted in using inconsistent earnings measures during our test period. This process results in a sample of 113 recognizing firms (452 firm-years).

INSERT TABLE 1 HERE

We also identify a control sample of all firms from the 2002 S&P 500, S&P 400 mid-capitalization, and S&P 600 small-capitalization indices that did not announce plans to voluntarily adopt the SFAS 123 recognition provisions during 2002. We require that the firms have data available on Compustat necessary to perform our tests for the four years surrounding the announcement period. This selection process results in a control sample of 1,234 firms (4,936 firm-years). The sample selection process is summarized in Table 1.⁴

V. Results

Table 2 reports descriptive statistics separately for the recognizing and control firm subsamples. The recognizing firm sub-sample means and medians for both earnings (E_{it}) and market value of equity (MVE_{it}) are significantly greater than the corresponding means and medians for the control group of firms. However, the mean stock return (R_{it}) for the recognizing firms is significantly less than the control firms. These results suggest that the recognizing firms,

⁴ Consistent with Aboody et al. (2004a), a substantial percentage of the recognizing firms are from the financial institutions industry (SIC one-digit code = 6). Specifically, 220 firm-years (49 percent) are from this industry. In the control group there are 652 firm-years (13 percent) from this industry. When we re-estimate equations (1) and (2) excluding these firms, our results are qualitatively the same.

which are more profitable and larger than the control firms, have more ability to take the hit to earnings resulting from expensing ESOs. Yet, the market does not appear to perceive this difference. There is no statistical difference in change in earnings (ΔE_{it}) between the two groups.

INSERT TABLE 2 HERE

Table 3 reports the equation (1) estimation results. The results are consistent with our hypothesis. The estimate of λ_7 , the coefficient on $\Delta E_{it} * POST_t * RECOGNIZE_t$, is significantly positive (coefficient estimate = 0.597; p-value = 0.004). This result indicates that the recognizing firms' increase in the long window earnings response coefficient is statistically greater than the control firms' increase in the long window earnings response coefficient, consistent with our hypothesis that the recognizing firms' increased their perceived earnings quality. The analysis reported at the bottom of Table 3 indicates that the control firms' earnings response coefficient decreases from 0.420 to 0.373 whereas the recognizing firms' earnings response coefficient increases from -0.018 to 0.524.

INSERT TABLE 3 HERE

The test results reported in Table 3 also indicate that the recognizing firms' long window earnings response coefficient was significantly lower than the control firms' long window earnings response coefficient in the pre-announcement period. After the recognizing firms' significantly greater increase in the long window earnings response coefficient, however, the post-announcement period long window earnings response coefficients for the two groups are not significantly different from one another. These results are consistent with the recognizing firms sending a credible signal to market participants that their perceived earnings quality was lower than warranted in the pre-announcement period.

To validate this finding, we estimate the earnings persistence, a measure of actual earnings quality, in both the pre- and post- announcement periods for the recognizing and control firms using the following differences-in-differences model:

$$E_{it} = a_0 + \alpha_1 E_{it-1} + \alpha_2 POST_t + \alpha_3 E_{it-1} * POST_t + \alpha_4 RECOGNIZE_i + \alpha_5 E_{it-1} * RECOGNIZE_i + \alpha_6 POST_t * RECOGNIZE_i + \alpha_7 E_{it-1} * POST_t * RECOGNIZE_i + e_{it} \quad (2)$$

where all variables are as previously defined. The coefficient on E_{it-1} , α_1 , represents the earnings persistence coefficient for the control firms in the fiscal years ended prior to July 2002. We expect a positive sign on this coefficient. We have no prediction regarding the sign on α_3 , the coefficient on $E_{it-1} * POST_t$, which represents the change in the earnings persistence coefficient for the control firms in the fiscal years beginning after December 2002. Including this variable helps control for changes in earnings persistence for all firms attributable to factors other than the announcements to voluntarily adopt the SFAS 123 recognition provisions. The coefficient on $E_{it-1} * RECOGNIZE_i$, α_5 , represents the recognizing firms' incremental earnings persistence coefficient in the fiscal years ended prior to their announcements to voluntarily adopt the SFAS 123 recognition provisions. Finally, α_7 , the coefficient on $E_{it-1} * POST_t * RECOGNIZE_i$, captures the incremental change in the earnings persistence coefficient for a recognizing firm relative to being a control firm in the fiscal years ending before and beginning after the 2002 announcement period.

Indeed, the results reported in Table 4 indicate that earnings persistence, a measure of actual earnings quality, is not significantly different between the recognizing and control firms in either the pre- or post-announcement period. Taken together, the results suggest that low perceived earnings quality was a motivating factor in the recognizing firms' decisions to

voluntarily adopt the SFAS 123 recognition provisions and that the announcements to do so were successful in signaling higher earnings quality to market participants.

INSERT TABLE 4 HERE

VI. Conclusion

Based on a sample of 113 firms that announced plans to voluntarily adopt the fair value method of accounting for stock-based compensation between July and December 2002, this study provides evidence that these recognizing firms experienced a significantly greater earnings response coefficient increase from the pre-announcement to the post-announcement date period relative to a control set of firms that did not announce such plans in 2002.

Our results provide evidence consistent with the recognizing firms' announcements to voluntarily recognize SFAS 123 ESO expense sending a credible signal to market participants that their perceived earnings quality was lower than warranted. These results provide a better understanding for the motivations behind, and the resulting positive stock price reactions to, the recognizing firms' announcements documented in Aboody et al. (2004a) and Robinson and Burton (2004). Because adopting the SFAS 123 recognition provisions is a conservative accounting choice that results in the persistent understatement of net income relative to footnote disclosure, our evidence also contributes to the voluntary accounting choice (e.g., Fields, Lys and Vincent, 2001) and conservatism (e.g., Ahmed et al., 2002) streams of literature. Also, because the signal of earnings quality sent to market participants involves recognizing an expense already disclosed in the footnotes, our evidence adds to the literature addressing recognition versus disclosure (e.g., Bernard and Schipper, 1994; Aboody 1997; Barth et al., 2003; Aboody et al., 2004b). Finally, our evidence suggests that market participants perceive that firms expensing ESOs have higher earnings quality, implying that investors prefer expensing of ESOs to footnote

disclosure. We thus contribute to the ongoing debate concerning accounting for stock-based compensation (e.g., Dechow et al., 1996; Espahbodi et al., 2002; Aboody et al., 2004a; Aboody et al., 2004b).

References

- Aboddy D. 1997. Recognition versus disclosure in the oil and gas industry. *Journal of Accounting Research Supplement*: 21-32.
- Aboddy D., M. Barth and R. Kasznik. 2004a. Firms' voluntary recognition of stock-based compensation expense. *Journal of Accounting Research* 42: 123-150.
- _____. 2004b. SFAS 123 Stock-based compensation expense and equity market values. *The Accounting Review* 79: 251-275.
- Ahmed, A., B. Billing, R. Morton and M. Stanford-Harris. 2002. The role of accounting conservatism in mitigating bondholder-shareholder conflicts over dividend policy and in reducing debt costs. *The Accounting Review* 77: 867-890.
- Barth, M., G. Clinch and T. Shibano. 2003. Market effects of recognition and disclosure. *Journal of Accounting Research* 41: 581-609.
- Bartov, E. and G. M. Bodnar. 1996. Alternative accounting methods, information asymmetry and liquidity: Theory and evidence. *The Accounting Review* 71: 397-418.
- Becker, G. 2002. Options are Useful- but only if they're used right. *Business Week* (August 5): 26.
- Bernard V. and K. Schipper. 1994. Recognition and disclosure in financial reporting. Working Paper, University of Michigan and University of Chicago.
- Buffett, W. (2002, April 9). Stock options and common sense. *The Washington Post*: A19.
- Dechow, P., A. Hutton and R. Sloan. 1996. Economic consequences of accounting for stock-based compensation. *Journal of Accounting Research* 34: 1-20.
- Espahbodi, H., P. Espahbodi, Z. Rezaee and H. Tehranian. 2002. Stock price reaction and value relevance of recognition versus disclosure: The case of stock-based compensation. *Journal of Accounting and Economics* 33: 343-373.
- Fields, T., T. Lys and L. Vincent. 2001. Empirical research on accounting choice. *Journal of Accounting and Economics* 31: 255-307.
- Financial Accounting Standards Board (FASB). 1995 Accounting for stock-based compensation. FASB Statement No. 123, Norwalk, CT: FASB.
- Ghosh, A. and D. Moon. 2005. Auditor tenure and perceptions of audit quality. *The Accounting Review* 80 (2): 585-612.

Hughes, J. and C. Levine. 2003. Management compensation and earnings-based covenants as signaling devices in credit markets. *Journal of Corporate Finance* 11 (5): 832-850.

Robinson, D. and D. Burton. 2004. Discretion in financial reporting: The voluntary adoption of fair value accounting for employee stock options. *Accounting Horizons* 18 (June): 97-108.

Schipper, K. and L. Vincent. 2003. Earnings quality. *Accounting Horizons* 17 (Supplement): 97-110.

Table 1
Sample Selection

Recognizing Firms

Total firms identified as voluntary	
SFAS 123 adopters	150
Less: Foreign firms	(9)
Less: Firms with missing data	(19)
Less: Firms with change in year end	<u>(9)</u>
Recognizing firms	<u>113</u>

Control Firms

S&P 1500	1,500
Less: Firms identified as voluntary	
SFAS 123 adopters	(90)
Less: Firms with missing data	(105)
Less: Firms with change in year end	<u>(71)</u>
Control firms	<u>1,234</u>

Notes to Table 1

Recognizing Firms are those firms that announced plans to voluntarily adopt the employee stock option expense recognition provisions of SFAS 123 during the period between July and December, 2002.

Control Firms consist of all firms from the 2002 S&P 500, S&P 400 mid-capitalization, and S&P 600 small-capitalization indices that did not announce plans to voluntarily adopt the SFAS 123 recognition provisions during 2002.

Table 2
Descriptive Statistics

	N	Mean	Standard Deviation	Minimum	Percentiles			Maximum
					25 th	50 th	75 th	
Recognizing Firms								
MVE_{it}	452	42.661*	60.928	0.937	22.719	33.825*	47.490	737.161
R_{it}	452	-0.055*	0.238	-0.873	-0.202	-0.075	0.053	1.020
ΔE_{it}	452	0.016	0.317	-0.758	-0.011	0.005	0.021	6.348
E_{it}	452	0.060*	0.099	-0.852	0.037	0.067*	0.094	0.628
Control Firms								
MVE_{it}	4,936	28.435*	23.007	0.184	16.351	24.805*	36.498	786.867
R_{it}	4,936	-0.015*	0.396	-0.968	-0.234	-0.069	0.135	5.394
ΔE_{it}	4,936	0.011	0.182	-5.074	-0.013	0.007	0.029	2.405
E_{it}	4,936	0.038*	0.145	-5.292	0.026	0.052*	0.076	1.423

Notes to Table 2

E_{it} is income before extraordinary items, discontinued operations, and changes in accounting principles (annual *Compustat* data item *IB*) for control firms and is *IB* less recognized stock compensation expense for recognizing firms scaled by market value of equity at the end of the third month after year t-1 fiscal year end (monthly *Compustat* data item *MKVALM*).

MVE_{it} is the market value of equity three months after fiscal year end (monthly *Compustat* data item *MKVALM*) scaled by the common shares outstanding (annual *Compustat* data item *CSHO*) as of the beginning of the fiscal year.

R_{it} is the market adjusted cumulative return for the twelve month period ending three months after fiscal year end.

ΔE_{it} is the change in income before extraordinary items, discontinued operations, and changes in accounting principles from year t-1 (annual *Compustat* data item *IB*) for control firms and is *IB* less recognized stock compensation expense for recognizing firms scaled by market value of equity at the end of the third month after year t-2 fiscal year end (monthly *Compustat* data item *MKVALM*).

* Mean or median is significantly different across the two groups at a two-tailed p < 0.001.

Table 3
Effect of Announcing the Adoption of the Fair Value Method of Accounting for Stock Options
on the Earnings Response Coefficient

Dependent Variable is Stock Returns (R_{it})

	Coefficient	Predicted Sign	Coefficient Estimates (two-tailed White adjusted p-values)
Intercept	λ_0	?	-0.030 (0.001)
ΔE_{it}	λ_1	+	0.420 (<0.001)
$POST_t$	λ_2	?	0.020 (0.051)
$\Delta E_{it} * POST_t$	λ_3	?	-0.047 (0.736)
$RECOGNIZE_i$	λ_4	?	-0.034 (0.072)
$\Delta E_{it} * RECOGNIZE_i$	λ_5	?	-0.446 (<0.001)
$POST_t * RECOGNIZE_i$	λ_6	?	-0.008 (0.697)
$\Delta E_{it} * POST_t * RECOGNIZE_i$	λ_7	+	0.597 (0.004)
N			5,388
Adjusted R ²			0.035

Separate group coefficients	Derivation	N	λ
Control firm-years pre-announcement	λ_1	2,468	0.420
Recognizing firm-years pre-announcement	$\lambda_1 + \lambda_5$	226	-0.018
Control firm-years post-announcement	$\lambda_1 + \lambda_3$	2,468	0.373
Recognizing firm-years post-announcement	$\lambda_1 + \lambda_3 + \lambda_5 + \lambda_7$	226	0.524

Coefficient differences between groups	Relevant Coefficients	Difference	F	p-value
Recognizing pre- vs Control pre-	-0.018- 0.420	-0.438	13.45	<0.001
Recognizing post- vs Recognizing pre-	0.524- -0.018	0.542	12.49	<0.001
Control post- vs Control pre-	0.373- 0.420	-0.047	0.11	0.736
Recognizing post- vs Control post-	0.524- 0.373	0.151	0.87	0.350

Table 3 (continued)

Notes to Table 3

R_{it} is the market adjusted cumulative return for the twelve month period ending three months after fiscal year end.

ΔE_{it} is the change in income before extraordinary items, discontinued operations, and changes in accounting principles from year t-1 (annual *Compustat* data item *IB*) for control firms and is *IB* less recognized stock compensation expense for recognizing firms scaled by market value of equity at the end of the third month after year t-2 fiscal year end (monthly *Compustat* data item *MKVALM*).

$POST_t$ is an indicator variable =1 for the two fiscal years beginning after the announcement period to recognize SFAS 123 expense (July 2002-December 2002) and =0 for the two fiscal years ending before the announcement period (July 2002).

$RECOGNIZE_i$ is an indicator variable =1 for recognizing firms and =0 for control firms.

Table 4
Earnings Persistence

Dependent variable is Scaled Earnings (E_{it})

	Coefficient	Predicted Sign	Coefficient Estimates (two-tailed White adjusted p-values)
Intercept	α_0	?	0.027 (<0.001)
E_{it-1}	α_1	+	0.282 (0.001)
$POST_t$	α_2	?	-0.009 (0.348)
$E_{it-1} * POST_t$	α_3	?	0.198 (0.284)
$RECOGNIZE_i$	α_4	?	0.035 (0.007)
$E_{it-1} * RECOGNIZE_i$	α_5	?	-0.153 (0.345)
$POST_t * RECOGNIZE_i$	α_6	?	-0.020 (0.253)
$E_{it-1} * POST_t * RECOGNIZE_i$	α_7	?	0.008 (0.976)
N			5,388
Adjusted R ²			0.107

Separate group coefficients	Derivation	N	α
Control firm-years pre-announcement	α_1	2,468	0.282
Recognizing firm-years pre-announcement	$\alpha_1 + \alpha_5$	226	0.129
Control firm-years post-announcement	$\alpha_1 + \alpha_3$	2,468	0.480
Recognizing firm-years post-announcement	$\alpha_1 + \alpha_3 + \alpha_5 + \alpha_7$	226	0.335

Coefficient differences between groups	Relevant Coefficients	Difference	F	p-value
Recognizing pre- vs Control pre-	0.129-0.282	-0.153	0.89	0.346
Recognizing post- vs Recognizing pre-	0.335-0.129	0.206	1.15	0.284
Control post- vs Control pre-	0.480-0.282	0.198	1.34	0.248
Recognizing post- vs Control post-	0.335-0.480	-0.145	0.49	0.484

Table 4 (continued)

Notes to Table 4

$E_{it}(E_{it-1})$ is income before extraordinary items, discontinued operations, and changes in accounting principles (annual *Compustat* data item *IB*) for control firms and is *IB* less recognized stock compensation expense for recognizing firms scaled by market value of equity at the end of the third month after year t-1 (t-2) fiscal year end (monthly *Compustat* data item *MKVALM*).

$POST_t$ is an indicator variable =1 for the two fiscal years beginning after the announcement period to recognize SFAS 123 expense (July 2002-December 2002) and =0 for the two fiscal years ending before the announcement period (July 2002).

$RECOGNIZE_i$ is an indicator variable =1 for recognizing firms and =0 for control firms.