Early Adopters of Fair Value Accounting for Stock-Based Compensation: A Case for Signaling

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Abstract

This paper explores signaling as a possible explanation as to why companies voluntarily used the fair value method to account for stock-based compensation prior to it becoming mandatory in 2004. Our sample was divided into two groups, early adopters and non-adopters, to determine whether early adopters were signaling through their adoption decision that they were higher quality firms. A univariate analysis was performed to test the differences between the means of quantifiable attributes of the adopting and non-adopting firms for 2002 and 2003. Our findings are consistent with a signaling explanation that, for some firms, the decision to voluntarily expense options long before there was a requirement to do so signaled that these firms were committed to earnings quality and reporting transparency, and thus were more desirable to investors than their non-adopting counterparts.

I. Introduction

Turn-of-the century accounting scandals, corporate bankruptcies, and the well-publicized Arthur Anderson debacle are stark reminders of the regulatory environment in which corporate misconduct and deceptive accounting practices frequently occurred, and often with dire consequences to investors. Public outcry for regulatory change ultimately led to the passage of the Sarbanes-Oxley Act in 2002. This legislation sent a strong message to the accounting profession that accounting rules and standards should promote more quality and transparent reporting. As Congress was enacting Sarbanes-Oxley, the accounting profession was grappling with another difficult and politically charged issue: how to account for stock-based compensation. The matter was complicated by the fact that, at the time, accounting standards allowed stock-based compensation to be accounted for using either of two vastly different methods: the Intrinsic Value Method (IV) or the Fair Value Method (FV). The Intrinsic Value Method is based on Accounting Principles Board Opinion No. 25: Accounting for Stock Issued to Employees - APB 25 (APB 1972), and the Fair Value Method is based on the Statement of Financial Accounting Standard No. 123, Accounting for Stock-based Compensation - SFAS 123
(FASB 1995).

Under IV, stock-based compensation cost was seldom reflected in earnings because the recognized expense was based on the excess, if any, of the market price of the stock at the grant date over the exercise price of options. Since the option price was routinely set to equal the market price on the grant date, companies systematically avoided recognizing compensation costs from such transactions. In fact, IV only required companies to provide pro forma disclosures of net income and earnings per share as if SFAS 123 had been adopted.

In contrast, stock-based compensation costs were reflected in earnings under the FV

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because the costs were measured at the grant date based on the expected fair value of the stock award and recognized over the service period. Intuitively, most would argue that FV promoted more quality and transparent reporting because it more accurately reflects the economic substance of the underlying transactions. Despite this compelling argument, few companies voluntarily used FV prior to the required adoption of Statement of Financial Accounting Standards 123 (Revised) (SFAS 123(R)) in 2004 (FASB 2004). Only 179 companies had adopted or announced their intention to adopt the FV approach by March, 2003. The number had risen to 276 by May, 2003, and to 483 by February, 2004 (McConnell, Pegg, Senyak, & Mott 2004).

The choice of methods in accounting for stock-based compensation can potentially have a significant impact on a company's reported earnings. Arthur Levitt, Jr., former chairman of the SEC, points out that Federal Reserve researchers concluded that between 1995 and 2000, the average earnings growth of the companies in the S&P 500 would have been 2.6% less had stock options been expensed (Levitt 2002). A similar study of companies in the S&P 500 concluded that average earnings may have been overstated by as much as 10 percent because of not recognizing stock-based compensation expense (Kieso, Weygandt, & Warfield 2005). The effect was even greater on companies with broad based stock option plans. For example, if Cisco Systems, which granted stock options to virtually all its employees, had been required to expense its options in 2001, the organization's reported loss would have been $1.7 billion greater than the figure actually reported.

In October 1995, the FASB issued SFAS 123 which encouraged (but did not require) companies to account for stock-based compensation at the estimated fair value of stock options on the grant date. This standard prompted few additional companies to use FV. Similar to the behavior before this standard was issued, most companies continued to account for stock-based compensation under IV.

Despite the obvious inadequacy and inconsistency in the applicable standards, the Financial Accounting Standards Board (FASB) did not require companies to use the FV until 2004. This failure to act by the FASB contributed to an environment where reported earnings and financial position were systematically distorted. Furthermore, the reluctance of companies to voluntarily use FV suggests a general willingness of companies to sacrifice earnings quality and reporting transparency for more short-term earnings objectives.

Of the more than 9000 public corporations, only a small number chose to use FV from 2002 and 2004. What factors, if any, distinguished the early adopters of the FV (FASB's Recommended approach) from companies that continued to use IV? One approach to answering this question might be found in signaling theory.

II. Background

A. APB 25: INTRINSIC VALUE METHOD

Issued in 1972 by the Accounting Principles Board (the predecessor to the Financial Accounting Standards Board), APB 25 provides guidance on generally accepted methods of accounting for most types of stock-based compensation awards. It requires companies to use the intrinsic value method where compensation expense is measured as the difference

between the market price of the stock and the exercise price of the stock option on the measurement date. The measurement date is the first date on which both the number of options and the exercise price are known. For the typical stock option plan, the measurement date is the date options are issued to the employees. This is also referred to as the grant date. Compensation expense is almost never recorded under APB 25 because most companies use a fixed plan, whereby the exercise price is routinely set to equal the market price on the grant date. Companies that apply APB 25 and related interpretations to account for stock options must adopt the disclosure provisions of SFAS 123. These provisions are explained in the next section.

B. SFAS 123: FAIR VALUE METHOD

In June, 1993, the FASB proposed that firms account for stock options at fair value on the grant date and expense it over the periods that employees provide service. This proposal was abruptly withdrawn in December, 1994, in response to opposition by a vast majority of comment letters to the exposure draft.

In October, 1995, the FASB issued SFAS 123, effective for fiscal years beginning after December 15, 1996. SFAS 123 recommended (but did not require) that compensation expense from stock options be measured at FV and recognized in the financial statements over the service period of the employees receiving the stock options. In a political response to companies' overwhelming opposition to the FV method, SFAS 123 was modified to allow the use of the intrinsic value method under rules of APB 25. Companies that elected to use APB 25 were required only to disclose in footnotes the pro forma effect on net income and earnings per share as if the preferable fair value method had been used to recognize the stock-based compensation expense. Thus, companies were allowed to continue using the Intrinsic Value Method despite the concerns expressed by users of the financial statements (primarily through their comment letters) that the intrinsic value method would result in financial statements that would not adequately account for the economic impact of underlying transactions when employees received stock-based compensation in exchange for their services.

C. PROPOSED AMENDMENT TO SFAS 123 AND 95

In April, 2003, the FASB unanimously voted in favor of expensing stock options at fair value over the service period based on an option pricing model. This was followed in March, 2004, by an exposure draft entitled "Share-Based Payment-an Amendment of Statements No. 123 and 95 (Proposed Statement of Financial Accounting Standards)". This proposed statement mandated the use of only the FV method and was designed to improve comparability and transparency by eliminating the use of the intrinsic value method. Interestingly, the FASB based its position on the reasoning that recognizing compensation cost in the financial statements, as opposed to footnote disclosures, improves the relevance, reliability, and transparency of the financial information.

The FASB noted three principal factors that influenced its actions. The first was the concern that financial statements under the intrinsic value method do not faithfully represent the economic transactions affecting the issuer, namely, receipt and consumption of employee services in exchange for equity. The second was the need to improve the comparability of reported financial information by eliminating alternative accounting methods. Finally, the

FASB wanted to simplify U.S. GAAP with respect to the accounting for stock-based compensation and provide greater convergence with international accounting standards. The proposal was adopted in 2004 as SFAS 123 (R).

I. Signaling Theory

Signaling was first proposed by Michael Spence to address the problem of information asymmetry in transactions where one party has more or better information than others (Spence 1973). He suggested that the problem could be resolved by having one party send a signal to reveal relevant information about itself to the other party. The party receiving the signal would interpret it and adjust its behavior accordingly, thus resolving the problem of information asymmetry. The concept was originally studied in the context of prospective employees signaling their skills to prospective employers, but has since been broadened to apply to many other economic decisions.

In general, signals are used to indicate a certain quality that would otherwise not be directly observable. Signaling occurs in competitive environments where it is beneficial to produce an honest signal, but prohibitively costly to produce a deceptive one. The costs include both the cost to produce the signal and the punitive cost for producing a deceptive signal. Thus, signals tend to be honest and reliable when the potential benefits of producing them truthfully exceed the costs.

Information not directly observable that FV companies would want to convey through signaling are earnings quality and more transparent reporting practices. Although some companies produce higher quality earnings and engage in more transparent accounting practices, such qualities can only be confirmed through costly and detailed analysis. Signaling is a cost effective alternative that allows such firms to distinguish themselves as higher quality companies because the cost of adopting FV is more than off-set by the perceived higher quality from signaling. In the current study, we assume that the voluntary adoption of the FV is a cost-effective way for a firm to signal its higher quality.

IV. Research Motivation and Purpose

We argue that stock options are costs of doing business that should be reflected in earnings like any other measurable cost of doing business. Furthermore, by including these costs in earnings, both the quality of earnings and financial position of a company are improved. Therefore, we hypothesize that the companies are signaling their commitment to earnings quality and reporting transparency by voluntarily adopting FV. Although we recognize that the adoption decision may have been motivated by other factors, signaling is one of the more theoretically compelling possibilities. Given all the recent accounting scandals in which numerous high profile companies were forced to restate their financial statements for various improprieties, signaling to the public that a firm is proactive in adopting accounting standards that promotes earnings quality, comparability, and transparency seems like a smart strategy. Such reporting would be highly desirable if these firms were indeed of a higher quality when compared to the IV firms.

What motivated those relatively few companies to adopt FV voluntarily? Were they,

in fact, signaling information about their philosophies concerning earnings quality and reporting transparency? This paper addresses these and other questions by analyzing selected variables for differences between early adopters (FV firms) and non-adopters (IV firms) for explanations consistent with signaling theory. It is our expectation that firms' willingness to voluntarily expense options is related to key financial variables associated with firm size, growth, operating profit margin, risk, quality of earnings, and stock market performance. We, therefore, hypothesize that FV firms are significantly different from IV firms with respect to the following key variables:

- EBIT margin
- Beta
- 3 year average total asset growth
- 3 year average sales growth
- Level of total assets
- Level of sales
- Dividend yield
- Dividend yield to dividend yield of the S&P 500
- 1 year total return
- 3 year total return
- 5 year total return
- Option expense to reported net income
- Interest expense to reported net income

V. Empirical Methodology

For each of the fiscal years ending in 2002 and 2003, we used the population of S&P 500 companies and divided it into two categories: 1) those that adopted the FV method (SFAS 123) of recognizing stock-based compensation expense in earnings and 2) those that chose the alternative intrinsic value method (APB 25) of providing such information in a footnote disclosure only. The appropriate category was determined by reviewing each company's annual report (or form SEC 10-K) for accounting procedures and related disclosures concerning stock-based compensation. During this review we collected data for net income as reported, FV stock-based compensation expense for the FV companies, and pro forma net income for the IV firms as if the FV method had been used to account for stock-based compensation expense. The other variables (Tables 1 and 2) used in the analysis for the S&P 500 companies were obtained from the COMPUSTAT data base.

In 2002 only 19 of the 500 S&P firms used the fair value method in accounting for stock options; the other 481 firms used the intrinsic value method. In 2003 the number of fair value firms increased to 101, leaving 399 intrinsic value firms. The key variable of interest for our study was the ratio of stock-based compensation expense to reported net income. This ratio was computed for all companies that reported positive net income for the year. In 2002, 400 companies reported positive net income while 100 had losses, and in 2003, 435 firms were profitable while 65 had losses. In 2002, all 19 of the fair value firms were profitable, and in 2003 94 of the 101 fair value firms were profitable. The amount of stock-based compensation expense is not recorded as an expense by intrinsic value companies but is shown only as a disclosure item in a firm's "Notes to Consolidated Financial

Statements." This amount is reported as an expense by fair value firms, and thus reduces net income or increases a loss. Thus, the higher the ratio of stock-based compensation expense to reported income, the greater the chance a firm would prefer **not** to use the fair value method. For the FV firms, the ratio was computed by dividing reported stock-based compensation by reported net income; for the IV firms, the ratio was computed by dividing the amount of stock-based compensation disclosed in the "Notes" by adjusted net income.

Univariate tests of the differences between the means of the variables for the fair value and the intrinsic value firms were performed. T-tests of the null hypothesis that the mean values of each variable for the two groups of firms are equal were performed using the SPSS. This statistical procedure is appropriate when comparing the average performance of two groups.

VI. Results

The evaluation of differences in means revealed statistically significant differences between fair value companies and intrinsic value companies. The ratio of stock-based compensation expense to reported net income, the key variable of interest for our study, was significantly higher (at the .01 level) in both 2002 and 2003 for companies using the intrinsic value method (see Table 1 for the 2002 results and Table 2 for the 2003 results). In 2003, the mean value was 27% for intrinsic value firms and 6% for fair value firms. When this ratio exceeds one, a reported profit becomes a loss. Our review of the firms' annual reports revealed that eleven profitable intrinsic value companies in both 2002 and 2003 would have reported a loss if they had used the fair value method.

Our analysis also revealed that in 2002, none of the 19 companies using the FV method reported a loss, whereas 100 (or 21%) of the 481 companies using the intrinsic value method reported a loss (see Table 3). For firms reporting losses, none chose to expense options; but firms that were profitable, 5% (19/400) had chosen the fair value approach that expensed options. The results were similar in 2003, where only 7 (7%) of the 101 companies using the FV method reported a loss, but 58 (17%) of the intrinsic value companies reported a loss (see Table 4). For firms reporting losses, 11% (7/65) chose to expense options; but firms that were profitable, 22% (94/435) chose the fair value approach. It is reasonable, then, that a firm that is reporting a loss would not wish to increase that loss by using a procedure which treats a transaction as an expense when an alternative accounting method of handing that transaction exists.

The earnings before interest and taxes margin (EBIT) was significantly higher for the fair value firms in both 2002 and 2003, indicating more relative earnings to absorb the option expense. Actually, fair value firms had a lower stock option expense than the intrinsic value firms, as indicated by their significantly lower ratio of option expense to reported income. The higher profitability of these firms may be due in part to their low stock option expense. The decision to expense stock options is relatively easy to make when the amount involved is relatively small. We recognize that firms with low stock option costs may have higher personnel costs since stock options provide an alternate source of executive and employee compensation. The fair value firms in the S&P 500 appear to have managed all of their compensation and other expenses in such a manner that resulted in a higher EBIT margin.

Firms with higher EBIT margin may reflect higher quality of earnings. EBIT is calculated before adjustments for nonrecurring items, value changes in investment securities, write-down of assets, gains or losses from discontinued operations, other income, and other extraordinary items. It is in these areas that there are significant opportunities to "manage" reported earnings. Although the components of EBIT (and EBIT margin) can also be "managed" to some extent, it is likely that EBIT is a "purer" figure than net income. Firms with higher EBIT margin would be less likely to try to manufacture profits, and thus these firms could be said to have a higher quality of earnings.

Our analysis also suggests that the lower stock option cost and higher EBIT margin may have contributed to the fair value firms paying higher dividends, given the significantly higher dividend yield and the higher relative dividend yield for these firms. Higher dividend yield may also be a signal of greater earnings quality. Firms that pay out a large portion of their reported profits in dividends may have real earnings that have not been doctored; other firms, with large reported earnings but minimal dividend payments, may have reported earnings that have been disguised, falsified, or "adjusted". A firm cannot pay dividends unless sufficient real earnings and cash are available. Farinha and Moreira tested the relationship between dividend payments and earnings quality for the period 1987 – 2003. Using a sample of approximately 40,000 firm-year observations, they found a positive relationship between dividend payments and several measures of earnings quality (Farinha and Moreira 2007). These results are consistent with our findings that the more profitable FV firms share a larger portion of reported earnings with their stockholders than is the case for the IV firms.

Our results also indicate that it was the larger firms that took the lead in adopting the fair value method of accounting for stock option expenses. Although the growth rate was similar for both sets of firms, the level of total assets was significantly higher for fair value firms. Also, growth in sales was similar for both groups of firms, but the level of sales was higher for fair value firms. The difference in the level of sales was statistically significant in 2003 but not in 2002, again indicating that larger firms made the switch to the fair value method.

Risk and return characteristics of firms are of paramount interest to security analysts and investors. A common measure of a firm's risk, the beta coefficient, was significantly lower for fair value firms. It is expected that lower market risk would be accompanied by lower market return, and indeed this is the case. The 5 year total return, which consists of price appreciation, dividend reinvestment and dividends earned on reinvested dividends, was significantly lower for the fair value companies in both 2002 and 2003. While the 3 YEAR total return was also significantly lower for the fair value companies in 2002; the difference was not significant in 2003; nor were there significant differences for the 1 year total return in either year. Although the low risk, low return characteristics of the fair value firms have an appeal to some investors, it should be noted that the intrinsic value firms cannot be considered highly "risky." With a beta of 0.95 in 2003 and 1.03 in 2003, these firms exhibit average market risk, while fair value firms are less risky than the market average.

The low risk, low return characteristics of the FV firms is a signal of their more transparent financial statements and higher earnings quality. This relationship has been

verified by several researchers who have evaluated the relationship between earnings quality and the cost of capital. In an exhaustive review of over 35 articles on this issue, Habib found that higher earnings quality was associated with lower cost of capital in virtually all cases. Since risk is positively related to the cost of capital, lower risk firms can be expected to have a higher quality of earnings (Habib 2006).

Finally, we calculated the ratio of interest expense to reported net income and found it was statistically the same for both the IV and FV companies; the differences between the two in both years were not statistically significant. We also evaluated the relation between interest expense and option expense. Did firms that have high option expense also have high interest expense? Or did they tend to have low interest expense? We calculated the correlation coefficients between option expense/reported net income and interest expense/reported net income for 2002 and 2003. We found the correlation to be very low in both years. The correlation was -0.013 in 2002 and 0.011 in 2003. Thus, we conclude that there is no relation between option expense and interest expense; the amount of interest expense is not a factor in the decision to grant options and the resulting option expense.

VII. Conclusions

The decision to use the fair value method or the intrinsic value method in accounting for stock options was a choice that corporations had freely made. Since the proposed amendment to FASB 123 and 95 has become effective, however, firms no longer have that choice; they are required to use the fair value method. The results of this paper suggest that there are significant differences between firms that expensed their stock options and those that had chosen not to. Clearly, the impact on the bottom line appeared to have been paramount to the decision to expense stock options given that it resulted in a decrease in net income or an increase in a net loss. Our study reveals that firms reporting a loss were less likely to use the fair value method, presumably, because of the negative impact it had on earnings.

Fair value firms had a significantly higher EBIT margin, indicating that they had relatively more earnings to absorb the option expense. Not surprisingly, the ratio of option expense to reported income was significantly lower for FV firms. The lower stock option cost and higher EBIT margin were also found to be associated with a higher dividend payout by fair value firms. Both of these results are consistent with FV firms providing a signal to investors that they are committed to reporting transparency and earnings quality.

The rate of growth was also similar for both groups of firms, but size was significantly different. As measured by total assets, fair value firms were significantly larger in 2002 and 2003. The level of sales was also higher for fair value firms, although the difference was not significant in 2002.

Our results also confirmed the expected risk-return relationships that investors require. The 5-year total return was lower for the fair value firms in both 2002 and 2003, and the 3-year total return was also lower in 2003. Risk, as measured by beta, was also lower in both years, indicating that fair value firms provide a low risk, low reward investment compared with their intrinsic value brothers. Lower risk was also related to signaling higher earnings quality.

One justification for requiring FV expensing of stock options is to improve the transparency of financial reporting. Based on this research analysis, our results are consistent with a signaling explanation -- that FV firms are indeed sending a signal that they are more committed to transparency in financial reporting and earnings quality. The lower beta, higher EBIT margin, and higher dividend yield are components of a signal to investors that the FV firms can be expected to have higher earnings quality and greater transparency in financial reports.

Table I

Mean Values and Standard Deviations for Selected Variables in 2002 for S&P 500 Firms Accounting for Stock Option Expense Using the Intrinsic Value Method and the Fair Value Method

Variable	Intrinsic Value Firms (n = 481)	Fair Value Firms (n = 19)	t-statistic	Standard Error Difference
EBIT margin	12.99 (26.00)	28.50 (24.46)	-2.704**	5.74
Beta	0.95 (0.66)	0.68 (0.37)	2.968***	0.09
3 year average total asset growth	19.01 (30.59)	14.80 (16.30)	1.055	3.99
3 year average sales growth	15.34 (23.68)	13.03 (16.82)	0.576	4.01
Level of total assets	31,524 (90,444)	135,047 (177,382)	-2.531**	40,903
Level of sales	12,317 (21,346)	22,772 (29,320)	-1.538	6,796
Dividend yield	1.45 (1.58)	3.23 (2.35)	-3.279***	0.54
Dividend yield to dividend yield of the S&P 500	96.10 (107.06)	216.27 (129.38)	-3.891***	30.89
1 year total return	0.41 (35.13)	3.49 (28.1)	-0.451	6.82
3 year total return	7.99 (20.32)	-2.12 (9.42)	4.187 ***	2.41
5 year total return	13.84 (16.46)	8.06 (7.90)	2.868***	2.02
Option expense to reported income*	27.16 (104.725)	5.89 (6.20)	3.832***	5.55
Interest expense to reported income*	58.71 (237.75)	44.3 (39.95)	0.794	18.14

Notes. Mean values are presented with standard deviations in parentheses. Total assets and sales are expressed in millions of dollars; means are expressed as percentages.

*Only firms reporting positive net income are included here; 400 of the 500 S&P firms reported positive income in 2002 and all 19 fair value firms were profitable.
**Significant at 5 percent level
***Significant at 1 percent level

Table II

Mean Values and Standard Deviations for Selected Variables in 2003 for S&P 500 Firms Accounting for Stock Option Expense Using the Intrinsic Value Method and the Fair Value Method

Variable	Intrinsic Value Firms (n = 399)	Fair Value Firms (n = 101)	t-statistic	Standard Error Difference
EBIT margin	12.24 (24.47)	21.86 (20.24)	-4.080***	2.36
Beta	1.03 (0.78)	0.85 (0.52)	2.702***	0.07
3 year average total asset growth	12.58 (19.21)	11.23 (16.43)	0.709	1.90
3 year average sales growth	7.87 (15.99)	9.21 (19.03)	-0.652	2.06
Level of total assets	17,039 (35,178)	118,391 (204,502)	-4.962***	20,425
Level of sales	8,984 (11,459)	25,148 (40,441)	-3.977***	4,065
Dividend yield	1.62 (2.24)	2.88 (2.41)	-4.742***	0.27
Dividend yield to dividend yield of the S&P 500	81.17 (116.48)	135.43 (111.96)	-4.314***	12.58
1 year total return	-14.42 (29.70)	-16.53 (22.76)	-0.777	2.72
3 year total return	-3.29 (22.50)	-2.33 (18.70)	0.429	2.24
5 year total return	2.47 (14.10)	-0.29 (9.94)	2.164**	1.28
Option expense to reported income*	21.92 (59.12)	8.47 (15.61)	3.755***	3.58
Interest expense to reported income*	67.20 (511.93)	72.26 (135.5)	-0.14	35.97

Notes. Mean values are presented with standard deviations in parentheses. Total assets and sales are expressed in millions of dollars; means are expressed as percentages

*Only firms reporting positive net income are included here; 435 of the 500 S&P firms reported positive income in 2003 and 94 of the 101 fair value firms were profitable.
**Significant at 5 percent level
***Significant at 1 percent level

Table III

NUMBER OF FIRMS REPORTING PROFITS OR LOSSES FOR 2002

	Firms reporting losses	Firms reporting profits	Total
Intrinsic value firms	100	381	481
Fair value firms	0	19	19
Total	100	400	500

Table IV

NUMBER OF FIRMS REPORTING PROFITS OR LOSSES FOR 2003

	Firms reporting losses	Firms reporting profits	Total
Intrinsic value firms	58	341	399
Fair value firms	7	94	101
Total	65	435	500

References

Accounting Principles Board. *Accounting Principles Board Opinion No. 25: Accounting for Stock Issued to Employees (APB 25),* New York: AICPA, 1972.

Farinha, J. & Moreira, J. *Dividends and Earnings Quality: The Missing Link?* Unpublished manuscript, University of Porto, Porto Portugal and Lancaster University Management School, Lancaster, UK, 2007.

Financial Accounting Standards Board. *Statement of Financial Accounting Standard No. 123: Accounting for Stock-based Compensation (FASB 123).* Stamford, CT: Financial Accounting Standards Board, 1995.

Financial Accounting Standards Board. *Statement of Financial Accounting Standard No. 123 (Revised): Share-Based Payments,* Stamford, CT: Financial Accounting Standards Board, 2004.

Habib, A. Information risk and the cost of capital: Review of the empirical literature. *Journal of Accounting Literature, 25*, 2006, 127 – 169.

Kieso, D., Weygandt, J., & Warfield, T. *Intermediate accounting* (11th ed., Vol. 2). Hoboken, NJ: John Wiley & Son, 2005.

Levitt, A. *Take On The Street: What Wall Street And Corporate America Don't Want You To Know And How You Can Fight Back*. New York, NY: Knopf Publishing Group, 2002.

McConnell, P., Pegg, J., Senyak, C., & Mott, D. "Companies That Currently Expense Or Intend To Expense Stock Options Using The Fair Value Method." *Bear Stearns Update,* February 2004.

Spence, M. (1973). Job Market Signaling. *Quarterly*