

OUT-OF-THE-MONEY: THE IMPACT OF UNDERWATER STOCK OPTIONS ON EXECUTIVE JOB SEARCH

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The need for future leadership in organizations is widely recognized, and often addressed through leadership development, succession planning, and building a top talent pipeline among existing employees. Equally important is retaining talented executives. Executive retention has become a concern for organizations as plunging stock prices have led to vastly devalued stock options, perhaps causing executives to look elsewhere for more lucrative stock option portfolios. Yet, there has been little research on the relationship between stock option value and executive retention. In a cross-company, cross-industry sample of 610 U.S. executives, we explored the relationship between underwater stock options and job search. We found a positive association between the percentage of underwater stock options in executives' portfolios and job search. This relationship was moderated as predicted, by executives' perceptions of alternative employment and money inadequacy beliefs.

For the past 2 decades, stock option grants have become an increasingly popular form of executive compensation in the United States (Hall, 2000) and abroad (Taft & Singh, 2003). Hall and Murphy (2002) reported that in 1999, 94% of S&P 500 companies granted options to their top executives, up from 82% in 1992. Stock options have also increased in terms of their proportion of executives' total compensation. Hall and Murphy (2002) further reported that in 1999, stock options accounted for 47% of the total compensation of S&P 500 executives, up 22% from 1992. In addition to stock option grants and base salary, executive pay packages typically contain other components, such as annual bonuses tied to firm performance, benefits, and other long-term incentives such as restricted

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stock grants (Taft & Singh, 2003). However, recent reports indicate that stock options now represent the largest single component of executives' total compensation packages (St-Onge, Magnan, Thorne, & Raymond, 2001).

There are several reasons for the increased use of stock option grants in executives' pay packages. First, companies are not currently required to charge stock option grants against earnings (Bodie, Kaplan, & Merton, 2002), providing a unique way to reward executives and other employees without increasing labor costs. Second, stock options have been widely used as a means of aligning the divergent interests of executives and shareholders (Brandes, Dharwadkar, & Lemesis, 2003). Finally, stock options are widely used as a means of attracting and retaining top talent (Ittner, Lambert, & Larcker, 2003).

Stock options are nontradable rights to purchase a certain number of shares in one's company at a certain price known as the exercise price (Hull, 2002). The exercise price is often the firm's market price on the date they are granted (Hall & Murphy, 2002). Stock options are considered "underwater" (or "out-of-the-money") when the market price falls *below* the exercise price. Conversely, stock options are considered to be "in-the-money" when the market price is *above* the exercise price (Hull, 2002). When stock options are underwater they are considered to have no current value to the recipient even though they may have value in the future if the stock price appreciates (Hall, 2000). As long-term incentives, stock options usually cannot be exercised (i.e., the shares cannot be purchased) all at once, and not until a certain future date (often 4–5 years after the grant date). Stock option grants often are subject to vesting schedules whereby executives can exercise a small portion of a grant each year (e.g., 20% of the shares in a grant each year up to 5 years). Stock option grants typically expire after 10 years (Weeden, Carberry, & Rodrick, 1998). Most executives receive different stock option grants with a different exercise price each year (Linney, 1999) or even at multiple times per year. Therefore, at any given time, an executive's stock option portfolio likely consists of some options that are in-the-money and some that are out-of-the-money.

In contrast to their increased popularity, executives' stock option portfolios have experienced massive depreciation in recent years. One recent survey suggested that more than 80% of U.S. companies had some underwater options, with more than one third reporting that at least 50% of their outstanding options were underwater (Corporate Board, 2001). Widespread depreciation in the value of option portfolios is believed to have a variety of negative consequences for organizations, including reduced motivation and morale of option holders (Burwaza, 1998; Delves, 2001), and misalignment of management and shareholder interests (Daily, Certo, & Dalton, 2002). However, one of the most widely publicized

concerns with depreciated stock option portfolios is the loss of key talent (Tully, 2000). Ittner, Lambert, and Larcker (2003) reported that employee retention was the most often cited objective for stock option plans among a sample of 194 “New Economy” firms. In addition, The National Center for Employee Ownership found that 93% of companies in a nationwide survey of U.S. companies indicated that the “retention of key employees” was a key objective of their stock option grants (Weeden, Carberry, & Rodrick, 1998). This retention concern does not appear to have subsided with the recent recession: “Despite a weakened economy, competition for key talent remains stiff: highly skilled employees holding worthless options may pay closer attention to calls from headhunters” (Delves, 2001, p. 28).

Stock options have been the subject of considerable research during the past 2 decades. Several studies using an agency theory framework have examined risk avoidance tactics among CEOs possessing stock options and other forms of variable pay designed to align the interest of shareholders and executives. One noted problem with stock options is that they may motivate executives to make decisions that minimize their own risk at the expense of shareholders (Wiseman, Gomez-Mejia, & Fugate, 2000). For example, previous research has explored how executives can mitigate personal risk by pursuing conglomerate mergers (Amihud & Lev, 1981), acquisitions (Sanders, 2001), using alternative accounting methods (Antle & Smith, 1986), and reducing R&D expenditures (Hoskinson, Hitt, & Hill, 1993).

Additional research has explored whether the use of stock option grants impacts firm performance. Thus far, evidence is mixed. Some studies suggest that option grants have a positive impact on firm performance. For example, Conyon and Freeman (2000) and Sesil, Kroumova, Blasi, and Kruse (2002) found that the use of broad-based option plans was associated with higher productivity and higher levels of value added per employee. Conversely, Ittner, Lambert, and Larcker (2003) found no evidence that the use of stock options for lower-level employees was associated with accounting based or stock return measures of firm performance. In addition, Aboody (1996) found a negative relationship between the value of firms’ outstanding shares and share prices.

In contrast to the substantial stock options literature focused on firm-level outcomes, research on individual-level outcomes has been sparse. One notable exception is a stream of behavioral finance research, which has examined predictors of stock option exercise. Recent work in this area demonstrates that the probability of exercise of in-the-money options is greatest when the market price exceeds the previous 52-week maximum price of the firm’s stock (Core & Guay, 2001; Heath, Huddart, & Lang, 1999).

Notwithstanding these advances in research, the impact of underwater stock options on retention-related outcomes remains virtually unexplored in the literature. Hom and Griffeth's (1995) review and meta-analysis of the turnover literature argued that compensation variables in general (let alone those specifically relating to stock options) have received inadequate attention despite their demonstrated importance to the withdrawal process in the popular press and in labor economics research (e.g., Ippolito, 1991; Peel & Wilson, 1990). The most relevant paper we have encountered thus far is a study by Daily et al. (2002), who examined the impact of stock option repricing practices on executive turnover and firm performance. In a sample of U.S. public firms, Daily and her colleagues (2002) found no evidence that repricing practices reduced turnover or increased firm performance.

Currently, the appropriate role of stock options in executive pay is under significant scrutiny with proposals to replace stock options with restricted stock (Block, 2003; Kinsley, 2003) and/or to treat stock options as an accounting expense (Bodie, Kaplan, & Merton, 2002). Nonetheless, examining the effect of stock options on executive retention processes remains important. First, it seems unlikely that stock options will be abandoned (Zuckerman, 2003), given their accounting benefits (Bodie et al., 2002), unique motivating capabilities (Brandes et al., 2003), and the commitment of many organizations to their importance among various forms of compensation (Strauss & Kessler, 2003). Second, at the time of this study (2000–2001), stock options were undoubtedly a significant component of executive pay and thus offer a useful opportunity to extend our understanding of employee retention.

Therefore, the purpose of this paper is to investigate the impact of underwater stock options on executives' job search behavior above and beyond previously identified antecedents and to explore individual difference variables that may influence this relationship. In this paper, we operationalized underwater stock options as the percentage of currently underwater stock options in executives' portfolios (discussed in detail in the measurement section). We focused on executive job search behavior as an outcome variable because both theoretical models and empirical research in the turnover literature have identified it as a key component of the withdrawal process (Blau, 1993; Bretz, Boudreau, & Judge, 1994; Lee & Mitchell, 1994), yet, job search is arguably less constrained than actual turnover, which requires the *opportunity* to leave. This research focuses specifically on *active* job search behavior, which assesses an individual's behavioral commitment to finding a new job and has been shown to be a proximal predictor of actual turnover (e.g., Blau, 1993, 1994; Somers & Birnbaum, 2000).

Turnover Models and Stock Options

Applied psychologists and labor economists have studied turnover for decades. Numerous theoretical turnover models (e.g., Mobley, Griffeth, Hand, & Meglino, 1979) and empirical studies (e.g., Hom, Caranikas-Walker, Prussia, & Griffeth, 1992; Hom & Griffeth, 1991) have focused on the precise cognitive and behavioral elements of the withdrawal processes. In addition, numerous studies have identified variables that initiate the withdrawal process. Regarding this literature, Lee and Mitchell (1994) observed that most studies examining the determinants of turnover draw on one of two central concepts known as “push” and “pull” factors. Pull theories of turnover identify market or environmental determinants of the withdrawal process such as the availability of jobs in the labor market (Ehrenberg & Smith, 1991; March & Simon, 1958). In contrast, push theories of turnover identify job-related perceptions and attitudes believed to be antecedents of the withdrawal process (Lee & Mitchell, 1994).

In support of push and pull turnover models, a host of empirical studies have identified an array of determinants of search activity and voluntary turnover, including environmental, work-related, and attitudinal factors (Boudreau, Boswell, Judge, & Bretz, 2001; Bretz et al., 1994; Cotton & Tuttle, 1986; Hom & Griffeth, 1995; Lum, Kervin, Clark, Reid, & Sirola, 1998; Pettman, 1973; Roberts & Chonko, 1996). For example, Bretz et al. (1994) argued that unacceptable levels of job-related characteristics such as pay level, work stress, or work attitudes would *push* or motivate executives to search for alternative employment, “presumably because the benefits of doing so offset the costs of searching” (p. 279).

Among the numerous predictors of withdrawal attitudes and behavior identified by previous research, at least three are related to stock options. First, research has identified pay level (or total compensation) as an especially robust determinant of turnover. Ehrenberg and Smith (1991) noted “a very strong and consistent finding in virtually all studies of worker quit behavior is that holding worker characteristics constant, employees in industries with lower wages have higher quit rates. In fact, the relationship is so strong that we [argue] that an unusually low quit rate is often a reliable signal of an above equilibrium wage rate” (pp. 388–389). Stock options are one of many elements of executives’ total compensation, and therefore a component of their pay level. Second, previous research has also demonstrated that individuals’ perceptions of their company’s performance are a strong predictor of withdrawal cognitions and behaviors (Boudreau et al., 2001; Bretz et al., 1994). This research suggests that employees have a tendency to stay with “winners” and leave poorly performing companies.

This research is relevant in the present context because the percentage of underwater options in an executive's portfolio is likely to be related to the firms' overall performance. Generally speaking, stocks perform well when the company performs well and vice versa. Third, research shows that quit rates vary by industry (Ehrenberg & Smith, 1991; Hall, 1982; HR Focus, 1996). Indeed, stock options may play a more prominent role in retaining executives in some industries over others perhaps because stock prices are more historically volatile or because stock options comprise a greater percentage of executives' remuneration. The value of stock options also is likely to vary by industry, as stock price volatility is a key determinant of their potential value (Hull, 2002).

In summary, stock options are likely to be related to pay level, firm performance, and industry type, three factors that have been identified in previous research as job search and turnover antecedents. We propose that underwater stock options represent a *unique* push factor for executives that have not yet been explored in the empirical job search literature. Underwater stock options may be a unique push factor for at least four reasons. First, underwater stock options have become widely recognized sources of poor morale and disaffection among employees (Daily et al., 2002). Second, stock options have become an expected component of executive compensation and represent a key bargaining point in the recruitment process (Brandes et al., 2003). Third, firms grant stock options *in addition* to other forms of pay, including base salary, suggesting that they believe the added stock option component provides unique leverage on outcomes like retention. Finally, stock options are likely to play an important role in job search behavior because they make up such a large portion of executives' pay (Hall & Murphy, 2002). Pearl Meyer, a noted expert on executive compensation, recently argued that underwater stock options are aversive to executives because so much of their pay is at risk. "When 60% of your compensation is in options that might not be worth anything, you are at risk for 60% of your total package. I don't know how *you* would feel about it but I would be distressed if I were under water in that situation" (Elson, 2003, p. 73).

Theoretical models and empirical evidence thus demonstrate that pay level and other factors relating to stock options (e.g., firm performance, industry type) affect employee attitudes and retention-related behavior. We propose that stock options are a unique element of executives' total compensation, and as such may explain variance in job search behavior that has been left unexplained by previously researched variables such as pay level. In other words, we argue that executives might react independently to underwater stock options, given their greater potential impact on total wealth, and their unique symbolic importance relative to other forms of pay. Therefore, this study seeks to first test whether stock options offer

additional insight into predicting job search behavior. Accordingly, we first hypothesize that after controlling for executives' total pay, perceived firm performance, and industry type:

Hypothesis 1: The percentage of underwater stock options will be positively related to executives' level of job search behavior.

In addition to the main effect relationship between underwater stock options and job search activity, we draw on additional research and theory suggesting that executives' reactions to underwater options may be moderated by a variety of characteristics. We will now briefly review insights from agency theory, equity theory, and the psychology of money and turnover literatures to suggest possible moderators of this relationship.

Total Wealth

Agency theory describes exchange relationships between principals (e.g., owners) and agents (e.g., managers). It suggests that if performance cannot be monitored, executives' pay should be aligned with the interests of shareholders. An important element of alignment is the risk tolerance of agents and principals. Agency theory generally assumes that individuals are risk averse (Jensen & Meckling, 1976). However, a growing body of research suggests exceptions to this assumption. Stock options are meant to convey shareholder risk to executives, but it is possible that individual risk tolerance moderates the degree to which this affects their behaviors.

For example, Eisenhart (1989) noted that agency theory's assumptions that agents are always risk averse may be inappropriate under certain conditions. Citing previous research from the economics literature (e.g., MacCrimmon & Wehrung, 1986), she argued that as agents become increasingly wealthy, their risk aversion is likely to decrease. Similarly, Huddart (1994) proposed that wealth is likely to have an influence on how soon after vesting employees decide to exercise their options. He showed that highly wealthy employees are able to absorb more risk (and thus reap more profit) by holding their options longer before exercising, rather than at the earliest opportunity. Consistent with this prior research and theory, we propose that executives' total wealth may impact how they react to underwater stock options. Executives may be wealthy for a variety of reasons, such as past job successes, previous exercise of stock options, or financial resources independent of their employment. Underwater stock options are likely to pose less risk to wealthy executives, thus suggesting underwater options are less likely to lead to job search activity for those with greater wealth. Accordingly, we hypothesize that after controlling for total pay, perceived firm performance, and industry type:

Hypothesis 2: Total wealth will moderate the relationship between percentage of options underwater and job search, such that the percentage of underwater options will have a stronger (positive) relationship with search among those with lower reported wealth.

Financial Inadequacy

In addition to an individual's reported wealth, one's *perception* of his/her financial situation may also be relevant. Indeed, whether someone is "wealthy" is in the eye of the beholder. Furnham (1984) defined financial inadequacy as the degree to which individuals feel that they do not have enough money. To the casual observer, financial inadequacy may seem inconsequential to the discussion of how U.S. executives react to underwater stock options because they are known for being well compensated. However, an emerging research stream on the psychology of money (Furnham & Argyle, 1998; Mitchell & Mickel, 1999; Tang, Furnham, & Wu, 2002) strongly suggests that financial inadequacy is a highly subjective perception. Tang (1995) asserted that "when people make more money, they immediately change their standards and want even more money" (p. 810). A remark once made to the first author by an executive in a high-tech company reinforces that wealth perceptions are highly subjective: "When most of your friends' homes are worth 8 million dollars, your 2 million dollar home seems inadequate."

These observations are consistent with equity theory (Adams, 1965), which asserts that individuals engage in social comparison when evaluating exchange relationships. Equity theory suggests that individuals evaluate their outcomes to inputs in comparison to friends, coworkers, or peers in other organizations. These social comparisons have often been applied to the study of pay satisfaction (Mowday, 1996). Numerous studies demonstrate that satisfaction with different elements of pay is contingent on the pay levels of referent others (e.g., Blau, 1994; Williams, 1995).

Empirical research has demonstrated that wealthy individuals do not always feel financially secure (Furnham & Argyle, 1998; Ravallion & Lokshin, 1999). Indeed, numerous studies have found surprisingly weak relationships between objective measures of wealth (such as income, property values, and total assets) and self-reported financial well-being measures (Easterlin, 1974; Oswald, 1997; Simon, 1974). This suggests the need to investigate the role of an individual's perceived financial adequacy in addition to total wealth.

Drawing on equity theory and the psychology of money literature, we propose that perceptions of financial inadequacy may be informative to understanding executives' reactions to underwater stock options. If executives feel that they are not as wealthy as their peers or have not yet

reached their financial goals, they are likely to react to underwater stock options differently than if they felt those needs and goals were met. Those who feel greater financial inadequacy are likely to be more sensitive to underwater stock options because they may perceive a greater opportunity cost by staying in the organization. We thus propose that underwater stock options should be more of a “push” factor for executives who feel a higher degree of financial inadequacy. Relative to other forms of rewards that have been studied in the past, stock options may have an even stronger interaction with financial inadequacy perceptions, because the upside potential of stock options is so high relative to other forms of pay. Accordingly, we hypothesize that after controlling for total pay, perceived firm performance, and industry type:

Hypothesis 3: Financial inadequacy will moderate the relationship between percentage of options underwater and job search, such that the percentage of underwater options will have a stronger (positive) relationship with search among those with greater financial inadequacy.

Money as a Symbol of Success

A related, but distinct cognition involves the symbolic nature of money. In an interview with the first author, a remark made by a venture capital executive in Silicon Valley underscored the intensely symbolic nature of wealth. The executive observed that “becoming wealthy from one successful startup is not enough to earn respect from your peers. In the Valley, you need at least two successful startup ventures to prove that you aren’t a fluke.”

The psychology of money literature suggests that money can represent a diverse set of characteristics for individuals (e.g., achievement, success, status, respect, self-esteem, freedom, control, power, greed, and even evil) and that the meaning of money goes far beyond mere economic value (Belk & Wallendorf, 1990; Furnham & Argyle, 1998). For instance, Rubinstein (1981) found that 74% of respondents agreed with the statement, “In America, money is how we keep score” (p. 33). Tang (1995) examined several dimensions of the symbolic meaning of money and identified *money success* perceptions (i.e., the degree to which individuals believe that money is a symbol of their success) as a key determinant of job and pay satisfaction.

This literature offers potential insight into understanding how executives react to underwater stock options. As noted earlier, stock options are unique from other forms of pay due to their visibility (Brandes et al., 2003) and the fact that they have often been viewed as a symbol of success (Stein, 2003). Therefore, underwater stock options may represent a stronger “push factor” for those executives who have stronger money

success beliefs. In other words, executives for whom money more strongly represents success characteristics such as effort, achievement, and status are likely to feel a greater sense of discontent when their stock options are underwater and thus react with greater job search. Accordingly, we hypothesize that after controlling for total pay, perceived firm performance, and industry type:

Hypothesis 4: Money success perceptions will moderate the relationship between the percentage of options underwater and job search, such that the percentage of underwater options will have a stronger (positive) relationship with job search for those who have a stronger belief that money is a symbol of success.

Perceived Employment Alternatives

Human capital theory (Becker, 1975) and a large body of empirical literature in labor economics and applied psychology suggest that labor market conditions play an important role in explaining turnover cognitions and behaviors (Gerhart, 1990). Human capital theory argues that the likelihood of voluntary turnover is highest when the costs of leaving are low, such as under circumstances where better jobs are plentiful (Ehrenberg & Smith, 1991). Several empirical studies in labor economics support this view, demonstrating that turnover rates are greater when general labor market conditions are favorable (e.g., Armknecht & Early, 1972; Eagly, 1965).

Similarly, theoretical models of voluntary turnover argue that an individual's perceived ease of movement represents a key moderator variable in the relationship between push/pull factors and turnover (Gerhart, 1990). For example, March and Simon (1958) proposed that perceived ease of movement interacts with the perceived desirability of movement (e.g., job dissatisfaction) to influence turnover. Muchinsky and Morrow (1980) argued that when the "economic opportunity valve" is open, the relationship between individual factors and turnover is stronger than when the valve is closed. In support of these predictions, Gerhart (1990) found evidence in a sample of American adolescents that perceived ease of movement moderated the relationship between job satisfaction and voluntary turnover. Similarly, meta-analytic findings provided by Carsten and Spector (1987) suggested that the relationship between job satisfaction and turnover was stronger when unemployment is lower. Thus, perceptions of alternative job opportunities may play an important role in understanding the relationship between underwater stock options and job search.

Specifically, we propose that executives who perceive more employment opportunities will be more likely to respond to underwater options with search activity than executives who feel that alternatives are scarce.

Stock options may have a particularly strong interaction with alternative employment perceptions, because executive employment alternatives can vary significantly in both the number of options, and their upside potential. We hypothesize that after controlling for total pay, perceived firm performance, and industry type:

Hypothesis 5: Perceived alternative employment opportunities will moderate the relationship between the percentage of stock options that are underwater and job search, such that the percentage of underwater options will have a stronger (positive) relationship with job search for those who perceive more external opportunities.

Method

Procedure

A mail survey was sent to 11,968 U.S. executives contained in the database of a large executive search firm in October 2000. In addition, data on total pay, industry, and demographic information (e.g., age, gender) were obtained directly from the search firm's archival database to supplement the survey data and to evaluate response bias. We note that this search firm's clients are the companies searching for employees. The search firm does not accept resumes or applications from individuals searching for jobs but rather identifies potential candidates in response to client needs by examining publicly available information (e.g., proxy material, professional association lists). Thus, participants in this study are unlikely to differ from the general population of U.S. executives in terms of their job search activity.

The surveys were prepared and mailed by the search firm. Surveys were encoded so that those returned could be matched with information contained in the search firm's archival database. Participants were instructed to return the survey (business reply envelope included) directly to the researchers, under assurances of strict confidentiality. A total of 1,601 subjects responded to the survey resulting in a response rate of 13.38%, a rate comparable to other survey-based research of executives in U.S. firms (Cycota & Harrison, 2002; Hambrick, Geletkanycz, & Fredrickson, 1993). A large portion of the overall sample did not own employee stock options, either because they were employed in privately held companies (nearly half, 46%), or because their company did not grant them (17% of executives from public companies indicated that they did not own stock options). Because of the focus of this study, the primary analyses were conducted using only those executives holding stock options (i.e., $n = 610$). However, as shown below, we also ran analyses using the entire

respondent sample (i.e., including those with no options) to more completely investigate whether holding stock options affected job search activity.

Participants

Executives in the respondent sample were primarily married (89%) and male (89%), with an average age of 49 years. They had been in their jobs an average of 2.75 years and in their present organization 5.5 years. The average respondent had a yearly total salary (base plus bonus) of \$197,910, and was two levels below the CEO (ranging from 0 to 6 levels below: 12% 0 levels, 34% 1 level, 25% 2 levels, 15% 3 levels, 9% 4 levels, 4% 5 levels, 1% 6 levels). Respondents represented a variety of industries, suggesting that this sample is representative of the general population of U.S. executives. Specifically, respondents represented 92 different industries (30.5% from manufacturing, 6.8% from transportation, 2.7% from retail, 13.4% from finance, 24.2% from services, and 21.7% from other industry categories) and 1,205 different companies. Of the 610 respondents holding stock options, 93% were married, 91% were male, and had an average age of 48 years. They had been in their jobs an average of 2.41 years, in their present organization 6.38 years, had a yearly total cash compensation (base plus bonus) of \$214,358 and were two levels below the CEO (ranging from 0 to 6 levels below: 7% 0 levels, 32% 1 level, 30% 2 levels, 16% 3 levels, 10% 4 levels, 4% 5 levels, 1% 6 levels). This subgroup represented 45 different industries (33.8% from manufacturing, 5.4% from transportation, 1.5% from retail, 14.1% from finance, 25.7% from services, and 19.5% from other industry categories) and 526 different companies. Finally, this sample of executives had a high degree of experience with stock options (respondents had owned stock options for an average of 10.9 years) and the stock market (having an average of 18.4 years of stock market investing experience).

To explore possible nonresponse bias, we compared nonrespondents to respondents on an array of variables (e.g., salary, demographics, hierarchical level, industry, company size) contained in the search firm's database. Of these variables, only age revealed a statistically significant difference ($M_{\text{respondent}} = 49.15$, $M_{\text{nonrespondent}} = 50.00$; $F = 17.25$, $p < .01$) and the magnitude of the difference was small, suggesting little systematic difference between the two groups. We also compared the subsample of respondents holding options to the respondents without options. We found statistically significant differences on age ($M_{\text{with options}} = 48.37$, $M_{\text{no options}} = 49.56$; $F = 10.55$, $p < .01$), the percentage of female respondents ($M_{\text{with options}} = .09$, $M_{\text{no options}} = .13$; $F = 6.63$, $p < .05$), the percentage of nonmarried respondents ($M_{\text{with options}} = .07$, $M_{\text{no options}} = .11$; $F = 6.28$,

$p < .05$), and organizational tenure ($M_{\text{with options}} = 6.38$, $M_{\text{no options}} = 5.02$; $F = 17.37$, $p < .01$). We also compared those holding options to those without options on the variables of substantive interest in this study (e.g., job search, financial inadequacy), and found a difference on employment alternatives ($M_{\text{with options}} = 3.15$, $M_{\text{no options}} = 3.01$; $F = 11.51$, $p < .01$). However, the magnitudes of the differences were small, thus suggesting those individuals who received options did not differ markedly from those who did not receive options.

Measures

Dependent variable: Job search. We measured job search using Blau's (1993) active job search scale, which was designed to assess the degree to which respondents engaged in active job search behaviors in the past 6 months. Sample search activities include: "Had an interview with a prospective employer," "Listed yourself as an applicant in a newspaper, journal or professional association," and "Sent out a resume to potential employers." Respondents indicated their level of job search using a 6-item Likert-type scale (ranging from 1 = *never or 0 times* to 5 = *very frequently or at least 10 times*). The items were averaged to form a single job search score ($\alpha = .86$) with a higher number indicating a greater frequency of job search.

Independent Variables

Percentage of stock options underwater. Commonly used measures for valuing employee stock options (i.e., ESOs or nontradable stock options) are pricing models that were developed to price tradable stock options (i.e., "call" and "put" stock options) on the open market (Hull, 2002). Pricing models such as intrinsic value, the Black-Scholes model, and growth-discount models (Restaino, 2001) are limited in their applicability to underwater stock options because in purely financial terms, stock options cannot have negative value. That is, when the market price of the stock falls below the stock option's exercise price, this does not result in financial loss for option holders because stock options are simply the right to purchase shares in the company (Delves, 2001; Dunford, 2004; Hull, 2002).

Given the absence of measures of *underwater* stock options, we developed a survey-based measure designed to capture as objectively as possible the degree to which executives' portfolios were underwater. Stock option value is determined by a variety of factors, such as the spread between the exercise price and market price, vesting schedules, and tax issues (Brandes et al., 2003; Hull, 2002). The complexity of valuing stock options is widely

known (Business Week, 2002; Longnecker, 1999), and there are now several online tools available to option recipients to keep track of the value of their portfolios (e.g., www.mystockoptions.com). Still, estimating the ultimate value of stock options remains difficult. Executives are unlikely to know exactly how much their options are currently worth. Yet, it is likely that they are able to estimate with reasonable accuracy the proportion of underwater options in their portfolios, because this requires only comparing the exercise price of options with the current stock price. We therefore operationalized underwater stock options as the *percentage of currently underwater stock options in executives' portfolios*.

We assessed the percentage of underwater stock options by asking respondents "How many stock options do you currently own from your present employer?" and "How many of those options are currently underwater?" (i.e., meaning that at the date of the survey the exercise price exceeded the market price for a given option share). The percentage of underwater options was then calculated by dividing the total number of underwater options by the total number of options held. At the time of the survey, 18% of respondents reported that all of their options were underwater and 20% reported that all of their options were in-the-money. The mean percentage of underwater options was 28%. A higher number on this scale indicates a greater percentage of underwater stock options in an executive's overall portfolio.

In order to offer evidence of the validity of our underwater stock options measure, we investigated its relationships with several variables in our data set. First, the percentage of underwater options were significantly and negatively correlated with perceived firm performance ($r = -.32$, $p < .01$) and the share price of the firm at the time of the survey ($r = -.34$, $p < .01$). In addition, we found a significant positive correlation ($r = .23$, $p < .01$) between the percentage of underwater options and the difference in dollars between the firm's 52-week high price and current market price at the time of the survey (the greater that difference, the farther the stock price had fallen from its yearly high). Though small, these correlations were significant and in the expected direction, thus providing evidence that executives were able to estimate with reasonable accuracy the percentage of underwater options in their portfolio.

Total wealth. Consistent with prior research (e.g., Andrews & Whitney, 1976; Davis & Helmick, 1985; Porter & Garman, 1992), respondents were asked to report their total wealth in dollars, including their investments and assets. Given the possibility that individuals may incorporate the paper value of their stock option portfolios when estimating their total wealth, we explored potential collinearity between total wealth and the percentage of underwater stock options. Although the correlation between these variables was statistically significant ($r = -.08$, $p < .05$),

the small magnitude of the correlation suggests collinearity is not a significant problem. Given the level of financial knowledge and experience likely associated with this sample of executives, it is reasonable to believe that they would not include the paper value of their stock options when estimating their total wealth.

Perceived financial inadequacy. We used Furnham and Argyle's (1998) money inadequacy scale, which consists of five items designed to measure the extent to which respondents feel that their income is inadequate. Sample items include: "The amount of money I have saved is never quite enough," and "Most of my friends have more money than I do." Questions were answered on a 6-point Likert scale ranging from 1 = *strongly disagree* to 6 = *strongly agree*. Responses to these items were averaged to form a single financial inadequacy score ($\alpha = .70$). A higher number on this scale indicates that respondents felt a greater sense of financial inadequacy.

Money as a symbol of success. We used Tang's (1995) money success scale, which consists of eight items designed to measure the extent to which individuals perceive money as a symbol of success. Sample items include: "Money represents one's achievement," "Money makes people respect you in the community," "Money gives you autonomy and freedom," and "Money will help you express your competence and abilities." All items were answered on a 6-point Likert scale ranging from 1 = *strongly disagree* to 6 = *strongly agree* ($\alpha = .85$). Tang (1995) provided evidence of this scale's convergent validity as money success was positively related to job and pay satisfaction. A higher number on this scale indicates that respondents felt that money represents greater success. Given the conceptual similarity between financial inadequacy and money success perceptions, we ran a confirmatory factor analysis of the two scales. Results provided evidence that they were distinct constructs. A two-factor model fit the data well ($\chi^2 = 275.154$, $N = 610$), $p < .001$ [GFI = .94, CFI = .91, RMSEA = .08]. These results met rule of thumb suggestions that the RMSEA should be no greater than .10 and GFI and CFI should be greater than .90 (Medsker, Williams, & Holahan, 1994). A one-factor model was also tested ($\chi^2 [501.48$, $N = 610]$, $p < .001$ [GFI = .89, CFI = .82, RMSEA = .11]). A χ^2 difference test indicated that the two-factor model fit the data significantly better than the one-factor model ($\Delta\chi^2 = 325.33$, $p < .001$) as hypothesized.

Perceived employment alternatives. We measured perceived employment offers with three items designed to tap key dimensions identified in previous literature such as the probability of finding acceptable alternatives (Billings & Wemmerus, 1983; Mobley, 1977) and availability of alternative opportunities (Steers & Mowday, 1981). Specifically, respondents were asked, "How difficult do you think it would be for you to obtain

new employment?" (1 = *extremely difficult*, 5 = *extremely easy*), "Give your best estimate of your present alternative employment opportunities." (1 = *no opportunities*, 5 = *many opportunities*), and "How long would it take you to find a comparable position if you were to leave your current one?" (1 = *within one day*, 5 = *within 6 months*; reverse scored). The three items were averaged to create a single alternative employment score, with a higher number on this scale indicating a greater perceived availability of alternative job opportunities. We found that the scale had moderate reliability ($\alpha = .67$), which was comparable to the reliability of similar measures found in prior research (Martin, 1980).

Control Variables

Perceived firm performance. Firm performance is often measured using objective metrics such as Return on Total Assets, Return on Equity, or Tobin's q (Barney, 1997; Finkelstein & Hambrick, 1996). Unfortunately, objective measures of firm performance were not available to us. However, perceived firm performance has been used in a variety of studies as an alternative to objective firm performance measures (see Delaney & Huselid, 1996; Dollinger & Golden, 1992; Powell, 1992). Research demonstrates that measures of perceived firm performance are closely related to objective measures (Dess & Robinson, 1984; Venkatraman & Ramanujam, 1987). For example, Guthrie (2001) found a .81 correlation between managers' subjective ratings of productivity and objective measures of sales per employee.

We measured perceived firm performance with six items adapted from previously used measures (Chambers, Foulon, Handfield-Jones, Hankin, & Michaels, 1998; Delaney & Huselid, 1996; Powell, 1992). Sample items include "This company is a strong performer," and "This company is an industry leader." All items were answered on a 6-point Likert scale ranging from 1 = *strongly disagree* to 6 = *strongly agree*. The items were averaged to create the scale ($\alpha = .87$). A higher number on this scale indicates higher firm performance.

Total pay. We assessed executives' total pay using the search firm's archival database. The variable includes executives' total base and bonus pay at the end of the year preceding the administration of our survey (i.e., the calendar year ending 1999).

Industry type. We measured industry type using the firm's 4-digit SIC codes as recorded by the search firm's archival database. SIC codes were then dummy coded (in a binary fashion) for membership in six general industry categories: manufacturing, transportation, retail, finance, services, and "other." The "other" category was the omitted category in the regression analysis.

Results

Table 1 shows the means, standard deviations, and intercorrelations of the dependent and independent variables. Note that Table 1 shows the results for the subsample of respondents holding stock options. Consistent with prior research, the bivariate results showed that total pay, perceived alternatives, and perceived firm performance were significantly and negatively related to job search. In addition, the bivariate results showed a positive relationship between the percentage of underwater stock options and job search ($r = .21, p < .01$), thus providing initial support for Hypothesis 1.

To test our hypotheses, we conducted a hierarchical (OLS) regression analysis in four steps. In Step 1, we regressed the control variables on job search. In Step 2, we added the hypothesized main effects. In Step 3, we added the hypothesized interaction terms, and in Step 4 added exploratory interaction terms, which we will discuss along with some additional post hoc analyses below (see under the Post Hoc Exploratory Analyses section). The regression analysis was designed in hierarchical steps to examine if the addition of each variable set explained a significant amount of incremental variance in job search. Table 2 step 1 demonstrates that among the control variables, perceived firm performance was significantly negatively ($\beta = -.28, p < .001$) related to job search. Though the bivariate relationship between total pay and job search was significant and negative, when both total pay and perceived firm performance were included in the model simultaneously, the total pay variable did not reach significance. In the case of executives, this may not be surprising because their perceptions of firm performance may be more closely related to their pay than other types of employees.

The second step of the regression analysis added the main effect variables. Table 2 indicates that the addition of the main effect variables (Step 2) explained a significant amount of incremental variance in job search beyond the control variables ($\Delta R^2 = .03, p < .01$). As predicted, we found a significant positive relationship ($\beta = .13, p < .01$) between the percentage of underwater stock options and job search activity, over and above the effects of the controls. This finding is consistent with the correlation results in Table 1 and supports Hypothesis 1. More specifically, underwater stock options explained additional variance in job search beyond perceived firm performance, firm size, the percentage of total pay in stock options, total pay and industry type, and provided evidence that underwater stock options were a unique push factor.

In the third and fourth steps of the analysis, we entered the interaction terms following moderated regression techniques outlined by Stone and

TABLE 1
Descriptive Statistics, Inter-Item Correlations, and Coefficient Alphas

No.	Variable	<i>M</i>	<i>SD</i>	1	2	3	4	5	6	7	8	9	10
1	Job search	1.67	0.78	.86									
2	Underwater options (%)	.37	0.43	.21**	—								
3	Total wealth ^a	2293.07	5707.01	-.08*	-.08*	—							
4	Financial inadequacy	2.74	0.53	.01	-.02	.12**							
5	Money success	3.84	0.85	.05*	-.03	.03	.70						
6	Alternative employment	3.06	0.79	-.16**	-.04	.12**	-.04	.85					
7	Perceived firm performance	3.96	1.11	-.28**	-.32**	.05*	-.03	-.07**	.67				
8	Firm size ^b	14.59	18.20	-.02	.06	-.01	-.02	-.03	.02	.87			
9	Total pay ^a	214.36	221.49	-.08*	-.03	.33*	.09**	.09**	.14**	.05*	-.01	—	
10	Total pay in stock options (%)	.18	.20	.01	-.05	.16**	.13**	.02	.10**	.07*	.01	.18**	—

Notes. Where appropriate, coefficient alpha is listed in boldface on the diagonal.

^aIn thousands of dollars.

^bIn thousands of employees.

* $p < .05$ ** $p < .01$.

TABLE 2
Hierarchical Moderated Regression Analysis

Step	Variable	1	2	3	4
1. Controls	Perceived firm performance	-.28***	-.22***	-.22***	-.22***
	Firm size	-0.01	-0.01	-0.02	0.00
	Percentage of total pay in stock options	0.04	0.04	0.05	0.05
	Total pay	-0.07	-0.05	-0.05	-0.04
	Manufacturing	0.04	0.03	0.02	0.03
	Transportation	0.07	0.07	0.07	0.06
	Retail	0.04	0.04	0.03	0.03
	Finance	0.03	0.03	0.02	0.01
	Services	-0.01	0.02	0.02	0.02
2. Main effects	Options underwater (%)		0.13**	0.12**	.33**
	Financial inadequacy		-0.01	-0.08	-0.08
	Money success		0.06	0.06	0.06
	Employment alternatives		-0.10*	-0.22***	-.22**
3. Hypothesized interactions	Total wealth		-0.04	-0.07	-0.06
	Under X financial inadequacy (%)			0.12*	0.11
	Under X money success (%)			0.03	0.03
	Under X alternative employment (%)			0.16**	.17***
	Under X total wealth (%)			-0.08	-0.08
4. Exploratory interactions	Under X firm size (%)				-0.03
	Under X% of total pay in stock options (%)				-0.01
	Under X manufacturing (%)				-0.14
	Under X transportation (%)				-0.07
	Under X retail (%)				-0.02
	Under X finance (%)				-0.10
	Under X services (%)				-0.12
R^2 /Adjusted R^2		.09/.07	.12/.10	.14/.11	.15/.11
ΔR^2		.09***	.03**	.02*	.01

Notes. Reported betas are standardized. $N = 610$.
* $p < .05$ ** $p < .01$ *** $p < .001$.

Hollenbeck (1984). In this analysis, if the interaction terms accounted for a significant amount of incremental variance, then a moderated relationship exists. In the third step of the analysis, the hypothesized interaction terms accounted for a small but significant portion of variance in job search over and above that of the main effects in Step 1, ($\Delta R^2 = .02, p < .01$).

Hypothesis 2 predicted that total wealth would moderate the relationship between the percentage of options underwater and job search. The interaction between total wealth and the percentage of options underwater was nonsignificant (see Table 2, Step 3), thus failing to support

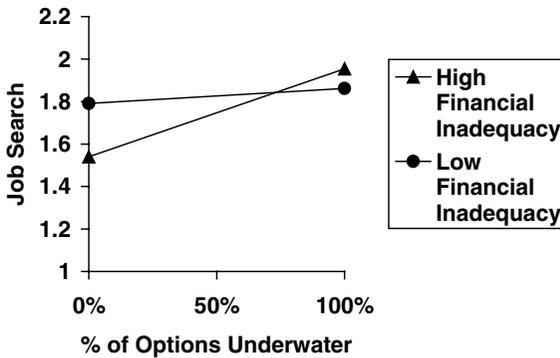


Figure 1: Financial Inadequacy Moderates the Relationship Between the Percentage of Underwater Stock Options and Job Search.

Hypothesis 2. Hypothesis 3 predicted that financial inadequacy would moderate the relationship between the percentage of options underwater and job search. Our results provide support for this hypothesis (see Table 2, Step 3), as the financial inadequacy \times percentage of options underwater interaction term accounted for significant incremental variance in job search beyond the main effects. Figure 1 depicts a graph of this moderated relationship. Specifically, our results show a stronger positive relationship between the percentage of options underwater and job search among those who perceived greater financial inadequacy than those who felt they were in better financial circumstances.

Hypothesis 4 predicted that positive money success perceptions would moderate the relationship between the percentage of options underwater and job search. We found no support for this hypothesis. The interaction term for money success \times percentage of options underwater was not a significant predictor of job search (see Table 2, step 3).

Finally, Hypothesis 5 predicted that perceived alternative employment opportunities would moderate the relationship between the percentage of options underwater and job search. As shown in Table 2, the interaction term perceived alternatives \times percentage of options underwater accounted for significant incremental variance in job search. In support of Hypothesis 5, there was a stronger positive relationship between the percentage of options underwater and job search among those who perceived greater alternative employment opportunities than among those who perceived fewer alternative opportunities. Figure 2 depicts a graph of this moderated relationship.

Post hoc exploratory analyses. To further investigate the relationship between stock options and executives' job search activity, we conducted three additional exploratory analyses. First, we ran a one-way ANOVA

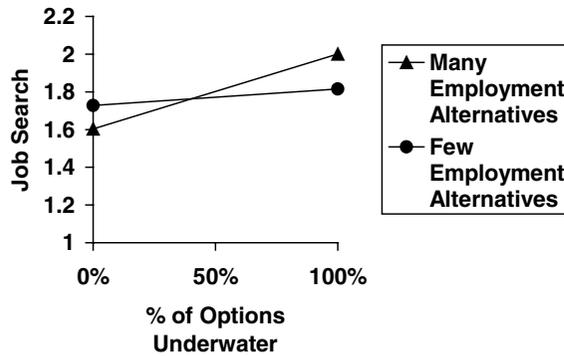


Figure 2: Perceived Alternative Employment Moderates the Relationship Between the Percentage of Underwater Stock Options and Job Search.

to compare job search levels of executives with all options underwater, those with all options in the money, and those with no stock options. Consistent with the regression results, these analyses showed significant mean differences in job search between the three groups ($F = 11.93$, $p < .001$). Specifically, we found that executives with all underwater options searched for a new job significantly more than those executives holding all in the money options (mean difference = 0.35, $p < .001$). In addition, executives with all options underwater searched significantly more than executives without stock options (mean difference = 0.21, $p < .01$). Finally, executives with all stock options in the money searched significantly less than executives possessing no stock options at all (mean difference = 0.14, $p < .05$). These findings thus provide further support for the role of underwater stock options in predicting an individual's job search activity.

In a second post hoc analysis, we examined possible nonlinearity in the relationship between the percentage of underwater stock options and job search. We added a squared term for the percentage of underwater options variable to the second step of a hierarchical regression containing the original nonsquared term plus the control variables. The squared term was positively related to job search ($\beta = .68$, $p < .05$) and explained a significant amount of incremental variance in search ($\Delta R^2 = .01$, $p < .05$) providing evidence that the positive relationship between the percentage of underwater options and job search was nonlinear. Figure 3 plots this relationship graphically. It appears that job search activity may increase most dramatically when stock option portfolios are more than 50% underwater. On the other hand, the graph suggests that the percentage of underwater options and job search may not be strongly related below 25% underwater. Additional research is needed to better understand the nature of this nonlinear relationship.

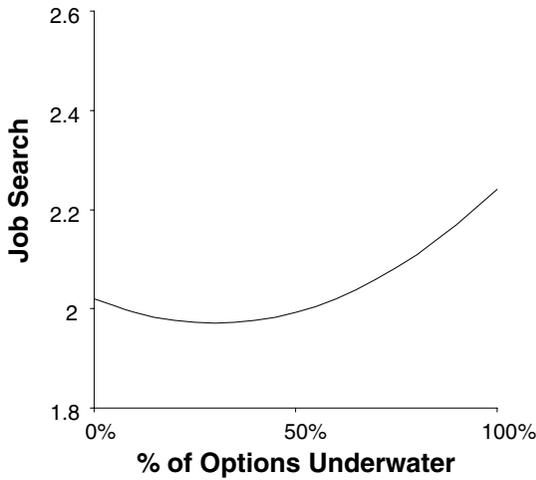


Figure 3: The Nonlinear Relationship Between the Percentage of Underwater Stock Options and Job Search.

Finally, we conducted an exploratory analysis of three additional potential moderator variables of the relationship between the percentage of underwater options and job search. First, a firm's compensation strategy (i.e., "pay mix") may be an important driver of how an executive reacts to underwater stock options such that underwater stock options may be more of a push factor for those with a more risky pay mix. Therefore, we explored the percentage of total compensation paid in options as a potential moderator of the relationship between the percentage of underwater options and job search. In addition, we explored two firm characteristics, firm size and industry type, as potential moderators of executive's reactions to underwater options. Executives in smaller firms and those in more dynamic industries may receive a greater proportion of their total pay in stock options due to firms' cash conservation needs. This may in turn impact how executives react to underwater stock options as they likely self-select into companies that rely more heavily on variable pay. However, as shown in Table 2 (see step 4), none of these interactions were statistically significant, and they did not account for significant incremental variance in job search.

Discussion

We examined the relationship between underwater stock options and executive job search activity using a sample of executives from different companies and industries in the United States. Although controlling for

variables that have been identified as significant predictors of job search in the past and also linked to stock options (total pay, perceived firm performance, and industry type), we found that executives with a higher percentage of underwater stock options in their portfolios engaged in job search with greater frequency. Subsequent (ANOVA) analyses corroborated these findings, showing significant differences in job search levels between executives with stock option portfolios entirely underwater, executives with portfolios entirely in the money, and executives possessing no stock options. In addition, we found support for individual difference variables related to one's perception of his/her financial situation as well as employment opportunities in moderating the role of underwater stock options in job search activity.

Underwater Stock Options and Job Search

The positive relationship found between the percentage of underwater options and job search lends empirical support to claims by managers, compensation experts, and boards of directors that underwater stock options pose a retention problem for organizations (Daily et al., 2002; Delves, 2001; Linney, 1999). Results from this study suggest that underwater stock options may represent a "push" factor for executives beyond variables that have been previously identified in the literature, such as industry type, perceived firm performance, and total pay. In addition, our ANOVA results show that the least amount of job search was demonstrated by executives with all in-the-money option portfolios (even compared to executives having no stock options). These findings suggest that in-the-money stock options may provide retention incentives for executives.

Given the lack of attention stock option issues have received in the separation literature, this study represents an important first step in addressing that gap. It is important to note, however, that much of the variance in job search in our study remains unexplained (e.g., Adjusted R^2 in our full model was .11). This is comparable to prior research on job search behavior (e.g., Barber, Wesson, Roberson, & Taylor, 1999; Cavanaugh, Boswell, Roehling, & Boudreau, 2000), reporting R^2 values between .07 and .12. This large amount of unexplained variance highlights the need to explore linkages between stock options and other withdrawal indicators not addressed in our study, such as absenteeism, job dissatisfaction, reduced organizational commitment, and turnover.

Total Wealth, Financial Inadequacy, and the Symbolic Meaning of Money

Consistent with previous research (Furnham & Argyle, 1998; Ravallion & Lokshin, 1999), we found evidence that objective measures of

wealth are not necessarily related to how wealthy people perceive themselves to be. Indeed, the correlation between executives' reported total wealth and perceived financial inadequacy was low and *positive* in magnitude ($r = .12$). Apparently, even the wealthiest executives can feel that their financial needs have not been met. In addition, we found no role for total wealth in moderating the relationship between underwater stock options and job search.

On the other hand, we did find evidence that executives' *perceptions* of financial inadequacy influenced their reactions to underwater stock options. Presumably, executives who feel greater financial inadequacy may have more to lose by underwater stock options and thus may seek to remedy this by searching for employment at other organizations. This finding adds to the growing literature on the psychology of money (Furnham & Argyle, 1998; Mitchell & Mickel, 1999; Tang, 1995) that has begun to identify money-related attitudes and behaviors and link them to important work outcomes (Tang & Gilbert, 1995). This finding also supports the importance of the more "subjective" assessment of one's financial situation in driving an individual's reactions to underwater stock options.

Perceived Alternative Employment

Results from our study also indicated that perceived alternative employment opportunities moderated the relationship between the percentage of underwater options and job search. This finding is consistent with human capital theory (Becker, 1975) and the turnover literature in both applied psychology (Gerhart, 1990; Steel & Griffeth, 1989) and labor economics (Ehrenberg & Smith, 1991), which hold that turnover antecedents have a stronger impact when the costs of leaving are lower. If executives feel they are in high demand in the labor market, underwater options may reinforce their belief that they are losing out on opportunities for significant wealth creation at other firms, or that staying represents too high an opportunity cost.

Practical Implications

Earlier we noted that the retention of executives and other key talent has become of utmost concern to organizations during the recent recession as the value of stock option portfolios has plunged (Delves, 2001; Tully, 2000) and executives are not viewed at fault (i.e., the source of the declining stock prices). Though fruitful future research opportunities exist in examining the impact of underwater stock options on actual turnover behavior, the results of this study are germane to the concerns

expressed by many firms and boards of directors regarding the loss of top executives with underwater stock options. In addition, we note that executive job search can be a negative outcome for organizations, even if it does not lead to turnover. Researchers have suggested that job search can be highly costly for organizations (March & Simon, 1958) in terms of employee detachment, lost productivity, and lost time spent (Locke, 1976). Although underwater options explained a modest amount of variance in search activity, this is over and above the effect of variables such as performance and total pay.

Our findings suggest that the prevalence of underwater options in an individual's portfolio may itself be a push factor, so organizational programs that minimize the extent of underwater options when the stock price depreciates are likely to minimize the push to seek alternative employment opportunities for option holders. As noted earlier, one strategy taken by some firms is the repricing of executives' underwater stock options (Daily et al., 2002). However, repricing has drawn intense criticism from shareholders and carries accounting penalties due to a 1998 ruling by the Financial Accounting Standards Board requiring firms to charge repriced stock options against their earnings (Murphy, 2003).

Given the drawbacks of repricing, compensation experts have suggested alternative ways of minimizing underwater stock options (Linney, 1999). First, firms could issue stock option grants more frequently throughout the year but with fewer options per grant. It would be important to continue to administer such grants with long-term vesting schedules (typically with 4- or 5-year vesting intervals) as a long-term retention incentive, and to encourage recipients to maintain a long-term focus. However, with smaller and more frequent grants, option portfolios would contain a more diversified set of exercise prices that would increase the likelihood that some options in the portfolio would be in the money if the stock price depreciates (Linney, 1999). In addition, the total number of shares would remain constant (pleasing shareholders), and the options would not be charged against earnings (barring any changes in expensing requirements by the Financial Accounting Standards Board).

Second, firms could minimize the push factor associated with underwater stock options by granting restricted stock. Recently, companies like Microsoft have begun to replace stock option grants with shares of restricted stock to attract and retain employees (Acohido, 2003; Strauss & Kessler, 2003). Restricted stocks are shares of stock given to executives and other employees that mature over a long period of time. There are several important differences between restricted shares and stock option grants that make them attractive to recipients in uncertain times. First, restricted stock shares have value even if the stock price depreciates

between the time they are granted and their vesting date (Kinsley, 2003). Second, unlike stock options, which are only the right to purchase shares, recipients own restricted shares outright once they mature (Block, 2003). Third, restricted stock shares have much less upside and downside potential than stock option grants and generally make up a much smaller portion of executives' total pay (Strauss & Kessler, 2003). In effect, they trade risk for a smaller, but more certain profit. These differences suggest that executives holding restricted stock shares may be less likely to leave a company when the stock price depreciates than executives holding stock options grants. Indeed, as noted recently by Microsoft's Steve Ballmer "awarding restricted stock instead of stock options will help [Microsoft] attract and retain the best employees and better align their interests with those of shareholders" (Hannon & Nichols, 2003). However, we also found that in-the-money stock options are a retention motivator, so by reducing the upside potential through restricted stock grants, it is also possible that firms may suffer an offsetting reduction in retention. This question is beyond the scope of this study but obviously important, and informed by the present findings.

A final noteworthy consideration involves the practice of making stock option grants contingent on performance. In an effort to strengthen the relationship between pay and performance, many companies are granting stock options only to executives who meet or exceed certain performance goals (Weeden et al., 1998). Our results suggest that there may be a hidden danger in this practice that is worth consideration. If firms issue option grants only to top performers, then they may be placing their best performers at more significant risk when their options go underwater, assuming that the stock price can decline for reasons beyond executives' control. Such firms may thus be in danger of creating a situation where depreciation in the stock price may encourage the firm's best performers to leave.

Limitations and Future Research

There are several limitations to this study that highlight potential directions for future research. First, monomethod bias is always a concern when variables are measured using a single survey at a single point in time (Campbell, 1982; Williams & Brown, 1994). Recent work by Podsakoff, MacKenzie, Lee, and Podsakoff (2003) demonstrates that method bias can distort observed correlations between measures due to an array of potential rater, item characteristic, and context effects. Although we were limited to a single medium at a single point in time, we took careful steps to minimize such effects by varying response formats, counterbalancing the order of predictor and criterion variables, and assuring participants of

the anonymity of their responses. In addition, many of the variables in this study were behavioral (e.g., job search behavior frequency) or quantitative (e.g., the percentage of underwater options) in nature and were thus relatively objective for participants to report, reducing the likelihood of inflated relations involving these variables (Saks & Ashforth, 1999). Finally, it is unlikely that inflated relationships due to method variance could account for the interactions found in this study.

A second limitation is that the cross-sectional nature of the design provides only a glimpse into the relationship between two dynamic variables at a certain point in time. Stock prices change daily, and therefore, the history of such fluctuations is likely to have an effect on job search over time. Cross-sectional data do not offer an insight into how long options have been underwater and what the causes of such fluctuations may be. It is likely that a steady decline or constant dramatic variability in the stock price could have a different effect on job search than steady growth punctuated by a sudden downturn. This suggests that our findings may be conservative in that noise in the percentage of underwater options variable may attenuate the findings.

In addition, the timing of our survey may limit the generalizability of our results. Though estimates of the exact beginning of the recession vary, many agree that it was well underway by the spring of 2000 (Green, 2001). It is thus likely that given the timing of our survey, our findings are most representative of the economy after the dotcom bubble burst and thus can provide insight to companies as they face the challenges of today's economy. It is also important to note that despite the survey timing, we found sufficient variance in the variables of interest (e.g., percentage of stock options underwater, perceived opportunities) to reveal significant and theoretically consistent results. Nevertheless, future research using longitudinal designs may shed further light on executives' reactions to underwater options by capturing potential period effects.

Another limitation of this study is its focus on only one of many interesting outcome variables. Although job search is part of the withdrawal process (Lee & Mitchell, 1994) and an important outcome in and of itself (as it reflects detachment from an organization), it does not always lead to turnover (Bretz et al., 1994). For example, recent research (Boswell, Boudreau, & Dunford, *in press*) has shown that individuals sometimes engage in job search to obtain bargaining leverage rather than to leave the organization. Thus, underwater options may motivate job search among executives who are seeking to improve their current employment situation (rather than leaving the organization), perhaps by increasing less risky forms of remuneration such as their pay level. Future research should consider the impact of underwater options on actual turnover and other withdrawal-related attitudes such as absenteeism, job satisfaction, and

organizational commitment. A related issue that merits future research concerns where executives go when they voluntarily leave an organization with underwater stock options. It would be interesting to track departing executives to see if they seek employment in less risky settings (e.g., in companies with a less volatile stock price or those in which stock options make up a smaller proportion of total compensation).

Of course, this discussion assumes that turnover of executives is deleterious to the firm. Yet, a growing body of literature has noted the possible benefits of turnover among poor performers (e.g., Olian, 2004; Sturman, Trevor, Boudreau, & Gerhart, 2003). Turnover among executives would be beneficial to a company if underwater stock options are due to poor managerial performance. For example, it is entirely possible that depreciation in a firm's stock price may be the result of poor judgment on the part of executives. In such cases, underwater stock may provide shareholders with a catalyst for making a change in the firm's leadership.

In addition, there are other possible consequences of underwater stock options to explore in future research. Organizations grant stock options for several reasons, including increased employee motivation, performance, perceived ownership, and ownership behavior (Brandes et al., 2003; Burwaza, 1998). Future research is needed to understand the impact of depreciated stock option portfolios on these other outcomes.

This study used the percentage of underwater stock options in executives' portfolios as a measure of underwater stock options. Although this measure provides important information about the breadth of underwater options in executives' portfolios, it does not provide information about *how far* executives' portfolios are underwater. We would expect the measure used in this study to be moderately related but distinct from a measure that assesses the "worth" of one's portfolio. Indeed, there are a variety of scenarios possible where the percentage of underwater options may be unrelated to how far the portfolio is underwater. For example, one could have all options underwater, but only slightly below the exercise price. Future research could build on this study by using archival data to understand more precisely how far executives' stock options portfolios are underwater. Future research may offer greater insight into understanding how executives react to underwater stock options by developing quantitative measures of "negative" stock option portfolio value.

Several interesting research questions emerge from evidence that the relationship between stock options and job search was nonlinear. Our results (see Figure 3) suggest that underwater stock options may not have been a push factor for executives unless a certain percentage of options in their total portfolio were underwater. Future research could explore points in the overall portfolio at which underwater options become a push factor. Another possibility is that executives' job search behavior and perceptions

of stock option value may be influenced by reference points. For example, executives may have a high percentage of underwater options at a given time but do not engage in job search because that percentage had been even higher in recent months. It would be interesting to explore what reference points may be used by executives in valuing their stock options. Future research on executives' reactions to underwater stock option may benefit from a multidisciplinary integration of theory and research from areas such as behavioral economics (e.g., Prospect Theory, Kahneman & Tversky, 1979).

This study focused on executives, yet stock options are increasingly being granted to employees throughout the organization, regardless of hierarchical level (Brandes et al., 2003). Note that though the average executive in the sample was two levels below the CEO, respondents ranged from 0 to 6 levels below the CEO. Although hierarchical level significantly correlated with stock options held ($r = .14$), the results reported above did not vary (i.e., were not moderated) by an individual's level within the organization. Nonetheless, examining whether these findings generalize to other employee groups is a fruitful direction for future research focused on more diverse samples.

Finally, firms have employed a variety of compensation practices to reduce compensation risk and limit turnover associated with underwater stock options (Daily et al., 2002; Hall, 2000; Linney, 1999). As noted above, Daily and her colleagues (2002) found that stock option repricing was not related to turnover in a sample of U.S. executives. In a post hoc analysis of our data, we similarly found no evidence to justify the use of repricing. In our survey, we asked respondents to indicate how many times their company had repriced their stock options during their tenure. When we included repricing frequency as a control in our regression analysis with the other variables used in this study, our results were quite consistent with those of Daily et al. (2002) as stock option repricing frequency was not significantly related to job search ($\beta = .04$, n.s.). Continued research is needed to explore the efficacy of repricing and other practices designed to retain executives with underwater stock options.

In conclusion, this study offers the first empirical investigation of the relationship between underwater stock options and executive job search behavior. Our findings indicate that the percentage of underwater stock options in executives' portfolios was positively related to job search and that this relationship was moderated by executives' perceptions of financial inadequacy and alternative employment opportunities. These data provide support for concerns reported in the popular press about underwater stock options posing a retention problem for top talent and suggest the need for future research to consider their impact on additional outcome variables such as work motivation, commitment, and performance.

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