Stock options expensing: An examination of agency and institutional theory explanations

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Abstract

As the debate over appropriate compensation disclosure continues, some firms have volunteered to recognize stock option costs within their income statements. On the one hand, stock option expensing can significantly enhance the legitimacy of the organization and restore shareholders’ confidence in corporate governance practices. On the other hand, expensing stock options could decrease firm earnings, leading to unfavorable comparisons to non-expensing firms. Our logit analysis of 402 S&P firms lends partial support to agency theory explanations for stock option expensing; these results depend on the costs associated with expensing. We find stronger support for the institutional theory perspective that mimetic pressures significantly increase the likelihood that firms will expense stock options, independent of the cost. Our findings have important governance implications, suggesting a more complex model of compensation disclosure in which social pressures dominate voluntary compensation disclosure decisions.

Keywords: Compensation; Corporate governance; Institutional theory; Ownership

Long-term, outcomes-based incentives like stock options have been recommended as compensation tools to create better alignment between agents and principals by encouraging employment-undiversified executives to take appropriate risks that bring value to shareholders (Eisenhardt, 1989; Jensen and Meckling, 1976). Such payments were practically invisible to owners because options were not expensed within income statements and only were apparent in footnotes in the form of diluted earnings per share. Because options were not expensed, net income and earnings per share remained high, organizations continued to give out millions of costless options during the 1990s and early 2000s, and options became a large part of executive compensation. Had firms been forced to provide a more transparent accounting of the costs of stock options, compensation decision makers might have used more restraint. With the onset of the bear market of the mid-2000s and increasingly negative public sentiment regarding executive compensation, more firms are considering voluntarily recognizing stock options costs.

But why would firms decide to recognize stock option costs voluntarily within their income statements? From an agency perspective, principals (owners) prefer stock option expensing because it can reduce information asymmetries by more accurately reflecting the firm’s financial position. Owners might advocate expensing because it would force companies to give stock options only when their incentive effect is greater than the cost and when options actually pay for performance (e.g., Aboody et al., 2003). Although some managers may voluntarily expense options to signal their optimism about the firm’s future (Bastian et al., 2003), in general, agents do not want to expense stock options because doing so suppresses earnings and makes the firm appear less profitable than its non-expensing rivals. Given that the costs of stock option expensing have been estimated to decrease the average company’s earnings by 10%, this decision is anything but inconsequential (Leonhardt, 2002).

From an institutional theory perspective, firms might adopt stock option expensing to acquire social legitimacy among networks of other expensing firms and to match the pervasiveness of expensing within their industries (Westphal et al., 2001;
Firms may adopt expensing to signal that they have sound corporate governance structures in place, which enhances their credibility in the institutional context (e.g., Westphal and Zajac, 1994). Firms may adopt expensing to signal that they have sound corporate governance structures in place, which enhances their credibility in the institutional context (e.g., Westphal and Zajac, 1994). In other words, firms may expense stock options not because expensing solves information asymmetry problems but out of a desire to be on the forefront of or join other firms practicing clearer corporate disclosure.

Given this context, we raise the following research question: How do agency, institutional, and cost factors influence management’s decision to reduce information asymmetry by voluntarily recognizing the cost of stock option compensation? The answer is important for both management literature and practice. From a theoretical perspective, little is understood about how agency and institutional forces may be constrained or enhanced on the basis of the costs associated with reducing information asymmetry. From a practical standpoint, our study has implications for public policy and ownership research in general. Specifically, we identify the conditions in which firms voluntarily expense options, a choice made by managers and their advisors (e.g., boards) to improve the disclosure of compensation costs.

1. Hypotheses development

1.1. Agency theory and expensing

1.1.1. The agent perspective on expensing

Historically, managers have vehemently opposed the expensing of stock options (Espahbodi et al., 2002). If agents believe that markets will read the news of a firm’s stock option expensing positively, they will advocate expensing (Bastian et al., 2003). However, we argue that agents will generally oppose stock option expensing because it increases the firm’s expenses and reduces its net income. Furthermore, management may oppose expensing because it makes the relationship between performance and compensation more transparent, which results in lower levels of information asymmetry. Finally, managers are more likely to oppose expensing when the costs of expensing are greater, because missing earnings estimates can result in lower stock prices and reduced bonuses.

1.1.2. The principal perspective on expensing

Institutional owners may not view the voluntary recognition of options favorably because decreased earnings are bad for owners as well as for agents (Kothari, 2001). Stock options have often been given by organizations as a way to conserve cash, but owners experience the downside of these options through the dilution of their ownership and reduced earnings per share. However, we believe institutional owners will generally advocate expensing for several reasons. First, from the shareholders’ perspective, the cost of options-based compensation should not exceed the associated benefits (Gillan and Starks, 2003). Requiring stock options to be expensed would cause compensation decision makers to think twice about issuing stock options haphazardly. Second, reduced information asymmetries between owners and managers have been associated with lower costs of capital and higher stock prices (Botosan, 1997).

Consistent with this theorizing, empirical research has found that institutional ownership concentration restrains executive compensation and strengthens the connection between compensation and firm performance (Khan et al., 2005). Recently, scholars have suggested that owners have different, often conflicting preferences and effects on organizational outcomes (Hoskisson et al., 2002; Ryan and Schneider, 2002). For example, major institutional owners (including diverse groups such as pension funds, mutual funds, and insurance companies) have different incentives to monitor (Black, 1992).

1.2. Long-term institutional investors

Institutions with long-term investment horizons maintain long-term relationships with the firms in which they have invested and engage in monitoring (Johnson and Greening, 1999). Safeguarding their interests relates to options expensing, in that expensing encourages additional accountability in compensation designs while restraining the dilution of shareholder value. We believe that long-term owners (i.e., pension funds, banks, insurance companies) will advocate expensing as a way to reduce information asymmetries.

Pension funds have significant, long-term outflows to beneficiaries and, because of the duration of their investments, are interested in improving their portfolios’ long-term value (Hoskisson et al., 2002; Ryan and Schneider, 2002). Pension funds cannot exit their investments by selling large blocks of stock (Pound, 1988), are more likely to hold their investments (Gilson and Kraakman, 1991), and thus are more likely to monitor management (Johnson and Greening, 1999). Moreover, pension funds have been among the most vocal participants in organizations of institutional investors (Woidtke, 2002). Consequently, improving general corporate governance through information asymmetry-reducing actions like expensing is in the interest of pension funds.

Other long-term investors like banks sell stability as much as performance and face little pressure for short-term results (Black, 1992). Bank equity investing occurs through banks’ trust function, through which banks generate fee income by acting as fiduciaries (Ryan and Schneider, 2002). Bastian et al. (2003) find that banks were early expensers and therefore may be more likely to support expensing in the firms in which they invest. Compared with short-term institutional investors, banks engage in long-term debt contracts that often cover several years. Similarly, insurance companies have predictable cash outflows and typically invest for long periods (Cox et al., 2004). Moreover, they often sell long-term policies to the firms in which they invest (Ryan and Schneider, 2002). For these reasons, we expect these and other long-term owners to prefer expensing, especially because they cannot simply exit.

Hypothesis 1A. Long-term institutional ownership will be associated with more stock option expensing.
1.3. Short-term institutional investors

According to some authors, short-term institutional owners may encourage managers to engage in myopic behavior (Bushee, 1998). Typically, investors with shorter investment horizons follow the “Wall Street rule” and implement active trading when they are dissatisfied with a company’s prospects (Ryan and Schneider, 2002). Because these transient investors rely on a sell-off strategy, they are less concerned with losing ownership power than with reduced earnings. Furthermore, proposing shareholder resolutions and amendments and engaging management can be costly, time-consuming activities that short-term oriented investors would find unattractive. Therefore, these owners act as “traders” rather than “owners” by buying firms with good earnings news and selling those with bad news (Bushee, 1998). Consequently, these investors will generally discourage management from taking any voluntary action that would decrease the firm’s earnings in the short run. Thus, short-term investors will oppose the expensing of options.

Because of their heightened liquidity requirements, combined with their quarterly performance focus, mutual funds (short-term owners) may emphasize high current returns and prefer projects with a high probability of a short-term payoff (Johnson and Greening, 1999; Kochhar and David, 1996; Ryan and Schneider, 2002). Mutual funds’ managers are evaluated on the basis of short-term goals, which causes them to hold shares for a short time and prefer an exit to a voice strategy (Cox et al., 2004; Ryan and Schneider, 2002). Although wealth management firms may be interested in value creation in the long run, their revenues are based on the fees charged as a proportion of the assets managed. In addition, the compensation of their managers is tied to the market value of their investments, which encourages a short-term orientation. Similarly, the compensation of managers at investment banks is driven largely by quarterly performance (Johnson and Greening, 1999). Their primary goal is to generate a high return in the short run, which encourages investment bankers to engage in portfolio shuffling (Johnson and Greening, 1999) rather than firm monitoring.

Hypothesis 1B. Short-term institutional ownership will be associated with less stock option expensing.

1.4. Principal interests and cost factors

We now turn our attention to a significant boundary condition for which agency explanations for reducing information asymmetries may be incomplete: We believe that the cost associated with stock options will affect the relationship between ownership and expensing. Information asymmetry problems are exacerbated with higher costs of stock options (Gillan and Starks, 2003), and managers tend to sell a substantial proportion of their options after exercising them (McGuire and Matta, 2003). The potential for the dilution of ownership stakes makes it even more important for long-term owners to require responsible stock options use. Specifically, when the costs of stock options are greater, long-term owners will want a clearer recognition of the cost of stock options, and management will follow suit.

Hypothesis 2A. The cost of stock options moderates the relationship between long-term ownership and expensing, such that greater cost is associated with a stronger positive relationship.

In contrast, because short-term owners are less concerned about the long term, they will be more opposed to expensing when the cost of expensing is greater. A higher cost of stock options will reduce the reported earnings significantly and even force companies that are heavy users of options to report losses in the short run (Bebchuk and Fried, 2004). Furthermore, when options cost more, short-term investors bear an even greater downside risk of negative market reactions to drops in earnings. Yet these institutions reward their managers on the basis of quarterly performance; therefore, they will oppose stock options expensing.

Hypothesis 2B. The cost of stock options moderates the relationship between short-term ownership and expensing, such that greater cost is associated with a stronger negative relationship.

1.5. Institutional theory perspective and expensing

Institutional theorists suggest that firms under the influence of legitimization effects will adopt similar structures through a process called “mimetic isomorphism” (DiMaggio and Powell, 1983). Therefore, organizations may voluntarily adopt compensation disclosure practices through the influence of a “changing institutional or social context in which . . . compensation decisions take place” (Zajac and Westphal, 1995, p. 247). Adopting legitimate practices is particularly important when technologies are unclear or uncertain (Meyer and Rowan, 1977). Both the use and accounting of stock options are exemplars of technological uncertainty and thereby inspire debate among and within shareholder interest groups, managers, and regulatory bodies (Bryan-Low, 2003).

Mimetic pressures originate from two main sources: direct exposure to other firms’ solutions through board interlocks and indirect exposure to and adoption of sanctioned solutions from within an industry (DiMaggio and Powell, 1983). First, interlocks affect expensing when board members learn of other boards’ compensation practices (Carpenter and Westphal, 2001; Mizruchi, 1996). Hence, firms may consider stock option expensing when other firms connected to them through board interlocks decide to expense. Second, mimetic pressures from within the firm’s industry could affect its decision to expense. In general, as the percentage of adopting firms in the industry increases, the firm will experience greater pressure to follow, particularly when technologies are unclear (Meyer and Rowan, 1977). If potential adopters view the benefits and costs associated with expensing as difficult to ascertain but do not wish to be left behind, they are more likely to copy the practices of their industry counterparts, independent of board
interlocks with other expensing firms. Consequently, as a greater percentage of the firm’s peers adopt expensing, it will face greater pressures to do the same.

**Hypothesis 3.** Increased mimetic pressures will be associated with more stock option expensing.

### 1.6. Institutional pressures and cost factors

Again, we expect the costs associated with expensing stock options to affect the relationships between mimetic pressures and expensing. Specifically, greater economic costs of expensing will influence agents’ decisions regarding voluntary disclosure and may suppress institutional pressures. However, when the cost of expensing is lower, we expect institutional pressures to have more success encouraging expensing, because agents will be less likely to oppose those mimetic pressures. As more firms announce their intent to expense, institutional pressures intensify, particularly if we assume that the costs of expensing are negligible but the credibility benefits are high (e.g., Abrahamson and Rosenkopf, 1993).

**Hypothesis 4.** The cost of stock options moderates the relationship between mimetic pressures and stock option expensing, such that the greater the cost of expensing, the weaker the association between mimetic pressures and expensing.

### 2. Methods

#### 2.1. Sample and procedures

Our initial sample included 458 firms from Standard and Poor’s (S&P) 500 that offered stock options to the CEO and/or at least one of the five top earners in the company for the year 2001. Complete data were available for 402 firms that represent 165 industries. We collected data regarding expensing announcements from a variety of sources, including a list of expensers maintained by the S&P, a list of expensers from Bear and Stearns, and public announcements in The Wall Street Journal and New York Times.

#### 2.2. Measures

##### 2.2.1. Dependent variable

The dependent variable in our study is whether an S&P 500 firm announced it would recognize stock option compensation. The current trend toward expensing within the S&P 500 began with the July 14, 2002, announcement by Coca-Cola; prior to that date, only two S&P 500 firms were expensing (Winn-Dixie and Boeing). Expensers were coded as 1; non-expensers were coded 0. Consequently, our analyses use logistic regression.

##### 2.2.2. Independent variables

We compiled institutional ownership data from CDA/Spectrum for 2001. Following Brickley et al. (1988), we classified owners according to legal type: pension funds, banks, insurance companies (long-term owners), mutual funds, investment banks, or wealth management companies (short-term owners). Next, using Hoskisson et al.’s (2002) work, we applied two measures of institutional ownership. First, we summed the total ownership by each of the six ownership categories for all owners that owned 1% or more of the company. Second, we counted the number of owners within each ownership type, with the criterion that the owner must own at least 1%.

To assess institutional pressures for expensing, we considered the number of interlocks that a firm had with other expensing S&P 500 firms. We then took this number and standardized it according to the total number of board members. We collected data for this field from The Corporate Library and proxy statements. Our second measure of institutional pressures used Barth et al.’s (1999) industry classification scheme. For each industry, we calculated the percentage of expensers; higher ratios indicate a greater percentage of expensers within that firm’s industry.

Stock option costs were based on the Black-Scholes value of options given to the top five earners in the firm for the year by Execucomp (for a review of Black-Scholes see Hall, 2000). We standardized this figure by the market capitalization of the firm to facilitate comparability, which gives a relative sense of how the cost of expensing would affect each firm.

#### 2.2.3. Control variables

Previous studies have linked firm size and CEO compensation; therefore, we controlled for firm size by using the logarithm of sales and winsorizing the data to limit the effect of extreme observations (Wilcox, 2001). Studies have also linked growth opportunities to stock option use; therefore, we controlled for growth opportunities using a proxy for Tobin’s Q (the logged value of market value/assets) (Wright et al., 1996).

Because CEO power can affect compensation decisions, we controlled for CEO ownership by including the percentage of total outstanding shares owned by the CEO. Furthermore, we logged CEO ownership on the basis of the results of kurtosis and skewness tests.

Due to board’s influence on firm decisions, we also included two variables: (1) board independence, calculated as the number of unrelated outsiders divided by board size, and (2) board size. Both these variables suggest potential checks on management action and may be associated with greater expensing.

Industry controls are frequently added to organizational studies; we implicitly control for industry pressures to expense, in that we investigate each industry to determine what percentage of companies was expensing stock options.

### 3. Results

In Table 1, we provide the means, standard deviations, and correlations for our variables. Of the 402 firms for which we had complete data, 16% were expensers. The average number of bank owners that owned 1% or more of the firm’s equity was 2.13, investment banks was .77, mutual funds was 5.4, pension funds was .27, wealth management firms was 1.07, and insurance companies was .5. On average, of those that owned 1% or more of the firm’s equity, banks jointly owned 5.6% of the
We tested the hypotheses with a series of logistic regression models (Tables 2 and 3). Models 1 and 4 explore the effects of our control variables, Models 2 and 5 add the main effects, and Models 3 and 6 add the centered interactions. We ran models for both the number of institutional owners that owned 1% or more of the firm’s equity (Models 1–3, Table 2) and the total institutional ownership of those that owned 1% or more of equity (Models 4–6, Table 3). The likelihood ratios associated with all models are significant.

For the number of owner models (Table 2), the differences between the likelihood ratio tests for Models 1 and 2 and Models 2 and 3 are significant and suggest that Model 3 is the best fit for the data. This pattern of results also is supported by the gradual, yet small increases in the generalized R². Additional analyses of the models’ classification accuracy show that Model 1 offers an overall classification rate of 85.4% and Model 3 has an overall classification rate of 89.5%, based on a .5 cutoff criteria (Greene, 2003).

For the equity ownership models (Table 3), the difference between the likelihood ratio tests of Models 4 and 5 is significant, but the difference between Models 5 and 6 is not, which suggests that Model 5 fits the data better. This pattern is confirmed by the increases in the generalized R² statistic between Models 4 and 5 but not between Models 5 and 6. Furthermore, Model 6 does not add any explanatory power; therefore, our discussions regarding equity ownership are based on Model 5. Analyses of our models’ classification accuracy show that Model 4 provides an overall classification rate of 85.4% and that Model 5’s overall classification rate is better (88.3%).

### 3.1 Controls

Sales are positively associated with expensing in both the ownership and the number of owners models. As we suggested, Tobin’s Q is negatively related to expensing in the number of owners model but has no significant effect in the ownership model. Neither CEO ownership nor the costs associated with...
Table 2
Stock option expensing as a function of agency and institutional factors for number of institutional owners with 1% or more equity

<table>
<thead>
<tr>
<th>Variables</th>
<th>Model 1</th>
<th>Model 2</th>
<th>Model 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intercept</td>
<td>−4.31</td>
<td>−4.98</td>
<td>−5.30</td>
</tr>
<tr>
<td>Sales</td>
<td>.62***</td>
<td>.58**</td>
<td>.57**</td>
</tr>
<tr>
<td>Tobin’s Q</td>
<td>−.18</td>
<td>−.29*</td>
<td>−.35*</td>
</tr>
<tr>
<td>CEO ownership (% of total shares outstanding)</td>
<td>.00</td>
<td>.04</td>
<td>.03</td>
</tr>
<tr>
<td>Cost of expensing</td>
<td>−.01</td>
<td>−.00</td>
<td>−.06</td>
</tr>
<tr>
<td>Board independence</td>
<td>1.12*</td>
<td>.89</td>
<td>1.01*</td>
</tr>
<tr>
<td>Board size</td>
<td>.12*</td>
<td>.12*</td>
<td>.11*</td>
</tr>
<tr>
<td>Number of pension funds (long-term)</td>
<td>.27</td>
<td>.17</td>
<td></td>
</tr>
<tr>
<td>Number of banks (long-term)</td>
<td>.50**</td>
<td>.61**</td>
<td></td>
</tr>
<tr>
<td>Number of insurance companies (long-term)</td>
<td>.01</td>
<td>−.03</td>
<td></td>
</tr>
<tr>
<td>Number of mutual funds (short-term)</td>
<td>−.10</td>
<td>−.13*</td>
<td></td>
</tr>
<tr>
<td>Number of wealth management firms (short-term)</td>
<td>−.01</td>
<td>−.01</td>
<td></td>
</tr>
<tr>
<td>Number of investment banks (short-term)</td>
<td>.15</td>
<td>.26</td>
<td></td>
</tr>
<tr>
<td>Expensers as a percentage of total interlocks</td>
<td>3.37***</td>
<td>3.41***</td>
<td></td>
</tr>
<tr>
<td>Expensers as a percentage of industry</td>
<td>4.38**</td>
<td>5.18**</td>
<td></td>
</tr>
<tr>
<td>Cost of expensing × Number of pension funds</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cost of expensing × Number of banks</td>
<td>−.26*</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cost of expensing × Number of insurance companies</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cost of expensing × Number of mutual funds</td>
<td>.11*</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cost of expensing × Number of wealth</td>
<td>−.07</td>
<td></td>
<td></td>
</tr>
<tr>
<td>management firms</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cost of expensing × Number of investment banks</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cost of expensing × Expenditure as a percentage of total interlocks</td>
<td>−.02</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cost of expensing × Expenditure as a percentage of industry</td>
<td>−.29</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Likelihood ratio χ²</td>
<td>105.56***</td>
<td>110.97***</td>
<td>124.14***</td>
</tr>
<tr>
<td>Generalized R²</td>
<td>.19</td>
<td>.20</td>
<td>.21</td>
</tr>
</tbody>
</table>

Unstandardized log estimates are reported. Boldface indicates the preferred model. n = 402.

* p < .10
* * p < .05
** ** p < .01
*** *** p < .001.

expensing has a direct effect on stock option expensing. Board independence and board size both are positively associated with expensing for the number of institutional investors (b = 1.01, p < .10; b = .11, p < .05, respectively, Model 3) and ownership equity (b = .97, p < .10; b = .10, p < .10, respectively, Model 5).

3.2. Hypotheses tests

Hypothesis 1A is partially supported for both the number of institutional owners (Table 2) and their equity ownership (Table 3). Namely, long-term institutional ownership in the form of the number of banks is strongly and positively related to voluntary expensing (b = .61 p < .01, Model 3), and banks’ total equity ownership is significantly positively associated with expensing (b = .780, p < .05, Model 5). However, neither the number of owners nor the ownership of either pension funds or insurance companies is significantly associated with expensing. Hypothesis 1B is partially supported for the number of mutual funds (b = −.13, p < .10; Model 3) and their equity ownership (b = −4.51, p < .05; Model 5), but the number and equity ownership of wealth managers and investment banks are not significantly associated with expensing.

Hypothesis 2A, which suggests that cost moderates the relationship between ownership and expensing, is not supported. Instead, a higher number of bank owners is associated with significantly more expensing, but only when the cost of stock options is low (b = −.26, p < .05, Model 3). The graph of this interaction in Fig. 1 illuminates this relationship. Interactions with other types of long-term institutional investors (i.e., pensions, insurance companies) are not significant. Similarly, Hypothesis 2B, which suggests that cost will moderate the relationship between ownership and expensing, is not supported in the anticipated manner. Namely, higher expensing costs are associated with a statistically greater propensity to expense, particularly when the number of mutual funds is greater (b = .11, p < .10; Model 3). In Fig. 2, we offer a graph of this interaction to clarify the relationship. However, in practical terms, the y-axis shows that the probability of expensing overall by mutual funds  

Table 3
Stock option expensing as a function of agency and institutional factors for percentage of institutional ownership for owners with 1% or more equity

<table>
<thead>
<tr>
<th>Variables</th>
<th>Model 4</th>
<th>Model 5</th>
<th>Model 6</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intercept</td>
<td>−4.31</td>
<td>−3.98</td>
<td>−3.99</td>
</tr>
<tr>
<td>Sales</td>
<td>.63***</td>
<td>.59***</td>
<td>.57**</td>
</tr>
<tr>
<td>Tobin’s Q</td>
<td>−.18</td>
<td>−.20</td>
<td>−.21</td>
</tr>
<tr>
<td>CEO ownership (% of total shares outstanding)</td>
<td>.00</td>
<td>.02</td>
<td>.02</td>
</tr>
<tr>
<td>Cost of expensing</td>
<td>−.01</td>
<td>.01</td>
<td></td>
</tr>
<tr>
<td>Board independence</td>
<td>1.12*</td>
<td>.97*</td>
<td>.95*</td>
</tr>
<tr>
<td>Board size</td>
<td>.12*</td>
<td>.10*</td>
<td>.09*</td>
</tr>
<tr>
<td>Pension fund ownership (long-term)</td>
<td>13.39</td>
<td>11.71</td>
<td></td>
</tr>
<tr>
<td>Bank ownership (long-term)</td>
<td>7.80*</td>
<td>8.71*</td>
<td></td>
</tr>
<tr>
<td>Insurance companies ownership (long-term)</td>
<td>−.96</td>
<td>−.121</td>
<td></td>
</tr>
<tr>
<td>Mutual fund ownership (short-term)</td>
<td>−.45*</td>
<td>−.468*</td>
<td></td>
</tr>
<tr>
<td>Wealth management ownership (short-term)</td>
<td>−.68</td>
<td>−.28</td>
<td></td>
</tr>
<tr>
<td>Investment bank ownership (short-term)</td>
<td>4.92</td>
<td>4.19</td>
<td></td>
</tr>
<tr>
<td>Expensers as a percentage of total interlocks</td>
<td>3.19***</td>
<td>3.27***</td>
<td></td>
</tr>
<tr>
<td>Expensers as a percentage of industry</td>
<td>5.34**</td>
<td>5.25**</td>
<td></td>
</tr>
<tr>
<td>Cost of expensing × Pension fund ownership</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cost of expensing × Bank ownership</td>
<td>−2.13</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cost of expensing × Insurance companies</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ownership</td>
<td>.52</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cost of expensing × Mutual fund ownership</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ownership</td>
<td>.77</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cost of expensing × Wealth management</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ownership</td>
<td>−.61</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cost of expensing × Investment bank ownership</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cost of expensing × Expenditure as a percentage of total interlocks</td>
<td>−.11</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cost of expensing × Expenditure as a percentage of industry</td>
<td>.21</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Likelihood ratio χ²</td>
<td>105.56***</td>
<td>107.89***</td>
<td>108.09***</td>
</tr>
<tr>
<td>Generalized R²</td>
<td>.19</td>
<td>.20</td>
<td>.20</td>
</tr>
</tbody>
</table>

Unstandardized log estimates are reported. Boldface indicates the preferred model. n = 402.

* p < .10
* * p < .05
** ** p < .01
*** *** p < .001.
(short-term investors) is very small. Interactions with other short-term institutional investors (i.e., wealth management firms, investment banks) are not significant.

Hypothesis 3 is fully supported. Expensers as a percentage of total interlocks are positively associated with expensing for both the number of institutional owners ($b=3.41, \ p< .001; \ Model \ 3$) and equity ownership ($b=3.19, \ p< .001; \ Model \ 5$). Expensers as a percentage of the industry also are positively associated with expensing for the number of institutional owners ($b=5.18, \ p< .01; \ Model \ 3$) and equity ownership ($b=5.34, \ p< .01; \ Model \ 5$).

However, Hypothesis 4 is not supported. Neither the interactions of the cost of expensing with expensers as a percentage of total interlocks nor the interactions of the cost of expensing with the percentage of expensers in the industry is significant.

4. Discussion and conclusions

4.1. Research findings and contributions

4.1.1. Agency and institutional ownership

Agency theory predicts that long-term owners will welcome more complete recognitions of the cost of stock options. Recent shareholder actions support this statement; for example, a shareholder proposal to expense stock options at Delta Airlines recently passed with 60% of the vote (Brooks, 2003). However, these results are contingent on not only the specific type of owner but also the cost of expensing; banks are only strong advocates of expensing when its costs are low and there are more bank owners.

Short-term owners may be less interested in firm expensing, because they do not want to support additional expenses that might hurt firm value in the short run. The results from our main effect hypotheses support this claim but are contingent on not only the specific type of short-term owner but also the cost of expensing. Specifically, mutual funds are less likely to oppose expensing when the costs are greater, particularly when there are significant numbers of other mutual fund owners. The overall impact of mutual funds on expensing is small; perhaps their different attitude toward expensing results from having a critical mass of other mutual funds that can help them bear the cost of expensing, which leads them to support it, as our interaction shows.

Another explanation suggests that information asymmetry solutions like expensing may be advocated more when there are more owners. The chances that any one owner will advocate any one solution increase as the number of owners increases. Similar to the logic of board interlocks, additional studies might investigate the possibility of “ownership” interlocks, whereby investors of a particular type compare notes on the relative value of information asymmetry solutions like expensing. Both our empirical results and these ideas lend further credence to institutional theory arguments.

Although the interactions are statistically significant, the practical significance of our results still requires discussion. By combining the results of our analyses into one graphic with only one y-axis that represents the propensity to expense, we can observe that the probability of expensing with short-term investors ranges from only .1% to 1.5%—a small figure compared with the long-term investor results, which range 1–13.5%. In other words, though the interaction is significant, the effect on the probability of expensing in practical terms is very small. Apparently, long-term investors (banks) are stauncher advocates of expensing, possibly because of their earlier exposure to the practice.

Recent scholarship in management studies suggests that ownership stakes alone are insufficient to influence management choice and only through activism can owners gain influence (e.g., David et al., 2001). In line with this alternative hypothesis, we investigated the owner activism history for 170 firms in our sample and found that previous activism is not a significant predictor of stock option expensing in 2002.
Our results contribute to ownership literature in several ways. Institutional owners vary in terms of their preferences for compensation recognition, and long-term owners (banks) differ in their preferences for disclosure from short-term owners (mutual funds). Our research confirms Hoskisson et al.’s (2002) insight that all institutional owners are not the same and that the number and the type of owners are important measures of influence. Evidently, the number of loud voices is more important than how large these owners are; considering one without the other will yield an incomplete picture of why firms expense. Although previous work has considered the effect of ownership on corporate behavior, ours is the first study to consider management’s decision to reduce information asymmetries between owners and managers in the form of clearer compensation disclosures. However, we can only understand a firm’s decision to expense by acknowledging that the various owners are more or less concerned with expensing as a function of cost. Namely, banks are stronger advocates of expensing but only when it does not cost much. Also, as a group, mutual funds are comparatively less likely to advocate expensing, because as short-term investors, they do not want to bear too many of these costs.

4.1.2. Institutional theory and mimetic pressures

We find strong support for the impact of mimetic pressures (Hypothesis 3, board interlocks, industry pressures) on stock option expensing. Stock option expensing, from both a financial and a corporate legitimacy standpoint, has been hotly contested, but our results illustrate how a solution can gain legitimacy within organizational fields and that firms may adopt solutions as much due to social pressures as to solve firm-specific information asymmetry problems. The cost of expensing involves no interactive relationship with mimetic pressures to expense (in contrast to Hypothesis 4). Agents are unsuccessful in deterring institutional environment forces, even though the high costs of options could significantly reduce reported earnings and improve the transparency in executive compensation. Alternatively, with lower cost options, powerful executives may demonstrate that they are at least trying to improve the corporate governance in their firms and signal enhanced credibility at no additional cost. Although our arguments are consistent with Fligstein’s (1991) suggestion that powerful actors can influence the adoption of norms, we nonetheless find that the interests of executives do not constrain the influence of the institutional environment. Symbolic attributes of stock options expensing, combined with the severe uncertainty evidenced by the conflicting interests of various owners, may contribute to the prevalence of institutional forces over rational cost explanations.

4.2. Limitations and further research

From an agency perspective, our study fails to consider the dynamism of ownership. Although we assume that some owners are short- or long-term oriented, we do not measure actual turnover in their portfolios. Researchers are just beginning to understand how ownership turnover may affect management action. Additional research could further our understanding of how stability in ownership patterns affects management decisions.

In addition, our methodology for measuring institutional pressures does not directly control for the dynamic nature of interlocks and how pressures to expense may evolve over time. Post hoc, we investigated whether the timing of expensing decisions affected a firm’s decision to expense by running an analysis in which we considered that firms had an interlock with an expenser only if the other interlocked firm’s expensing decision had been announced before that of the focal firm. These results do not affect our conclusions.

Further research from an institutional theory perspective could investigate the logic used to rationalize management’s decision to expense. Zajac and Westphal (1995) suggest that the reasons given for adopting compensation innovations vary as a function of company performance and time. Researchers therefore should study the rationales given for expensing over time. Early in the institutionalization process, the reasons given publicly for expensing stock options will likely be consistent with agency explanations, but over time, these explanations may change.

Limitations aside, ours is the first study to investigate how compensation disclosure is affected by agency, institutional, and cost factors and shows that ownership plays a statistically significant but minor role in the decision to expense stock options. Our results are also consistent with recent work that finds varieties of institutional owners gaining more say in firm decisions ranging from CEO compensation to R&D expenditures to corporate social responsibility. This study also extends work in the arena of corporate disclosure and accountability—areas important to many owners, institutional and otherwise.

Institutional pressures have a comparatively stronger effect than ownership, such that increased social pressures lead to more stock option expensing. Stock options have been criticized as a management “give-away” because they had no bearing on a firm’s expenses. The voluntary recognition of the cost of stock options may be influenced more by institutional factors than by principals or even the economic costs of expensing for now, or at least until new accounting guidelines take full effect in the United States. In addition, the voice of owner activism in the future may become louder as empowered principals confront management more often with their respective preferences for compensation disclosure.

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References


 Brooks R. Delta air holders recommend curbs on stock options. Wall St J 2003 [April 28].

 Bryan-Low C. Stock options are divisive subject in accounting. Wall St J 2003 [February 18].


