

Managerial Attitudes and Corporate Actions

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ABSTRACT

In the neoclassical theory of the firm, actions are taken to maximize the present value of the firm's cash flows -- there is no role for managerial attitudes in forming corporate policies. In contrast, our paper provides striking evidence that links psychological traits such as managerial risk aversion, time preference, and optimism to corporate financial policies. In addition, we find that past career experience and education is correlated with corporate decision making. We also find evidence consistent with a matching between the behavioral traits of executives and the kinds of companies they join; that is, certain types of firms attracting executives with particular psychological profiles. Further, we find that executives receive compensation packages that appeal to their risk preferences and other personal traits. Finally, we offer evidence on how US CEOs differ from non-US CEOs, CFOs, and the general population.

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1. Introduction

Traditional economics assumes that optimal corporate choices are related to the status and characteristics of the company, such as its investment opportunities and cash flows. To the extent that managerial decision-makers are considered (e.g., in agency conflicts), they are modeled as homogenous, nameless, and faceless agents. Recent research, however, indicates that individual managers often influence corporate decisions.

Bertrand and Schoar (2003) identify managerial fixed effects in corporate decisions. Among other things, they find that certain executives are associated with companies that use debt or pay dividends aggressively, and that these policies appear to follow the executives as they move from one company to the next. Other research links these differing managerial styles to personality traits such as overconfidence or optimism. Theoretical work by Heaton (2002) and Hackbarth (2004) argues that optimistic [and/or overconfident] managers use more debt. Landier and Thesmar (2006) argue that optimists use more short term debt. Malmandier and Tate (2005, 2006) construct a proxy for CEO overconfidence, and document positive correlation between their proxies and aggressive capital structure as well as acquisition decisions. They also show that overconfident CEOs implement investment policies that are more sensitive to cash flow variations than are the policies of their less confident peers. Kaplan, Klebanov, and Sorensen (2007) assess CEO characteristics of companies involved in private equity transactions, and find that CEO characteristics are related to success.

We provide new insight on the people and processes behind corporate decisions using a survey-based method. This approach allows us to address issues that traditional empirical work based on large archival data sources cannot. For example, we are able to administer psychological personality tests, gauge risk aversion, and measure other behavioral phenomena. We assess questions in the manner done by experimental economists (by administering gambles) and psychologists (by administering psychometric tests). Our survey quantifies behavioral traits of senior executives and also harvests information related to career path, education and demographics. We ask these same questions of chief executives and chief financial officers, among public and private firms, and in both the US and overseas. We also ask questions related

to standard corporate finance issues such as leverage policy, debt maturity, and acquisition activity. This combination of questions allows us to compare and contrast behavioral traits of executives conditional on job title and home country, as well as determine the important factors from both the traditional and behavioral literature that are related to corporate decisions.

We use the responses to address the following broad questions. Which corporate decisions do CEOs feel they can most influence, relative to the influence of CFOs and other senior managers? Are managerial psychological traits, career experiences, or education correlated with corporate decision making? Does there appear to be a matching between the behavioral traits of executives and the kinds of companies they join? Are executives associated with the kind of compensation packages that align with their risk preferences and other personal traits? Finally, how do CEOs differ from others, in particular non-US CEOs as well as US and non-US CFOs, in terms of behavioral and demographic characteristics?

Our paper focuses on CEOs because they are the principal decision makers. Our evidence indicate that CEOs feel they have the most influence in two key areas: mergers and acquisitions and capital structure. We investigate which factors and experiences (e.g., personality traits or career path) of the decision maker (CEO) affect capital structure and acquisition decisions. We show that these corporate policies are significantly related to the personality traits of executives. For example, we find that companies initiate more mergers and acquisitions when their chief executive is not very risk averse. Beyond risk aversion, one might expect that the strength of a chief executive's optimism might be related to corporate decisions. For example, optimistic CEOs might expect that recent profitability will continue into the future, or that the future will be better than the recent past. Consistent with this view and the arguments of Landier and Thesmar (2006), we find evidence that optimistic CEOs use more short term debt than do firms led by less optimistic CEOs.

In addition, we explore whether CEOs are employed in certain kinds of firms, to match their personalities and preferences. We find that CEOs who display personal risk-loving traits are also much more likely to display risk-loving traits in taking business risks. Further, firms with high historical or future growth rates are more likely to be run by risk-loving CEOs. These chief

executives are likely to be younger, and are taller than average. To the extent that height corresponds to confidence (and there is some literature that suggests this is the case, see e.g., Persicao, Postlewaite, Silverman, 2004), these results are consistent with more confident, risk loving, younger CEOs being more likely to run growth companies. We do not attempt to determine the direction of causality. Managers may self-select into companies (or companies may hire managers) who have the “right” personality traits for the particular company. Thus, whether CEOs pick the kind of companies that they are comfortable running or companies pick CEOs with the characteristics that fit the company profile, what we document is that there appears to be a match between CEO characteristics and types of companies. Traditional corporate theory would suggest that managerial characteristics should be irrelevant to corporate actions. To the extent that we find matching of personal and firm characteristics, this suggests a role for personal traits in corporate actions.

We additionally document evidence of matching between personality traits and compensation packages. We examine the CEOs’ target compensation in terms of the salary component, and separately the part that is performance dependent, i.e., bonus and stock and options. We find that risk averse CEOs are significantly more likely to be compensated by salary and less likely to be compensated by performance related packages. We further find that CEOs who are impatient (i.e., have a high rate of time preference) are more likely to be paid in salary. In contrast, male CEOs, those who attended prestigious colleges, and executives with past experience in finance or accounting, are less likely to be compensated via salary. These results are intuitive and suggest that CEOs are associated with the type of compensation package that is consistent with their personal preferences via matching to the right company, or they influence the mode of compensation once employed.

We are also able to compare CEOs to CFOs and others in terms of personality traits and career characteristics. We find, as might be expected, that CEOs and CFOs differ in demographics and career paths. Interestingly, we also find significant differences between CEOs and CFOs in terms of attitudes. In particular, our psychometric tests for optimism suggest that CEOs are much more optimistic than CFOs. We also find that US-based CEOs and CFOs are more optimistic than are their non-US counterparts.

While the survey approach allows us to ask many unique questions, it is not without potential problems. Surveys measure beliefs, not necessarily actions. Perhaps some of the survey questions are misunderstood or otherwise produce noisy measures of the desired trait or characteristic. Moreover, at least for some questions, executives can potentially parrot explanations that they think researchers want to hear, rather than state their true beliefs. In addition, field studies may face the objection that market participants do not necessarily have to understand the reason they do what they do in order to make (close to) optimal decisions. It is also possible that the respondents are not representative of the underlying population, an issue that we investigate below. Given that we conduct our survey at one point in time, it is not possible to determine causation for the most part. For example, we cannot say for sure whether risk-averse CEOs use short-term debt or whether firms that have a policy of using short-term debt attract risk-averse employees. Likewise, in most cases, it is not possible for us to identify whether the personality trait causes the corporate policy from whether an executive “learns” a trait on the job, nor can we separate a managerial fixed effect from a company fixed effect. In the latter case, a company might optimally seek out an executive with certain traits due to the needs of the business. Indeed, our matching results are consistent with such a story.

Even with these considerations, we believe that our study provides unique information about how executives’ characteristics and psychological traits are related to corporate decisions. We hope that researchers will use our results to develop new theories or potentially modify or abandon existing views.

The rest of the paper is organized as follows. Section 2 describes the survey instrument we use, and explains the design of the questions and delivery mechanism. Section 3 presents our analysis of who makes which decision within the firm, how managerial traits correspond to corporate actions, whether there is matching between companies and managers, and the differences between CEOs and others. Section 4 offers some conclusions.

2. Method

2.1 Survey mechanism

Measuring executive attitudes is inherently difficult. A common approach used in prior work is to infer executive attitudes from observed executive actions. While this is a laudable technique, it can raise issues on the validity of the action as a broad-based proxy, and limits samples to companies where such managerial actions are observable. We adopt a different approach in which we gauge managers' attitudes using well-established questions that have been shown in economics and psychology to be valid measures of people's attitudes.

To assess risk aversion, we examine managers' responses to a series of gambles in the spirit of Barsky, et al., (1997), who administer such questions in the Health and Retirement Survey. To assess optimism, we borrow from well established psychology literature using standard psychometric tests (Scheier and Carver's Life Orientation Test Revised or LOT-R test) that have been widely used in research. To measure time preferences, we assess time predilection for gains and losses. To gauge sure loss aversion, we present managers with a gamble that, if taken, indicates that they are averse to sure losses.

As far as we are aware no other economics study attempts to measure attitudes of senior management directly through such personality tests and relate them to firm level policies. In addition, we supplement with other measures thought to be important in capturing attitudes e.g., height as a measure of confidence, age, tenure, career track, education, prestige of the executive's undergraduate college, and other variables described below.

2.2 Survey Design

Our survey is wide ranging, our hope being to capture many facets of decision making. Below we focus on the key variables that we use in this study and how they are created.

2.2.1 Measuring attitudes

Personal risk aversion: We follow the approach in Barsky, et al., 1997 to measure personal risk aversion. In their paper, Barsky, et al., use survey methods to measure risk aversion in the Health

and Retirement Survey, which involves over 11,000 responses from adults aged 51 to 61. The principal requirement for a question aimed at measuring risk aversion is that it must involve gambles over lifetime income. The nature of the questions in Barsky, et al., is as follows:

Suppose that you are the only income earner in your family, and you have a good job guaranteed to give you your current (family) income every year for life. You are given the opportunity to take a new and equally good job, with a 50-50 chance, it will double your (family income) and a 50-50 chance that it will cut your (family) income by a third. Would you take the new job?

Barsky, et al., 1997, caution that because changing jobs is costly, there may be a status quo bias that would predispose an individual to reject the risky alternative. This is also discussed in Shefrin, 2005. Accordingly, we modify the Barsky, et al., approach, rewording the question as a choice between two alternative new jobs, one with a safe income stream, the other being risky. The series of questions that we use are:

Suppose you are the only income earner in your family. Your doctor recommends you move because of allergies. You have to choose between two possible jobs (choose one):

- (a) 100% chance that the job pays your current income for life
- (b) 50% chance that the job pays twice your current incomes for life and 50% chance that the job pays $2/3$ of your current income for life.

If the respondent picked (a), the survey continues to ask:

Which job would you choose if the choices were instead:

- (c) 100% chance that the job pays your current income for life.
- (d) 50% chance that the job pays twice your current incomes for life and 50% chance that the job pays $4/5$ of your current income for life.

If the respondent picked (b), the survey continues to ask:

Which job would you choose if the choices were instead:

- (e) 100% chance that the job pays your current income for life.
- (f) 50% chance that the job pays twice your current incomes for life and 50% chance that the job pays $1/2$ of your current income for life.

In our analysis, we classify people who answer (a) and (c) as being the most risk-averse. Just under 10% of the US CEO in our sample are very risk averse under this categorization. As a benchmark, the analogous group represents 64.5% of the respondents in Barsky, et al., (1997). Therefore, to the extent that the two samples and questions are comparable, CEOs are less risk averse than the typical person in the Barsky, et al., sample.

Business risk aversion

We also assess the respondent's risk aversion relating to the company's business. Our questions are intentionally similar to the personal risk aversion question but now the wording relates to the company. Our questions are as follows:

Hypothetically, suppose you run one company. You have to undertake new investments for the company. You have a choice between the following two investment projects, both of which are in the same line of business: (suppose \$X is your company's current cash flow).

- (a) 100% chance that cash flow is \$X for the foreseeable future.
- (b) 50% chance that cash flow is \$2X for the foreseeable future and 50% chance that cash flow is $$(2/3)X$ for the foreseeable future.

Depending on whether the respondent answers (a) or (b), similar to the personal risk aversion questions above, the respondent is taken down one of two branches with options of $$(4/5)X$ or $$(1/2)X$, respectively.

Optimism

We measure optimism using psychometric tests specifically designed to gauge optimism. In particular we use the Life Orientation Test - Revised (LOT-R), as devised by Scheier & Carver (1994). The LOT-R has been used extensively in the psychology literature;¹ it has the advantages that it is a very credible measure in psychology, it is brief and easy to use, and has a well established interpretation. Its brevity makes it ideal for use in a survey such as ours where survey length is an important consideration.

In this test, respondents are asked to answer a number of questions on a 5-point scale ranging from "I agree a lot," "I agree a little," "I neither agree nor disagree," "I disagree a little," and "I disagree a lot." There are 6 pertinent questions with 4 filler questions. The 6 scored questions follow:

1. In uncertain times, I usually expect the best.
2. If something can go wrong for me, it will.
3. I'm always optimistic about my future.
4. I hardly ever expect things to go my way.
5. I rarely count on good things happening to me.
6. Overall, I expect more good things to happen to me than bad.

¹ References to articles that use LOT-R can be found at <http://www.psy.miami.edu/faculty/ccarver/sciLOT-R.html> and Puri and Robinson (2007).

Coding is done so that high values indicate optimism. Thus questions 1, 3, 6 are numerically coded with a 5 if the respondent answers “I agree a lot” and 1 if they answer “I disagree a lot.” Questions, 2, 4, and 5 are coded as 5 if the respondent answers “I disagree a lot,” and 1 if the respondent answers “I agree a lot.” We classify as optimistic respondents who average 4.0 or higher for the six questions.

Time preference

We ask the following question to measure time preference for gains (see e.g., Loewenstein, Read and Baumeister, 2003):

Would you rather win \$10,000 US now or win \$13,000 a year from now?

If the respondent answers that s/he would rather win \$10,000 today, s/he is categorized as being impatient because s/he has an implicit discount rate of more than 30%.

Aversion to Sure Losses

If an executive is averse to sure losses then this may lead her/him to undertake actions such as “throwing good money after bad” in hopes of turning around what appears to be a sure loss. We pose the following question to measure aversion to sure losses:

Last year your company invested \$5 million US in a project that was expected to generate cash flows of \$10 million US after one year. A year has passed and the project yielded nothing.

Now you have the opportunity to invest an additional sum in this same project. There is a 20% chance that the project will generate a \$10 million US cash flow in a year’s time and nothing thereafter. There is an 80% chance that the new investment will generate nothing at all. How much would you be willing to invest today?

\$ _____ million dollars US.

If the respondent replies \$2 million or more we classify her/him as averse to sure losses because this action indicates a willingness to overpay to continue the project in order to avoid the “sure loss” of terminating the project today.

2.2.2. Demographics/career related variables

We gather information on the personal characteristics of the executives, their past career/education, and related demographics. Below we explain how we measure and interpret these variables and the rationale for incorporating them in the survey.

Height: Economists have documented a height-wage disparity that is almost the same magnitude as the gender wage disparity (see e.g., Persicao, Postlewaite, Silverman, 2004). One explanation given for this disparity is that height, especially in the adolescent years, is important in developing confidence, which ultimately translates into the wage disparity. (For example, the (tall) star athlete has confidence built up during his youth, as coaches and other adults laud his accomplishments; this confidence carries over into other aspects of the athlete's life.) This literature would suggest that height can be considered a proxy for confidence. Accordingly, height might capture something that our behavioral questions do not. We define a male to be tall if he is 5 ft 10 inches or above, and a woman is tall if she is 5 ft 4 inches and above, both of which are one inch greater than the average adult height among U.S. residents.

Male: The male-female wage disparity is well documented. There is also a growing literature that suggests that males tend to be more overconfident than females (see e.g., Barber and Odean, 2001).

MBA: An MBA degree can signal many things. It can represent valuable knowledge gleaned from a good business education. On the other hand, it might indicate conservatism as those who really want to shoot for the stars early on might decide that a MBA is not necessary.²

Age: An executive's age can potentially affect decisions in important ways. Younger CEOs may be bolder. On the other hand, age can give experience and perspective, allowing executives to take more risks. Some evidence suggests that personal risk aversion appears to increase with age till age 70 and then decline (see Shefrin, 2005). There is also some evidence that the sophistication of financial decisions varies with age (see Agarwal, et. al., 2007).

² Chevalier and Ellison (1999) find that fund managers with MBAs tend to take on more systematic risk.

Tenure: How long a CEO stays in the job could affect the kind of corporate actions s/he is willing to take. While career concerns for CEOs, and how they affect decisions over their tenure, has not been well documented, it is reasonable to assume that tenure-related career concerns exist. Accordingly, we also ask how long executives have been in their current jobs.

Past experience: The executive's career path (whether they come from finance, accounting, legal, sales/marketing, or other routes) could affect outlook and comfort level in certain kinds of decisions. Accordingly, we ask the respondent whether his/her work experience prior to becoming an executive was primarily in operations, legal, sales/marketing, accounting, finance/treasury, research, or other.

Prestigious College: Graduating from a college with high SAT scores can be a sign of innate intelligence of the executive. It is also possible that graduating from a prestigious college endows certain expectations on the kind of work that one does and the kind of company that one joins. Accordingly, we use SAT scores of the colleges that the executives attend to gauge how prestigious the school is. The methodology we employ is similar to Chevalier and Ellison (1999).³

2.2.3 Company characteristics

We collect information on a number of company characteristics. The purpose is to determine whether we can identify a correspondence between personal or demographic information and

³ Ideally, we want the SAT score of the school at the time that the CEO was there; our computed SAT scores are an approximation for this. We follow Chevalier and Ellison (1999) methodology, which briefly, is as follows. We use Lovejoy's College Guide as our main source for SAT scores. Where there is a range of SAT scores we take the midpoint of the middle 50% of freshmen scores as reported in Lovejoy's College Guide. If the middle 50% is not available we take the average SAT scores or ACT scores at the university. For 64% of our sample the scores are calculated directly. For the rest, we approximate: if only mean SAT scores are available then we use the sum of the mean math and verbal scores. Some schools report ACT mid 50% range only. For these we construct predicted values from a regression of SAT math high on ACT math low, ACT math high, ACT math low squared and ACT math high squared. If only the average ACT math and english scores are reported then we rerun similar regressions using the midpoint of the SAT-50 percent ranges as the dependent variable and the midpoint of the ACT-50 percent ranges and the midpoint squared as independent variables. If only composite ACT scores are reported, then we use them as if they represent only english and math scores and rerun the above regressions. If only selectivity scores are reported then we assign to these schools the mean SAT score of the schools with the same selectivity index.

corporate actions. Additionally we search for evidence consistent with a matching of executives and companies. Accordingly we gather the following information.

Size: The size of the firm can be important for a variety of reasons. Large size can imply a certain amount of stability and has implications for growth. Research suggests that large firms typically have more debt (Frank and Goyal, 2003). Hence, at the very least, we want to control for size in our tests. In our tests we take large firms to be those with sales revenues exceeding \$1B.

Public or Private: We ask respondents to indicate whether their firm is public or private. This is an important characteristic of the company in its own right, and can be related to some corporate decisions, e.g., acquisition activity.

Debt Ratio: The amount of debt that a company uses is the subject of much discussion in the finance and behavioral economics literatures. Using more debt “levers up” the firm, producing more risk and higher expected returns, a preference for which might be related to executive personality traits. Hence we ask respondents to indicate the total debt/total assets ratio for their companies.

Short Term Debt Ratio: Some theories suggest that behavioral characteristics matter more for short term debt as opposed to the total debt undertaken by the firm (see e.g., Landier and Thesmar, 2006). Accordingly, we also ask for the short term debt/total debt ratio for the firm.

Number of acquisitions: Dating back to Roll’s (1986) Hubris hypothesis on takeovers, many argue that acquisitions are often driven by managerial characteristics and their agendas as opposed to being purely value-maximizing transactions. The large literature on bidder returns, which are small or even negative on average, is consistent with such a story (see e.g., Andrade, Mitchell, and Stafford, 2001). Accordingly, one of our objectives is to investigate whether managerial characteristics are related to acquisition activity.

Historic Growth: We are interested in investigating the types of companies that different sorts of managers work for. If there is some matching of managerial traits to company characteristics, rapidly growing companies would be a logical place to see such matching. Hence we ask the executives to report that average annual sales revenue growth rate for their company over the last three years.

Expected Growth: Presumably, it is not just historical growth that is important but future anticipated growth as well. Hence we also ask managers to project the annual growth rate in sales for their companies over the next three years.

Compensation: Executives arguably have some discretion about the composition of their compensation packages. All else equal, managers with certain characteristics (e.g., high risk aversion) should choose compensation packages with a larger salary component and a lower variable component. In any given year, these components might vary. Hence we ask managers about the target percentage of their total compensation that is in the form of salary, bonus, stock and option compensation, and other.

2.3 Survey Delivery

We created an initial survey instrument based on existing theoretical and empirical research. We then solicited feedback from a number of academics, practitioners, and CEOs on the initial version of the survey. Based on this feedback, we shortened and focused. We also sought and incorporated the advice of marketing research experts on the survey's design and execution. A PDF of the faxed English language version of the final survey instrument can be found at <http://faculty.fuqua.duke.edu/~jgraham/CEOCFO.pdf> For most of the participants, rather than a fax, the version of the survey they were administered consisted of a series of linked HTML pages.

We survey both CEOs and CFOs. We contacted three groups of CEOs. The largest group was approximately 10,000 executives who subscribe to *Chief Executive* magazine. *Chief Executive* has more than 70,000 subscribers, and we emailed an invitation to participate in the survey to the CEO subscribers who work at the largest 10,000 companies (among their 70,000 subscribers). There was a bounceback rate of about 2.3 percent on the emails, meaning that approximately 9,770 executives received the invitation. We also reached out to readers of *Chief Executive* with an advertisement in the magazine that invited them to go to a weblink to participate in the experiment. This printed advertisement attracted fewer than two dozen participants, and if we were to delete these CEOs from the sample our results do not change. Due to their small number, we do not separate out these CEOs for the remainder of the paper but instead merge them in with the other *Chief Executive* respondents.

The second group of CEOs we contacted are 800 (net of bounced emails) chief executive readers of *CFO* magazine. We emailed the same survey invitation to these executives. The third group of CEOs attended the World Economic Summit in Davos during January 2005. We faxed surveys to 142 Davos' executives and received seven responses. If we were to delete these responses, it would not alter our results. Due to their small number, we do not separate out these CEOs for the remainder of the paper.

In total, we surveyed approximately 10,700 CEOs, once improper email addresses are eliminated. All of these invitations were issued on approximately February 1, 2006. We sent a reminder to all those emailed on February 14th. Across all these groups, 1,180 CEOs responded, for a response rate of approximately 11%. In the analysis below, we focus primarily on the 1,017 CEOs who work for firms headquartered in the United States.

During the first two weeks of February 2006, we also invited four groups of US CFOs to participate.⁴ The largest group of surveyed CFOs consists of subscribers to *CFO* magazine. On our behalf, the magazine emailed 6,800 invitations (net of bounced emails) to subscribers of the

⁴ Most of those surveyed have the job title CFO. Some have the title of Treasurer, Assistant Treasurer, VP Finance, Comptroller, or a similar title. We refer to this group collectively as CFOs.

US version of its primary publication, *CFO* magazine. Separately, Duke University emailed 2,000 (net of bounced emails) CFOs who had participated in previous quarterly CFO Global Business Outlook surveys conducted by researchers at Duke and *CFO* (see <http://www.cfosurvey.org>). The response rate for the quarterly survey is typically 5 to 6 percent. The third group was 253 CFOs who participate in the Forum on Corporate Finance. Finally, 107 financial officers who are alumni of Duke University were faxed a survey instrument (the results do not change if the faxed responses are ignored). All total, approximately 9,000 US-based CFOs were surveyed. We received 549 responses, for a response rate of approximately 6%.

We also surveyed Asian and European chief financial officers. In particular, we invited subscribers to *CFO* Europe and *CFO* Asia magazines to participate. In the demographic questions, we verify that these respondents in fact work in firms that are headquartered in these geographic regions. *CFO* Europe sent approximately 5,600 email invitations and *CFO* Asia 4,500, both figures net of emails that bounced. Nearly 400 European CFOs responded, as did 264 Asian CFOs, yielding response rates of approximately 7% and 6%, respectively. The Asian group was not sent an email reminder because the reminder date fell near the Chinese New Year. The European response rate may be a little higher because we gave the executives the opportunity to take the survey in any of four languages: English, French, German, or Dutch. The Asian survey was only available in English. In this paper, the non-US executives and CFOs are primarily included as a comparison group for executive personality traits and characteristics.

2.4 Summary statistics and data issues

Table 1 contains self-reported summary information about the characteristics of sample firms. In our sample 11% of the firms are public, with mean sales revenue of \$561 million. The median firm has 2 operating segments and has demonstrated median sales growth of 12% historically. The median debt-to-assets ratio is 20%, and the short-term debt to total debt ratio is 15%. The mean (median) number of acquisitions over the past three years is 1.1 (0). Performance sensitive compensation (stock, options, bonus) accounts for about 29% of the total compensation of the average executive in our sample, while salary accounts for about 57%.

We gather a number of demographic characteristics of the CEOs relating to personality traits as well as career and education. Some summary statistics about CEOs are given in Table II, panel A. (We discuss the differences between CEOs, CFOs, and others in more detail later in the paper.) In our sample, 9.9% of US CEOs are very risk averse. Thus most CEOs seem willing to take on risk, which is perhaps a necessary ingredient of the job that CEOs undertake. Or, perhaps risk-takers that succeed are the “winners” who ultimately rise to the CEO position.

More than one-third of CEOs have a MBA degree. They are predominantly male (92.3%). The median male height is 71 inches while the median female height is 66 inches. 80.2% of the sample is optimistic as gauged by the LOT-R test. 8.4% demonstrate aversion to sure losses. One-third are impatient in terms of having a discount rate of greater than 30%. In terms of career path, 16% of the sample comes from a finance/accounting background. The mean CEO is 54 years old, they have an average tenure of 10.4 years, and they attended universities with a mean SAT score of 1160.

Table II, Panel B reports the correlations between both firm and executive characteristics for the US CEOs. Some of the correlations are interesting, and some are intuitive. For example, older CEOs and those with longer tenure are more risk averse. CEOs with MBAs are younger, tend to have a career path in finance or accounting, are less likely to display aversion to sure losses, and tend to have shorter tenures. As might be expected, older CEOs have longer tenure, the prestige of the college they graduate from matters less, they tend to be in larger firms, and they are more likely to be male.

Following the recommendation by List (2007), we benchmark to Compustat. We examine sales, debt-to-assets, and other variables as shown in the Appendix. Briefly, our sales comparison indicates that our sample firms are smaller than the typical Compustat firm, with two-fifths of our sample falling in the smallest Compustat quintile. The survey response sample is, however, fairly representative of the Compustat universe in terms of debt/assets, debt maturity, and historical growth.

3. Who makes corporate decisions?

We now analyze the job title of the key corporate decision makers, to determine who makes various corporate decisions. For this purpose we use the following question: “Amongst the management team, who has the most input in the following policies?” We study policies related to capital structure, payout, capital investment, allocating capital across divisions, and mergers and acquisitions. Managers are asked to respond on a scale of 1-7, where 1 is “I make decision without help from others,” and 7 stands for “Others make the decision.” Thus, a 7 indicates that the survey respondent (i.e., the CEO or the CFO) does not participate in a certain corporate decision, while a 1 indicates that the executive makes the decision more or less on his/her own.

We first examine how often CEOs consider themselves to be the sole decision maker (i.e., a response of 1) for a given corporate policy, relative to the views reported by CFOs of their role in the decision process. For these questions we first analyze the responses of the roughly 950 CEOs and 525 CFOs who work at U.S. based firms. Table III, panel A presents the comparison. Across the board, CEOs are much more likely to think that they are the sole decision makers, relative to CFOs’ views of their own involvement in the decision process. CEOs tell us that they are most influential (i.e., most likely to make decisions without input from others) in mergers and acquisition decisions (15.4% assign a rank of 1 to their input, thereby claiming to make the decision in isolation), as well as capital structure decisions (15.1%). In decreasing order of CEO influence, 13.7% of chief executives claim to dominate payout, capital allocation (13.4%), and investment (10.7%) decisions. Three percent of CFOs indicate that they have sole influence in capital structure, the highest among the corporate decisions that we examine. This number is a significantly lower proportion than for CEOs.

As a corollary, we examine how often CEOs think they make a given corporate decision with very little or no input from others (i.e., a response of 1 or 2), and again compare to the decision-making authority of CFOs. These results are shown in panel B of Table III, and are quite similar to that in panel A discussed above, but the magnitudes are much larger. For example, 46.7% of CEOs rate their dominance of the merger and acquisition decision as a 1 or 2, compared to about 10% for CFOs.

In column (2) of both Panel A and B of Table III, we match CEO firms to CFO firms based on whether the company is public or private, and in column (3) we match on size. In general, we continue to see significant differences in how CEOs and CFOs perceive themselves in terms of dominating the decision process in US corporations.

If managerial characteristics affect corporate actions, it seems reasonable to expect that this effect would be most important in decisions dominated by a single individual. Hence, we focus on the CEO in our subsequent analysis. In the next section, we focus on the key decision maker (the CEO) and the two decisions that CEOs most frequently dominates (M & A and capital structure).

4. CEO characteristics and corporate policies

We now analyze the traits of managers and whether they relate to corporate actions. We then analyze whether the data are consistent with the matching of manager's traits and the kind of companies that they work for, as well as the compensation packages that they receive.

4.1 Are CEO traits related to corporate decisions?

We first investigate whether CEO characteristics are associated with capital structure choices. Table IV, Panel A examines univariate correlations between capital structure and CEO traits as well as company characteristics. In terms of what is related to the debt ratio (total debt/total assets) in the univariate comparisons, the only significant characteristics are the past career path of the CEO and whether the CEO is male. If the CEOs' past experience is primarily in the finance/accounting arena, then the firm uses significantly more total debt. In particular, of the CEOs who have prior experience in finance/accounting, 52% are in companies that have a high debt ratio (i.e., above the sample mean). Of the CEOs with nonfinancial background, only 37% are in companies with a high debt ratio.

We next examine debt ratios in a multivariate setting (see Table IV, Panel B). In the regressions we include executive characteristics as well as firm characteristics as explanatory variables.

Column (1) shows that, after controlling for other factors, in terms of executive characteristics CEOs with finance/accounting background are significantly more likely to take on more debt. One interpretation of this result is that CEOs who are more conversant with finance or technical oriented training are more likely to see the value in using debt and are more comfortable with this outcome.

Next, we examine short term debt. As can be seen in the univariate analysis in Table IV, panel A, males, optimists, and executives from private companies, are more likely to use a higher proportion of short term debt. We think these are interesting results. Theories such as that in Augustin and Landier (2006) suggest that optimists are more likely to take on short term debt. Our results are consistent with these theories. Similarly, if male gender corresponds to being overconfident (Barber and Odean, 2001), the relation we find between short term debt and gender is consistent with overconfidence leading to more short-term debt usage.

We examine the relation between short term debt and executive and firm characteristics in a multivariate framework. As can be seen in column (2), panel B of Table IV, the two variables that are significant in this regression are optimism, and if the CEO is male. In particular, optimism is highly significant at 1%. The results confirm that highly optimistic, male CEOs are more likely to have more short term debt in their companies.

CEO traits have often been thought to be important in merger and acquisition activity. Recall, also, that CEOs claim to be the dominant decision-maker in M&A decisions. Accordingly, we next examine whether the number of acquisitions made by a company is related to managerial characteristics. Table IV, panel A examines whether the company makes any acquisitions and separately, whether it makes multiple acquisitions.

The univariate M&A results suggest that larger, public firms, and CEOs who are less risk-averse, are more likely to make acquisitions. When we examine companies that make multiple acquisitions, we again find that large firms and public firms are more likely to make such acquisitions, which is intuitive. However, we also find that when the CEO displays aversion to sure losses, then s/he is more likely to make multiple acquisitions. As discussed below, this could

indicate that such acquisitions are more likely to be diversifying acquisitions, occur in sunk money situations, or are one way to camouflage previous bad acquisitions.

Table IV, panel B, column (3) presents the results of a probit analysis in which the dependent variable equals 1 if the company makes any acquisitions and 0 otherwise. Consistent with the univariate results, a company is more likely to make acquisitions if it is a public company, and if it is large. CEOs' personal risk aversion is very significant. Risk-loving CEOs are more likely to make acquisitions in general. This is an interesting result and consistent with the idea that CEO characteristics matter in acquisition activity, which has been articulated going back to papers such as Roll's (1986) Hubris hypothesis on takeovers, (see also Malmendier and Tate, 2007).

We additionally perform a multinomial logit analysis. Table IV, panel B, column (4) presents the results when a single acquisition is made, column (5) is for multiple acquisitions. The multinomial logit yields very similar results to the probit specification. Risk-loving CEOs are more likely to undertake an acquisition. Large, public companies are also more likely to make multiple acquisitions. We also find that CEOs who are averse to sure losses are more likely to make multiple acquisitions, which is consistent with the univariate results. This result could have several interpretations. One possibility is that such acquisitions are diversifying acquisitions. Unfortunately, we do not have data to distinguish the diversification effects of the acquisitions. Another possibility is that multiple acquisitions are done to camouflage the outcome of any one (potentially bad) acquisition, or similarly to allow the executive to delay admitting (to himself or others) that an earlier acquisition was a failure, so additional investment is made to avoid confirming this previous "sure loss". It is also possible that the "pay more now to avoid acknowledging a loss" aspect of the sure loss question might capture a bidding war, where an "averse to sure loss" person keeps bidding until s/he wins, thereby increasing the number of acquisitions for these CEOs. Either way, these results are intriguing and worthy of further investigation, perhaps using different experimental designs.

Overall, our results suggest that capital structure actions, both total debt and short term debt, as well as acquisition activity are related to CEO traits and the kind of career experience that managers have had in the past.

4.2 Matching of CEO traits to companies

One should be careful when interpreting the results in Section 4.1 because we are unable to distinguish between whether managers with particular characteristics take certain corporate actions or whether managers with such characteristics select (or, are selected into) companies with a lot of debt or acquisition activity. It is interesting to examine whether there is indeed a “matching” of CEO traits and demographics with company characteristics. Below we explore this further. One company characteristic that is natural to examine in terms of such potential matching is the growth status of the company.

Table V, panel A examines the historical annual sales growth, as well as the future annual sales growth as anticipated by the CEO. The univariate tests indicate that risk loving CEOs are more likely to work for companies with high historical and high expected growth. Further, young CEOs, tall “confident” CEOs, and CEOs who do not have finance/accounting backgrounds, and who work for private firms, are more likely to work for high growth companies. The CEOs who work in firms with high historic growth are less likely to have attended prestigious colleges. CEOs with an MBA are more likely to work for companies with high anticipated growth. If we interpret height as a measure of confidence our results are consistent with a matching story in which young, confident, risk-taking CEOs are more likely to work for high growth companies. When we further examine anticipated growth rates we find similar patterns. These are intriguing results and are generally consistent with these kinds of CEOs choosing to work for growth companies, or at least companies with potential for future growth.

Table V, panel B, column 1, presents the results of a probit regression in which the dependent variable is 1 if the company has demonstrated high historical growth; and equals 0 otherwise. The probit suggests that risk loving, young, tall CEOs who come from less prestigious colleges, and who are not from finance/accounting backgrounds, are more likely to be employed at growth companies. Such companies are also less likely to be public. Similar results are found when we examine a probit in which the dependent variable is 1 if the anticipated future growth rates are high; and 0 otherwise. Once again, we find that risk loving, young, tall CEOs who come from

less prestigious colleges, and are not from finance/accounting/legal arenas are more likely to be in such firms. Additionally, we find that MBAs and male CEOs are more likely to work for high expected growth firms. These results are consistent with some self-selection or matching occurring between certain kinds of CEOs and certain kinds of companies.

Perhaps the place where matching should be strongest is with respect to compensation. CEOs have some negotiating power in such packages or can alternatively find employment elsewhere if the compensation package is not to their liking. Accordingly, we investigate the target compensation of the CEO. In particular, we ask whether CEOs are likely to take a larger part of their compensation from a fixed component, such as salaries, or a performance based component such as stock, options and bonus. Table V, panel A presents the univariate statistics. The results are quite strong. Risk takers are much more likely to be paid proportionately more with stock, options and bonuses and much less likely to be compensated via salaries. The same holds for young CEOs, and male CEOs. Executives in small firms receive proportionately more in salaries, and less in the form of stocks, options and bonuses. Executives who are impatient (with a high rate of time preference) receive proportionally more in salary. Executives from prestigious colleges, public firms, and from finance/accounting tracks receive relatively less of their compensation in the form of salary. Executives with longer tenure draw more in salary and relatively less in stocks/options/bonus.

We next investigate whether these results hold in multivariate specifications. Table V, panel B, columns 3 and 4 present the regression results. Consistent with the univariate results, executives from more prestigious colleges are less likely to be compensated by a proportionally large salary component. For public companies and large companies there also tends to be a proportionally lower salary component. The three personal characteristics that are significant are risk-taking, gender, and rate of time preference. The results suggest that risk-lovers are more likely to obtain proportionately larger amount in terms of stock/bonus/options and less likely to receive relatively large salary. Males are also less likely to go for proportionately large salary and more likely to go for higher performance component. Executives who display high levels of impatience, demanding a high return to defer gains, are much more likely to be compensated with proportionately smaller stock/options/bonus component.

These results are intuitive and offer strong circumstantial evidence that there is matching of executive characteristics and the kind of compensation packages they receive. Whether executives choose their package or the company tailors it to the kind of individual they are trying to recruit, the evidence is consistent with some matching that is not random but occurs very distinctly around certain managerial and firm characteristics. This is an important result for a number of reasons. First, in the context of the compensation literature, firms typically undertake costly incentive schemes to induce managers to take on risk. The cost of giving appropriate risk taking incentives is higher if the CEO is risk-averse (Ross 2001). Our results suggest that there is matching of CEO risk aversion to the compensation package in a way that might make the compensation package incentive components less costly by giving performance based pay to those CEOs who are more willing to take on risk. Second, our results suggest that firms may choose the “right” kind of managers for them, and this might show up in some of the manager fixed effects that has been found elsewhere in the literature (see e.g., Bertrand and Schoar, 2003).

4.3 Comparisons between US CEOs, US CFOs, and non-US executives

We next investigate how similar CEOs are to other people? For example, how similar are they to CFOs? Or to the general population?

For risk aversion we have a benchmark from the Barsky, et al., (1997) study. Our survey uses similar questions to Barsky, et al., on risk aversion but we find very different results. Barsky, et al., (1997) posed these questions in the Health and Retirement Study (HRS), which had a mean respondent age of 55.6 years. Our mean CEO age is roughly similar at 54.1 years. In Barsky et al., (1997) over 64% of the respondents are reported to be extremely risk-averse. In contrast, we find that only 9.9% of our CEOs are risk averse. This suggests that there is a big difference between CEOs and the similar aged lay population (at least as measured in the HRS). These results however, need to be interpreted with caution, since CEOs likely also have larger wealth than the lay population.⁵

⁵As explained in Section 2, our question is also slightly different from Barsky, et al., (1997).

We are able to use data that we collected from the survey to further compare CEOs to CFOs. A comparison of characteristics is given in Table VI. It can be seen that CEOs are much less likely to have MBA degrees than are CFOs. CEOs are also likely to be older, with longer tenure and from more prestigious universities. CFOs are more averse to sure losses and their main career path is likely to be in finance/accounting arenas. CEOs tend to be more impatient than CFOs: there are a significantly larger number of CEOs with a high rate of time preference as compared to CFOs. Interestingly CEOs are much more optimistic than CFOs, with 80 percent of CEOs being classified as optimists compared to only 66 percent of CFOs. This is a noteworthy result. Not only do CEOs assess themselves as optimists more than CFOs but this also ties in with others' perception of CEOs. In an informal survey of CFOs, Graham and Harvey (2007, March) ask CFOs about their perceptions of CEO optimism. They find that 48% of CFOs say that their CEOs are optimistic than they are, and only 5.1% of the CFOs say they are more optimistic. As to how CEOs are more optimistic, 35.7% of CFOs say that CEOs are more optimistic about all aspects of life, above and beyond the CEO's extra optimism about business prospects. Thus our results suggest that CEOs are indeed special in terms of their personality characteristics.

We need to be careful in drawing conclusions from this comparison because they are unconditional, not having first matched the executives by firm characteristics. Hence we redo the differences in characteristics of CEOs and CFOs after matching for whether the company is public or not. Panel B of Table VI, column (2) shows that the results are similar. We also match by size in column (3). After matching we find similar results with the only exception being that the differences in time preference is no longer robustly significant. The results suggest that CEOs not only have different career paths from CFOs but importantly, differ in terms of their attitudes.

Next, we examine how US CEOs and CFOs differ from executives from other parts of the world (see panel A). (We match on whether the company is public or not and by firm size in unreported tables and find results similar to those discussed next.) We find both CEOs and CFOs from the United States tend to be less risk averse than CEOs and CFOs whose companies are not located in the United States. Further, both US CEOs and CFOs tend to be taller (though this could be

because of a native population height differential). They are also more optimistic, and older with longer tenure.

Further, non-US CEOs and CFOs tend to be less patient as indicated by their higher time preference, relative to their US counterparts. Foreign CEOs also have a higher aversion to sure losses than US CEOs. The only place where we find significant difference between US and non-US CEOs that does not hold in CFOs is in terms of their educational background. US CEOs are less likely to have a MBA than their non-US counterparts, but US CFOs are more likely to have a MBA than their non-US counterparts.

In all, our results suggest that CEOs, particularly in the US, tend to be marked by certain personal characteristics, which may well be an integral part of having what it takes to become a CEO and/or to operate effectively as a chief executive.

4. Conclusions

We offer a unique perspective on how the personality characteristics of CEOs impact corporate policies. We assemble a unique database in which we measure managers' attitudes using well established questions that have been validated in economics and psychology as providing a good gauge of people's attitudes. Our survey not only quantifies behavioral traits of senior managers but also gathers information related to the career path, education, and demographic characteristics of the managers.

We focus on two corporate decisions that CEOs feel that they have the most control over – acquisitions and capital structure. We find evidence that links psychological traits such as risk aversion and optimism to corporate policies, in addition to past career experience and education. Our evidence also suggests that there is matching between the behavioral traits of the CEOs and the companies that they choose to work for. For example, growth companies have a different CEO profile than do slower growth, steady state companies. Further, the compensation packages of CEOs also seem to be matched to their risk preferences and other characteristics. Finally, we also offer evidence that CEOs differ from CFOs in important ways, both on the psychological

profile as well as in terms of past career and education. U.S based CEOs also differ in significant ways from their non-U.S. counterparts.

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TABLE I

FIRM CHARACTERISTICS SUMMARY STATISTICS. This table reports the summary statistics of specific firm characteristics used in the analysis. All variables reflect the survey responses of participating US CEOs. Firm sales (size) is determined based a survey question categorizing firm sales into seven size groups. Category midpoints are used to create the firm size variable reported here. Category 1 includes firms with sales less than \$25M, category 2 includes firms with sales between \$25M and \$99M, category 3 includes firms with sales between \$100M and \$499M, category 4 includes firms with sales between \$500M and \$999M, category 5 includes firms with sales between \$1B and \$4.9B, category 6 includes firms with sales between \$5B and \$9.9B, and category 7 includes firms with \$10B or above in sales. Historical and expected growth reflect growth in sales. Number of operating segments refer to the number of segments in which the reporting executive has experience in prior to current position. Number of acquisitions reflects the number of acquisitions the firm has made over the past two years. Executive compensation variables (stocks, options, bonuses, and salary) are percentages of total compensation.

	N	Mean	Std. Dev.	Min	Med	Max
Public (%)	790	11.4	31.8	0.0	0.0	100.0
Sales (Size) Revenue (\$M)	966	561.5	1855.2	12.5	62.0	12500.0
# Operating Segments	1006	2.2	1.4	1.0	2.0	12.0
Historical Growth (%)	953	23.0	45.7	-30.0	12.0	500.0
Expected Growth (%)	957	18.9	19.7	-5.0	12.0	100.0
Debt to Assets Ratio (%)	815	28.4	28.3	0.0	20.0	200.0
Short Term Debt to Total Debt Ratio (%)	809	26.8	31.4	0.0	15.0	152.0
Number of Acquisitions	877	1.1	6.1	0.0	0.0	100.0
Stocks, Options, and Bonuses (%)	1016	28.9	27.7	0.0	25.0	100.0
Salary (%)	799	57.1	26.4	0.0	60.0	100.0

TABLE II

PERSONAL CHARACTERISTICS OF CORPORATE EXECUTIVES. Panel A reports the summary statistics of personal characteristics of US CEOs. Personal risk aversion is a dummy variable for executives that prefer a job that pays with certainty their current salary against jobs that pay twice their current income with 50% chance and 80% of their current income with 50% chance. MBA degree is a dummy variable for executives with MBA degrees. Optimism is a dummy variable for an executive that has reported an average of 4 or higher in the LOT-R Test. Sure loss aversion is a dummy for executives who avoids sure losses now by hedging. Focused is a dummy for executives who have experience focused in financial and/or accounting fields. Tenure is the number of years the executive has been in current position. Time preference for gains is a dummy variable for executives who prefers money now over money a year later at an interest of 30%.

Panel A: Summary Statistics

	N	Mean	Std. Dev.	Min	Med	Max
Personal Risk Aversion (%)	1013	9.9	29.8	0.0	0.0	100.0
MBA Degree (%)	919	35.1	47.8	0.0	0.0	100.0
Male (%)	1014	92.3	26.7	0.0	100.0	100.0
Male Height (inches)	885	71.1	2.8	52.0	71.0	82.0
Female Height (inches)	78	65.7	2.4	58.0	66.0	71.0
Optimism (Overall) (%)	997	80.2	39.8	0.0	100.0	100.0
Sure Loss Aversion (%)	866	8.4	27.8	0.0	0.0	100.0
Time Preference for Gains (%)	1001	32.9	47.0	0.0	0.0	100.0
Focused in Fin. & Acc. (%)	989	16.0	36.7	0.0	0.0	100.0
Age	996	54.1	9.4	25.0	54.0	89.0
Tenure	1016	10.4	8.5	0.5	8.0	56.0
University SAT Score	847	1159.7	156.6	750.0	1140.0	1485.0

Panel B reports the correlations between both firm and executive characteristics for our main analysis sample of US CEOs. Old is a dummy variable for executives older than the median of the survey executives. Tenure is considered long if the executive has been in the position for longer than the median length of office in the sample of US CEOs. Prestigious is a dummy for executives who studied at a US university with average SAT scores in the fourth quartile of the survey sample. Large firm is a dummy for firms are reported to have more than \$1B in sales. Tall is a dummy variable for male executives over 5'10" and female executives over 5'4". Other variables are defined as in Table IIA. Significance at the 10% level is denoted by *, 5% by **, and 1% by ***.

Panel B: Correlations

	Personal Risk	MBA	Male	Tall	Optimistic	Sure Loss Aversion	Time Preference for Gains	Focused in Fin. & Acc.	Old	Long Tenure	Public	Prestigious College
MBA	-0.037											
Male	-0.004	0.050										
Tall	-0.028	0.020	0.005									
Optimistic	-0.012	0.012	-0.047	0.037								
Sure Loss Aversion	0.001	-0.074 **	-0.006	0.036	0.038							
Time Preference for Gains	0.036	-0.053	-0.093 ***	0.011	-0.020	0.083 **						
Focused in Fin. & Acc.	0.035	0.169 ***	0.063 **	-0.020	-0.037	-0.013	-0.081 **					
Old	0.120 ***	-0.141 ***	0.081 **	-0.017	0.012	-0.068 **	-0.038	-0.051				
Long Tenure	0.093 ***	-0.126 ***	0.014	-0.022	0.048	-0.050	-0.005	-0.037	0.315 ***			
Public	0.014	0.003	-0.001	0.001	0.001	0.008	-0.041	-0.011	0.021	-0.117 ***		
Prestigious College	-0.014	0.042	-0.118 ***	0.007	-0.011	-0.027	-0.064 *	-0.040	-0.078 **	0.014	0.007	
>\$1B Firm	-0.007	-0.025	0.037	-0.014	0.023	0.006	-0.006	0.005	0.050	-0.099 ***	0.383 ***	-0.035

TABLE III

WHO MAKES CORPORATE DECISIONS? Survey participants are asked to rank on a scale of 1=high to 5=low on their input on financial decisions below. Ranks presents the order of decisions in which the executives report they have the most influence. Panel A reports the the percentage of participants who answered "1". Panel B reports the percentage of participants who answered "1" or "2". Specification (1) compares the full sample of US CEOs against the full sample of and US CFOs. Specification (2) compares US CEOs to US CFOs based on a one-to-one sample match on whether the firm is public or private, randomly sampling when samples are uneven. That is, for each public/private US CEO, a US CFO is (randomly) matched and included in the sample. Specification (3) compares US CEOs and US CFOs based on a one-to-one sample match on firm size categories. Significance is between US CEOs and US CFOs. Significance at the 10% level is denoted by *, 5% by **, and 1% by ***. Number of observations are included in the panel header.

Panel A: Participants who answered "1"

	(1): Unconditional ~950 CEOs/525 CFOs					(2): Public/Private Matching ~380					(3): Size Matching ~420				
	US CEOs		US CFOs			US CEOs		US CFOs			US CEOs		US CFOs		
Rank	%	Rank	%	Rank		%	Rank	%	Rank		%	Rank	%	Rank	
Mergers & Acquisitions	1	15.4	5	0.6	***	1	14.4	5	0.5	***	1	9.1	5	0.1	***
Capital Structure	2	15.1	1	3.1	***	2	12.6	1	3.4	***	2	7.9	1	3.1	***
Payout	3	13.7	3	1.9	***	4	11.2	3	1.9	***	4	6.5	3	1.7	***
Capital Allocation	4	13.4	2	2.7	***	3	11.9	2	2.6	***	3	7.8	1	3.1	***
Investment	5	10.7	4	1.3	***	5	9.2	4	1.3	***	5	6.0	4	1.0	***

Panel B: Participants who answered "1" or "2"

	(1): Unconditional ~950 CEOs/525 CFOs					(2): Public/Private Matching ~380					(3): Size Matching ~420				
	US CEOs		US CFOs			US CEOs		US CFOs			US CEOs		US CFOs		
Rank	%	Rank	%	Rank		%	Rank	%	Rank		%	Rank	%	Rank	
Mergers & Acquisitions	1	46.7	5	9.7	***	1	42.8	5	10.1	***	1	42.1	5	11.4	***
Capital Structure	2	39.6	1	24.0	***	4	35.9	1	26.9	***	4	27.2	1	25.5	
Payout	3	38.9	3	14.5	***	2	36.7	3	15.9	***	2	29.8	3	16.0	***
Capital Allocation	4	38.2	2	19.3	***	3	36.0	2	20.5	***	3	29.2	2	22.2	**
Investment	5	36.3	4	13.7	***	5	33.0	4	15.1	***	5	22.4	4	15.3	***

TABLE IV

DO CEO AND/OR FIRM CHARACTERISTICS AFFECT CORPORATE POLICIES? Panel A looks at how certain executive and firm characteristics affect corporate policies on capital structure and M&A in the sample of US CEO survey respondents. Debt ratio and short term debt are defined to be high if they are above the mean of the survey sample of US CEOs. Mergers and acquisitions reflect the merger and acquisition behavior within the last two years for firms which have US CEO survey representation. Acquisitions ≥ 2 is an indicator for firms with a lot of M&A activity. Numbers to the left of "/" reflect the percentage of US CEOs, among the ones displaying the trait at the top, who also reflect the characteristic at the left. Numbers to the right of "/" reflect the percentage of US CEOs, among the ones who do not display the trait at the top, who also reflect the characteristic at the left. For example, of those with available data, 40% of males and 29% of females were associated with high debt ratios. Other variables are defined as in Table II. Significance is between the sample that exhibit firm/executive trait and the sample that does not exhibit the trait. Significance at the 10% level is denoted by *, 5% by **, and 1% by ***.

	Personal Risk- Aversion	MBA	Male	Tall	Optimistic	Sure Loss Aversion	Time Preference for Gains	Fin / Acc Focused	Old	Long Tenure	Public	Prestigious College	Small Firm
High debt ratio			40 / 29 *					52 / 37 ***					
High short term debt ratio			34 / 17 ***		35 / 24 ***						25 / 35 *		
Acquisition == 0	73 / 64 *					56 / 66 *					47 / 66 ***		68 / 40 ***
Acquisitions ≥ 1	27 / 36 *					44 / 34 *					53 / 34 ***		32 / 60 ***

Panel B reports the regression analysis of firm/executive characteristics on corporate decisions on capital structure and M&A. Debt ratio and short term debt are defined to be high if they are above the mean of the survey sample of US CEOs. Specifications (1) through (3) uses binary dependent variables and therefore uses both a probit and a marginal effect probit specification to calculate the contribution of each firm/executive characteristics to the probability of the left hand side event. Specifications (4) and (5) use a categorical variable on acquisitions that distinguishes firms with no acquisitions, one acquisition, and more than one acquisition and runs a multivariate logit model. Industry dummy variables are used. Only US CEOs are included in the regressions. Significance at the 10% level is denoted by *, 5% by **, and 1% by ***, with z-stats reported in parenthesis.

	Probit Models						Multivariate Logit Models	
	(1)		(2)		(3)		(4)	(5)
	High Debt Ratio		High Short Term Debt / Long Term Debt Ratio		Firms Making Acquisitions		Firms Making 1 Acquisition Compared to Firms Making No Acquisitions	Firms Making >1 Acquisitions Compared to Firms Making No Acquisitions
	Coefficients	Marginal Effects	Coefficients	Marginal Effects	Coefficients	Marginal Effects	Coefficients	Coefficients
Personal Risk Aversion	-0.040 (0.19)	-0.015	-0.237 (1.05)	-0.081	-0.519 (2.11)	-0.167 **	-0.943 *	-0.996 (1.61)
MBA	0.029 (0.23)	0.011	-0.066 (0.53)	-0.024	0.027 (0.22)	0.010	0.143 (0.59)	-0.126 (0.44)
Male	0.420 (1.56)	0.151	0.616 (2.22)	0.189 **	-0.258 (1.07)	-0.098	-0.278 (0.54)	-0.551 (1.10)
Tall	0.053 (0.39)	0.020	-0.164 (1.21)	-0.060	0.058 (0.43)	0.021	0.500 (1.63)	-0.317 (1.12)
Optimistic	0.164 (1.08)	0.062	0.461 (2.90)	0.154 ***	0.060 (0.39)	0.022	0.280 (0.85)	-0.111 (0.31)
Sure Loss Aversion	0.282 (1.35)	0.111	0.043 (0.21)	0.016	0.270 (1.37)	0.102	-0.308 (0.61)	1.043 *** (2.85)
Time Preference for Gains	0.028 (0.21)	0.011	0.156 (1.19)	0.057	-0.073 (0.57)	-0.026	-0.087 (0.33)	-0.197 (0.70)
Focused in Finance & Accounting	0.425 (2.80)	0.167 ***	0.255 (1.61)	0.095	-0.105 (0.67)	-0.037	0.011 (0.03)	-0.454 (1.31)
Old	-0.057 (0.45)	-0.022	0.127 (0.99)	0.046	-0.010 (0.08)	-0.004	0.084 (0.32)	-0.146 (0.52)
Long Tenure	0.084 (0.65)	0.032	0.157 (1.22)	0.056	0.105 (0.83)	0.038	0.073 (0.28)	0.331 (1.13)
Public	0.213 (1.05)	0.084	-0.133 (0.63)	-0.047	0.435 (2.24)	0.166 **	0.446 (1.08)	0.980 ** (2.51)
Prestigious College	0.009 (0.07)	0.003	-0.055 (0.42)	-0.020	-0.140 (1.07)	-0.050	-0.320 (1.17)	-0.147 (0.49)
> \$1B Firm	0.415 (1.61)	0.164	-0.086 (0.32)	-0.030	0.878 (3.54)	0.339 ***	0.447 (0.78)	2.199 *** (4.52)

Cons	-0.706	**	-1.473	***	-0.197	-1.515	**	-0.520
	(2.06)		(4.21)		(0.60)	(2.32)		(0.75)
Industry Dummies	Y		Y		Y	Y		Y
N	512		511		540	540		540
χ^2 (df)	58.45 (21)		30.52 (21)		42.80 (21)	81.77 (42)		81.77 (42)
P-Value	0.00		0.08		0.00	0.00		0.00

TABLE V

DO CEO AND/OR FIRM CHARACTERISTICS AFFECT CORPORATE POLICIES? Panel A looks at how certain executive and firm characteristics affect corporate policies in terms of firm sales growth and managerial compensation in the sample of US CEO survey respondents. Historical growth is high if it is above 5% and expected growth is high if it is above 6%. Stock, options, and bonus and salary are considered high if above the mean of all respondents. Numbers to the left of "/" reflect the percentage of US CEOs, among the ones displaying the trait at the top, who also reflect the characteristic at the left. Numbers to the right of "/" reflect the percentage of US CEOs, among the ones who do not display the trait at the top, who also reflect the characteristic at the left (example provided in Table IVA). Significance is between the sample that exhibit firm/executive trait and the sample that does not exhibit the trait. Significance at the 10% level is denoted by *, 5% by **, and 1% by ***.

Panel A: Firm/executive traits and corporate policies

	Personal Risk- Aversion	MBA	Male	Tall	Optimistic	Sure Loss Aversion	Time Preference for Gains	Fin / Acc Focused	Old	Long Tenure	Public	Prestigious College	Small Firm
High Historical Growth	64 / 77 **			79 / 68 ***				68 / 78 **	71 / 83 ***		66 / 78 **	69 / 78 ***	
High Expected Growth	62 / 81 ***	83 / 76 **		80 / 75 *	80 / 74 *		82 / 77 *	72 / 80 *	74 / 85 ***		66 / 81 ***		80 / 63 ***
High Stock, Options, Bonus	33 / 48 ***		48 / 32 **				39 / 51 ***		43 / 52 **	42 / 54 ***	75 / 42 ***		44 / 81 ***
High Salary	69 / 51 ***		52 / 65 **				57 / 50 *	44 / 54 **	56 / 47 **	55 / 48 *	30 / 56 ***	45 / 55 **	55 / 24 ***

Panel B reports the regression analysis of firm/executive characteristics on corporate decisions in terms of firm sales growth and managerial compensation. Historical growth is high if it is above 5% and expected growth is high if it is above 6%. Specifications (1) - (4) use binary dependent variables and therefore use both a probit and marginal effect probit specification to calculate the contribution of each firm/executive characteristics to the probability of the left hand side event. Industry dummy variables are used. Only US CEOs are included in the regressions. Significance at the 10% level is denoted by *, 5% by **, and 1% by ***, with z-stats and t-stats reported in parenthesis.

	Probit Models									
	(1)		(2)		(3)		(4)			
	High Historical Growth		High Expected Growth		High Stock, Options, and Bonus		High Salary			
	Coefficients	Marginal Effects	Coefficients	Marginal Effects	Coefficients	Marginal Effects	Coefficients	Marginal Effects		
Personal Risk Aversion	-0.537 (2.51)	-0.181 **	-0.592 (2.68)	-0.183 ***	-0.453 (1.96)	-0.172 *	0.667 (2.90)	0.245 ***		
MBA	0.147 (1.10)	0.042	0.359 (2.50)	0.087 **	-0.045 (0.37)	-0.018	-0.076 (0.63)	-0.030		
Male	0.087 (0.32)	0.026	0.617 (2.49)	0.193 **	0.439 (1.82)	0.166 *	-0.526 (2.16)	-0.198 **		
Tall	0.291 (2.02)	0.089 **	0.265 (1.75)	0.071 *	-0.068 (0.50)	-0.027	0.065 (0.49)	0.026		
Optimistic	-0.039 (0.24)	-0.011	0.136 (0.81)	0.036	-0.014 (0.10)	-0.006	0.124 (0.83)	0.049		
Sure Loss Aversion	0.052 (0.23)	0.015	0.123 (0.50)	0.030	0.256 (1.25)	0.102	-0.164 (0.79)	-0.065		
Time Preference for Gains	-0.188 (1.39)	-0.056	0.115 (0.81)	0.028	-0.293 (2.28)	-0.115 **	0.088 (0.70)	0.035		
Focused in Finance & Accounting	-0.371 (2.23)	-0.117 **	-0.296 (1.67)	-0.082 *	0.019 (0.12)	0.007	-0.191 (1.25)	-0.076		
Old	-0.493 (3.59)	-0.141 ***	-0.425 (2.98)	-0.106 ***	-0.122 (0.99)	-0.049	0.126 (1.03)	0.050		
Long Tenure	-0.081 (0.58)	-0.023	0.003 (0.02)	0.001	-0.133 (1.07)	-0.053	0.003 (0.03)	0.001		
Public	-0.608 (2.90)	-0.204 ***	-0.478 (2.26)	-0.141 **	0.638 (3.28)	0.248 ***	-0.490 (2.54)	-0.192 **		
Prestigious College	-0.403 (2.99)	-0.124 ***	-0.110 (0.76)	-0.028	0.089 (0.71)	0.035	-0.207 (1.66)	-0.082 *		
> \$1B Firm	-0.045 (0.18)	-0.013	-0.463 (1.85)	-0.138 *	0.694 (2.74)	0.267 ***	-0.486 (1.98)	-0.191 **		
Cons	1.058 (3.02)	***	0.338 (0.98)		-0.277 (0.83)		0.341 (1.04)			

Industry Dummies	Y	Y	Y	Y
N	542	544	530	530
χ^2 (df)	74.57 (21)	87.51 (21)	58.85 (21)	46.31 (21)
P-Value	0.00	0.00	0.00	0.00

TABLE VI

COMPARISONS OF EXECUTIVE CHARACTERISTICS ACROSS SAMPLES. This table reports the summary statistics of specific personal characteristics of participating executives used in the analysis. Panel A compares the characteristics between US CEOs to US CFOs, US CEOs to Non-US CEOs, and US CFOs to Non-US CFOs, respectively. Panel B compares the characteristics of US CEOs against those of US CFOs based on three sampling methods. The first, unconditional, compares the entire sample of US CEOs to the entire sample of US CFOs. The second sampling method matches firms one-on-one based on public/private status, randomly sampling when the number of observations are uneven. The third sample method matches firms one-on-one based on size categories. Panel C compares the characteristics of US CEOs against those of non-US CEOs using the three sampling methods described above. Panel D compares the characteristics of US CFOs against those of non-US CFOs for the three sampling methods. Variables are defined as in Table II. Summary statistics reflects means where applicable. Significance at the 10% level is denoted by *, 5% by **, and 1% by ***. Number of observations are included in the panel header.

Panel A: Comparisons between US CEOs, US CFOs, Non US CEOs and Non US CFOs

	US CEOs ~ 1016 vs US CFOs ~ 549		vs Non US CEOs ~ 163		vs Non US CFOs ~ 715		
Personal Risk Aversion (%)	9.9	8.4		16.6	**	14.0	***
MBA Degree (%)	35.1	51.8	***	47.9	***	33.5	***
Male (%)	92.3	90.3		94.4		87.6	
Male Height (inches)	71.1	71.0		69.3	***	69.1	***
Female Height (inches)	65.7	65.2		56.9		63.4	*
Optimism (Overall) (%)	80.2	65.8	***	54.4	***	48.2	***
Sure Loss Aversion (%)	8.4	12.8	**	20.3	***	14.2	
Time Preference for Gains (%)	32.9	26.2	***	41.8	**	38.2	***
Focused in Fin. & Acc. (%)	16.0	87.0	***	26.1	***	86.3	
Age	54.1	48.7	***	50.2	***	43.3	***
Tenure	10.4	6.8	***	9.1	*	5.9	***
University SAT Score	1159.7	1113.9	***	1208.7		1118.8	

Panel B: Comparisons between US CEOs and US CFOs based on three sampling methods

	(1) Unconditional ~ 1016 CEOs / 549 CFOs			(2) Public/Private Matching ~ 383			(3) Size Matching ~ 421		
	US CEOs	vs	US CFOs	US CEOs	vs	US CFOs	US CEOs	vs	US CFOs
Risk Aversion (Personal) (%)	9.9		8.4	9.7		6.3	9.8		8.6
MBA Degree (%)	35.1		51.8	35.6		50.6	34.1		49.7
Male (%)	92.3		90.3	93.2		92.4	95.7		89.3
Male Height (inches)	71.1		71.0	71.4		70.9	71.1		70.8
Female Height (inches)	65.7		65.2	66.0		65.0	66.2		65.0
Optimism (Overall) (%)	80.2		65.8	80.8		64.8	81.3		65.9
Sure Loss Aversion (%)	8.4		12.8	8.0		12.7	7.7		11.9
Time Preference (Gain) (%)	32.9		26.2	33.7		24.7	27.9		26.3
Focused in Fin. & Acc. (%)	16.0		87.0	14.6		86.1	18.6		87.6
Age	54.1		48.7	54.1		48.9	55.1		48.8
Tenure	10.4		6.8	10.2		7.2	10.5		7.0
University SAT Score	1159.7		1113.9	1167.7		1114.8	1149.4		1108.2

APPENDIX

This Appendix compares the survey sample of the firms under management of US CEOs to the Compustat sample using survey variable definitions. The survey data is matched against the 2005 annual Compustat data for consistency as our survey is conducted in early 2006, which should reflect 2005 financials. Sales is surveyed by seven size categories. Category 1 includes firms with sales less than \$25M, category 2 includes firms with sales between \$25M and \$99M, category 3 includes firms with sales between \$100M and \$499M, category 4 includes firms with sales between \$500M and \$999M, category 5 includes firms with sales between \$1B and \$4.9B, category 6 includes firms with sales between \$5B and \$9.9B, and category 7 includes firms with \$10B or above in sales. Debt to assets ratio, short term debt ratio, dividend yield, and historical growth are reported by US CEO survey respondent.

Credit rating is the S&P long term domestic issuer credit rating grouped into 10 categories in order of increasing credit ratings. Category 1 include firms with credit ratings of D or suspended, category 2 include firms with ratings of C, or CI, category 3 include firms with ratings of CC, category 4 include firms with ratings of CCC-, CCC, or CCC+, category 5 include firms with ratings of B-, B, or B+, category 6 include firms with ratings of BB-, BB, or BB+, category 7 include firms with ratings of BBB-, BBB, or BBB+, category 8 include firms with ratings of A-, A, or A+, category 9 include firms with ratings of AA-, AA, or AA+, and category 10 include firms with ratings of AAA-, or AAA.

Compare to Compustat Using Survey Variable Definitions

Variable		Sample average	Sample median	Compustat breakpoint quintiles				
				1	2	3	4	5
Sales	Universe avg.			1.0	1.7	2.8	3.9	5.7
	Sample avg.	2.2	2.0	1.0	2.0	3.0	4.5	6.6
	Sample %			40.4	27.1	20.5	9.1	2.9
Debt/Assets	Universe avg.			0.0	0.0	0.2	0.3	1.0
	Sample avg.	0.3	0.2	0.0	0.1	0.2	0.3	0.7
	Sample %			19.6	16.9	16.2	22.6	24.7
Short Term Debt/Total Debt	Universe avg.			0.0	0.0	0.2	0.4	0.9
	Sample avg.	0.3	0.1	0.0	0.0	0.2	0.4	0.9
	Sample %			25.8	11.4	28.3	18.7	15.9
Dividend Yield	Universe avg.					0.0	0.0	0.0
	Sample avg.	0.2	0.0			0.0		0.4
	Sample %					50.2		49.8
Credit Rating	Universe avg.			4.7	5.8	6.8	7.3	8.4
	Sample avg.	8.4	9.0	3.6	6.0	7.0	8.0	9.6
	Sample %			7.4	7.4	8.7	17.0	59.5
Historical Growth	Universe avg.			-0.2	0.0	0.1	0.2	1.7
	Sample avg.	0.2	0.1	-0.2	0.0	0.1	0.2	1.0
	Sample %			0.9	28.0	35.6	22.7	12.7