

# **Change in Investor Sentiment Regarding Stock Option Accounting**

**Eli Bartov<sup>\*</sup> and Carla Hayn<sup>\*\*</sup>**

## **Abstract**

We investigate whether investors changed their view of option expensing between the enactment of SFAS No. 123 in 1995, which required pro forma footnote disclosure of option expenses, and the enactment of SFAS No. 123(R) in 2004, which requires that option costs be recognized in the income statement. Examining a sample of high-option-issuing firms, we hypothesize and find a shift in investor sentiment in favor of option expensing that appears to have been sparked by the accounting scandals that surfaced in 2001 and 2002. This result is based on the contrasting stock price response to key events preceding the two standards. Cross-sectional analyses of the sample firms' responses highlights the trade-off investors made between the negative "income effect" of option expensing and the positive "information effect" arising from the presumed greater transparency achieved by such expensing. The results further suggest that income statement recognition of the option expense provides information beyond footnote disclosures.

<sup>\*</sup> Stern School of Business, New York University

<sup>\*\*</sup> Anderson Graduate School of Management, University of California at Los Angeles

We thank participants in the accounting workshops at Florida Atlantic University, Georgetown University, Indiana University, Southern Methodist University and the 2006 American Accounting Association Annual Meeting for their useful comments on the paper. We appreciate the diligent work of Lucile Faurel and Karthik Balakrishnan who helped us with data collection and computer programming. We gratefully acknowledge Audit Integrity LLC for providing data on firms' accounting and governance rankings.

## Change in Investor Sentiment Regarding Stock Option Accounting

### 1. Introduction

Accounting for employee stock options has been perhaps the most contentious issue ever addressed by the Financial Accounting Standards Board (FASB). Although by 1988, the FASB concluded that stock options represented a cost and subsequently, in a 1993 Exposure Draft, proposed that they be treated as an expense reported on the income statement, this pronouncement proved to be just another step in the long, arduous option-expensing debate.<sup>1</sup> Intense opposition to the proposal from numerous parties eventually forced the FASB to back down from mandating option expensing. The statement finally enacted in October 1995, Statement of Financial Accounting Standard No. 123 (SFAS No. 123), “Accounting for Stock-Based Compensation,” required that companies report the effect of options on earnings only in their footnote disclosures. In explaining the rationale for the standard, the FASB maintained its stance that expensing produced the “most relevant and representationally faithful” computation of net income. However, it accepted the “compromise” requirement because:

The debate on accounting for stock-based compensation unfortunately became so divisive that it threatened the Board's future working relationship with some of its constituents. Eventually, the nature of the debate threatened the future of accounting standards setting in the private sector.... The Board chose a disclosure-based solution for stock-based employee compensation to bring closure to the divisive debate on this issue—*not because it believes that solution is the best way to improve financial accounting and reporting* (pars. 60 and 62, SFAS No. 123; italics added).

The furor in the corporate community over the FASB's 1993 Exposure Draft raised many questions about stock option expensing. Was there merit to companies' claims that reporting the expense on the income statement would “strike at the heart of the job-creating high-tech industry,” “eliminate a competitiveness tool that has been responsible for the growth of the U.S. economy,” and create a “financial albatross” for start-up companies?<sup>2</sup> Or, in keeping with the efficient market hypothesis, was this expense already known and valued by market participants?

---

<sup>1</sup> The Exposure Draft proposed that the fair value of options granted be capitalized as a deferred cost on the grant date and then expensed over the options' vesting period.

<sup>2</sup> See “Senate Weighs In Against FASB on Options,” [Newbytes News Network](#), May 6, 1994 and Statement of Mark Heesen, President, National Venture Capital Association, Testimony before the Committee on Senate Banking, Housing and Urban Affairs Subcommittee on Securities and Investment, November 12, 2003.

Research findings on the impact of SFAS No. 123 are mixed on these issues. Dechow, Hutton, and Sloan (1996) document a negative market reaction to the FASB's announcement in April 1993 that it was moving forward on a standard requiring option expensing for 347 firms that wrote the FASB expressing opposition to option expensing. They find no significant reaction for another 734 firms identified as being likely to be affected by option expensing. Similarly, none of the samples they examine had a significant price response to the release of the 1993 Exposure Draft. Dechow et al. suggest that this may have been because "the probability of mandatory expensing never rose much above zero." The primary finding that emerges from their analyses is that the stiff opposition to mandatory option expensing arose primarily from concerns that top executives' compensation packages would be subject to more public scrutiny.

In a related study, Espahbodi, Espahbodi, Rezaee and Tehranian (2002), examine a broader sample consisting of high-tech, high growth and start-up firms. They document a significant stock price decline upon the issuance of the 1993 Exposure Draft and, subsequently, to the FASB's decision to require footnote disclosure of the impact of options on net income. Further, they find that the market response to these events is more negative the greater is the potential reduction in income. They conclude that investors perceived that firms would be hurt by option expensing, not only because their reported earnings would be lower but also because these numbers would be less useful for contracting purposes.

More recently, Aboody, Barth and Kasznik (2004) and Robinson and Burton (2004) find that investors rewarded firms that announced early (by July 2002) that they were voluntarily switching to option expensing under the existing standard, SFAS No. 123. Interestingly, there was no significant stock price response for firms that later announced that they were switching to expensing. For most of the early announcers, the impact of expensing options on net income was negligible, suggesting that the move to option expensing was more symbolic than substantive.

The conflicting results of these studies—no discernible reaction or a negative reaction to the FASB's announced intention to move forward with option expensing and the subsequent introduction of the 1993 Exposure Draft, a negative reaction to the decision to require footnote disclosure, and a positive reaction to only the earliest announcements of voluntary switching—do not provide a clear picture of how investors view stock option expensing. Anecdotal evidence on the issue is also ambiguous. While there are indications suggesting that investor sentiment shifted in support of option expensing, the continued strong opposition to such a move by high tech and other firms that were heavy granters of options, various investor groups, Congressional members

and other leading public officials raises doubts about the extent of support that option expensing garnered.

The promulgation of the revised standard, SFAS No. 123(R), “Share-Based Payment,” enacted in December 2004 affords us an opportunity to revisit the question of how investors view stock option expensing. We investigate this issue with a new research question stemming from recent changes in the reporting environment, a new methodology and, as a result of the pro forma disclosures mandated by SFAS No. 123, a sample for which the impact of option expensing on firms’ bottom lines can be more precisely quantified. Further, with some qualifications (discussed in section 4.1), this setting provides a natural experiment to determine whether footnote disclosure is equivalent to income statement recognition, an issue that often arises as the FASB, the SEC and other concerned constituents debate the relative merits of alternative forms of disclosure.

Many events transpired during the nine-year interval between the enactment of the two standards. The number of stock options granted grew astronomically from 1993 to 2004.<sup>3</sup> Further, in the latter part of this period, accounting scandals of such firms as Enron, Global Crossing and WorldCom, to name but a few, began to be uncovered almost weekly. Many suggested that there was a link between these scandals and the increased use of stock options.<sup>4</sup> Because a greater portion of top managements’ compensation was tied to stock prices, executives had even more incentive to manipulate earnings in order to boost their companies’ reported performance. As reported by The Washington Post, “(S)tock options foster a corrosive climate that tempts many executives, and not just those at Enron, to play fast and loose when reporting profits.”<sup>5</sup>

During 2002, as the argument that the failure to expense stock options significantly impaired financial statement transparency and contributed to reporting abuses gained acceptance, there appears to have been a marked shift in sentiment regarding such expensing by some groups.<sup>6</sup> While in the past it was widely feared that option expensing would prove harmful to the economy, stymieing companies’ ability to raise funds and thus thwarting economic growth, increasingly it

---

<sup>3</sup> Data by the U.S. Department of Labor indicate that the value of Employee Stock Ownership Plan (ESOP) assets increased from \$184.0 billion in 1994 to \$500.0 billion in March 2005.

<sup>4</sup> One role that stock options played in the accounting scandals was to weaken the incentives for the Board of Directors to “blow the whistle” on accounting irregularities. As evidence of the persuasive power of these options, AOL Time Warner gave its board member 40,000 options annually, valued at \$843,200 per director. (See “The Ten Habits of Highly Defective Companies,” The Nation, August 5, 2002, p. 16.)

<sup>5</sup> R. Samuelson, “Stock Option Madness,” The Washington Post, January 30, 2002.

<sup>6</sup> Testifying before the Senate Finance Committee in April 2002, Sarah Teslik, Executive Director of the Council of Institutional Investors, stated that executive compensation was a leading cause of corporate, accounting and financial-services fraud and that stock options, in particular, were “a fraudster’s best safe-cracking tools.”

appears that option expensing began to be associated with greater reporting transparency, more credible financial statements and, as a result, an increased ability to raise capital.

The purpose of this study is to examine whether, and if so why, investors' perception of the merits of option expensing shifted over the nine-year period between the passage of SFAS No. 123 and SFAS No. 123(R). To provide a benchmark, we first examine how the stock price of our sample firms responded to events that preceded the original standard, SFAS No. 123. We then identify events that had a bearing on the likelihood that a revised standard requiring option expensing would be enacted and examine the stock price of our sample firms to announcements of these events. To understand the variation in firms' price responses, we use a cross-sectional regression analysis that incorporates the perceived costs and benefits of option expensing. The costs stem from the "income effect" associated with reporting lower earnings, while the benefits emanate from the "information effect," the improved financial statement transparency associated with option expensing.

The income effect arises from the consequences of reporting lower income as a result of expensing options. The primary argument made by those opposed to such expensing was that it would depress stock prices, "cause an upheaval in the stock market," and make it more difficult to attract employees and raise capital in the future.<sup>7</sup> The information effect stems largely from the perceived greater transparency obtained by expensing options and the corrective influence that this might have on management's incentives to manipulate earnings.<sup>8</sup> More tangibly, because the revised standard requires that the cost of options be associated with specific business activities, financial statement information under the revised standard is likely to be informative about the actual compensation costs associated with the firm's operations. A second aspect of the "information effect" is implied by the Dechow et al. results: reporting the actual cost of stock options on the income statement translates the value of options granted to a dollar figure whose impact on the company's income is clearly visible.

The results of our analyses support this primary hypothesis—investors' negative reaction to events indicating an increased likelihood of mandated option expensing in the early 1990s became positive to similar events in the pre-SFAS No. 123(R) period. Although the negative

---

<sup>7</sup> The Financial Executives Institute was among those advancing this argument; see "Time to Look at Stock Options' Real Cost," *The New York Times*, October 21, 2001.

<sup>8</sup> The revised standard explicitly notes this as a reason for requiring option expensing stating that some respondents regarded the failure to expense options as having "obscured important aspects of reported performance and impaired the transparency of financial statements" (SFAS No. 123(R), par. 4)

income effect is still present to some extent, it appears to be offset by the added information provided by option expensing. Not only is the information effect positive, it further appears to be positively related to the amount of the potential option expense. These findings are above and beyond other factors documented by past research (e.g., impact on borrowing ability or contracting) that may influence how investors weigh option costs in valuing firms.

This study contributes to the literature on accounting for employee stock options, corporate disclosures, and financial statement transparency in several ways. First, analysis of the market response to various events leading up to SFAS No. 123(R) provides evidence that allows us to make inferences about whether investors perceive that expensing provides information beyond footnote disclosures. Prior research (e.g., Aboody, Barth and Kasznik (2004) and Balsam, Bartov and Yin (2005)) indicates that stock prices reflect the pro forma option expense reported in the SFAS No. 123 footnote disclosures. However, these studies are silent on whether expense recognition provides information beyond these disclosures. Thus our findings directly address the question often raised by the FASB, the SEC and others as to whether disclosure is synonymous with recognition in a supposedly semi-strong-form efficient market. Second, because the footnote disclosures required by SFAS No. 123 enable us to estimate not only which firms will be affected by expensing but also the extent of this impact, we can resolve the mixed findings by others studies as to how investors as a whole regard option expensing and if, indeed, there was a shift in their view over the period that preceded SFAS No. 123 (R). Further, unlike prior studies that examined only one dimension of option expensing, our research design enables us to distinguish between the income effect documented by past studies as well as an information effect. Inclusion of this latter effect is informative because it sheds light on whether the FASB's objective to create more transparent financial statements through option expensing is valued by investors. Finally, including both effects enables us to gauge how investors weigh the tradeoffs between the income effect and the information effect associated with option expensing in their valuation of firms.

The paper proceeds as follows. In the next section, we briefly recap the controversy on option expensing and the major accounting pronouncements on stock options. In section three, we outline our procedure to identify the key events leading up to the revision of SFAS No. 123 and describe those events as well as the ones leading up to the enactment of SFAS No. 123. In section four, we discuss the economic determinants hypothesized to influence the market response to the key events. Section five contains our primary hypotheses. The test used to assess investors' response to the key events preceding the initial and the revised standard are outlined in section six

and a cross-sectional model to calibrate variations in the impact of option expensing across firms is developed. The samples on which the tests are conducted and the data collection procedures are presented in section seven. Section eight contains the results of our primary tests along with supplemental tests and sensitivity analyses. Conclusions are provided in the final section.

## **2. Stock Option Controversy and Accounting Pronouncements Preceding SFAS No. 123(R)**

Options were initially accounted for in accordance with Accounting Principles Board Opinion No. 25 (APB No. 25), “Accounting for Stock Issued to Employees,” which was issued in October 1972. This standard generally did not require a charge against income for “fixed” options plans whereas performance stock options and stock appreciation rights were expensed.<sup>9</sup> In the mid-1980s, as the popularity of fixed options plans increased, the FASB began discussing how best to account for options. Among other concerns, the FASB contended that all options should be treated in a uniform manner. The Board decided early on that stock options granted to employees represented a cost and that the proper accounting treatment for options was expensing. However, few others shared this view. The then Big Six accounting firms unanimously agreed that the Board should drop the issue of option expensing.<sup>10</sup> Congressional members voiced their opposition to option expensing, with Senator Lieberman introducing a bill in May 1994 to “express the sense that the Financial Accounting Standards Board should maintain the current (non-expensing) accounting treatment”; the bill was adopted by a vote of 88 to 9. Most vocal of all, Silicon Valley firms and their option-compensated employees maintained that option expensing would have a tremendously detrimental impact, “hurting the economy,” “scaring off investors,” “limiting firms’ ability to recruit,” “bringing the tech movement to its knees” and “hurting the rank-and-file employees’ ability to participate in the ownership of their own companies.”<sup>11</sup> With such a strong and widespread sentiment against stock option expensing, it is perhaps not surprising that the accounting standard enacted in October 1995, SFAS No. 123, “Accounting for Stock-Based Compensation,” did not require option expensing.

Under SFAS No. 123, firms were encouraged to recognize a charge against earnings for their option expense but they could elect to report under APB No. 25, disclosing their stock option

---

<sup>9</sup> APB No. 25 requires that on the “measurement date,” the date when both the number of shares and the exercise price are known, earnings be charged an amount equal to the excess of the fair market value of the stock on that date over the amount payable by the employee (the exercise price). For a “fixed” stock option plan, since the exercise price is usually equal to the fair market value of the stock on the grant date, there is no charge against earnings.

<sup>10</sup> See letter from the Big Six accounting firms to FASB chairman Dennis Beresford dated July 15, 1994.

<sup>11</sup> See, for example, “Over 4,000 Employees Rally to Send President Clinton a Strong Message: Stock Option Rule Change will Hurt Job Creation, Economic Growth,” *Business Wire*, March 25, 1994.

expense only in a footnote. Virtually all firms initially opted for footnote disclosure. Thus the diverse application of APB No. 25, where some options were included as expenses on the income statement while the cost of the majority of options was relegated to the footnotes, continued.

To address the questions that arose about the application of this standard, the FASB revisited stock options in July 2000 with FASB Interpretation No. 44 (FIN No. 44), “Accounting for Certain Transactions Involving Stock Compensation.” FIN No. 44 purposefully did not address any issues related to the application of the fair value method included in SFAS No. 123.<sup>12</sup>

Little mention was made of options until the accounting scandals began to surface.<sup>13</sup> A number of these frauds occurred at high-tech companies that relied heavily on stock options to “pay” both management and employees. While there was no direct indication that the use of stock options was a factor in any of these cases, a general outcry began to surface in the press that options were a “bad influence.” Senator Carl Levin’s introduction to his bill limiting the benefits of options, presented to Congress in February 2002, describes the connection this way: “Most executive pay packages rely heavily on options, encouraging corporate managers to push accounting rules to the limit to make their financial statements look better so their stock prices will go up; then executives can cash in their options.” Arthur Levitt, the previous SEC chairman, held that “a lot of the excesses that occurred in the ‘90s were the result of stock options improperly accounted for” and that the only way to escape the “vicious cycle” caused by options was to report them on the income statement.<sup>14</sup>

As a result of the mounting number of corporate accounting scandals, we hypothesize that there was a shift in investor sentiment regarding option expensing that occurred sometime during 2001-2002. Such a shift is reflected anecdotally in the views of public officials. For example, in the early 1990s, President Clinton and the current chair of the SEC, Harvey Pitt, spoke out against option expensing arguing that this accounting treatment would “harm the economy.”<sup>15</sup> However by 2002, Federal Reserve Chairman, Alan Greenspan, lent his support to expensing saying, “One step towards better earnings quality would be forcing companies to treat the value of stock options

---

<sup>12</sup> FIN No. 44 defines an employee for purposes of applying APB No. 25, provides criteria for noncompensatory plans, addresses how to account for changes in previously fixed stock options or awards, and discusses how to account for the exchange of stock compensation awards in business combinations.

<sup>13</sup> In the last 1990s, irregularities at Waste Management, WorldCom, Cendant, Sunbeam, Tyco and Xerox filled the press. Enron took center stage in the fall of 2001. During the 15-month period following Enron, an additional 37 major frauds were uncovered, three times more than in the previous 10 years combined.

<sup>14</sup> Webcast conducted by Business Finance, December 2, 2002.

<sup>15</sup> “Clinton Enters Debate on How Companies Reckon Stock Options,” The Wall Street Journal, December 23, 1993.

granted to executives and employees as an expense.”<sup>16</sup> The new chair of the SEC, William Donaldson, who previously doubted the logic of expensing options, reversed his position and publicly supported the FASB’s movements in this direction.<sup>17</sup> Further anecdotal evidence of a shift is the change expressed by various investor groups in their position on option expensing. The Council of Institutional Investors, a nonprofit organization whose 140 pension fund members include large corporate, public and labor funds, was heralded in the 1990s as “the poster child for opposing charging options to earnings.” However in March 2002, the group reversed its position, voting overwhelmingly to endorse option expensing.<sup>18</sup> For illustrative purposes, a few citations from the press indicating a shift in favor of option expensing are provided in table 1.

In an attempt to regain investor and governmental confidence and, perhaps sensing a shift, some companies, beginning with Coca-Cola in July 2002 and followed shortly thereafter by The Washington Post, Bank One, General Motors and General Electric, began voluntarily switching to option expensing in accordance with the preferred fair value method prescribed by SFAS No. 123. In response to questions about how to handle the change from disclosure to recognition of the option expense, the FASB enacted SFAS No. 148, “Accounting for Stock-Based Compensation—Transition and Disclosure,” in October 2002. This statement provides guidance for firms switching to recognition, requires quarterly disclosures of the stock option pro forma effects based on the fair value method, and requires that the disclosures be presented prominently and in a more “user-friendly” format. However, it wasn’t until December 2004 that the new standard requiring option expensing was finally enacted.

### **3. Events Affecting the Likelihood of Mandated Option Expensing**

#### **3.1. Selection Procedure of Events Preceding the Enactment of SFAS No. 123(R)**

In order to track investors’ sentiment regarding option expensing, we each identified events that appeared to have a bearing on the likelihood that a revised standard would be enacted as reported in The Wall Street Journal, The Washington Post and the New York Times. We read all of the articles reported in these sources beginning in October 1995, following the enactment of SFAS No. 123, through December 2004 when SFAS No. 123(R) was enacted. We retained those events that we both identified and that contained new information which had not previously been reported (or that could not be inferred with certainty based on prior reports). For example, on July

<sup>16</sup> “Greenspan Warns Against Too Much Regulation,” The Wall Street Journal, March 27, 2002, p. A3.

<sup>17</sup> “Much Ado about Stock Options—The Epilogue,” The Wall Street Journal, April 23, 2003, p. A23.

<sup>18</sup> Stone, P., “How Enron has Stirred Up Business,” National Journal, March 2, 2002.

27, 2002, it was reported that the FASB would once again consider the mandatory expensing of options. Similar news reports were released during the following two-week period. However, we include only the first of these reports.

To pinpoint the reaction to news strictly about stock option accounting, we also required that the event be “isolated” in the sense that the press release was not confounded by other accounting-related news. An example of such a “confounded” event occurred on March 13, 2003 when the FASB formally voted to add stock options to its agenda, an action that undoubtedly increased the likelihood that option expensing would eventually be mandated.<sup>19</sup> However, the price movements around this event are not informative because on this same day and reported in the same press releases, it was announced that the FASB would likely add pension accounting to its agenda. The announcement made on April 10, 2002 that President Bush was publicly “siding with the business community” and opposing option expensing is a similarly confounded event since, on this same day, it was announced that Federal Reserve Chairman Alan Greenspan strongly supported option expensing and that Senator John McCain and other Senator members were drafting bills to require option expensing.

### **3.2. Description of Events Preceding the Enactment of SFAS No. 123(R)**

Following the enactment of SFAS No. 123, from late 1995 through 2001, few articles appeared in the press about stock options.<sup>20</sup> However, in the years 2002-2004, there were 229 articles in our news sources that mentioned stock option expensing. Many of these articles did not contain new information but rather explained stock options and the ongoing debate about their accounting treatment. Reading through these articles chronologically to identify when information was released that had not been previously reported, we initially identified 23 dates on which major news events occurred that affected the likelihood of a new standard requiring option expensing.<sup>21</sup> Eight of these dates were dropped because the press releases contained “confounding” news that would make it difficult to assess the impact of the stock option news. The remaining 15 events that met the selection criteria are discussed briefly below.

The first event that we identify as having a bearing on whether option expensing would eventually be mandated was the announcement that a bill was being introduced in the Senate to

---

<sup>19</sup> This formal vote confirmed the FASB’s earlier announcement that it planned to add stock options to its agenda.

<sup>20</sup> We found a few fairly general articles in our news sources that either reviewed the earlier accounting debate or commented on the increased use of options.

<sup>21</sup> To identify the key events, we each separately read the 229 articles and identified those that contained new information that had a bearing on the likelihood that the FASB would enact a new standard requiring option expensing. The events that we test are those common to both of our searches.

force companies to recognize on their income statements the amount of the option expense deducted for tax purposes. We view this event, which occurred on February 6, 2002, as increasing the likelihood of mandated option expensing.

The next two events are also identified as increasing the likelihood of mandated option expensing. On July 27, 2002, the FASB reported that it would once again consider option expensing. On August 7, 2002, the Board went a step further announcing that it was exploring a requirement that companies report the bottom-line impact of options on the face of their income statements (but not to actually include options in the calculation of net income).

The fourth event, occurring on February 7, 2003, is evidence of the growing opposition to the movement to expense options. On this day it was reported that 70 House and Senate members had notified the FASB that they were against option expensing. We classify this event as one that decreased the likelihood of mandated option expensing.

On February 18, 2003, the FASB announced its intentions to put option expensing on its agenda, following the course set by the IASB, despite the strong and growing opposition of some corporate groups.<sup>22</sup> This announcement, which we categorize as increasing the likelihood that a revised standard would eventually be enacted, is the fifth event that we examine. On April 20, 2003, the Board announced that it was moving forward with option expensing despite the strong anti-expensing forces led by the high tech sector. Two days later the Board announced that its members had unanimously agreed by a formal vote that stock options should be expensed. These two announcements, because they occurred close together and have a consistent (positive) effect on the likelihood of option expensing, comprise our sixth event.

The seventh event that we identify occurred on September 11, 2003, when the FASB announced that it was postponing its activities on option expensing until it could resolve various accounting concerns (i.e., the appropriate option valuation methodology). Prior to this announcement, the FASB had stated that it expected to issue a proposal (the Exposure Draft) by the end of 2003 and a final standard by spring 2004. We interpret this postponement as an event consistent with a decreased likelihood of mandated option expensing since, among other effects, the delay gave the tech industry more time to promote its campaign against the FASB.<sup>23</sup>

---

<sup>22</sup> The IASB's promulgation of a standard requiring option expensing occurred over the period from August 2001 to February 2004. We did not include dates of major IASB events in our analysis since news reports on the IASB's actions were summary articles mentioning other accounting-related issues or containing confounding news about the situation in the U.S. (i.e., mention that option expensing in the States was still unlikely or "faced an uphill battle").

<sup>23</sup> Deloitte & Touche surveyed CEOs and CFOs and found that over 90% were strongly opposed to option expensing. (See "Options Battle Mounts /Tech Firms Resist Rules on Expensing," [San Francisco Chronicle](#), October 22, 2003)

On January 9, 2004, it was announced that the powerful Senate Banking Committee was backing the FASB. Concurrent with this announcement, the Board reported that a proposal draft might be ready by the following month. Because both of these news items are consistent with an increased likelihood of option expensing, we include these as event eight.

The Exposure Draft on option expensing was released almost three months later, on March 31, 2004. Although this did not constitute “news” in the sense that it conveyed unexpected information, because this issuance is a formal step in the standard setting process and to compare the reaction to it with that to the exposure draft preceding SFAS No. 123, we include it as event nine, classifying it as increasing the likelihood of mandated expensing.

The most serious threat to option expensing arose when Congress became actively involved in the debate. On April 21, 2004, it was reported that a “lobbying blitz” was gaining momentum in the House and that a bill would be introduced limiting the amount of options expensed to those granted to the top five executives.<sup>24</sup> This bill was approved by the House Committee on June 16, 2004 and passed the full House by an overwhelming majority (312 to 111) on July 20, 2004. We classify these three events, designated events 10, 11 and 12, respectively, as decreasing the likelihood of mandated option expensing.<sup>25</sup>

On August 11, 2004, the FASB’s proposal suffered another setback when Donald Nicolaisen, Chief Accountant of the SEC, announced that he was inclined to give companies an additional year to prepare for any standard that might eventually be passed on option expensing. Bowing to external pressures, on October 14, 2004, the FASB again announced that it would delay its plan to require companies to expense options. We interpret these two events, numbered 13 and 14, respectively, as consistent with there being a decreased likelihood that mandated option expensing would be enacted.

The final event, enactment of SFAS No. 123(R) in December 2004, required option expensing for all firms beginning for fiscal periods after June 15, 2005.<sup>26</sup> Although it is likely that

---

<sup>24</sup> The bill, “Stock Options Accounting Reform Act” (HR3574), in addition to limiting option expensing to the CEO and the next four most highly paid executive officers, also stipulated that volatility would be assumed to be zero in option-pricing models used to estimate the amount of the expense, delayed expensing for small firms until three years after they had gone public, and required the Commerce and Labor Departments to complete an economic impact study of stock option expensing within one year.

<sup>25</sup> A similar bill, with 23 co-sponsors, was introduced in the Senate. This bill never made it out of the Banking Committee largely because Senator Richard Shelby, head of that committee, and other senators supported option expensing. Events related to this bill are not included due to the release of confounding information on those days.

<sup>26</sup> On April 14, 2005, the SEC voted unanimously to delay the effective date of SFAS 123(R) until the first quarter of the first *fiscal year* beginning after June 15, 2005 rather than the first *quarterly* or *annual* period beginning after that

the official approval of this new standard contained no unexpected news since, by late November 2004, passage of a new standard appeared inevitable, we include it as the final event, event 15, since it represents the culmination of the standard setting process.

### **3.3. Description of Events Preceding the Enactment of SFAS No. 123**

While the focus of this study is on the events preceding the enactment of the revised standard, to provide a benchmark against which to gauge any change in investor sentiment we revisit the key events that preceded the original standard using our sample firms and methodology.<sup>27</sup> The three events that had a bearing on the enactment of SFAS No. 123 that we examine are those common to both the Dechow et al. (1996) and Espahbodi et al. (2002) studies.

The first such event is the FASB's announcement on April 7, 1993 that it intended to propose that companies expense stock options. This event, which increased the likelihood that a standard on option expensing would be enacted, is expected to elicit a negative response as investors focused on the income effect. The second event during this period that we examine is the FASB's issuance, on June 30, 1993, of an Exposure Draft requiring option expensing. While this event increased the likelihood that option expensing would eventually be mandated, it is confounded by another event. On the same date, a bill was introduced in the Senate that was intended to "counter" the FASB's proposal, reducing the likelihood that a new standard would be enacted. Notwithstanding the difficulty in isolating the response to the Exposure Draft, we include this event for completeness sake in order to compare the response of our sample firms to that documented by the earlier studies. The third pre-SFAS No. 123 event that we examine occurred on December 14, 1994 when the FASB announced that it was moving to footnote disclosure, dropping its previous stance of requiring income statement recognition of the option expense. While this change removed the possibility that options would be expensed, it increased the probability that the cost of options would be disclosed in the financial statements, albeit in the footnotes. While again the potentially offsetting news makes it difficult to definitively characterize this event, because it does increase the likelihood of financial statement disclosure, we regard it as an increased likelihood event.

---

date as originally prescribed by the statement. For calendar-year firms, this moved the adoption quarter from the third quarter of 2005 to the first quarter of 2006.

<sup>27</sup> As noted earlier, prior studies used different samples and methodologies and, more importantly, had serious data limitations that prevented a more precise determination of firms that would be most affected by option expensing.

#### 4. Economic Determinants Underlying Investors' Response to Key Events

In this section we discuss two factors that appear to have had an important bearing on investors' response to key events preceding the enactment of SFAS No. 123(R): the income effect and the information effect.

##### 4.1. Income Effect of Expensing Options

The income effect examined in Dechow et al. (1996) and Espahbodi et al. (2002) refers to the impact that reporting lower income as a result of expensing stock options has on the firm. Since information on the extent of this reduction was limited or nonexistent prior to the enactment of SFAS No. 123, the footnote disclosures mandated by that standard would likely have revealed new information to investors. The question arises as to whether such information is value relevant. Since the accounting treatment has no bearing on firms' future cash flows, initially it might appear that the advent of footnote disclosures has no valuation implications. However, there was a generally perceived fear by high-option-issuing companies and their constituents that reporting this expense would negatively impact their stock prices.

This argument rests on the notion that certain types of investors rely primarily on reported earnings, using a simple heuristic (e.g., the price-to-earnings or market-to-book ratio) to value firms' equity. While skeptics may scoff at this argument since expensing options has no cash flow impact, ample anecdotal evidence supports it. Even Alan Greenspan, a believer in market efficiency and a strong proponent of option expensing, acknowledged that options would "reduce a corporation's perceived earnings and conceivably its stock price."<sup>28</sup> A more recent example is the recommendation by Goldman Sachs' analysts to avoid companies where large downward revisions of EPS are likely as earnings estimates begin to reflect the impact of option expensing under SFAS No. 123(R).<sup>29</sup> Their fear is that investors might engage in widespread selling of option-laden companies since their quantitatively-based models are often programmed to automatically sell shares when earnings expectations drop significantly.

Another possible explanation for the perceived adverse valuation effect of reporting the option expense in the calculation of income rather than in the footnotes stems from the higher credibility given to items reported on the income statement. FASB Concepts Statement No. 2 (SFAC 2), "Qualitative Characteristics of Accounting Information," states that the "criteria for formally recognizing elements in financial statements call for a minimum level or threshold of

---

<sup>28</sup> Speech to a conference on venture capital, Atlanta Federal Reserve Bank, May 2, 2002.

<sup>29</sup> See Auckerman, G., "Hold on Tight: Cuts in Profit Estimates Loom," *Heard on the Street*, The Wall Street Journal, February 14, 2006.

reliability of measurement that should be higher than is usually considered necessary for disclosing information outside of financial statements” (par. 44). Evidence that investors recognize this higher threshold is provided by Frederickson, Hodge and Pratt (2005) who find (using an experimental design) that even relatively sophisticated financial statement users judge the stock option expense reported on the income statement to be more reliable than the same amount reported in the footnotes. Further, they find that the reason for reporting the option expense on the income statement affects its perceived reliability, with required recognition viewed as producing more credible numbers than voluntary recognition. These results suggest that investors would regard option expenses that were mandated to be both more relevant and more accurate than either the pro forma disclosures or amounts expensed voluntarily under SFAS No. 123, and thus give the recognized numbers greater weight in their firm valuations.<sup>30</sup>

It is noteworthy that the income effect in the pre-SFAS No. 123 period stemmed from making the amount of the option expense known by reporting it in the footnotes or by voluntarily recognizing it on the income statement. In contrast, the income effect associated with the revised standard, our primary interest, centers on moving the disclosure from the footnotes to the income statement and recognizing the option expense as part of the various line items reported on the income statement as opposed to a single line item in the footnotes and, further, being required to recognize this expense (as opposed to voluntarily recognizing it). Whether these differences are indeed significant, there remained widespread resistance to actually expensing stock options because of the perceived adverse valuation consequences, suggesting that there were perceived costs associated with recognizing options on the income statement above and beyond those associated with footnote disclosure.<sup>31</sup>

#### **4.2. Information Effect of Expensing Options**

We hypothesize that as a result of the numerous accounting scandals and the belief that options were somehow involved in managers’ illicit acts, investors began focusing on what we term the “information effect” of expensing stock options. That is, rather than emphasizing why option expensing might depress stock prices, constrain firms and limit their potential for growth, we contend that in the period preceding the revised standard, the majority of investors began to

---

<sup>30</sup> Further evidence of the increased credibility of income statement recognition versus footnote disclosure is provided by Libby, Nelson, and Hunton (2005) who find that reliability is an important consideration in auditors’ decision to include an item within the financial statements.

<sup>31</sup> Greenspan noted that “...most American businesspeople believe that (option) expensing is more than just bookkeeping.” (Speech to a conference on venture capital, Atlanta Federal Reserve Bank, May 2, 2002.)

view expensing favorably, believing that it contributed to reporting transparency, reduced managers' incentives to boost stock prices and thus produced more credible, relevant financial statements.

Given that the pro forma impact on income of expensing options was available in firms' financial footnotes under SFAS No. 123, the question arises as to whether new information would be conveyed by reporting the option expense on the income statement. Clearly many believed that it would as exemplified by the 14,239 letters received by the FASB in response to the Exposure Draft.<sup>32</sup> One source of news that might be provided by a standard mandating expensing is the extent to which options are used to fund each of the firm's activities, information not available from the one-line pro forma footnote disclosures under SFAS No. 123. SFAS No. 123(R) requires that the option expense be associated with specific items on the income statement (e.g., cost of goods sold or selling, general and administrative expenses) and the balance sheet (e.g., inventory), and not reported as a single line item as was done under SFAS No. 123. For example, when IBM adopted SFAS No. 123(R) in the first quarter of 2005, its stock option expense of \$191 million for that quarter and \$276 million for the same quarter a year earlier was spread across four line items on the income statement: cost of goods sold, selling, general and administrative (SG&A) expenses, research development and engineering, and income tax benefits. Investors might well value this disaggregated information as suggested by previous research (see, for example, Banker and Chen (2006), Berger, Hann and Piotroski (2003) and Chen and Zhang (2003)).

A ramification of the line item incorporation is that for a given level of option expense, the amount recognized on the income statement is likely to differ from the pro forma amount due to the fact that some costs are likely to be reflected in balance sheet accounts (e.g., in inventory). This "deferred recognition" (i.e., capitalizing some of the option cost and expensing it later when the associated revenues are realized) could also convey new information that might alter investors' valuation.

Another change brought about by option expensing is that the extent of option usage and its impact on net income becomes obvious, reducing any information processing costs. While the efficient market hypothesis holds that where or how an item is publicly disclosed does not affect investors' valuation, Hirshleifer and Teoh (2003) illustrate how investors' limited attention could lead to a preference for recognition over disclosure for the same information.

---

<sup>32</sup> The 1993 Exposure Draft, viewed as being "extremely controversial," generated "only" 1,789 letters.

As noted above, the placement of the disclosure could be informative in and of itself. SFAC 2 implies that recognized numbers are more reliable than numbers disclosed in footnotes. Evidence provided by Frederickson, Hodge, and Pratt (2005) suggests that financial statements users give more weight to items reported on the income statement as compared to the footnotes.

Further, mandating option expensing would make financial statements comparable across firms, eliminating the possibility that companies could report option expensing either in the footnotes or the income statement as allowed by SFAS No. 123.

The FASB summarized its views on how the proposed standard would improve financial reporting as follows:

Recognizing the compensation cost in the financial statements improves the relevance and reliability of that financial information, helping users of financial information to understand better the economic transactions affecting an enterprise and to make better resource allocation decisions. Such information specifically will help users of financial statements understand the impact that share-based compensation arrangements have on an enterprise's financial condition and operations...improve comparability by eliminating one of two different methods of accounting for share-based compensation transactions and would also thereby simplify existing U.S. GAAP. Eliminating different methods of accounting for the same transactions leads to improved comparability of financial statements because similar economic transactions are accounted for similarly" (FASB, Exposure Draft No. E-177, p. xi-xii).

## **5. Hypotheses**

Our first hypothesis focuses on the three earlier events that preceded the enactment of SFAS No. 123, all of which increased the likelihood of option expensing. We hypothesize that they elicited a negative stock price response as investors focused on the perceived negative effect that reporting lower income would have on companies' stock prices. In contrast, our second hypothesis is that the stock price response is positive (negative) to similar increased (decreased) likelihood events that preceded the enactment of the revised standard, SFAS No. 123(R). We expect this reversal in the sign of the price response to events preceding the two standards for two reasons. First, the many claims made in the wake of the accounting scandals that expensing options would lead to more transparent financial statement and prevent (or at least reduce) accounting fraud may have led investors to view this treatment more favorably. Second, the negative income effect, if still present, is likely to be weaker than it was a decade earlier as investors had several years to evaluate the impact of the potential option expense as disclosed in firms' pro forma footnote disclosures.

While we hypothesize that events occurring in 2002 and beyond that increased (decreased) the likelihood of required option expensing elicited a positive (negative) stock price response, there are viable alternative hypotheses. For example, the anti-expensing view held in the early 1990s that led to the “compromise” enacted in SFAS No. 123 might have persisted, with investors continuing to believe that regardless of its benefits, option expensing would be detrimental to high-tech, high-growth firms that relied on options to compensate their employees. In this case, the income effect could outweigh any information effect, resulting in a negative reaction to events indicating an increased likelihood of mandated expensing and a positive reaction to events suggesting that a revised standard was not likely.

Alternatively, investors might not have responded significantly to the events that we have identified. We may have failed to accurately identify the events that had a bearing on the likelihood of option expensing or, more likely, investors’ expectations may have been impounded in stock prices gradually prior to these events. Indeed, one might argue that with the advent of SFAS No. 123, any value-relevant information provided by option expensing was already known to investors through the footnote disclosures and thus events changing the likelihood of mandated option expensing were not informative. Or, it might be the case that the any negative news conveyed by the likelihood of forthcoming option expensing (e.g., the income effect) was exactly offset by positive news associated with this accounting treatment (e.g., the information effect), resulting in an insignificant response to the identified events.

While there may be merit to these alternative hypotheses regarding investor response to the identified events, the predictions arising from them are distinct from those stemming from our primary hypotheses. Thus, our tests, which are outlined in the following section, should distinguish between the two sets of hypotheses.

## **6. Assessing Investors’ Response to Key Events**

The stock price response to the three pre-SFAS No. 123 events and the fifteen pre-SFAS No. 123(R) events is computed as the cumulative abnormal return occurring over the three-day window centered on each event date.<sup>33</sup> Abnormal returns are derived by subtracting the daily mean return for the same size portfolio as provided by the Center for Research on Securities Prices (CRSP) database from the firm’s return.

---

<sup>33</sup> Since event 6 spans more than one date, we consider a slightly longer window than begins one day prior to the first date and extends to one day following the last date.

To gain insight into the economic factors underlying the stock price response to the identified events, we relate each event's abnormal returns to the income effect and the information effect as follows:

$$\text{Ret}_{i,t} = \alpha + \beta_1(\text{IncEffect}_{i,t-1}) + \beta_2(\text{InfoEffect}_{i,t-1}) + \sum \beta_c(\text{Control Variables})_{i,t-1} + \varepsilon_{ie} \quad [1]$$

Ret is the cumulative abnormal return of firm *i* over the 3-day window centered on the event announcement, *e*, occurring in year *t*. As discussed below, IncEffect is intended to capture the negative effect of expensing options while InfoEffect is designed to capture any benefits stemming from the added transparency brought about by stock option expensing. We include both the income and information effects to determine how these two somewhat conflicting factors stemming from expensing options affected investors' response.

IncEffect is computed as the product of the dollar amount of reduction in net income due to the expensing of options at the end of year *t-1* divided by the average market value of equity for year *t-1* (designated Options/MVE), multiplied by its P/E ratio in year *t-1*. The P/E ratio is measured as the average market value of equity for the year divided by income from continuing operations for firms with positive earnings. For firms with negative earnings (whose P/E ratios are thus not meaningful), we use the average P/E ratio (computed as described above) of the three firms in the same industry (based on the 4-digit SIC code) with the lowest positive earnings.<sup>34</sup> Multiplying the option expense by the P/E ratio accounts for the cross-sectional variation in the sensitivity of firms' stock prices to earnings changes. This is an important consideration in assessing the response to the likelihood of a revised standard requiring option expensing. If the firm is profitable and has a high P/E ratio, a small decline in earnings can have a multiplicative effect on price. However, if the firm is profitable but has a low P/E ratio, investors may not be particularly sensitive to the reporting of additional expenses. Data to compute the average value of equity is derived from the CRSP monthly database. Earnings data are derived from the Compustat database.

Because IncEffect is measured as a positive number, we hypothesize that there is a negative relation between it and the Ret for events hypothesized to increase the likelihood of mandated option expensing (i.e.,  $\beta_1 < 0$ ). That is, the greater the erosion in net income resulting from option expensing and the more sensitive is the firm's equity to the level of reported earnings, the more negative is the expected market response. Correspondingly, for events reducing the

---

<sup>34</sup> Similar (but slightly less significant) results are obtained when we used the median P/E ratio of profitable firms in the same industry (based on four-digit SIC codes).

likelihood of mandated option expensing, we hypothesize that the income effect is positive (i.e.,  $\beta_1 > 0$ ).

The above discussion suggests that improvements in reporting transparency would be particularly valued by investors in the wake of the accounting scandals. Accordingly, the variable InfoEffect is based on both the extent to which the firm has issued options and the perceived level of transparency of its financial statements. If stock option expensing leads to greater perceived reporting transparency, firms that have issued more options and that have relatively lower transparency prior to option expensing are expected to have the greatest improvement in transparency. For firms that already have relatively transparent financial reporting, the incremental increase in transparency achieved by expensing options is expected to be negligible.

To capture the information effect, we thus need a proxy for transparency. However, like other qualitative attributes of financial reporting, transparency is difficult to measure. Former Chief Accountant of the SEC, Lynn Turner, speaking of the need for transparent reporting, said that companies' disclosures should enable investors to "see the company through the eyes of management...reflecting in a timely manner the actual economic results and trends in operations and liquidity of the business, and the industry and environment in which it is operating."<sup>35</sup> Transparency thus encompasses a broad spectrum of the firm's reporting practices, its accounting method choices, its disclosure policies and its governance characteristics.

Rather than attempt to develop and validate a measure of transparency, we use an established one produced by Audit Integrity, LLC. This proprietary measure, known as the Accounting & Governance Risk (AGR) score, is based on a company's accounting and governance practices. It estimates the risk that companies' reported financial numbers misrepresent their true economic performance by taking into account both their financial condition and their reporting incentives.<sup>36</sup> According to Audit Integrity, this measure encapsulates earnings quality and addresses "the transparency of public companies' accounting and governance practices."

To create the AGR score, Audit Integrity relies on information in the firm's latest quarterly report, trend analysis over the past few years, its performance and financial position relative to industry benchmarks, and approximately 130 information items about the firm's financial

---

<sup>35</sup> SEC Update: "Transparent Financial Reporting and Disclosures," speech given at the Interagency Accounting Conference, April 3, 2001, Denver, Colorado.

<sup>36</sup> For example, the AGR score reflects the fact that firms in financial distress may have more incentives to manage earnings upward in order to avoid bankruptcy.

performance and corporate governance practices. Audit Integrity uses this data to determine how similar a given firm's financial statements are to past questionable financial statements (i.e., those subject to an SEC investigation, those cited in shareholder class action lawsuits, or those that have had to be restated). Beginning with a score of 100, points are subtracted for quantitative risk factors that indicate aggressive accounting and weak corporate governance. The AGR scores thus range from 100 (highest level of transparency) to 0 (lowest level of transparency).

To estimate our measure of Transparency and to make it comparable with the IncEffect variable, we convert these scores by subtracting the original AGR score from 100 and dividing the result by 100.<sup>37</sup> The resulting measure of reporting transparency ranges from 0 (very transparent) to 1 (least transparent). To estimate the InfoEffect variable, we multiply this Transparency variable by Options/MVE (defined above) to capture the extent to which the firm relies on options as a form of compensation. We hypothesize that the less transparent are the firm's financial statements and the more options it has issued (relative to its market value), the greater the expected information impact of a standard requiring stock option expensing and thus the more positive the market response to increased likelihood events (i.e.,  $\beta_2 > 0$ ). We expect the opposite response to events decreasing the likelihood that option expensing would be required.

To control for factors that might influence the investors' reaction beyond those captured by the income and information effects, we include the following four variables suggested by prior research: Comp5, Cashflow, Leverage, and Size (market capitalization). Comp5 gauges the extent to which stock options are used to compensate the firm's top five executives. If recognition of the option expense on the income statement increases its visibility, as investors become aware of the level of top management's compensation they might shy away from firms that appear to be overly generous in granting options. If this is the case, the coefficient on Comp5 for the increased (decreased) likelihood events would be negative (positive). Or, investors might value this information proportionally to its magnitude (particularly if it enabled them to take "corrective" actions). This would result in the opposite reactions (i.e., a positive (negative) reaction to the increased (decreased) likelihood events). Comp5 is operationalized as the ratio of stock options granted to the top five executives relative to their total compensation.<sup>38</sup> Data to compute this variable was hand collected from firms' financial reports and, where possible (for about one-fifth of the firms in our sample), from the Execucomp database.

---

<sup>37</sup> We use the average score over the most recent four quarters in our tests.

<sup>38</sup> The denominator consists of salary, bonus, other annual compensation, restricted stock, compensation from long-term incentive plans, "other compensation," and stock options.

In examining investors' response to SFAS No. 123, Espahbodi et al. (2002) find that smaller companies with lower free cash flows and limited debt capacity experienced a more negative stock price response to events indicating an increased likelihood of option expensing. We thus include Cashflow, Leverage, and Size, described below, as additional control variables in equation [1]. Data to compute these variables are obtained from Compustat for year t-1.

Cashflow, captures the company's ability to generate cash and thus provides an indication of how dependent the company is on outside financing. Measuring this variable as cash flow from operations for year t-1 standardized by the average market value of the firm's equity for that year, we hypothesize that the lower the firm's cashflows, the more likely it is to need outside financing. If investors believe that borrowing ability will be curtailed by option expensing, there will be a positive (negative) sign on this variable's coefficient in regression [1] for events increasing (decreasing) the likelihood of option expensing.

Leverage, measured as long-term debt divided by total assets, assesses the firm's ability to borrow in the future as well as its exposure to debt covenants and the associated contracting costs. It is difficult to predict the sign of this variable's coefficient. If a high leverage ratio indicates that firms have reached their borrowing capacity or are close to violating their debt covenants, a negative coefficient would be expected on this variable as option expensing becomes more likely. Conversely, a higher ratio may actually be indicative of borrowing ability and greater debt capacity. As an example of this, high tech and other start-up firms, with a low ability to borrow due to the level and variability of their cashflows, have low leverage ratios whereas more established, stable companies have relatively higher leverage ratios as a result of their greater borrowing capacity. If the leverage variable detects this effect, then firms with relatively higher leverage ratios will be less adversely affected, all other things being equal as the likelihood of mandated option expenses increases (i.e., a positive coefficient on Leverage).

Size, measured as the log of the average market value of equity in year t-1, is included to control for attributes (e.g., age, competitive strength) that are not included in regression [1]. We offer no hypothesis about the sign of the coefficient on this variable.

## **7. Sample**

The extent to which firms use options as a form of compensation varies considerably across firms. Even for option-granting firms, the potential impact on their income statements of expensing options varies through time. For example, the reduction in reported net income due to

option expensing for 1800Flowers.com varied from -360.5% in 2002 to -63.8% in 2003 and -3.3% in 2004. Note that the *pro forma* impact of option expensing on reported income changed considerably over the three years not only because the company granted less options but also because its profitability increased. Beyond variability across firm years, the impact of option expensing within a given industry is not uniform. Consider, for example, “high-tech” firms defined as those within the four-digit SIC codes of 3570-3579. The fiscal 2003 *pro forma* impact of expensing options for Apple Computer (SIC 3571) was markedly different from that of Hewlett-Packard (SIC 3570), with a decline in reported income of -241% and -32%, respectively.

Early researchers investigating the market’s reaction to the promulgation of SFAS No. 123 had to grapple with determining which firms might be impacted by option expensing and the extent of the related expense.<sup>39</sup> We benefit from having the footnote disclosures mandated by SFAS No. 123 over the nine-year period from 1996-2004. Using this information, we identify a sample of firms whose net income would most likely be affected by expensing options as follows.

To determine the impact of expensing stock options, using Compustat data we expressed the implied option expense on a per share basis and then computed the reduction in basic EPS that would have occurred had options been expensed. We identified all firms with a reduction of at least 15 percent in basic EPS in the year prior to the event year, total assets of at least \$10 million and an implied option expense of at least \$1 million. The last two screens ensure that we examine reasonably large firms. Matching these firms with the Center for Research on Security Prices (CRSP) database resulted in three samples of 987, 736 and 543 for the events occurring in 2002-2004, respectively. Further matching these firms with the Audit Integrity database (required to compute the InfoEffect variable) resulted in a final sample of 780, 672 and 512 firms upon which to examine the events occurring in year 2002, 2003 and 2004, respectively.<sup>40</sup> To go back in time and investigate investors’ response to the initial standard, we began with the 780 firms present in 2002 and identified 260 firms present in 1993 and 322 firms present in 1994.

---

<sup>39</sup> Dechow et al. (1996) examine firms with a high percentage of common shares reserved for conversion to stock options relative to the total common shares outstanding. The numerator reflects not only fixed stock options (the focus of the proposed accounting standard on option expensing) but also variable stock options and stock appreciation rights (both of which were already expensed under existing accounting rules). Further, this ratio is influenced by factors that have little bearing on the impact of expensing stock options (e.g., the age of the option plan). As Dechow et al. note, this introduces noise in the sample selection process and reduces the power of their test. Espahbodi et al. (2002) examine large, fairly mature firms (in the DISCLOSURE database) in 1996, the first year that SFAS No. 123 was in effect. These firms were not heavy issuers of options. The option-related expense would have reduced income by less than 5.4% for half of the firms they examine; one-fifth of the firms had no option-related expenses.

<sup>40</sup> The number of firms per year decreased due primarily to acquisitions.

As noted above, we measure the impact on net income of expensing options at the yearend prior to the event year. While the percentage impact does vary across years as the example on 1800Flowers.com illustrates, there is a strong correlation of option usage across years for our sample firms. Correlating the ratio of the implied option expense to the market value of equity across the years of our examination yields a Pearson correlation coefficient of 0.52. The correlation coefficient for the variable IncEffect (i.e., the reduction in income from expensing options times the P/E ratio) averages 0.27 across the three years of the sample. (Both coefficients are significant at the 0.001 level.) Thus it appears reasonable to assume that investors would assess the impact of option expensing based on the extent of option usage in the recent past.

### **7.1 Descriptive Statistics**

The sample firms are spread across 47 industries (defined by two-digit SIC codes), with about 56% of the firms clustered in four industry groups. Specifically, one quarter of the sample firms are in the business services sector (two-digit SIC code of 73) and about half of these are in the prepackaged software industry (four-digit SIC code of 7372). The other three industries which each contain about 10% of the sample firms are biotech (two-digit SIC code of 28), electronic and electrical equipment industries (two-digit SIC 36), and medical equipment and laboratory equipment (two-digit SIC 38).

Statistics on reported income and the pro forma dollar impact of stock option expensing for the sample firms by year are reported in table 2, panel A. As can be seen in the sixth column (Quartile 2), roughly half of the sample firms were not profitable, with the median net income ranging from a low of negative \$2.91 thousand in 2001 to a high of \$1.65 thousand in 2003; the mean value of net income ranged from \$11.24 thousand in 2001 to a high of \$34.86 thousand in 2003. The mean pro forma net income which reflects the reduction due to option expensing was lower by more than \$40.31 thousand on average over the three years or an average decrease of 268.55%. By year, the mean percentage decline in net income resulting from expensing options was 461.65%, 278.89% and 65.11% in 2001, 2002 and 2003, respectively. The median declines are higher (due to the “small denominator” effect), equaling 320.27%, 309.04%, and 446.67% in 2001, 2002 and 2003, respectively. The potential magnitude of the impact of stock option expensing renders this sample a powerful one on which to examine whether investors’ sentiment toward stock option expensing changed.

Table 2, panel B, contains descriptive statistics on the independent variables used in the cross-sectional tests. On average, the IncEffect variable ranges from a mean value of 1.74 in 2001

to 0.78 in 2003. The median value of 1.80 in 2001 fell slightly in 2002 and 2003, to 1.09 and 1.30, respectively. This drop reflects the sample firms' changing P/E ratios since Options/MVE is relatively constant. While no particular trend is evident in the InfoEffect variable over the years, the Transparency component of this variable has monotonically fallen. In terms of reporting transparency, Transparency has a mean (median) value of 0.59 (0.56) in 2001, 0.55 (0.53) in 2002 and 0.53 (0.51) in 2003. Yet it remains considerably higher than the comparable score for all other firms included in the Audit Integrity database (i.e., most publicly-traded firms) which had mean (median) values ranging from 0.41 to 0.37 (0.44 to 0.35) over the years 2001-2003. Thus our sample firms generally had a lower level of reporting transparency. Further, the decline in this variable (i.e., the "improved" transparency) over the examined period for the sample firms was about half of what it was for firms in general based on the median values.

As regards the control variables, the sample firms have relatively low levels of leverage, with long-term debt divided by the market value of equity equaling a mean (median) average ranging from 0.08 to 0.20 (0.02 to 0.05) across the three years. The sample firms' ability to generate cash from operations is, on average, positive with the median value of cash flow from operations to average market value hovering around 0.05 and the mean value increasing from 0.01 to 0.08 over the years examined. However, over one-quarter of the firms examined have negative cash flow from operations in each of the years examined. This cash shortage is consistent with these firms issuing stock options as compensation in order to conserve cash. Regarding the percentage of compensation in the form of options paid to the top 5 executives, as indicated by the values of OpComp5, this remained fairly stable over the three-year interval with a mean (median) value of about 15% (13%). The sample firms are fairly small which, given that a large number of companies in the sample are in high tech and other emerging industries, is expected and consistent with their propensity to issue options. The firms' average market values over the three-year period range from a mean (median) of \$2.1 billion to \$2.2 billion (\$247.4 to \$414.8 million).

Table 3 contains the correlation coefficients of the independent variables in regression [1]. The primary variables of interest, IncEffect (which captures the negative income effect of option expensing) and InfoEffect (used to assess the level of the firm's reporting transparency) are not significantly related. IncEffect is negatively related to the amount of leverage and the level of cash flows. Given the nature of the industries in which these firms operate (primarily high-tech and software) and their relatively small size, these are likely to be fairly young, largely equity-financed companies that are still building up operations as evidenced by their low cash inflows.

Not surprisingly, IncEffect is positively related to the amount of options used to compensate the top executives. IncEffect is negatively related to firm size, indicating that the smaller firms in the sample tend to be most affected by option expensing. Firms with a lower level of transparency (higher value of InfoEffect) tend to have less leverage, lower cashflows, use more options to compensate top management and to be smaller in size.

A few significant correlations are present among the control variables: the amount of debt in the company (Leverage) is positively related to the ability to generate cash (Cashflow) and positively related to firm size (Size). The ability to generate cash is negatively correlated with the extent to which options are used in the compensation packages of the top 5 executives (OpComp5) and positively related to firm size (Size). Finally, top executives of smaller firms tend to have a greater portion of their compensation in the form of options as compared with larger firms as evidenced by the negative correlation between OpComp5 and Size.

## **8. Results**

### **8.1. Stock Price Response to Events Affecting Likelihood of Mandated Option Expensing**

Table 4 displays the market reaction to announcements of events hypothesized to affect the likelihood that option expensing would be required in the pre-SFAS No. 123 and later in the pre-SFAS No. 123(R) periods. Panel A contains the mean stock-returns and t-statistics for the three events that had a bearing on the likelihood of mandated option expensing in the period preceding the original statement. Recall that of the 780 firms in the sample in 2001, 260 firms and 322 firms in 1993 and 1994, respectively, had sufficient return data to estimate the market reaction to these events. The mean three-day abnormal return for each of the first two events was negative and statistically significant. The response to the third event, the Board's decision to drop its proposal to require option expensing and require instead footnote disclosure while negative was not statistically significant. These results indicate that investors responded negatively to the possibility of option expensing in the period preceding the enactment of the original standard and provide a benchmark for gauging the response to the revised standard.

Panel B shows the market response to events preceding the enactment of the revised standard. Five of the eight events (events numbered 2, 3, 5, 6 and 8) expected to increase the likelihood of a revised standard mandating stock option expensing generated a positive response with the mean three-day abnormal returns ranging from 0.38% to 0.62% (all statistically significant at the 5% level or better). Four of these were FASB announcements, with the two

strongest responses to the news in August 2002 and February 2003, respectively, that the FASB was considering a requirement that firms report the stock option expense prominently on the face of the income statement and that the FASB was following the IASB's move to expense stock options each resulted in about an average return of about 0.50% over the three-day window. The eighth event, the Senate Banking Committee's announcement in January 2004 that it was officially backing the FASB's move, also resulted in a significantly positive market reaction. This event was noteworthy in that it halted the Congressional uprising that originated in the House and cleared the way for the FASB to issue SFAS No. 123(R).

The reaction to the first identified event, announcement that a bill would be introduced in the Senate to expense the amount of options deducted for tax purposes, was insignificant.<sup>41</sup> The market reaction to the FASB's announcement that an Exposure Draft had been issued (event nine) was also insignificant. (Recall that we include this event because of its role in the standard-setting process and to compare the market reaction to its promulgation with the reaction to the Exposure Draft that preceded SFAS No. 123.) Similarly, announcement of SFAS 123(R) (event 15) did not evoke a significant market response.

Panel B also contains the seven events hypothesized to decrease the likelihood that a standard mandating option expensing would be enacted. The market reaction to all of these events was negative as hypothesized and statistically significant at the 5% level or better. Announcements that option expensing might be delayed or postponed by the FASB or the SEC (events 7, 13 and 14) resulted in a combined market reaction of -1.30%. Congressional actions (events 4, 10, 11 and 12), culminating in the approval of a watered down bill by the House Financial Services Committee, an action that many felt could derail the FASB's efforts, resulted in a combined market response of 1.27%.<sup>42</sup>

The results reported in panel B for the revised standard are in sharp contrast to those provided in panel A for the original standard. While the original standard elicited a negative response to the possibility of option expensing, similar events preceding the revised standard garnered a positive response. Underscoring this apparent shift in public sentiment regarding option expensing, the results of panel B indicate that investors reacted negatively when it appeared that opposition to a revised standard was gaining strength.

---

<sup>41</sup> Similar bills had been introduced in earlier years so perhaps this bill was not unexpected. Or, perhaps the likelihood that this bill would ever pass was judged to be very low.

<sup>42</sup> See, for example, "House Panel Set to Rein in FASB on Options Rule," Wall Street Journal, June 16, 2004.

To account for the cross-sectional correlation in stock returns that may be present because we examine the same calendar dates for the sample firms, we employ the Fama-MacBeth (1973) approach, considering each event date as one observation and then combining the events hypothesized to increase the likelihood of mandated option expensing around the original standard reported in panel A and the events hypothesized to increase (decrease) the likelihood of a revised standard requiring option expensing reported in panel B.<sup>43</sup> The results, presented in Panel C, are consistent with those reported above. Namely, the three events that preceded the original standard resulted in negative returns, albeit of indeterminable statistical significance (due to the small number of observations). Conversely, similar events occurring almost a decade later that suggested an increased likelihood that option expensing would be required generated positive and significant mean abnormal returns whereas the seven events in opposition to the FASB's attempts to require option expensing are associated with negative and statistically significant mean abnormal returns. This analysis suggests that the results reported in the table are robust to alternative statistical methodologies and, in particular, are not driven by biased standard errors arising from positive cross-sectional correlations among the stock returns.

## 8.2. Cross-Sectional Tests

Table 5 presents the results from regressing the market response to events related to the passage of SFAS No. 123(R) on our two primary variables of interest: the income effect (IncEffect) which captures the negative income effect of expensing options and the information effect (InfoEffect) which captures the transparency of the financial statements, as well as on the four control variables (Leverage, Cashflow, OpComp5, and Size).<sup>44</sup> Panel A contains the results for the events pooled based on their expected impact on the likelihood of mandated option expensing while Panels B and C present the results for the separate events. Panel D contains the results of a Fama-MacBeth analysis.

Our hypothesis on the cross-sectional response to events expected to increase the likelihood of mandated option expensing is borne out by the data. As reported in panel A, the coefficient of IncEffect (-0.011) is significantly negative for the increased likelihood events. That is, the more pronounced is the income effect due to option expensing, the more negative the

---

<sup>43</sup> Event 15 was excluded from the Fama-MacBeth analysis because, as discussed earlier, we made no prediction about investors' response to this event.

<sup>44</sup> While it would be interesting to contrast the results of this cross-sectional test with the one performed on the events preceding the enactment of the original standard, data on the income statement effect of expensing options and the data required to compute the InfoEffect variable is not available for the 1993-1994 period.

market response to events indicating that this accounting treatment was likely to be required. For these increased likelihood events, the coefficient on the variable proxying for the information effect,  $\beta_2$ , is significantly positive (0.186) as hypothesized. Apparently, investors viewed the possibility of option expensing more favorably for firms that had issued a substantial amount of options and whose current level of financial reporting was less transparent.

Two control variables were significant for the increased likelihood events: OpComp5 and Size. The significantly positive coefficient on OpComp5 suggests that the greater the proportion of options included in the top executives' compensation packages, the more favorably the market viewed option expensing. The reason for this may be twofold. If the option expense is reported directly on the income statement, this may give investors a greater ability to monitor the compensation package of top management and thus prevent excessive option grants. Also, to the extent that the reported numbers are judged to be more credible, investors might weight the compensation package more accurately in their valuation of the firm. The negative coefficient on Size suggests that investors felt that the proposed expensing of options would be of more value for smaller firms, perhaps because information beyond that provided in financial statement disclosures is relatively limited for smaller firms.

The second line of results in Table 5 shows the relation between the market response to events hypothesized to decrease the likelihood of mandated option expensing and the variables of interest. The coefficient for IncEffect, while positive, is not significant. However, the coefficient capturing the information effect of option expensing, InfoEffect, is negative and significant (at the 0.05 level) suggesting that investors were troubled by the prospect that mandated option expensing would not be enacted because of the potential loss of information. OpComp5, a control variable, is negative and significant (at the 0.01 level), consistent with the results above. Investors apparently favored the greater reporting transparency gained by expensing options, particularly for those firms that depended more on options to compensate their top executives.

In Panels B and C, we examine regression (1) separately for each of the fifteen events. For 9 of the 15 events (four of the increased likelihood events and five of the decreased likelihood events), the coefficient on IncEffect is statistically significant in the predicted direction. For 11 of the 15 events (six of the increased likelihood events and nine of the decreased likelihood events), the coefficient on InfoEffect is significant and in the predicted direction. This suggests that these economic effects were prevalent across the examined events.

The results of the Fama MacBeth analysis, reported in Panel D, are consistent with those reported in Panel A.<sup>45</sup> Specifically, the mean values of IncEffect and InfoEffect are significant and in the hypothesized direction for events increasing the likelihood of mandated option expensing and insignificant for events decreasing the likelihood of mandated option expensing.

Taken together, the stock price reaction to the key events preceding the two standards and the cross-sectional analyses indicate that investors, on average, changed their views on option expensing over the nine-year period preceding the revised standard, taking into consideration not only the impact that reporting lower income might have on firms' equity but also the increased transparency of the financial statements perceived to result from option expensing.

### 8.3. Supplemental Tests

In this section we provide two supplemental tests to address, separately, the income effect and the information effect. Regarding the income effect, the findings above suggest that investors focus on earnings and that the prospect of reporting lower income caused a decline in firms' stock prices. To explore this possibility further, we investigate investors' reaction to firms for which expensing options moves them from a profit to a loss. To the extent that investors focus on earnings, this group, which constitutes about 11% of the firm-years in our sample, might be particularly sensitive to option expensing since such expensing changes the "nature" of their earnings.<sup>46</sup>

To examine whether the response to option expensing is more pronounced for this group, we incorporate a dummy variable (Loss) that takes on a value of 1 if expensing stock options causes a profitable firm to report a loss and 0 otherwise in regression (1) as follows:

$$\text{Ret}_{iet} = \alpha + \beta_1(\text{IncEffect}_{it-1}) + \beta_2(\text{InfoEffect}_{it-1}) + \beta_3(\text{Loss}_{it-1}) + \beta_4(\text{Loss}_{it-1}) * (\text{IncEffect}_{it-1}) + \sum \beta_c(\text{Control Variables})_{it-1} + \varepsilon_{ie} \quad [2]$$

For increased (decreased) likelihood events, we expect  $\beta_3$  to be negative (positive).

The results of this test (not tabulated) provide evidence consistent with this expectation. For both the increased (decreased) likelihood events,  $\beta_4$  is significantly negative (positive) at the 5% level. This finding reinforces the notion that, *ceteris paribus*, reporting lower income as a result of option expense is regarded negatively by investors.

---

<sup>45</sup> Since we are looking at common event dates for the sample firms, the error terms likely violate the OLS assumptions of cross-sectional independence.

<sup>46</sup> Burgstahler and Dichev (1997) and DeGeorge, Patel and Zeckhauser (1999) provide evidence that this is an important benchmark that firms actively try to meet.

In the second supplemental test, we examine the information effect as well as the robustness of our results by examining a very different group of firms (none of which is included in our main sample). These firms voluntarily switched to option expensing prior to the enactment of the revised standard. Past research (Aboody et al. (2004) and Robinson and Burton (2004)) indicates that investors rewarded the early “switchers” but did not react significantly to firms that later made similar announcements. We hypothesize that the net impact of option expensing was more positive for the early switchers as compared with the later ones because for this group. That is, the positive information effect outweighed any negative income effect. We thus expect these firms to have relatively less transparent financial statements and/or for their income to be less impacted by option expensing compared with the later switchers.<sup>47</sup> A further possibility that we explore is whether more of the early switchers belonged to one of the more scandal-ridden industries.<sup>48</sup> For these firms, adoption of option expensing may have served as a positive signal to investors, distinguishing them from their non-adopting peers.<sup>49</sup>

We identified 133 firms that announced that they were voluntarily switching to option expensing in July through November 2002.<sup>50</sup> Most of these firms are in industries other than electronic, computer, business services or biotech, the industry concentrations of our primary sample. The 35 firms whose announcements occurred before August 1, 2002 are characterized as early switchers and the remaining firms are regarded as later switchers.

The three-day abnormal returns (centered on the announcement day) for the sample is 1.14% (significant at the 0.05 level), as reported in table 6, panel A. About 30% of the firms’ stock prices increased significantly upon announcement that they were voluntarily adopting option expensing. Consistent with prior studies, the 2.56% abnormal returns accruing to the early switchers were significantly more positive (at the 0.01 significance level) than those experienced by the later switchers of 0.79%.

---

<sup>47</sup> Since our prediction is about the net effect, both effects need not differ. Holding the income effect constant, the information effect could be greater for early switchers or vice versa.

<sup>48</sup> Industries that were identified as being particularly scandal-prone (those with at least two major scandals in the 1999-2002 period) are: computers and computer components (SIC 357), computer programming and related services (SIC 737) and pharmaceuticals and drugs (SIC 283). Firms with scandals in these industries include Xerox, Lucent, Computer Associates, Iomega, Telxon, Critical Path, Peregrine Systems, Bristol-Myers and Merck.

<sup>49</sup> Note that we do not include a variable for membership in a “scandal-ridden industry” in our primary analysis because a revised standard would apply to all firms in the economy. We include it here since the voluntary adopters “self-selected” into the sample.

<sup>50</sup> We searched the Factiva database to identify this sample. To reduce the possibility of “confounding” news, firms whose adoption announcements were combined with earnings releases or other corporate news (e.g., changes in dividend policy, stock repurchases, etc.) were eliminated.

Descriptive statistics on the primary variables of interest for these firms are provided in table 6, panel B. The pro forma impact of expensing options for these early adopters is considerably smaller than for our primary sample, with a mean (median) effect of -16.29% (-8.42%) compared to a mean (median) effect that ranged from -65.11% to -461.65% (-309.04% to -446.67%) for the primary sample. On average, these firms had more transparent financial statements as seen by the lower values of the Transparency variable (a mean value of 0.32 as compared with the comparable values for the primary sample which ranged from 0.53 to 0.59).

Consistent with our hypotheses, significant differences exist between the early and later switchers in terms of the pro forma impact of expensing options. The later switchers' income was reduced by 20.29%, nearly four times as much as for the early switchers (an average decrease of 5.10%). Further, the difference in the Transparency measure of the two groups, 0.42 for the early switchers as compared with 0.28 for the later switchers, is statistically significant (at the 0.01 significance level), indicating that the early switchers had less transparent financial statements than the later switchers.

Results of the cross-sectional analysis, reported in table 6, panel C, reveal that the income effect is insignificant for the voluntary adopters. This likely stems from the relatively low impact of option expensing on these firms' income. However, as expected, the InfoEffect variable is statistically significant for these firms, even though as a group they are more transparent than the main sample. Apparently, in the wake of the accounting scandals, any move that promised to increase financial transparency was rewarded by investors. Note that this effect is much more pronounced for the early switchers; the coefficient on InfoEffect is not significant for the later switchers. This result complements that of Aboody, Barth and Kasznik (2004) who find a significant positive announcement period return to early adopters that gave, as a motivation for adopting option expensing, the desire to increase their financial reporting transparency.

To test whether affiliation with a scandal-prone industry gives an added signal to investors that the firm is taking actions to become more transparent, we introduce a dummy variable to regression [1] equaling one if the firm belongs to a scandal-prone industry and zero otherwise. The results, presented in table 6, panel D, support the notion that firms that voluntarily adopted option expensing were regarded more positively by investors, particularly if there had been major accounting scandals by firms operating in the same industry to which the early adopter belonged.

#### 8.4. Sensitivity Analyses

To further examine the robustness of our results, we perform two tests to determine the extent to which our results are sensitive to our measure of transparency and to the identified event dates as discussed below.

Our primary measure of transparency, InfoEffect, is based on firms' accounting and governance rankings (AGR scores) that are derived from comprehensive econometric models that encapsulate numerous aspects of the firm that have a bearing on its reporting transparency. While, as noted earlier, this is the most comprehensive measure we found, to determine if our results are robust to other indicators of transparency, we consider a second measure based on accruals. Our rationale for using accruals to assess transparency is twofold. First, the more significant are a firm's accruals, the greater the measurement problems inherent in assessing its true economic performance. One of the frustrations often raised by analysts is their difficulty in trying to "see through accruals" to discern the firm's actual operating performance. Research by Bradshaw, Richardson and Sloan (2000) indicates that neither analysts nor investors fully incorporate the future impact of high accruals in projecting future earnings, supporting the notion that more accruals lead to less understood, and thus less transparent, financial statements. Our second reason for focusing on accruals is that in general, the greater the level of accruals, the greater the effort required by financial statement users to determine the source of the accruals. Relatedly, the more consistent are accruals from year to year, the more predictable they are and, it seems reasonable to assume, the less difficult it is to understand and interpret them.

To capture these aspects of accruals, our alternative measure of transparency is computed as the absolute value of accruals in year  $t-1$  divided by the mean value of accruals over the preceding three years ending with year  $t-2$ .<sup>51</sup> This measure is designed to detect an accrual level that departs from the "normal" level reported over the preceding three-year period. If accruals indeed render the financial statements less transparent, the higher this measure, the more difficult it may be to understand the components of reported income.

Using this accruals-based measure of transparency, we rerun regression [1] for the combined increased- and decreased-likelihood events preceding the revised standard. For the increased likelihood events, the findings remain intact although the coefficient on the InfoEffect is

---

<sup>51</sup> Bushman, Piotroski and Smith (2003) consider various "macro" aspects of transparency such as frequency and extent of disclosures, governance measures (e.g., composition of board of directors) and auditor size. Since their focus is on differences across countries with different reporting regimes rather than differences across firms within the same regime, most of their measures are not applicable to our setting.

less significant (at the 0.05 level rather than the previous 0.01 level). For the decreased-likelihood events, the coefficient on InfoEffect remains negative but becomes insignificant. We suspect that the decline in significance of this variable is due to the fact that the accruals-based measure incorporates significantly more “noise,” reflecting many aspects of the firm that are not related to reporting transparency. Also, InfoEffect (which is based on the AGR scores) captures features of a firm’s reporting stance beyond those reflected by the accruals measure.<sup>52</sup>

To ensure that our cross-sectional results are not spurious, in a second sensitivity test we examine the cross-sectional response of our sample firms to news events other than the 15 events that we examine in the pre-SFAS No. 123(R) period. Specifically, during the 2002-2004 period we identify the nine dates that had the most positive return and the nine dates that had the most negative return on the Russell 2000 index. Running regression (1) separately on these two sets of dates, we examined the significance of our two variables of interest, IncEffect and InfoEffect. Significant coefficients on these variables in these regressions could indicate that our main results have little to do with changes in the likelihood of option expensing (i.e., a spurious correlation).<sup>53</sup>

The abnormal returns for 14 of these 18 dates were not significantly different from zero; four dates had marginally significant returns (between the 0.06 and 0.10 significance levels).<sup>54</sup> The results from estimating regression [1] separately for the positive and negative news events produced no statistically significant coefficients on our variables of interest, lending credence to our primary results.

## 9. Conclusion

SFAS No. 123, enacted in 1995, was a political compromise between the FASB and companies and other constituents who argued that option expensing would depress stock prices, make it difficult to raise capital and thereby dampen economic growth. Nine years later, in the wake of the accounting scandals that began to surface in 1998 and reached a boiling point in 2001 and 2002, a demand arose for more transparent financial reporting. This, along with the IASB’s adoption of mandated option expensing, provided a strong impetus for the FASB to revisit option accounting.

---

<sup>52</sup> The accrual measure is not significantly correlated with the InfoEffect variable, probably because the AGR scores reflect not only accruals but also a much broader range of firm characteristics.

<sup>53</sup> We assume that the positive (negative) return dates are synonymous with increased (decreased) likelihood events.

<sup>54</sup> Examining our three news sources on these dates for announcements that would have affected our sample firms yielded only one article. This article described the government’s activities to “fix” the accounting scandals and implied that stock options were one of the causes of the scandals, giving management incentives to manipulate income (“The Market Punishes Its Own,” [The Wall Street Journal](#), July 23, 2002).

We document a shift in public sentiment in favor of option expensing in the 2002-2004 period as the debate on stock option accounting gained momentum. First, examining a sample of firms most likely to be affected by option expensing, our results indicate that investors responded positively to events suggesting that option expensing would eventually be mandated and negatively to events indicating that the move toward option expensing was losing ground. This is in sharp contrast to their negative response to the events preceding the passage of SFAS No. 123 that promoted option expensing. Second, examining simultaneously the income and information effects inherent in option expensing, we document that while the negative income effect appeared to persist in the period preceding enactment of the revised standard, it was accompanied by investors' increased need for financial reporting transparency. Sensitivity tests suggest that our results are robust and not caused by omitted variables or spurious correlations.

Given the short time that SFAS No. 123 (R) has been in effect, investors and analysts have only a limited sample of firms upon which to gauge the effects of option expensing. However, our results suggest that investors believe that recognizing option costs on the income statement provides value-relevant information beyond that previously available in the footnote disclosures. Further, the evidence is consistent with the new standard producing a more "relevant and representationally faithful" computation of income, in keeping with the Financial Accounting Standards Board's objective in revising the accounting treatment for stock options.

## References

- Aboody, D., Barth, M. and R. Kasznik, 2003, "Firms' Voluntary Recognition of Stock-Based Compensation Expense," Journal of Accounting Research, v. 32, n. 2, pp. 123-150.
- Aboody, D., Barth, M. and R. Kasznik, 2004, "SFAS No. 123 Stock-Based Compensation Expense and Equity Market Values," The Accounting Review, v. 79, no. 2, pp. 251-275.
- Accounting Principles Board, 1972, Opinion No. 25, "Accounting for Stock Issued to Employees," New York: America Institute of Certified Public Accountants.
- Balsam, S., E. Bartov and J. Yin, 2005, "Disclosure versus Recognition of Option Expense: An Empirical Investigation of SFAS No. 148 and Stock Returns, Working Paper, New York University.
- Banker, R. and L. Chen, 2006, "Predicting Earnings Using a Model Based on Cost Variability and Cost Stickiness," The Accounting Review, v. 81, no. 2, pp. 285-307.
- Bens, D., Wong, F. and D. Skinner, 2004, "The Relationship between Employee Stock Options and Stock Repurchases," Working Paper, University of Chicago.
- Berger, P., Hann, R. and J. Piotroski, 2003, "The Impact of SFAS No. 131 on Information and Monitoring," Journal of Accounting Research, v. 41, no. 2, pp. 163-223.
- Burgstahler, D. and I. Dichev, 1997, "Earnings Management to Avoid Earnings Decreases and Losses," Journal of Accounting and Economics, v. 24, pp. 99-126.
- Bushman, R., Piotroski, J. and A. Smith, 2003, "What Determines Corporate Transparency?" Working Paper, University of Chicago.
- Chen, P. and G. Zhang, "Heterogeneous Investment Opportunities in Multiple-Segment Firms and the Incremental Value Relevance of Segment Accounting Data," The Accounting Review, v. 78, n. 2, pp. 397-428.
- Dechow, P., Hutton, A. and R. Sloan, 1996, "Economic Consequences of Accounting for Stock-Based Compensation," Journal of Accounting Research, v. 34, pp. 1-20.
- DeGeorge, F., Patel, J. and R. Zeckhauser, 1999, "Earnings Management to Exceed Thresholds," Journal of Business, v. 72, pp. 1-33.
- Dyson, R., 2004, "Accounting for Stock-Based Compensation: A Simple Proposal," New York State Society of CPAs.
- Elayan, F., Pukthuanthong, K. and R. Roll, 2005, "Investors Like Firms that Expense Employee Stock Options and They Dislike Firms that Fail to Expense," Journal of Investment Management, v. 3, n. 1.

Espahbodi, H. Espahbodi, P. Rezaee, Z and H. Tehranina, 2002, "Stock Price Reaction and Value Relevance of Recognition versus Disclosure: The Case of Stock-Based Compensation," Journal of Accounting and Economics, v. 33, pp. 343-373.

Financial Accounting Standards Board. 1993, Exposure Draft No. E-124, "Accounting for Stock-Based Compensation," Stamford, Conn.: FASB (June).

\_\_\_\_\_, 1995, Statement of Financial Accounting Standards No. 123, "Accounting for Stock-Based Compensation," Stamford, Conn.: FASB (October).

\_\_\_\_\_, 2002, Exposure Draft No. E-168, "Accounting for Stock-Based Compensation—Transition and Disclosure: An Amendment of FASB Statement No. 123," Stamford, Conn.: FASB (October).

\_\_\_\_\_, 2002, Statement of Financial Accounting Standards No. 148, "Accounting for Stock-Based Compensation—Transition and Disclosure," Stamford, Conn.: FASB (December).

\_\_\_\_\_, 2004, Exposure Draft No. E-177, "Share-Based Payment: An Amendment of FASB Statements No. 123 and 95," Stamford, Conn." FASB (March).

\_\_\_\_\_, 2004, Statement of Financial Accounting Standards No. 123(R), "Share-Based Payment," Stamford, Conn.: FASB (December)

Frederickson, J., F. Hodge and J. Pratt, 2005, "The Evolution of Stock Option Accounting: Disclosure, Voluntary Recognition, Mandated Recognition and Management Disavowals," Working Paper, Hong Kong University of Science and Technology, University of Washington and Indiana University.

Hirshleifer, D. and S.H. Teoh, 2003, "Limited Attention, Information Disclosure, and Financial Reporting," Journal of Accounting and Economics, v. 36, pp. 337-386.

Lambert, R., Leuz, C. and R. Verrecchia, 2005, "Accounting Information, Disclosure, and the Cost of Capital," Working Paper, University of Pennsylvania.

Libby, R., Nelson, M. and J. Hunton, 2005, "Recognition v. Disclosure and Auditor Misstatement Correction: The Cases of Stock Compensation and Leases," Working Paper, Cornell University.

Pricewaterhouse Coopers, 2002, "New Trends in Stock Compensation Accounting—Is it Time to Adopt FAS 123?" HR Insight, 02/18.

Robinson, D. and D. Burton, 2004, "Discretion in Financial Reporting: The Voluntary Adoption of Fair Value Accounting for Employee Stock Options," Accounting Horizons, 18 (2).

**Table 1**  
**Anecdotal Evidence Suggesting a Change in Sentiment toward Stock Option Expensing**

	<b>Excerpts from Press Releases in the Period Preceding:</b>	
<b>Group</b>	<b>Pre-SFAS No. 123</b>	<b>Pre-SFAS No. 123(R)</b>
<b>Investors</b>	<i>Both the Council of Institutional Investors and United Shareholders Assn., the two most prominent groups of shareholder activists, have joined AT&amp;T, General Electric, and others in rejecting the change (to mandated option expensing). (<u>Business Week</u>, April 12, 1993)</i>	<i>The change in investor sentiment was on full display yesterday, when the Council of Institutional Investors, an influential coalition of pension funds, endowments and investment houses, voted overwhelmingly to reverse its mid-1990s position and endorsed the expensing of options. "We recognize the downside of options more," said Sarah Teslik, the group's executive director. "They turn companies into Ponzi schemes," she added. (<u>The Wall Street Journal</u>, March 26, 2002)</i>
	<i>The United Shareholders Association, a group representing 65,000 investors in American companies, has informed FASB, on a number of occasions, of its opposition to the proposed stock option guidelines. (<u>New York Times</u>, September 1, 1993)</i>	<i>A decade ago, there was little support among investors for expensing options. But now many investors have concluded that options are an expense and that they would be better off with information on them in the financial statements. (<u>New York Times</u>, April 1, 2004)</i>
<b>Politicians</b>	<i>"The venture capitalists tell me that the FASB rule will simply make stock options more expensive...which will make the cost of starting a new company rise. Now this might be acceptable if some greater public purpose were served by the FASB rule...but it is difficult to find such a benefit in the current FASB proposal." (John Kerry in a speech to the Senate, 1994.)</i>	<i>Sen. John F. Kerry, who before the recent accounting scandals had opposed requiring expensing, has privately told corporate types that he now supports such a rule. (<u>The Washington Post</u>, July 10, 2003)</i>
	<i>Members of a Senate subcommittee joined in threats of legislative intervention if the FASB follows through with a proposal to change the way stock options are accounted. Sen. Gramm (R., Texas) said he would reluctantly support legislation overturning the FASB's actions if the board does not drop its proposal. His sentiment was echoed by others on the Senate panel, including Sen. Boxer (D., Calif.), Sen. Dodd (D., Conn.) and Sen. Shelby (D., Ala.) (<u>Dow Jones News Service</u>, October 21, 1993)</i>	<i>Sen. Richard Shelby, who is fighting congressional efforts to block changes to stock options accounting rules, acknowledges that he was once on the other side of the issue. Now chairman of the Senate Banking Committee, the Alabama Republican strongly opposes efforts in Congress to curb a move by the Financial Accounting Standards Board to make companies record options as an expense. (<u>Reuters News</u>, June 22, 2004)</i>
<b>Accounting Firms</b>	<i>In response to the 1993 Exposure Draft, the Big Six accounting firms wrote the FASB that "(W)e believe that the best solution is to withdraw the proposal to change the accounting and, instead, expand disclosures." (Letter dated July 15, 1994 addressed to FASB chairman Dennis Beresford)</i>	<i>Top accounting firms, who backed their clients' vehement opposition to expensing stock options the last time accounting rulemakers took up the issue, have changed their tune this time around. Several major accounting firms have written to the FASB in favor of requiring companies to deduct stock option costs from profits, a move some analysts say reflects their efforts to emphasize their independence following a spate of accounting scandals. (<u>Reuters News</u>, February 14, 2003)</i>

**Table 2**  
**Descriptive Statistics on Reported Net Income,**  
**the Pro Forma Impact of Option Expensing**  
**and Independent Variables by Year**

**Panel A: Reported Net Income and Pro Forma Impact of Option Expensing**

(all \$ in thousands except EPS data)

Year (No. of firms)	Variable <sup>a</sup>	Mean	Std. Dev.	Quartile 1 <sup>b</sup>	Quartile 2 <sup>b</sup>	Quartile 3 <sup>b</sup>
2001 (n=780)	Reported Net Income	11.24	436.67	-25.12	-2.91	11.68
	Pro Forma Net Income	-40.65	356.07	-47.87	-12.23	8.51
	Diff. in Net Income <sup>a</sup>	-51.89	456.28	-22.75	-9.32	-3.17
	% drop from expensing options <sup>c</sup>	-461.65%		-90.56%	-320.27%	-27.14%
	Reported EPS	-0.30	2.67	-1.15	-0.16	0.38
	Pro Forma EPS	-0.74	2.84	-1.92	-1.48	0.10
	Difference in EPS <sup>a</sup>	-0.44	0.63	-0.77	-1.32	-0.28
2002 (672 firms)	Reported Net Income	16.62	419.81	-17.84	-1.77	15.32
	Pro Forma Net Income	-29.73	310.55	-32.99	-7.24	5.94
	Diff. in Net Income	-46.35	410.23	-15.15	-5.47	-9.38
	% drop from expensing options	-278.89%		-84.92%	-309.04%	-61.23%
	Reported EPS	-0.15	1.28	-0.61	-0.23	0.53
	Pro Forma EPS	-0.49	1.44	-0.79	-0.38	0.24
	Difference in EPS	-0.34	1.37	-0.18	-0.15	-0.29
2003 (512 firms)	Reported Net Income	34.86	421.96	-10.74	1.65	17.57
	Pro Forma Net Income	12.16	372.39	-17.83	-2.81	11.25
	Diff. in Net Income	-22.70	365.41	-7.09	-4.46	-6.32
	% drop from expensing options	-65.11%		-66.01%	-446.67%	-35.97%
	Reported EPS	0.04	1.07	-0.42	0.10	0.40
	Pro Forma EPS	-0.22	1.13	-0.62	-0.18	0.21
	Difference in EPS	-0.26	0.23	-0.20	-0.28	-0.19

<sup>a</sup> The difference in net income and the difference in EPS are computed as reported pro forma income (or pro forma EPS) minus reported net income (or EPS).

<sup>b</sup> To determine the values in the quartile columns, firms are ranked each year by reported net income. The values of reported net income, pro forma net income and the respective per share amounts for the firm at each of the quartile “breakpoints” in the annual distribution are reported in the table.

<sup>c</sup> The % drop is calculated as  $(\text{Diff. in Net Income} / \text{Reported Net Income}) * 100$ .

**Table 2 (Continued)**  
**Descriptive Statistics on Reported Net Income,**  
**Pro Forma Impact of Option Expensing**  
**and Independent Variables by Year**

**Panel B: Independent Variables**

Year	Variable	Mean	Std. Dev.	Quartile 1	Quartile 2	Quartile 3
2001 (780 firms)	IncEffect	1.79	2.12	0.52	1.80	7.81
	P/E Ratio	51.19	76.94	25.82	39.21	73.56
	Options/MVE	0.04	0.13	0.02	0.05	0.11
	InfoEffect	0.20	0.42	0.07	0.26	0.73
	Transparency	0.59	0.26	0.33	0.56	0.71
	Leverage	0.08	0.23	0.01	0.02	0.17
	Cashflow	0.01	0.25	-0.03	0.03	0.06
	OpComp5	0.18	0.26	0.07	0.16	0.33
	Size	5.48	1.84	4.86	5.95	7.02
2002 (672 firms)	IncEffect	1.24	1.73	0.16	1.09	5.11
	P/E Ratio	41.28	60.05	16.35	27.27	51.16
	Options/MVE	0.03	0.23	0.01	0.04	0.10
	InfoEffect	0.16	0.43	0.03	0.22	0.73
	Transparency	0.55	0.27	0.34	0.53	0.73
	Leverage	0.18	0.49	0.01	0.03	0.20
	Cashflow	0.02	0.36	-0.03	0.05	0.11
	OpComp5	0.14	0.20	0.07	0.12	0.20
	Size	5.61	1.83	4.41	5.51	6.66
2003 (512 firms)	IncEffect	0.78	1.22	0.23	1.30	4.74
	P/E Ratio	39.06	54.23	23.25	32.43	54.91
	Options/MVE	0.02	0.09	0.01	0.04	0.09
	InfoEffect	0.11	0.28	0.03	0.20	0.65
	Transparency	0.53	0.29	0.34	0.51	0.72
	Leverage	0.20	0.48	0.01	0.05	0.24
	Cashflow	0.08	0.39	-0.01	0.06	0.12
	OpComp5	0.12	0.21	0.07	0.11	0.19
	Size	6.15	1.71	4.96	5.99	7.13

Legend

- IncEffect: the income effect measured as Options/MV multiplied by the P/E ratio at yearend t-1  
P/E ratio: the P/E ratio at yearend t-1 for firms with positive earnings; the average P/E ratio of the three firms with the smallest positive profits in the same industry at yearend t-1 for firms with negative earnings; the P/E ratio is measured as the average market value of the firm divided by income from continuing operations  
Options/MVE: the expense associated with options (as reported in the SFAS No. 123 footnote disclosures) for year t-1 divided by the average market value of equity for year t-1  
InfoEffect: the information effect measured as Options/MV multiplied by Transparency multiplied by 10  
Transparency: variable derived from the AGR score ranging from 0 (most transparent) to 1 (least transparent)  
Leverage: long-term debt divided by the market value of equity, both measured at yearend t-1  
Cashflow: cashflow from operations divided by the average market value of equity for year t-1  
OpComp5: ratio of stock options granted to the top five executives divided by their total annual compensation for year t-1  
Size: log of the average market value of the firm's equity for year t-1

**Table 3**  
**Correlation between the Independent Variables Used in Regression [1]<sup>a</sup>**

Pearson Correlation Coefficients Above the Diagonal;  
Spearman Rank Order Correlation Coefficients Below the Diagonal

*(probability levels provided in parentheses)*

	IncEffect	InfoEffect	Leverage	Cashflow	OpComp5	Size
IncEffect	<b>1.000</b>	0.02 (0.34)	-0.05 (0.00)	-0.04 (0.01)	0.06 (0.00)	-0.04 (0.01)
InfoEffect	0.02 (0.36)	<b>1.000</b>	-0.12 (0.00)	-0.24 (0.00)	0.16 (0.00)	-0.20 (0.00)
Leverage	-0.07 (0.00)	-0.08 (0.00)	<b>1.000</b>	0.17 (0.00)	-0.02 (0.27)	0.08 (0.00)
Cashflow	-0.29 (0.00)	-0.04 (0.03)	0.20 (0.00)	<b>1.000</b>	-0.19 (0.00)	0.19 (0.00)
OpComp5	0.16 (0.00)	0.07 (0.00)	-0.03 (0.29)	-0.13 (0.00)	<b>1.000</b>	-0.15 (0.00)
Size	-0.12 (0.00)	-0.15 (0.00)	0.12 (0.00)	0.18 (0.00)	-0.24 (0.00)	<b>1.000</b>

<sup>a</sup> Correlations for the combined years are reported in the table.

Legend

- IncEffect: the income effect measured as Options/MV multiplied by the P/E ratio at yearend t-1  
P/E ratio: the P/E ratio at yearend t-1 for firms with positive earnings; the average P/E ratio of the three firms with the smallest positive profits in the same industry at yearend t-1 for firms with negative earnings; the P/E ratio is measured as the average market value of the firm divided by income from continuing operations  
Options/MVE: the expense associated with options (as reported in the SFAS No. 123 footnote disclosures) for year t-1 divided by the average market value of equity for year t-1  
InfoEffect: the information effect measured as Options/MV multiplied by Transparency multiplied by 10  
Transparency: variable derived from the AGR score ranging from 0 (most transparent) to 1 (least transparent)  
Leverage: long-term debt divided by the market value of equity, both measured at yearend t-1  
Cashflow: cashflow from operations divided by the average market value of equity for year t-1  
OpComp5: ratio of stock options granted to the top five executives divided by their total annual compensation for year t-1  
Size: log of the average market value of the firm's equity for year t-1

**Table 4**  
**Market Reaction to Events Influencing the Likelihood of Mandated Option Expensing**

**A. Pre-SFAS No. 123 Period (1993-1994)**

Event No.	Date	Event	Hypothesized Impact on Stock Price	Mean Abnormal Return (%) <sup>a</sup>
A	April 7, 1993	The FASB proposed that companies be required to take a charge for stock options on their income statements.	Negative	-0.41 (-3.18)**
B	June 30, 1993	The FASB reports that it will issue an Exposure Draft requiring companies to expense stock options.	Negative	-0.43 (-2.90)**
C	December 15, 1994	The FASB announces that it will require footnote disclosure of the option expense, dropping its proposal for income statement recognition.	Not specified	-0.16 (-1.32)

(No. of observations: 260 for events A and B; 322 for event C)

**B. Pre-SFAS No. 123(R) Period (2002-2004)**

Event No.	Date	Event	Hypothesized Impact on Stock Price	Mean Abnormal Return (%) <sup>a</sup>
1	Feb. 06, 2002	Senate bill to be introduced that would force companies to expense stock options that are deducted for tax purposes.	Positive	-0.17 (-1.41)
2	July 27, 2002	The FASB reports that it will once again consider expensing stock options, following the IASB's decision on options a week earlier.	Positive	0.43 (3.09)**
3	Aug. 7, 2002	The FASB announces that it is exploring a requirement that companies disclose the bottom-line impact of stock options prominently on the face of the income statement (but not to actually expense the options).	Positive	0.62 (6.18)**
4	Feb. 7, 2003	A total of 70 House and Senate members, spurred on by a coalition of tech companies, notify the FASB that they oppose stock option expensing and vow to halt the FASB's actions.	Negative	-0.22 (-1.95)**
5	Feb. 18, 2003	The FASB announces that it will move in the same direction as the IASB and add stock options to its agenda for the year.	Positive	0.48 (5.60)**
6	April 20-23, 2003	The FASB announces that it will proceed "along the path of stock options expensing," unanimously agreeing (via vote) that stock options should be expensed.	Positive	0.38 (3.61)**
7	Sept. 11, 2003	The FASB postpones issuing an exposure draft on option expensing until first quarter of 2004 effectively postponing the date for any eventual standard to the second half of 2004.	Negative	-0.68 (-3.15)**
8	Jan. 9, 2004	The two most powerful members of the Senate Banking Committee lend their support to the FASB, opposing Congressional intervention in the stock option debate.	Positive	0.53 (3.00)**

**Table 4 (continued)**  
**Market Reaction to Events Influencing the Likelihood of Mandated Option Expensing**

Event No.	Date	Event	Hypothesized Impact on Stock Price	Mean Abnormal Return (%) <sup>a</sup>
9	March 31, 2004	The FASB issues an Exposure Draft requiring stock option expensing.	Positive	0.16 (1.68)
10	April 20, 2004	A lobbying blitz to prevent option expensing gains momentum in Congress. The House Financial Services Committee announces that it will introduce a bill, with more than 100 bipartisan co-sponsors, that waters down the FASB's proposal by requiring expensing only of options issued to a firm's top five executives; the bill also prohibits the SEC from enforcing any new accounting rule on options until a study of its economic impact is made.	Negative	-0.58 (-4.69)**
11	June 16, 2004	The majority (45-13) of the House Financial Services Committee approves the bill.	Negative	-0.19 (-2.71)**
12	July 20, 2004	The House, responding to intensive lobbying by technology companies, overwhelmingly approves the bill (vote of 312-111).	Negative	-0.28 (-3.60)**
13	Aug. 11, 2004	Chief Accountant of the SEC, Donald Nicolaisen, says that the SEC will likely postpone the effective date of any stock option expensing plan for at least a year	Negative	-0.40 (-4.82)**
14	Oct. 14, 2004	The FASB announces a six-month delay in its plan to require option expensing.	Negative	-0.22 (-3.69)**
15	Dec. 16, 2004	The FASB issues SFAS No. 123(R), "Share-Based Payment," requiring the expensing of stock options beginning for fiscal periods after June 15, 2005.	Not specified	0.07 (0.48)

(No. of observations: 780 for events in 2002, 672 for events in 2003 and 512 for events in 2004)

**Panel C: Fama-Macbeth Tests**

Hypothesized Impact of Events on the Likelihood of Mandated Option Expensing	No. of Obs. (Events)	Mean Abnormal Return, % <sup>c</sup> (p value of Student t)
Pre-SFAS No 123 (events in panel A): Increased Likelihood	3	-0.33 (not determinable)
Pre-SFAS No. 123(R) (events in panel B): Increased Likelihood	7	0.29 (0.04)
Decreased Likelihood	7	-0.38 (0.01)

<sup>a</sup> Abnormal returns are measured as the raw returns minus the returns for the CRSP portfolio of similar-size firms.

T-statistics are provided in parentheses.

\*\* significant at the 0.01 level; \* significant at the 0.05 level

**Table 5**  
**Cross-Sectional Response to Events Related to SFAS 123(R)**

$$Ret_{i,e} = \alpha + \beta_1(IncEffect_{it-1}) + \beta_2(InfEffect_{it-1}) + \beta_3(IncEffect_{it-1})*(InfoEffect_{it-1}) + \Sigma\beta_c(Control\ Variables)_{i,t-1} + \varepsilon_{i,e} \quad [1]$$

<b>Panel A: Combined Events</b> (t-statistics provided in parentheses)								
Hypothesized Impact of Events on Likelihood of Mandated Option Expensing	Intercept	IncEffect	InfoEffect	Leverage	Cashflow	OpComp5	Size	Adj. R <sup>2</sup>
Increased Likelihood (n=4,702)	0.008 (1.35)	-0.011** (-3.04)	0.186** (4.74)	0.057 (0.81)	0.056 (1.65)	0.030* (1.98)	-0.001* (-1.73)	2.74%
Decreased Likelihood (n=3,896)	-0.009 (-1.78)	0.009 (1.51)	-0.061* (-2.01)	-0.703** (-2.64)	-0.067 (-0.68)	-0.041** (-3.36)	0.001 (0.98)	1.64%
<b>Panel B: Increased Likelihood Events<sup>a</sup></b>								
1: Senators introduce bill	0.046*	0.002	0.019**	0.178*	0.009	-0.043	-0.007**	4.01%
2: FASB will reconsider option expensing	0.035	-0.016*	0.319	0.233	0.095*	-0.051**	-0.003	3.09%
3: FASB explores reporting requirement	0.047*	-0.024*	0.180**	0.871	0.055	-0.126*	-0.002	0.89%
5: FASB announces that it will follow lead of IASB	-0.028*	-0.013*	0.194**	-0.080	0.031	-0.044*	-0.006**	7.83%
6: FASB unanimously agrees to expense options	0.004	-0.012	0.109*	0.521	0.026	-0.069*	-0.001*	3.32%
8: Senate Committee lends support to FASB	-0.026*	-0.031*	0.624**	-0.126	0.064*	-0.138*	0.003	7.29%
9: FASB issues exposure draft	0.019	-0.014	0.107	-0.673	0.021	-0.117	-0.002	0.78%
15: FASB issues SFAS 123(R)	0.004	-0.012	0.217*	0.547	-0.037	-0.091	0.000	1.42%
<b>Panel C: Decreased Likelihood Events<sup>a</sup></b>								
4: Congressional members vow to fight FASB	-0.003	0.019*	-0.160*	-0.556	-0.060*	0.069	-0.001	2.78%
7: FASB postpones issuing exposure draft	-0.009	0.038**	-0.041	-0.066	-0.018	0.087*	-0.000	1.93%
10: House will introduce “watered down” proposal	0.002	0.005	-0.149*	-0.121	0.022	0.054*	-0.000	5.33%
11: House Committee approves new proposal	0.006	0.017*	-0.135*	-0.174	0.013	0.059*	-0.002	2.31%
12: House overwhelmingly approves new proposal	-0.019	0.021*	-0.164*	-0.326	0.044	0.025	0.001	1.84%
13: SEC will postpone effective date of any plan	0.002	0.044**	-0.181*	-0.517**	-0.010	-0.141**	0.000	3.92%
14: FASB announces a six-month delay	-0.031*	-0.003	0.066	-0.654**	0.085*	0.002	0.003*	3.80%

\*\* significant at the 0.01 level; \* significant at the 0.05 level

<sup>a</sup> (No. of observations: 842 for events 1-3; 685 for events 4-7 and 512 for events 8-15.)

**Table 5 (continued)**  
**Cross-Sectional Response to Events Related to SFAS 123(R)**

$$Ret_{i,e,t} = \alpha + \beta_1(IncEffect_{it-1}) + \beta_2(InfEffect_{it-1}) + \beta_3(IncEffect_{it-1})*(InfoEffect_{it-1}) + \sum \beta_c(Control\ Variables)_{it-1} + \varepsilon_{ie} \quad [1]$$

<b>Panel D: Fama-MacBeth Tests (mean values are reported in table)<sup>b</sup></b>							
	Intercept	IncEffect	InfoEffect	Leverage	Cashflow	OpComp5	Size
Increased Likelihood	0.013 (0.48)	-0.015 (0.02)	0.221 (0.01)	0.184 (0.32)	0.033 (0.04)	-0.085 (0.01)	-0.002 (0.06)
Decreased Likelihood	-0.007 (0.21)	0.022 (0.04)	-0.109 (0.01)	-0.345 (0.01)	0.011 (0.33)	0.077 (0.24)	0.000 (0.46)

<sup>b</sup> p-value of Student t for the mean and p-value of the signed rank provided in parentheses

Legend

- IncEffect: the income effect measured as Options/MV multiplied by the P/E ratio at yearend t-1  
P/E ratio: the P/E ratio at yearend t-1 for firms with positive earnings; the average P/E ratio of the three firms with the smallest positive profits in the same industry at yearend t-1 for firms with negative earnings; the P/E ratio is measured as the average market value of the firm divided by income from continuing operations  
Options/MVE: the expense associated with options (as reported in the SFAS No. 123 footnote disclosures) for year t-1 divided by the average market value of equity for year t-1  
InfoEffect: the information effect measured as Options/MV multiplied by Transparency multiplied by 10  
Transparency: variable derived from the AGR score ranging from 0 (most transparent) to 1 (least transparent)  
Leverage: long-term debt divided by the market value of equity, both measured at yearend t-1  
Cashflow: cashflow from operations divided by the average market value of equity for year t-1  
OpComp5: ratio of stock options granted to the top five executives divided by their total annual compensation for year t-1  
Size: log of the average market value of the firm's equity for year t-1

**Table 6**  
**Voluntary Adopter Sample: Announcement Period Returns,**  
**Reported and Pro Forma Net Income and Cross-Sectional Analyses**

**Panel A: Market Response to Early Adoption Announcement<sup>a</sup>**

Sample	3-day Abnormal Returns		
	Mean	Median	% of firms with a significant positive response at the 0.05 (0.10) significance level
Overall sample (n=133)	1.14% (2.02)**	0.69%	29% (42%)
By subsample:			
Early switchers (prior to August 1, 2002) (n=35)	2.56%** (3.89)	2.23%	56% (74%)
Later switchers (after August 1, 2002 (n=98)	0.79% (1.54)	0.66%	21% (32%)

<sup>a</sup> (t-statistics provided in parentheses)

**Panel B: Reported and Pro Forma Net Income of Voluntary Adopters**

Variable <sup>b</sup>	Mean	Std. Dev.	Quartile 1 <sup>d</sup>	Quartile 2 <sup>d</sup>	Quartile 3 <sup>d</sup>
<b>Voluntary Adopter Sample (n=133)</b>					
Reported Net Income <sup>c</sup>	891.44	25,372.4	-20.87	790.24	2,184.34
Pro Forma Net Income	746.13	28,364.5	-23.68	723.73	2,072.50
Diff. in Net Income	-145.30		-2.82	-66.51	-111.83
% drop from expensing options	-16.29%		-13.46%	-8.42%	-5.12%
% of firms in scandal-prone industries	13%				
IncEffect	0.33	6.55	0.06	0.52	1.01
P/E Ratio	35.22	43.7	12.26	25.89	33.45
Options/MV	0.00	0.15	0.00	0.01	0.03
InfoEffect	0.00	0.03	0.00	0.01	0.02
Transparency	0.32	0.19	0.25	0.30	0.38
Size	22.77	5.85	13.69	19.56	27.16
<b>Panel B: by Subsample</b>					
<b>Early Switchers (n=35)</b>					
% drop from expensing options	-5.10%		-8.54%	-3.11%	-1.34%
Transparency	0.42	0.29	0.14	0.31	0.49
% of firms in scandal-prone industries	21%				
<b>Later Switchers (n=98)</b>					
% drop from expensing options	-20.29%		-15.22%	-10.31%	-6.47%
Transparency	0.28	0.16	0.10	0.22	0.31
% of firms in scandal-prone industries	10%				

<sup>b</sup> Variables are measured at the yearend prior to the announcement year.

<sup>c</sup> Reported and pro forma net income, and the difference between them, are in \$ thousands.

<sup>d</sup> To determine the values in the quartile columns, firms are ranked each year based on reported net income. The values of reported net income, pro forma net income and the respective per share amounts for the firm at each of the quartile "breakpoints" in the annual distribution are reported in the table.

**Table 6 (continued)**  
**Voluntary Adopter Sample: Announcement Period Returns,**  
**Reported and Pro Forma Net Income and Cross-Sectional Analyses**

**Panel C: Cross-Sectional Response to Voluntary Adoption Announcement**

$$Ret_{ie} = \alpha + \beta_1(IncEffect_{it-1}) + \beta_2(InfEffect_{it-1}) + \Sigma\beta_c(Control\ Variables)_{it-1} + \varepsilon_{ie} \quad [1]$$

Sample	Intercept	IncEffect	InfoEffect	Leverage	Cashflow	OpComp5	Size	Adj. R <sup>2</sup>
Overall Sample (n=133)	0.002 (0.65)	-0.002 (-1.03)	0.023** (1.96)	0.181 (0.98)	0.030 (1.31)	0.026* (1.94)	-0.002 (-1.67)	2.52%
By Subsample:								
Early Switchers (n=35)	0.014 (1.28)	-0.008 (-1.26)	0.030** (3.25)	0.203 (1.38)	0.042 (1.56)	0.023 (1.72)	0.000 (1.20)	1.84%
Later Switchers (n=98)	0.007 (1.03)	-0.005 (-0.92)	0.015 (1.67)	0.421 (1.46)	-0.060* (-1.97)	0.038* (1.88)	-0.001 (-1.38)	1.93%

\*\* significant at the 0.05 level, \* significant at the 0.10 level

**Panel D: Cross-Sectional Response to Voluntary Adoption Announcement – Impact of Industry Affiliation**

$$Ret_{ie} = \alpha + \beta_1(IncEffect_{it-1}) + \beta_2(InfEffect_{it-1}) + \beta_3(Industry) + \Sigma\beta_c(Control\ Variables)_{it-1} + \varepsilon_{ie} \quad [3]$$

Sample	Intercept	IncEffect	InfoEffect	Scandal-Prone Industry	Leverage	Cash-flow	OpComp5	Size	Adj. R <sup>2</sup>
Overall Sample (n=133)	0.010 (0.63)	-0.006 (-1.20)	0.021** (2.02)	0.007** (1.81)	0.176 (1.06)	0.031 (1.42)	0.024** (1.98)	-0.001 (-1.58)	2.61%
By Subsample:									
Early Switchers (n=35)	0.013 (1.41)	-0.007 (-1.15)	0.028** (2.96)	0.011* (1.93)	0.210 (1.43)	0.034 (1.48)	0.031* (1.88)	-0.000 (-0.91)	1.98%
Later Switchers (n=98)	0.008 (0.86)	-0.003 (0.74)	0.013 (1.51)	0.006** (1.80)	0.336 (1.58)	-0.054* (-1.78)	0.035** (1.86)	-0.020** (-1.89)	2.73%

\*\* significant at the 0.05 level, \* significant between the 0.05 level and the 0.10 level

**Legend**

- IncEffect: the income effect measured as Options/MV multiplied by the P/E ratio at yearend t-1  
 InfoEffect: the information effect measured as Options/MV multiplied by Transparency multiplied by 10  
 Transparency: variable derived from the AGR score ranging from 0 (most transparent) to 1 (least transparent)  
 Leverage: long-term debt divided by the market value of equity, both measured at yearend t-1  
 Cashflow: cashflow from operations divided by the average market value of equity for year t-1  
 OpComp5: ratio of stock options granted to the top five executives divided by their total annual compensation for year t-1  
 Size: log of the average market value of the firm's equity for year t-1