Why Do Some CEOs Work for a One-Dollar Salary?

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Abstract

We find that one-dollar salary plans may be camouflage for other not-so-visible forms of compensation since total compensation of CEOs with $1 salaries, inclusive of bonus and equity-based awards, is similar to that at comparable firms. There is greater likelihood of a $1 CEO salary arrangement at firms where the CEO owns a sizeable stake, and institutional ownership is relatively low. These powerful CEOs are also different in other ways. They are richer and more overconfident compared to other CEOs. Such CEOs are more likely to be motivated by personal non-monetary objectives, making adoptions of $1 CEO salaries ultimately detrimental to other shareholders. Indeed, shareholders of firms with $1 CEO salaries do not fare well in the aftermath of these adoptions. Overall, rather than being sacrificial acts, our findings suggest that adoptions of $1 CEO salaries are opportunistic behavior of the wealthier, more overconfident, and influential CEOs.

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Abstract

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<center>**Why Do Some CEOs Work for a One Dollar Salary?**</center>

I. Introduction

In an era in which the average compensation of U.S. CEOs has grown rapidly and there are accusations of excessive pay (Gabaix and Landier, 2008, Frydman and Saks, 2008, and Frydman and Jenter, 2010), why have some CEOs settled for a mere dollar-a-year salary? Recently, in the wake of the worst economic downturn in decades, the CEOs of all three major U.S. automakers pledged to work for an annual salary of just a $1. This presumably sacrificial step, to share the pain with shareholders and employees, is not unique to the recent economic crisis. In fact, scores of CEOs, including those with thriving firms like Apple and Google, have also adopted this compensation arrangement since the early 1990s. Most of these are CEOs of firms with household names from a very wide variety of industries (see Appendix A). In this paper, we examine these past adoptions of dollar-a-year CEO salaries to address a number of unanswered questions regarding this apparently contrarian behavior.

Specifically, in this paper we ask the following questions about adoptions of $1 CEO salaries: What are the motivations behind these adoptions? Are these adoptions merely publicity gimmicks to divert attention from otherwise enormous, less visible payoffs in the form of bonus, stocks or options?[1] What is special about these CEOs and their firms that led them to agree to adopt this uncommon salary scheme? Importantly, how do these CEOs and their shareholders fare in the aftermath of these adoptions? In order to address these questions, we formulate and test three hypotheses, highlighting different salient features of this phenomenon: First, in an *Alignment Hypothesis*, a $1 CEO salary is the optimal compensation contract for some firms (Hart and Holmstrom, 1987, Core, et al., 2003). Second, in a *Signaling Hypothesis*, we emphasize the implications of the willingness of some CEOs to suffer certain current loss of salary in exchange for larger equity-based payoffs later. Third, under a *Managerial Power*

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[1] In an oft repeated position in the media, Scott Mayerwotitz (2008) of *ABC News* notes that some of the $1 salary CEOs "earned millions of dollars through stocks and other forms of compensation." For example, Scott DeCarlo (2007) notes in *Forbes* that Steve Jobs of Apple was the highest paid boss among the 500 firms they tracked: "He drew a nominal $1 salary but realized $647 million from vested restricted stock last year."

<center>1</center>

Hypothesis as in Bebchuk, Fried, and Walker (2002) and Bebchuk and Fried (2004), $1 CEO salaries are not consistent with shareholder value maximization. In this view, the compensation contract is not the result of vigorous arm's length bargaining, but is instead designed to serve the CEO's personal goals. The $1 CEO salary may be a form of camouflage to minimize outrage over excessive total compensation or a diversion from other self-serving activities.

We begin with the first explanation, taking a shareholders' perspective. As a compensation decision normatively set to provide the CEO with incentives to maximize shareholders' wealth, a one-dollar salary can shift compensation to a largely equity-based form, and consequently better align the interests of the CEO to shareholders, as well as incent him to undertake risky growth opportunities. Thus, from the perspective of optimal contracting theory, we expect that firms in greater need of alignment between shareholders and their CEOs, and firms in possession of more growth options, are more likely candidates for adopting a dollar-a-year CEO salary. We examine this *Alignment Hypothesis* as a rationale for $1 CEO salaries.

It is, however, unlikely that we are simply looking at some variation in compensation structure, except that the salary component has been dropped to its lowest limit. If a $1 CEO salary were to be a part of the optimal compensation structure for such household firms, then this compensation choice would have been far more common. Rather than being directed at compensation structure *per se* to resolve an internal agency problem, adoptions of $1 CEO salaries may be an appropriate response to an urgent business challenge faced by the firm. Arguably firms adopting $1 CEO salaries face serious concerns about their prospects (either dire or loss of highly valuable opportunities), and these adoptions are a radical response to these situations. Taking the CEO perspective, only a capable CEO candidate would step forward to take a $1 salary "bet," agreeing to a certain drop in current income in exchange for a potential uncertain reward later. In essence, by accepting the bet, the CEO signals ability and wins the opportunity to execute his, possibly controversial, turnaround plan. This *Signaling Hypothesis* predicts that $1 CEO salaries are adopted by well-governed firms, facing challenging prospects, with able CEOs who have "skin in the game."

An alternative view does not make a sanguine prediction regarding the impact of $1 CEO salaries on shareholders. Another reason why some firms adopt $1 CEO salaries may arise from the personal benefits that CEOs can draw from these arrangements. One-dollar salaries attract considerable personal publicity for the CEO. As an apparently selfless act, it may also enhance his social status, which too may be more valuable to a rich CEO relative to some incremental salary dollars. The dark side of an interest in such personal benefits is that it is indicative of a diversion of attention away from shareholder value maximization, in addition to any distortive incentives because the $1 salary may not be optimal. We expect the firm to underperform as a result. Moreover, we do not expect the firm to be well-governed, since the CEO prevails in pursuing a value-destroying personal agenda. The $1 CEO is part of the power dynamics that results from strong CEOs with weak boards. This, as well as the *Alignment* and *Signaling Hypotheses*, draw upon rational economic motives for the $1 CEO salary. However, given the nature of the problem, it is natural to also wonder if CEOs that agree to $1 CEO salaries are overconfident of their abilities, and thus too willing to accept a bad gamble. This too is self-serving for the CEO, though motivated by a behavioral bias, and is detrimental to shareholders. We capture all such motives under a *Managerial Power Hypothesis*.

We identify only 50 genuine cases with $1 CEO salaries over the years, 1992-2005.[2] First of all, these arrangements appear to be a facade to hide other forms of compensation since we find that the resulting total compensation, inclusive of bonus and equity-based awards, is similar to that at comparable firms. Furthermore, we find that there is greater likelihood of a $1 CEO salary arrangement if the CEO is very rich, owns a sizeable ownership stake in the firm, and institutional ownership is relatively low. Also, we find that frequently the CEO appointment and the adoption of a one-dollar salary occur simultaneously. Importantly, the firm does not fare well. These findings support the *Managerial Power Hypothesis*. His relatively larger ownership stake in the firm, as well as the comparatively low institutional holdings, provide the shareholder power with which the CEO can extract board approval. Though CEOs

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[2] In many cases, *ExecuComp* reports no salary based in the Annual Compensation table in the proxy statement, but a closer reading of the footnotes in the proxy statement reveals that the CEO is well-compensated through an affiliated enterprise or was prepaid in a previous year.

tend to be rich in general, $1 CEOs are richer still. The very rich are more likely to pursue non-monetary personal pursuits.   Furthermore, even against other CEOs who tend to be overconfident, we find that $1 CEOs are significantly more overconfident.

This study offers contributions beyond a better understanding of the intriguing phenomenon of $1 CEO salaries.   Recent studies bring out the importance of taking $1 CEO salaries into account in studies of CEO compensation. For example, Guthrie, Sokolowsky, and Wan (2010) find that the findings of Chhaochharia and Grinstein (2009) are upturned when just two "outliers" – both cases of $1 CEO salaries in our sample, Steve Jobs of Apple and Kosta Kartosis of Fossil – are removed. We document many more cases of $1 CEO salaries, which too do not fit the usual mode of CEO compensation. Our findings also add to a recent growing literature on the importance of CEO characteristics for the policies and outcomes of firms (Bertrand and Schoar, 2003, Schoar, 2007, Graham, Harvey, and Puri, 2009, and Kaplan, Klebanov, and Sorensen, 2008, Malmendier, Tate, and Yan, 2010, and Cronqvist, Makhija, and Yonker, 2010). Finally, this paper illustrates the consequences of abandoning the traditional compensation format in which salary is the main pillar, with other components of compensation like target bonuses, options grants, defined pension benefits, and even severance arrangements typically expressed as a percentage or a multiple of base salary (Murphy, 1999).

In the next section, Section 2, we develop several hypotheses regarding the motivation for adopting a dollar-a-year CEO salary. To test these hypotheses, in Section 3 we describe how we identify our sample. We also provide descriptive statistics about CEOs and their firms for our sample and compare them with a set of control firms. We test the *Alignment Hypothesis* in Section 5, and the *Signaling and Managerial Power Hypotheses* in Section 6.   We examine the role of CEO overconfidence in the adoptions of $1 CEO salaries in section 7. The value effects of these adoptions are considered in section 8. In Section 9, we undertake a number of robustness checks and discuss further the implications of our findings. We offer concluding remarks in Section 10.

2. Hypotheses and their tests

To better understand the context in which firms adopt $1 CEO salaries, we begin by reading proxy statements for the first year of adoption. Appendix A presents related excerpts from proxy statements for some 50 firms that are the basis of our later empirical analysis. Table 1 draws upon this information to highlight certain aspects of these adoptions.

In Panel A of Table 1, we note that the two most frequently cited reasons for adopting $1 salaries are to align the interests of CEOs with shareholders, and to aid in the restoration of profitability.

In Panel B, we see that the reduction in salary to $1 is overwhelmingly accompanied by a reduction in bonus as well (88% of the cases), effectively eliminating current cash payoffs. Furthermore, a large proportion of the CEOs in our sample receive some equity-based compensation (78%), and that in many cases the firm actually notes that this compensation has been provided in lieu of lost salary and bonus. The exchange may be implied in other cases. This supports the view that a $1 salary may not necessarily imply a sacrifice, and motivates us to later examine total compensation.

Panel C shows that in about half the cases (46%) the appointment of the CEO occurs simultaneously with the adoption of a $1 salary arrangement. This is highly suggestive of a *quid pro quo* deal, whereby the CEO pays in lost salary and bonus in exchange for the opportunity to lead the firm and get any benefits that may accrue to him in the future of the stocks and options granted to him. Incumbent CEOs that change to a $1 salary arrangement may be accepting similar bargains to hold on to their jobs, and be allowed the opportunity to execute their preferred turnarounds.

Next, we rely on the proxy information, as well as media coverage and the literature, to formulate three hypotheses, *Alignment, Signaling,* and *Personal Benefits Hypotheses*, for why some CEO salaries are set at $1.

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2.1. *Alignment Hypothesis*

Interestingly, a sizeable number (38% of all cases, Panel A of Table 1) of firms offer no explicit reason for the adoption in their proxy statements. However, when they do, the most frequent reason (40% of all cases) is that a $1 salary helps align the interests of the CEO and shareholders by shifting compensation to a more stock- or option-based form.[3] Thus, the $1 CEO salary is frequently accompanied by equity-based compensation, (78%, in Panel B), with options grants in 70% of all cases. The following examples, all from proxy statements (Form DEF 14a) illustrate this:

Extended Stay America, Inc., George D. Johnson, Jr., 2000. "The Company does not pay Mr. Johnson any cash salary or bonus but rather compensates him exclusively through stock option grants. We believe that tying Mr. Johnson's remuneration to the performance of the Company's Common Stock will motivate Mr. Johnson to maximize stockholder value and is consistent with our policy of compensating the Company's senior executives, like Messrs. Huizenga and Johnson, primarily through annual stock option grants."

In many of these cases, the firm explicitly noted that the equity-based compensation was in lieu of the foregone salary and bonus:

AES Corp., Dennis W. Bakke, 1999. "The Committee decided that, beginning in 1999, Mr. Bakke would no longer receive cash as part of his overall compensation. Mr. Bakke was compensated solely by the grant of stock options (in lieu of a cash salary and cash bonus). The Committee believes that this method of compensation will align Mr. Bakke's compensation more closely with the financial interests of the Company's other shareholders."

In a few cases, the firm offered the exchange of salary and bonus as an option left to the discretion of the CEO:

Bombay Co., Inc., James D. Carreker, 2003. "Pursuant to his employment agreement, he was entitled to receive a base salary of $600,000 or, if he elected to receive his base salary in the form of restricted stock vesting in full at the end of three years, he was entitled to a grant of restricted stock valued at 1.25 times base salary. He elected to take stock and was granted 81,256 shares. At January 30, 2004, the shares had a value of $611,858. Similar elections may be made each year on or about the anniversary date of Mr. Carreker's appointment."

And then, there are cases where the salary is dropped because the CEO has a large ownership stake and thus automatically has interests aligned with shareholders:

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[3] The media has noted this too. Writing in *Business Week*, Moira Herbst (2007) calls it the ultimate pay-for-performance, where CEOs are "sending the message to investors that they'll make money only if other shareholders do, too."

Netscape Communications Corp, James L. Barksdale, 1997. "For 1997, Mr. Barksdale elected to receive a salary of $1.00 and to return an option grant of 300,000 shares made in April 1997. Mr. Barksdale believes that his compensation should be linked to the long-term interests of Netscape's stockholders. Accordingly, through his ownership position in Netscape's Common Stock, Mr. Barksdale's pecuniary interests are aligned with those of Netscape's stockholders."

The finance literature recognizes the potential benefits from an improved alignment of interests of the CEO and shareholders. Along with how much the CEO is paid, it is also important how he is paid, so that the structure of compensation matters to CEO behavior (Jensen and Murphy, 1990). According to traditional agency models, a larger equity-based compensation makes the CEO behave more like stockholders, and reduces the agency cost of equity (Jensen and Meckling, 1976). Moreover, since we see more of a shift towards larger options-based compensation rather than stock awards, we also raise the (implied) possibility that the purpose of $1 CEO salary is to incent the CEO to take on greater risks and benefit the firm from its growth opportunities (Smith and Watts, 1992). While alignment of CEO-shareholders interests and exploitation of growth opportunities are in principle desirable objectives across the board, only adopting firms take on extreme measures in formulating their compensation structures. Thus, our agency-based prediction is the following:

Alignment Hypothesis: *One-dollar CEO salaries are adopted by firms in greater need of alignment of CEO-shareholders interests and/or in possession of more growth options.*

2.2. *Signaling Hypothesis*

Of course, it should not be surprising that in the proxy statements, which are meant to garner their votes, that firms would most emphasize the shareholders' perspective in the adoption of $1 CEO salaries. But, adoptions of $1 CEO salaries also require the CEOs to accept riskier compensation packages, exchanging certain current income in exchange for an uncertain future reward. Only those CEO candidates would accept such packages that have the confidence in their ability to deliver. In a handful of cases (6%), the proxy statements literally voice this very confidence, typically in the context of performance problems:

Lily (Eli) & Co, Sidney Taurel, 2002. "In light of the reduction in the company's Prozac sales, Mr. Taurel voluntarily reduced his base salary to $1.00 for the year 2002. The company did not offset this reduction in salary by any additional compensation but provided a benefits allowance to preserve his employee benefits at their normal level. Mr. Taurel requested this reduction to demonstrate his confidence in the company's future results and to set an example for employees."

In many more cases (24%), the CEO gave up his salary to reduce costs and aid in the recovery of the firm, again effectively betting on the future:

Cisco Systems, Inc., John T. Chambers, 2002. "On April 1, 2001, Mr. Chambers requested that his base salary be lowered to a rate of $1.00 annually (until the recognition of a recovery in Cisco's performance). On May 11, 2001, the Committee agreed to honor this request until such a time as the Committee deems it appropriate to return Mr. Chambers' base salary to a market competitive level. For fiscal year 2002 Mr. Chambers' base salary remained at $1.00."

In other cases, the CEO may bet on adding significantly more value to an already profitable firm, with behaviorally similar implications regarding betting on the future as entailed in restoring profitability. Though this is a plausible situation, as perhaps in the cases of Apple and Google, Panel A of Table 1 suggests that restoration of profitability is likely a much more common reason for adoptions of $1 CEO salaries than the upside bet on the exploitation of large growth options.

We expect that only capable CEO candidates will signal an ability to successfully carry out a turnaround, or else they face an expected loss. Moreover, well-functioning boards will go forward with these arrangements with only deserving candidates, or else they accept a losing proposition for their shareholders. For the signal to be credible, the CEO must have a sufficient stake in the outcome to be handed over the reins of the firm.

Signaling Hypothesis: One-dollar salaries are adopted by well-governed firms to identify credible CEOs who can successfully address the concerns about the firms' prospects.

2.3. *Managerial Power Hypothesis*

A Proxy data and media coverage

Obviously, the proxy statements of firms adopting $1 CEO salaries do not point out that these schemes can be harmful to shareholders. Yet, the adoptions of $1 CEO salaries may be driven by personal agendas of the CEOs, which may not maximize shareholders' wealth. Indeed, in a couple of cases the proxy statements do mention personal motives –e.g., funding favored charitable causes-- may have prompted CEOs to seek these salary arrangements. See for example:

Pepsico, Inc., Roger A. Enrico, 1998. "At Mr. Enrico's request, the Committee approved a reduction in Mr. Enrico's annual salary from $900,000 to $1, and recommended to the Board of Directors that it consider using the savings to support front line employees(scholarship for children of PepsiCo's sales people, truck drivers, manufacturing plant workers and other front line employees). In January

1999/2000, the Board approved annual charitable contributions of approximately $1,000,000 to fund additional scholarships for children of PepsiCo's front line employees."

This negative view of $1 CEO salary adoptions has received more attention from the media. The following exchange from an interview of Mr. John Mackey, CEO of Whole Foods, with Steven Gray (2006) in the *Wall Street Journal*, illustrates the potential divergence of shareholders' and CEOs' interests in the objectives of the firm:

Gray: "Why are you cutting your salary to $1?"
Mackey: "It is hard for me to explain this in ways that people will understand. I've always followed my heart, and this is what my heart is telling me is the appropriate thing to do right now. I have enough money, and the deeper motivations are for me to do service and try to do good in the world. It may not make sense for other people who don't have the same inner experiences that I'm having. I'm not advocating other CEOs to do it. I don't think of myself as particularly special or noble for doing it. It's just what I want to do."
Gray: "How much of your salary cut decision has something to do with decelerating same-store sales growth?"
 Mackey: "None. Zero."

Besides being representative of a general mindset that is not focused on shareholders, adoptions of $1 salaries may be at a cost to firm performance because it may not be the optimal incentive scheme. Yet, it may be personally beneficial to the CEO. As the CEO of Palm Pilot, Carl Yankowski (2006) put it in *Marketplace*, "No question, the $1 salary is good personal marketing that's worth a fortune in publicity." If motivated by such personal pursuits, approval of the $1 CEO salary and the value destruction that follows presumes a failure of corporate governance. The wealthier individuals are more likely to seek the psychic pleasure of public service for its own sake, and the social recognition it engenders, instead of being tainted by the monetary gains associated with being a paid CEO.

Managerial Power Hypothesis: One-dollar CEO salaries are adopted by firms with weak governance and wealthier CEOs who pursue a personal agenda at a cost to shareholders.

3. Data

In this section, we begin by identifying our sample of firms that adopted dollar-a-year salaries, as well as a control group of comparable firms. Next, we describe differences between the two groups on a number of dimensions, including profiles of their CEOs and firm characteristics.

3. 1. Identification of sample and control firms, and sources of data

Sample identification

We use the entire *ExecuComp/ Compustat* database, as of the end of 2005 to identify all CEOs that at some point in time worked for a $1 salary or less. Spanning the period, 1992 to 2005, there were a total of 100 such "$1" CEOs in the database. We started in 1992 because that is when *ExecuComp* compensation data starts, and because there were very few cases (e.g., Lee Iacocca at Chrysler in 1978) before that date. We stopped in 2005 so that we could examine the post-adoption performance in the following years (long-term performance). Along with other data requirements, listed below, there were some 76 cases of CEOs with $1 salary in the Annual Compensation table reported in *ExecuComp*. Next, we read the proxy statements to see if these are truly $1 salary CEOs, and qualify for inclusion in our sample. Startlingly, in very many cases this is not the case.

To qualify for inclusion in the sample, an executive should serve as CEO for more than one fiscal year. In other words, CEOs who might work for low base salaries because of some special arrangement for the short-term contract are excluded from the sample. In practice, it is quite often the case for companies that find themselves in trouble to bring in an Interim CEO. Some interim CEOs are likely to be directors or board members in the same firm who already earn a decent salary. By taking extra tasks for interim CEO position, the person might be compensated with some benefits other than salary. Thus a low salary for the CEO position in the Annual Compensation Table in the proxy statement does not necessarily mean that the person takes a small salary out of the company.

We further clean the sample using other information in the proxy statements, eliminating CEOs who got a $0 or $1 salary because they were either prepaid in the previous year or are indirectly compensated by other enterprises under some special agreements. For example, the data from *ExecuComp* shows that Thomas W. Sturgess, the CEO of United Stationers, Inc., has a zero salary in the fiscal year 1995. However, the footnote with the compensation table in DEF 14A of United Stationers, Inc., states that, "For calendar year 1995, Mr. Sturgess received compensation from Wingate Partners, but no compensation from the

Company". Due to the lack of compensation information from Wingate Partners, we do not consider Mr. Sturgess as a $1 CEO. Similarly, Gabriel Battista from Talk America Holding also has a zero salary for fiscal years 2000 and 2001. However, the accompanying note in the proxy statement shows that Mr Battista's salaries for the years 2000 and 2001 were prepaid in 1999. This too is not a case of a $1 CEO.   To ensure that we do not incorrectly include such cases, we manually check the CEO compensation descriptions in 10-K or DEF 14A filings on EDGAR, paying attention to textual footnotes, for all cases initially found to have very low salaries in *ExecuComp*.   Nearly one-third (26/76) of the cases were excluded in the process, which spells a serious caveat regarding over-reliance on figures from the Annual Compensation table reported in *ExecuComp*. Our final list of 50 CEOs with a $1 salary, along with pertinent excerpts, is presented in Appendix A.

To form the control group of comparable firms, we begin with all the firms in the same 4-digit SIC industry as the firm adopting a $1 CEO salary in the year of the adoption. Since we are interested in a probit analysis to determine the factors that a firm will likely adopt a $1 CEO salary, we prefer wider industry membership instead of one-to-one matches, which would greatly overstate the likelihood of $1 CEO salary adoptions. We purposely exclude any sample firms that appear among the matches for a sample firm in a different year. Next, we retain those firms that, like our sample firms, are covered by the same data sources, giving us a total control group of 246 firms. In terms of various size measures, the sample and control are similar, as discussed later. All dollar amounts in the analysis are adjusted to 2005 dollars using the CPI.

Sources of data

Besides reading proxy statements, we access *Compustat* for accounting data, *CRSP* for stock market data, *Thomson 13-F's* for institutional ownership, and *Riskmetrics* for governance and board data. We undertake various searches using a number of search engines, including *Factiva.* Data on founders are partly hand-collected, and the rest are from *Compact Disclosure*

and Anderson and Reeb (2003).[4]   Data on the CEO's non-firm wealth are from Dittmann and Maug (2007).[5]   We also utilize the *Forbes 400* list to identify the richest individuals, *Hoover's* and *Bloomberg* for the education and history of individual CEOs, and to identify if a CEO was the founder of a firm. For measuring CEO overconfidence, we read articles on sample and control firms in more than a dozen media outlets, following the media-based methodology suggested by Malmendier and Tate (2005) and Malmendier, Tate, and Yan (2010).

Incidence of $1 CEOs

Table 2, Panel A, shows the incidence of "$1 salary CEOs". More than two-thirds of the new cases (35) are firms that are listed on NYSE, 14 are listed on NASDAQ and only one firm (Metaldyne) is listed on the OTC market. The number of new cases is on average only about 3.5 per year, with twice that number in 1999, the year with the most $1 CEO salary adoptions. But, 1999 is hardly unique since several other years have just one less adoption. Even so, we affirm our main findings with year fixed effects. The average number of $1 CEOs out there in any year, new plus continuing, is just under 10. Given the thousands of listed firms, the phenomenon of adopting a $1 CEO salary is rare.

Panel B of Table 2 shows that on average a CEO works for a $1 salary for 2.7 consecutive years. The median number of years is two, and the mode is just one year. In about one-third of the cases, the CEO earns a dollar-a-year salary for just one year. In another one-fourth of the cases, the $1 CEO salary persists for two. For 78% of our sample, the CEO receives a $1 salary for under 3 years. Clearly, for the typical firm, adoption of a $1 CEO salary is a temporary phenomenon.

From Panel C of Table 2, we observe that these firms are drawn from a very wide range of 4-digit SIC industries, revealing no notable clustering in a particular industry. Some 92% of the sample firms are solitary representatives of their industry. Only one industry has anything like a cluster, if only of five firms. But, even these firms from the prepackaged software

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[4] These data are available on line at http://astro.temple.edu/~dreeb/Working2.html.
[5] These data are available on line: http://people.few.eur.nl/dittmann/data.htm.

industry did not adopt $1 CEO salaries in the same year: Epicor Software adopted in 1995, Netscape in 1997, Zix in 1999, Oracle in 2000, and Siebel Systems in 2001. (We affirm our findings with year fixed effects and clustering by industry).

In sum, based on the incidence of adoption of $1 CEO salary, we find that it is a rare and temporary occurrence. When it does occur, it is more common among firms listed on the NYSE with no discernible pattern of industrial affiliation. These observations are more consistent with the view that these adoptions are precipitated by special business circumstances rather than routine issues of compensation structure.

Next, we examine various aspects of the profiles of the CEOs that work for a one dollar salary.

3. 2. CEO profile

<u>Personal characteristics</u>

In Panel A of Table 3, we describe their personal characteristics. In terms of age, gender, and education, CEOs of adopting firms are not remarkably different from CEOs at comparable firms. The one notable difference between the two groups is that adopting CEOs are portrayed to be more "confident" by the media, which we infer from the average number of articles on sample and control CEOs in the media with "confident" depictions of CEOs. We later develop a more detailed analysis motivated by this observation, since it suggests more hubristic behavior among CEOs of our sample firms.

<u>Indications of personal wealth</u>

The indicators of the personal wealth of CEOs that accept a dollar-a-year salary are presented in Panel B of Table 3. Some 30% of our sample CEOs belong to the *Forbes 400* list of the richest Americans, whereas less than 5% of the control group of CEOs belongs to this elite club. There is a clear over-representation of the richest among the CEOs with $1 salaries. In an alternative direct dollar comparison of one important source of their wealth, we rank all CEOs, those in the sample with $1 salaries along with their comparable CEOs in the control group, by the value of

their stockholdings in the firms they head up. We then divide the list into terciles based on the highest, middle, and lowest values of stockholdings. Notably, 68% of the sample CEOs belong to the tercile with the highest value of stockholdings in comparison to only 30% of the control group CEOs. These and other comparisons of CEO wealth between the sample and control firms show that they are statistically significantly different at the 5% or 1% levels. CEOs, as represented by those in our control sample, are in general a wealthy group. Our sample CEOs are wealthier still.

In order to assess the source of their wealth, we turn to Dittmann and Maug (2007) for estimates of non-firm wealth based on cumulating all historical cash inflows and outflows shown in *ExecuComp*. It would appear that the wealth of our sample CEOs is based largely on their holdings in their firm rather than non-firm wealth. One can interpret this to imply that CEOs of adopting firms have a serious commitment to the success of the firm. Alternatively, these individuals are so very rich that they are likely to seek non-monetary goals.

<u>History with the firm</u>

In Panel C of Table 3, we present various indicators of the historical connections between the CEOs and their firms, both for CEOs working for $1 salaries and their comparable CEOs. We see that they are no more likely to be founders than CEOs of comparable firms. Nor are they more likely to be come-back CEOs, brought back to tide over a challenging period. In fact, at the time of the $1 salary adoption, both the mean and median comparisons show that the CEOs that work for a dollar-a-year have served fewer years as CEO with the firm. The difference in medians is statistically significantly different at the 1% level, 1 year versus 3 years.

There are two other notable significant differences in Panel C of Table 3. The proportion of CEOs in their first year of appointment (first-time CEOs) for our sample firms is 46%, while it is only about 20% for the control group. It appears that many CEOs in our sample are appointed with a $1 salary. It is unlikely that the two events are independent, suggesting that the appointment and the $1 salary arrangement are a joint event. The other noteworthy connection is the relatively large ownership stake held by our sample CEOs, about 10% versus

around 3.2%.   Such stakes imply both greater commitment to shareholder value maximization as well as greater shareholder power for sample CEOs to pursue self-oriented objectives.

Next, we compare the characteristics of the firms whose CEOs work for a dollar-a-year salary against a comparable group of firms.

3. 3. Characteristics of firms whose CEOs work for a dollar-a-year salary

In Table 4, we present a comparison of a number of characteristics of our sample and control firms, including measures for size, growth, risk, capital structure, past performance, and payout policies.   If we require both significant differences in mean and median, there are no remarkable differences between the two groups, suggesting that the sample firms resemble other firms in their industries and are well-matched.   However, that the differences are not significant for certain firm characteristics is informative too.   Thus, it is worth pointing out that, whether we use a book measure, ROA, or market measures, LT Abnormal returns, LT CAR, or Alpha, the sample firms did not underperform in the three years prior to the adoptions of $1 CEO salaries. In fact, the median ROA was a positive 3% for firms adopting $1 CEO salaries, while it was 3.8% for control firms. This suggests that on average it was not a recent crisis that led to the adoptions, though it does not mean that there were no concerns about future performance.

The differences in means are significant for several growth measures, though the medians are not significantly different. Some of the sample firms seem to have high growth rates.

3. 4. Corporate governance of sample firms

In Table 5, we examine a number of governance features of our sample and control firms.

Boards of Directors

There is disagreement on what constitutes a more effective board. Hermalin and Weisbach (2003) in their survey on research on boards report the following empirical

15

regularities: Firms with smaller boards have better performance, but board independence is not related to firm performance. The evidence on CEO/Chairman duality is limited, but again its impact on the firm has been questioned. More recently, Coles, Daniel, and Naveen (2008) have argued that the impact of board size and independence depend on the nature of business of the firm, and that one size does not fit all. These issues are moot for our sample firms, however, because none of the board characteristics – size, independence, or duality of chairman and CEO – are reliably significantly different (i.e., mean and median are both significantly different).

Ownership Structure

Institutional investors may be considered more sophisticated investors with a superior ability to monitor managers, which may explain the improvements in profitability for firms targeted by institutions (Nesbitt, 1994, and Smith, 1996). Institutions also appear to monitor managers in control-related situations such as takeovers and proxy fights (Brickley, Lease, and Smith, 1988, and Agrawal and Mandelker, 1990). Furthermore, Hartzell and Starks (2003) find that institutional monitoring is associated with lower CEO compensation and higher pay-for-performance sensitivity. Consequently, we examine institutional ownership as a measure of non-CEO shareholder power. [6]

Table 5 shows that sample firms have mean and median institutional ownership of 53% and 56%, respectively, and that these are statistically significantly different at the 1% level from the corresponding figures of 61% and 62%, respectively, for the control group of firms. These findings support the view that non-CEO shareholder power is relatively weak among sample firms.

CEO Ownership: CEO ownership cuts both ways. Increases in CEO ownership better align interests of the CEO with shareholders, but it also empowers him to exert greater control at a possible expense to other shareholders. A CEO with a sizeable stake may be more interested in drawing private benefits of control and using the firm to expand his perquisite consumption.

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[6] To be sure, the monitoring role of institutions has been questioned in the literature. Some researchers have argued that institutions are myopic, and "vote with their feet."

Table 4 shows that CEOs of firms adopting $1 CEO salaries have noticeably higher mean and median stakes in the firm. The figures are 10.09% and 3.75%, respectively, compared with only 3.21% and 1.15%, respectively, for the control group. That is, CEOs for adopting firms hold more than three times the stakes held by CEOs of control firms. It is easy to imagine that CEOs in our sample are more powerful and wield much greater control over their firms compared to other CEOs.

Anti-takeover protection measures: Shareholder rights have been proxied with the extent of antitakeover defense provisions. The Investor Responsibility Research Center has published since 1990 details on 24 distinct corporate governance provisions for about 1500 firms. Gompers, Ishii, and Metrick (2003) and Bebchuk, Cohen, and Ferrell (2005) have used this data to develop the G- and E-indexes. We compare these indexes for the sample and control samples, and, as reported in Table 5, do not find any significant differences.

Compensation Committee

Given that the $1 CEO salary requires the approval of the compensation committee, we examine whether the committee is composed of independent directors and if there is a blockholder present on the committee. As Table 5 shows, only 34% of the firms adopting $1 CEO salaries have an independent committee compared to more than 67% among the control group (difference is significant at the 1% level). Few compensation committees have a blockholder present among sample or control firms, though the sample firms seem to have even fewer, 2% only (difference approaching 10% level of significance).

Overall, we find relatively weak institutional hold, a strong CEO control, and fewer independent committees among firms adopting $1 CEO salaries, which is a combination that should make CEOs with $1 salary relatively more powerful.

3.5. Total Compensation and its components for sample and control firms

Next, we examine how the total compensation and its components differ between the sample group of CEOs that work for a dollar-a-year salary and a control group of CEOs working for comparable firms. All dollar amounts are converted to 2005 dollars.

In Table 6, we present the mean and median amounts of income derived by sample and control group CEOs through a number of components of executive compensation. By design, sample CEOs have lower salary. However, they also have sizably lower mean (median) bonus, $161,490 ($0) compared to $673,590 ($610,440), with the differences being statistically significant at the 1% level. Consequently, total current cash compensation, which is defined by *Compustat* as salary plus bonus, is lower by about $1.2 million. That is, CEOs who accept to work for a dollar-a-year salary give up a large certain amount in exchange for items that potentially gain from equity-based awards.

Next, we consider Total Compensation, which includes stock grants. While CEOs of sample firms receive significantly lower median Total Compensation, there is no difference in mean Total Compensation. But, without grants of options, which are the most important source of income for our sample CEOs, we still cannot judge whether they have lower overall current income, in cash plus securities. So, we turn to the rows for Options Grants and Total Compensation Incl. Option Grants. The mean and median for Option Grants are both greater for the $1 CEOs, though only the mean differences are significant. Next, we see that CEOs with $1 salaries seem to do just as well or better in Total Compensation when we include Option Grants. Total Compensation Incl. Option Grants is greater for $1 salary CEOs, whether we look at mean or median, with the mean difference significant at the 10% level. This would support the view that the loss due to the $1 salary is recovered (or even more than recovered) through other compensation. But, this inference is based on average differences without taking into account individual firm characteristics.

Going beyond the univariate analysis, we recognize that total compensation is expected to vary according to the economic attributes of the firm. In particular, CEOs command larger total compensation if firm size, risk, performance, and growth opportunities are larger (Demsetz

and Lehn, 1985; Smith and Watts, 1992; Core, Holthausen, and Larcker, 1999; and Cyert, Kang, and Kumar, 2002). Larger, riskier, growth-oriented firms are more complex and require superior managerial talent. Also, CEOs demand more compensation if they have a proven track record of delivering profitability. Consequently, we regress the natural log of total compensation on firm size (natural log of firm's assets), risk (standard deviation of firm's daily stock market return over the 12-month period), performance (ROA), and an indicator variable (which is one for $1 CEO salary firms and zero otherwise). If the popular press is correct, and $1 salary does not imply an overall lower compensation, then the coefficient of the indicator variable should be positive.

Regressions results are presented in Table 7. We use two comprehensive definitions of total compensation in the regressions as dependent variables: (1) Total Compensation and (2) Total Compensation Including Options Granted (*ExecuComp* definition, TDC1). We control for size (log of total assets), profitability (ROA), and risk (total risk or beta riskiness). We do not include a control for growth opportunities, such as market-to-book or assets growth, because it is highly correlated with the risk measures. Our variable of interest is the indicator variable that identifies CEOs earning a dollar-a-year salary.

The results clearly show that, on average, the total compensation of $1 CEOs is statistically significantly lower than that of their peers. It is arguable if this result is also economically significant. For instance, the total compensation (not including options, but including stock grants) of $1 CEOs is, on average, 3.3% lower than that of comparable CEOs.

Adding option grants to the total compensation further decreases the economic magnitude of the difference between sample and control CEOs to as little as 1.1%, when we control for total riskiness. But, when the control is beta riskiness of the firm, CEOs with $1 salary show no statistically significant difference in total compensation. That is, in this multivariate analysis we find either an economically small (~1% less) or no difference in total compensation. In the univariate comparison, we reported higher total income for CEOs with $1 salaries. Overall, we conclude that CEOs with $1 salaries appear to make up in option grants

what they gave up in salary and bonus since their total compensation is about the same as that for CEOs of comparable firms.

Next, we test for our different explanations for why $1 CEO salaries are adopted.

4. Testing the *Alignment Hypothesis*

Testable implications

According to the *Alignment Hypothesis*, one-dollar CEO salaries are adopted by firms in greater need of alignment of CEO-shareholders interests and/or in possession of more growth options. From the perspective of greater need for alignment, we predict that firms with $1 salary CEOs will be larger, have greater free cash flow, lower leverage, and larger delta values. (Definitions of these measures and others are provided in Appendix B.) The reasons are the following: Jensen and Meckling (1976) argue that larger firms tend to be opaque and are prone to greater managerial agency problems. Firms with greater free cash flow, and less leverage to reduce discretionary free cash flow, are also likely to have more managerial agency problems, according to Jensen (1986). Delta is the dollar change in the CEO's stock and options holdings for a 1% change in the stock price of the firm (sensitivity of pay to performance). Firms with high delta values have recognized in the past a greater need for alignment of CEO-shareholders interests.

From the perspective of encouraging more risk-taking, we predict that firms with $1 CEO salaries will have higher ratios of market-to-book value of assets, greater historic use of options in the CEO compensation package, as well as larger vega values. Many researchers have used market-to-book value of assets to measure growth opportunities (e.g., Bryan, Hwang, and Lilien, 2000; Kole, 1997; Bizjak, Brickley, and Coles, 1993; Graver and Graver, 1993, etc.). Since options increase in value when the underlying assets experience more volatility, they have been used in executive compensation to incent managers to take greater risks (by undertaking growth opportunities). The past use of more options by the firm will therefore be an indicator of the presence of growth opportunities and the need for greater risk-taking incentives. Vega is the dollar change in CEO options holdings for a 1% change in stock return volatility, which is the

sensitivity of the manager's wealth to stock return volatility and captures the extent to which incentives have been used at the firm to help overcome managerial aversion to risk.

<u>Findings</u>

In Table 8, we present four different specifications testing the *Alignment Hypothesis*. The findings do not support the view that $1 CEO salaries are adopted because there are greater agency problems among these firms or larger growth opportunities, and therefore a need for alignment of interests through extreme measures in the structure of compensation. In untabulated results, we attempt many other combinations of independent variables, with a similar inference. These non-findings are important because they contradict the most frequently reported claim in the proxy statements that $1 CEO salaries are adopted to better align the interests of the CEOs with shareholders.

5. Testing the *Signaling* and *Managerial Power Hypotheses*

<u>Testable implications</u>

According to the *Signaling Hypothesis*, one-dollar salaries are adopted by well-governed firms to identify credible CEOs who can successfully address the concerns about the firms' prospects. In contrast, the *Managerial Power Hypothesis* predicts that one-dollar salaries are adopted by firms with weak governance and wealthier CEOs who pursue a personal agenda at a possible cost to shareholders. Some of the predictors of the *Signaling Hypothesis* for the adoption of $1 CEO salaries, like the nature of corporate governance, are the same as those for the *Managerial Power Hypothesis*, though the signs of the effects are the opposite. So, we develop the testable forms of the two hypotheses together.

For governance, we consider various board characteristics (size, independence, duality), ownership structure (CEO and institutional ownership), anti-takeover protection measures (G- and E-indexes), and whether or not the compensation committee is independent or not.

For concerns regarding the prospects of the firm, we consider recent profitability, using an accounting measure, ROA, and market-based measures, LT abnormal returns, and LT CAR. (The results are similar when Alpha is the performance measure). While the proxy statements

generally stress underperformance, we extend our analysis to include cases where the concern is about losing out on growth opportunities.   We therefore include Tobin's Q and asset growth as independent variables.

To assess if the CEO belongs among the wealthiest individuals in the US, we consider whether his holdings in the firm place him in the top tercile, and whether or not a CEO is listed among the top 400 richest individuals in *Forbes*.

Findings

Table 9 presents probit analyses of the factors that affect the likelihood that a firm will adopt a $1 CEO salary. Consistent with the univariate comparison, we see that firms with larger CEO ownership are more likely to adopt $1 CEO salaries. The coefficient of CEO ownership is positive and statistically significant in all specifications (at the 5% or better level).   The economic magnitude of the coefficient suggests that, *ceteris paribus*, a one percentage point increase in CEO ownership is associated, on average, with a 0.6% increase in the probability of being a $1 CEO . This is supportive of both the *Signaling* and *Personal Benefits Hypotheses*. Larger CEO stakes provide greater alignment, but they also imply a stronger CEO. The other ownership factor, however, contradicts the *Signaling Hypothesis* and supports the *Managerial Power Hypothesis*. The coefficient of institutional ownership is negative and significant in all specifications (at 5% level in three of them), suggesting that a one percentage point increase in institutional ownership is associated with an average decrease in the probability of being a $1 CEO of about 0.25%.   Together, these findings on ownership suggest that firms with CEOs with greater shareholder power are more likely to adopt $1 salaries, as predicted by the *Managerial Power Hypothesis*.

The negative significant coefficient (at the 1% level) on the indicator variable for an independent compensation board is also consistent with the *Managerial Power Hypothesis*. The *Signaling Hypothesis* predicts the opposite sign.

In every specification, we find that whether the CEO is among the richest is a significant predictor for the adoption of a $1 salary. The coefficient of "Top tercile -- Value of CEO shares" is positive and statistically significant (at the 1% level) in all specifications. The

economic magnitude of the coefficient suggests that the richest CEOs are, on average, about 20% more likely to be $1 CEOs. In untabulated findings, similar results are obtained with the indicator variable for membership in *Forbes* list of richest individuals. Furthermore, adding year fixed-effects to specification 7 and clustering the standard deviations by industry leads to the same conclusions – both the statistical significance and economic magnitude of the coefficients remain fairly the same, the only exception being the coefficients of institutional ownership and CEO shareholdings that now become significant at the 10% level only. These findings are consistent with the *Managerial Power Hypothesis* because more salary dollars may mean less to them and so there is a greater likelihood that the very richest will want to pursue non-monetary agendas, which is detrimental to shareholders. Arguably, since this wealth seems to invested in the firm, the findings are consistent with the *Signaling Hypothesis* as well. With so much at risk, we expect that only capable CEOs should step forward and accept $1 salaries.

Overall, the evidence supports the *Managerial Power Hypothesis*, though parts of the evidence affirm the *Signaling Hypothesis* as well.

6. A further test of the *Managerial Power Hypothesis*: Evidence on CEO overconfidence

So far we have tested whether $1 CEO salaries are adopted so as to draw personal benefits. Now, we examine the possibility that the CEO does not plan to benefit himself at an expense to shareholders. That is, his intentions are not in conflict with the interests of other shareholders. Rather, the CEO accepts the $1 salary bet because he is overconfident. That is, as in the *Signaling Hypothesis*, the CEO is willing to bet that he can successfully carry out his turnaround strategy, but his faith in his ability/strategy may be mistaken in this instance. The past successes of the very rich may make them more prone to such hubristic behavior. Following through on plans built on overconfidence is a form of drawing personal benefits.

Measuring overconfidence

We examine whether CEOs of firms adopting $1 salaries are indeed more overconfident. For this purpose, we follow the media-based procedure described in Malmendier, Tate, and Yan (2010), and Malmendier and Tate (2005) because we do not have access to their

longholder data. With one difference from their procedure, we employ a wider set of media outlets, which increased the collection task considerably, but it also helped increase coverage of sample and control CEOs.

We read articles from a variety of sources for all our sample and control firms: the main financial press (*Wall Street Journal*, *Financial Times*, *Business Week*, and *The Economist*), online financial news (*PR News Wire* and *Business Wire*), and the regular press (*NY Times*, *Washington Post*, *Boston Globe*, *USA Today*, *The Times*, *The Guardian*, and *The Independent*). An article is classified as "confident" when it mentions the CEO as using the words "confident", "optimistic", "confidence" or "optimism"; and it is classified as "cautious" when the CEO uses the words "reliable", "practical", "conservative", "frugal", or "steady". We exclude the article from analysis if it was a reprint of an earlier article already included in our analysis. Whenever we find no articles about the CEO, we set the corresponding variable to be zero.

We conduct our media-based analysis twice. Since many of our sample CEOs are first-time CEOs, we first study them in the year of adoption of $1 CEO salaries, making for a CEOs to CEOs comparison with our control group of firms. The findings are reported in Panel A of Table 10. However, the adoption of a $1 CEO salary could distort media coverage and make sample CEOs appear bolder and overconfident. To avoid that possibility, we also undertake a news analysis for the year prior to the year of adoption of $1 CEO salaries. The findings for the prior year are reported in Panel B of Table 10.

Comparison of CEO overconfidence

From a comparison of both mean and median articles per firm for sample versus control CEOs, the sample firms are found to be significantly more "confident." The mean number of "confident" articles is 0.98 for $1 CEOs, which is significantly higher than the mean of 0.55 for control group CEOs (the difference is statically significant at the 5% level). The medians are 0.5 and zero, respectively, and still statistically significant at the 5% level. There is no significant difference in the "cautious" articles between the two groups.

For the prior year, the mean for the "confident" articles for the $1 CEOs is 0.62, while the mean for the control group is 0.39, with the difference being statistically significantly different at the 10% level. The median is higher for the control firms, 1 versus 0, but the difference is not statistically significant. However, the mean and median number of articles per firm suggests that the $1 CEOs are less cautious than the control group CEOs. The means are 0.04 and 0.2, respectively, with the difference statistically significant at the 10% level. The medians are both zero, but still different at again the 10% level.

Overall, our findings from both analyses in Panel A and Panel B of Table 10 show that $1 CEOs are relatively overconfident compared to control group CEOs. Thus, this evidence points to an important characteristic that distinguishes the $1 CEO from other CEOs.

Overconfidence and the adoption of $1 CEO salaries

In specification (7) of Table 9, we include our "confident" and "cautious" measures as additional factors that may predict whether the firm will adopt a $1 CEO salary. The findings show that the coefficient on "confident" is positive and statistically significant (5% level), which means that firms with overconfident CEOs are more likely to adopt $1 CEO salaries. The other independent variables continue to have coefficients with the same signs and significance as before.

7. The value effects of the adoption of a $1 CEO salary

The predictions of the *Signaling Hypothesis* and *Managerial Power Hypothesis* are opposite to each other. The *Signaling Hypothesis* predicts that the adoptions will be value-creating, while the *Managerial Power Hypothesis* predicts that firm value will be adversely affected. In Table 11, we test for the impact of $1 CEO salary adoptions.

The regressions of Tobin's Q (measured as of the fiscal year-end when the CEO starts earning a dollar-a-year salary) show that firms with $1 CEO salaries have, on average, lower valuations than their peers – for instance, regression (1) of Table 11 shows that, holding everything else constant, the average Tobin's Q of sample firms is, on average, 0.81 lower than that of comparable firms . We follow the literature and include controls for size, profitability,

leverage, and growth, along with our variable of interest – the indicator variable for a $1 CEO – as well as a control for the percentage of shares owned by the CEO and the level of institutional ownership.

To correct for sample selection bias affecting firms with a dollar-a-year salary CEO, we implement Heckman's (1979) procedure. The first-stage regression (selection equation) is a probit model that estimates the probability of a firm having a $1 CEO salary. This is similar to the regressions shown in Table 9 with an additional instrumental variable – "CEO age" – that is proved to be positively related to the probability of being a $1 salary CEO and, in theory, should not be related to Tobin's Q. Equation (2) is the second-stage regression, which is identical to equation (1) plus an additional variable, "Lambda", generated from the first-stage regression that attempts to correct for sample-selection bias. The results consistently show that firms with $1 CEO salaries tend to have lower Tobin's Q. Therefore, we do not find evidence to support the *Signaling Hypothesis*. In contrast, we do find evidence consistent with the *Managerial Power Hypothesis* since $1 CEO salaries are associated with lower firm values.

8. Additional analyses and discussion

We undertake a number of robustness checks in this section, besides examining additional perspectives regarding $1 CEO salaries.

Alternative post-adoption performance measures: Stock returns, bankruptcies, and delistings

Our preferred method to assess the value effects of adoptions of $1 CEO salaries would be to undertake an event study. Consequently, we search for announcements of these adoptions and find only 11 such events. Since this forms too small a sample, we apply alternative valuation methods. (Even the 9 events are not "clean" since they include statements regarding accompanying restructuring.)

In using Tobin's Q, we are assuming that the market incorporates the future value effects of the adoptions of $1 CEO salaries in its current valuation of stock. As an alternative, we examine in Panel A of Table 12 the realized stock returns over the next three years using

daily stock returns from *CRSP*. In particular, we report LT Abnormal Ret, which is the 3-year cumulative return on the stock minus the 3-year cumulative return on the *CRSP* value-weighted index, LT CAR, which is the sum over a 3-year period of the difference between daily stock returns and the daily returns on the CRSP value-weighted index, and Alpha, which is the intercept of the market model estimated over a 3-year period using daily returns for the subject stocks and the CRSP value-weighted index. (Since not all firms last through the next 3 years, these returns are based on dropping firms as they exit the *CRSP* database.) These measures are estimated both for stocks of firms with $1 CEO salaries and the stocks of their control group firms. All three measures show that firms with $1 CEO salaries underperform.

In Panel B, we find that 40% of the firms have disappeared within 3 years, which is consistent with the poor post-adoption performance we have documented so far.

A mix of motivations for adoptions of $1 CEO salaries

Our overall support for the *Managerial Power Hypothesis* means that the average firm in our sample adopts a $1 CEO salary because of a value-destroying agenda of their powerful, wealthy, and overconfident CEOs. Such averaging hides the diversity of motives across adoptions, some of which may be beneficial to shareholders.   Moreover, the motives underlying both the *Signaling Hypothesis* and the *Managerial Power Hypothesis* may be more-or-less both at work, even though one explanation may be the dominant motive. For example, there may be "good" signaling-motivated adoptions mixed in with "bad" adoptions motivated by a pursuit of personal benefits by CEOs. Arguably, the "bad" adoptees are able to mimic and win approval because there are successful "good" adoptions out there.

One group of CEOs that arguably is unlikely to be seeking personal benefits (support of favorite causes, publicity, social status, or diversion of attention to non-value adding activities) through adoptions of $1 CEO salaries are those whose firms are facing difficulties.   In particular, there are 12 cases in our sample where the firms claim in the proxy statements that the CEO will forego salary as part of an effort to cut costs and restore profitability. But, are these really a different type of individual? After all, these CEOs are still taking on a bet, and in

that their behavior may be akin to other CEOs of firms adopting $1 CEO salaries. In Panel C of Table 12 we compare the relevant personal characteristics of this group of CEOs (N=12) with those of the control group (N=246), noting that the small size of the subject group. As expected, both the Tobin's Q in the year of adoption and the ROA in the year prior to the adoption of the $1 CEO salaries are lower for the sample firms, though only the median ROA is different (at the 10% level). Turning to their personal characteristics, the mean and median for the "confident" measure are 1.1 and 0.5 for this sample of CEOs, respectively, while the corresponding figures are 0.55 and 0.0, respectively, for the control group (difference of means significant at the 10% level), suggesting that CEOs of adopting firms may be overconfident even for this subgroup. This subgroup of CEOs is also richer than CEOs with control firms, with mean and median differences significant at the 1% level. While not definitive, this comparison suggests that perhaps it is a type of individual that steps forward for these salary arrangements, and that there may be variety of circumstances which can evoke this response.

Restructuring: What do the CEOs do after the adoption of a $1 CEO salary?

We approach this issue from two perspectives, examining in each case the capital expenditures of the firm. Though not the only form, we expect the 3-year changes in capital expenditures to be a likely indicator of restructuring undertaken by the CEO. As noted in Table 4, firms adopting $1 CEO salaries have a larger change in capital expenditures from the year prior to the adoption of a $1 CEO salary to two years after it, capex (-1, +2). Compared to non-adopting control firms, Table 4 shows that sample firms have a higher mean and median capex (-1, +2), though only the mean difference is statistically significant (5% level). This is suggestive of restructuring activity.

In an alternative view, consider the actual capex (-1, +2) as the best forecast of the capital expenditures that the $1 salary CEO is proposing, a variable that reflects his turnaround plan. In that case, the capex (-1, +2) is factored in the likelihood that the CEO will win approval. Indeed, in Specification (2) in Table 9, we see that capex (-1, +2) is a significant predictor of the adoption of a $1 CEO salary.

9. Conclusion

We study the motivation and impact of some CEOs agreeing to serve for a one-dollar a year salary. Our sample consists of some 50 CEOs of U. S. listed firms, who accepted this unusual arrangement over the years, 1992-2005, and most frequently did so for only one year. While the arrangement is not common, the firms adopting it appear to be quite ordinary in many ways, which makes it more all the more intriguing: Firms adopting $1 CEO salaries have household names, and are drawn from industries from across the board. Relative to control firms, they are similar in size, growth, riskiness, and their stock has not underperformed recently. Even the CEOs accepting $1 salaries are similar in age and education to CEOs of other comparable firms. They are also not founders or come-back CEOs stepping up to rescue their legacies. If anything, they have a significantly shorter past association with the firm compared to control group CEOs, and are frequently appointed CEOs at the same time that they are given the $1 salary arrangement. Why then do these firms and their CEOs, and not so many others, adopt $1 CEO salaries, and what is the resulting impact on their firms? Prior research has not addressed these questions.

In this paper, we empirically examine a number of hypotheses to explain why some CEOs work for a $1 salary. It has been asserted that the $1 salary is a facade behind which CEOs collect large not-so-visible forms of compensation. Indeed, we find that $1 CEOs do not lose out in terms of total compensation packages, using a number of alternative comprehensive compensation measures and controlling for firm characteristics like size that could affect remuneration. We also rule out the other oft made claim in proxy statements that such a drastic cut in salary is meant to shift incentives towards equity-based payoffs in order to better align CEO-shareholders interests (or to incent the CEO to take greater risks). We do not find that the likelihood of adoption of $1 CEO salary is greater for firms with more agency problems or greater growth potential. Thus, adoptions of one-dollar CEO salaries appear to be motivated by other considerations than obtaining the optimal compensation structure.

We propose two other alternative hypotheses, a *Signaling Hypothesis* and a *Managerial Power Hypothesis* to explain the phenomenon. According to the *Signaling Hypothesis*, based on traditional economic considerations, the CEO credibly signals his ability by betting his current income in exchange for a larger payoff later. We find that $1 CEOs have relatively larger equity stakes compared with CEOs at comparable firms, and this reinforces the notion of them having "skin in the game." We expect only capable CEOs to agree to this bargain, just as we expect boards to sign off only if they believe the candidate to be deserving. As a result, we expect the compact to be value-creating. The *Signaling Hypothesis* fails this crucial test. The Tobin's Q value of $1 CEO firms in the year of adoption, after controlling for other factors that affect firm value and correcting for selection bias, is significantly lower than that for comparable firms. Moreover, the firms with one-dollar CEO salaries have lower long-term subsequent returns, higher rates of bankruptcy filings, and greater CEO turnover.

In an alternative hypothesis, the *Managerial Power Hypothesis*, the CEO is driven by personal pursuits. His larger ownership stake, as well as low institutional holdings at the firm means that the CEO has the shareholder power to implement his plans. The $1 salary is a part of his pursuit of personal non-monetary objectives, which as a very wealthy individual he may value more than incremental salary dollars. The $1 salary can help camouflage a total pay package that is comparable to that for other CEOs. As a more overconfident individual, he may place greater faith than deserved on his strategy for the firm. Now, as predicted that the firm does not fare well. Overall, the evidence is supportive of this view of $1 CEO salaries.

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APPENDIX A: REASONS FOR A $1 SALARY IN PROXY STATEMENTS (Form DEF 14a)

FYR	Company	CEO	
1992	Panenergy Corp	Dennis R. Hendrix	In November 1990, Mr. Hendrix and the Company entered into an agreement whereby he would receive no salary for 1991, 1992, and 1993. Instead, Mr. Hendrix was awarded 300,000 shares of restricted Common Stock under the terms of the 1990 LTIP as compensation for that period...Effective February 24, 1993, the agreement with Mr. Hendrix was amended to extend the term through November 1996 and to award him an additional 300,000 shares of restricted Common Stock in lieu of salary for the period November 1993 through November 1996
1993	Lawter International Inc	Daniel J. Terra	Mr. Terra has been authorized to receive but has waived his annual salary from the Company since 1982. In addition, Mr. Terra does not receive grants of stock options under the Company's stock option plan.
1993	Grand Casinos Inc	Lyle Berman	Prior to July 31, 1994, Messrs. Berman and Taube received benefits and in lieu of salary were compensated under the Company's Incentive Plan.
1994	Wendy's/Arby's Group Inc (formerly Triarc)	Nelson Peltz	Peltz gave up his cash salary in return for payout in options for the following years
1995	Epicor Software Corp	Carmelo J. Santoro	Dr. Santoro became Acting Chief Executive Officer of the Company on April 17, 1994 and Chief Executive Officer in May 1994. Dr. Santoro received a directors fee for service on the Board in lieu of salary. Dr. Santoro resigned as Chief Executive Officer in February 1996, when Mr. Klaus joined the Company.
1996	El Paso Corp	William A. Wise	Mr. Wise's base salary was eliminated and replaced with long-term awards of stock options and restricted stock, the majority of which vest only after the expiration of specified time periods and only if certain performance targets are met within those periods. This change is consistent with Company-wide cost reduction initiatives and is intended to align Mr. Wise's compensation more directly with stockholder value.
1996	Masco Corp	Richard A. Manoogian	Mr. Manoogian's salary and bonus were reduced at his request, effective January 1, 1996, to $1 per year. Mr. Manoogian requested the Compensation Committee of the Board of Directors to implement this reduction to reflect his commitment to enhance stockholder value and his personal disappointment with the Company's stock price performance in recent years
1996	Autonation Inc	H. Wayne Huizenga	Mr. Huizenga is not paid any cash salary or bonus…Compensation Committee believes that tying the remuneration of Messrs. Huizenga and Berrard to the performance of Republic's Common Stock will enhance the long-term performance and stability of Republic by providing Messrs. Huizenga and Berrard the incentive to expand the Company's businesses and bring Republic to increased levels of profitability in future years...provides an incentive to each of them to maximize shareholder value...
1996	L A Gear Inc	Stanley P. Gold	At Mr. Gold's request, he did not receive any salary or other cash compensation during fiscal 1996 for his services as Chief Executive Officer of the Company

1996	CBS Corp (formerly Viacom)	Sumner M. Redstone	Mr. Redstone has waived payment of any salary or bonus compensation for his services as Chief Executive Officer of the Company. A special grant under the 1994 LTMIP of stock options to purchase 1,000,000 shares of Class B Common Stock was awarded to Mr. Redstone in January 1996 to reflect his assumption of additional responsibilities as Chief Executive Officer.
1997	Intl Game Technology	Charles N. Mathewson	As Chief Executive Officer, he receives no base salary. The Committee, based on its subjective evaluation of Mr. Mathewson's performance, granted Mr. Mathewson stock options in February 1996 to acquire 1,000,000 shares of the Company's Common Stock.
1997	Fruit Of The Loom Ltd -CL A	William F. Farley	Mr. Farley elected to forego $950,000 of his salary in 1997, 1998 and 1999 in consideration of the grant of options under the terms of the Executive Equity Investment Program.
1997	Borders Group Inc	Robert F. DiRomualdo	(in 1997/1998/1999) Messrs. DiRomualdo, Mrkonic,... were granted options in lieu of cash payment for 100% of their salary and bonus...FYR 1996, Mr. DiRomualdo, $515,000 salary, $525,300 bonus (100% of bonus used for the purchase of restricted shares);...FYR 1995, Mr. DiRomualdo, Mr. Mrkonic, Mr. Quinnell and Mr. Flanagan elected to forego the payment in cash of all of their 1995 salary earned subsequent to the Company's initial public offering and a portion of their 1996 salary and all of their "on plan" bonus for fiscal 1995 (the maximum portion of the bonus as to which an election was available) and to apply such amounts toward the purchase of restricted shares...Mr. Pfeffer was granted options in lieu of cash for 100% of his compensation.
1997	Netscape Communications Corp	James L. Barksdale	For 1997, Mr. Barksdale elected to receive a salary of $1.00 and to return an option grant of 300,000 shares made in April 1997. Mr. Barksdale believes that his compensation should be linked to the long-term interests of Netscape's stockholders. Accordingly, through his ownership position in Netscape's Common Stock, Mr. Barksdale's pecuniary interests are aligned with those of Netscape's stockholders. For the same reasons, Mr. Barksdale has elected to receive a salary of $1.00 for 1998
1997	Gulfstream Aerospace	Thoedore J. Forstmann	The Company does not have a chief executive officer, but has a five-person Management Committee chaired by Mr. Theodore J. Forstmann, who receives no cash compensation for his services to the Company, and including W.W. Boisture, Jr., Chris A. Davis, James T. Johnson and Bryan T. Moss.
1997	Checkers Drive-In Restaurant	C. Thomas Thompson	C. Thomas Thompson served as Chief Executive Officer from December 17, 1996 to November 9, 1997 and received no compensation for his duties as an officer of the ompany during fiscal year 1997, except for stock options granted to Mr. Thompson in fiscal year 1997 as reported in the table set forth under "Option Grants in Last Fiscal Year."
1998	Apple Inc	Steven P. Jobs	The Compensation Committee recognizes that Mr. Jobs' level of stock ownership significantly aligns his interests with those of the Company's shareholders
1998	Macdermid Inc	Daniel H. Leever	Under the terms of the plan, no base salary was paid to Mr. Leever.
1998	Metaldyne Corp	Frank M. Hennessey	The annual salary and bonus of the Company's Chairman, Richard A.Manoogian, of $573,000, was reduced at his request, effective January 1, 1998, to $1 per year. Frank M. Hennessey, who became the Company's Vice Chairman and CEO in early 1998, also requested that he receive annual salary and bonus of $1 for 1998. The Compensation Committee believes that replacing all of the cash compensation ... with compensation that is tied to the value of Company Common Stock over an extended period of time firmly links the interests of the Company's leaders with those of stockholders... Messrs. Manoogian and Hennessey first requested in 1998 that their salary and bonus be reduced to $1 to demonstrate their commitment to enhance stockholder value and their disappointment with the Company's recent stock price performance...
1998	Pepsico Inc	Roger A. Enrico	At Mr. Enrico's request, the Committee approved a reduction in Mr. Enrico's annual salary from $900,000 to $1, and recommended to the Board of Directors that it consider using the savings to support front line employees(scholarship for children of PepsiCo's sales people, truck drivers, manufacturing plant workers and other front line employees). In January 1999/2000, the Board approved annual charitable contributions of approximately $1,000,000 to fund additional scholarships for children of PepsiCo's front line employees.

1998	Capital One Financial Corp	Richard D. Fairbank	Under a compensation package approved by the Board of Directors on December 18, 1997 (EntrepreneurGrant II), Messrs. Fairbank and Morris agreed to give up their entire salary and all benefits under the Stock Purchase Plan, the Savings Plan and the company's Unfunded Excess Savings Plan (the "Excess Savings Plan") through 2000 in exchange for an award of performance-based options...Under a compensation package approved by the Board of Directors on December 20, 2004, Mr. Fairbank agreed to give up his entire salary and all benefits ...From 1997 through 2008, the compensation structure for the CEO consisted entirely of equity awards (typically stock options) in lieu of any salary, bonus, retirement plan contributions or other traditional forms of compensation. Compensating the CEO in stock options, in lieu of cash compensation, provides a strong alignment between the CEO's financial rewards and the value he delivers to stockholders.
1998	Univision Communications Inc	A. Jerrold Perenchio	Mr. Perenchio serves as CEO without remuneration...A. Jerrold Perenchio and his affiliates beneficially own 100% of the Class P Common Stock, Televisa beneficially owns 100% of the Class T Common Stock, and Venevision beneficially owns 100% of the Class V Common Stock. Mr. Perenchio, Univision's Chairman and Chief Executive Officer, serves without salary, bonus or equity-based compensation. As a significant stockholder and holder of majority voting power, Mr. Perenchio remains highly motivated to increase Univision's stockholder value and to incentivize management to do the same.
1999	Leggett & Platt Inc	Felix E. Wright	includes stock options for 52,118 shares awarded Mr. Wright in lieu of $709,084 of 1999 bonus and 50,294 shares awarded in lieu of $658,614 of 1999 salary and certain other benefits.
1999	ZIX Corp	David P. Cook	Since Mr. Cook's compensation is entirely stock based, his interests are aligned precisely with those of our stockholders. Our Board believed that the employment arrangement was appropriate in light of Mr. Cook's demonstrated prior success in founding and nurturing start-up and development-stage enterprises
1999	AES Corp	Dennis W. Bakke	The Committee decided that, beginning in 1999, Mr. Bakke would no longer receive cash as part of his overall compensation. Mr. Bakke was compensated solely by the grant of stock options (in lieu of a cash salary and cash bonus). The Committee believes that this method of compensation will align Mr. Bakke's compensation more closely with the financial interests of the Company's other shareholders.
1999	Cameron International Corp (formerly Cooper Cameron Corporation)	Sheldon R. Erikson	The Board believes that the future success of the Company is dependent upon the quality and continuity of management, and that compensation programs, such as stock option grants and options in lieu of salary, are important in attracting and retaining individuals of superior ability and in motivating their efforts on behalf of the Company. The Company's options in lieu of salary program allows executive officers and key employees the election to receive stock options in lieu of salary for all or a portion of their annual salary...Mr. Erikson elected to convert the equivalent of one year's base salary to stock options under the Options in Lieu of Salary Program for each of the years from 1995 through 1999 and for the years 2001 and 2002
1999	MarchFirst Inc	Robert F. Bernard	... effective with respect to 1999 compensation, salary and cash bonuses were eliminated, leaving stock options and their associated gains as the sole source of compensation. Without any base salary or bonus paid in cash, the CEO's compensation has been entirely dependent on the creation of incremental market value through setting strategic direction and achieving targeted financial performance
1999	Agribrands International Inc	William P. Stiritz	Prior to our Spin-off from Ralston, it was established that our Chief Executive Officer would receive stock options in lieu of salary for a period of five years. This decision was based on a desire to (1) ensure retention of our Chief Executive Officer for the first five years of operation for the new company, (2) provide appropriate compensation for our Chief Executive Officer without the need for substantial cash outlays, and (3) fully align the interests of our Chief Executive Officer with those of our shareholders.

1999	Washington Group International Inc	Dennis R. Washington	In lieu of salary, Mr. Washington was awarded an option as of April 8, 1999, to purchase 2,000,000 shares
2000	Kinder Morgan Inc	Richard D. Kinder	Mr. Kinder, at his initiative, accepted a salary of $1 per year to demonstrate his belief in our long term viability.
2000	Oracle Corp	Lawrence J. Ellison	CEO's compensation plan for fiscal year 2000-2003 consists of no salary and no bonus. Instead, during fiscal year 2000, on June 4, 1999, he was granted an option to purchase 10,000,000 shares of the Company's Common Stock (40,000,000 shares as adjusted for the Company's two 2-for-1 stock splits effective January 18, 2000 and October 12, 2000) at the fair market value at the time of grant. The option vests in equal installments over a period of four years and expires ten years from the date of grant... The changes to the Chief Executive Officer's compensation plan more closely align his compensation with the Company's stock performance...[The Chief Executive Officer's compensation plan is intended more closely to align his compensation with the performance of our Common Stock.(Oracle website)]
2000	Conseco Inc	Gary C. Wendt	For the first two years of his employment agreement Mr. Wendt is entitled to receive no salary...[The Compensation Committee seeks to align the interests of senior executive management with the interests of shareholders by providing for a substantial portion of the compensation paid to such officers to be tied directly to the financial results of the Company and the performance of the Common Stock. (LexisNexis)]
2000	Discount Auto Parts Inc	Peter J. Fontaine	Mr. Fontaine was initially granted a base salary of $192,400 for fiscal 2000, which was unchanged from his base salary for fiscal 1999... Effective July 8, 1999, however, Mr. Fontaine, in consultation with the Compensation Committee, elected to eliminate any base salary and to be compensated solely through the annual bonus.
2000	Extended Stay America Inc	George D. Johnson, Jr.	The Company does not pay Mr. Johnson any cash salary or bonus but rather compensates him exclusively through stock option grants. We believe that tying Mr. Johnson's remuneration to the performance of the Company's Common Stock will motivate Mr. Johnson to maximize stockholder value and is consistent with our policy of compensating the Company's senior executives, like Messrs. Huizenga and Johnson, primarily through annual stock option grants.
2001	Plains Resources Inc	James C. Flores	Pursuant to his employment agreement, Mr. Flores received, in lieu of base salary, an option under our 2001 plan to purchase 1,000,000 shares of our common stock at an exercise price of $23.00 per share
2001	Siebel Systems Inc	Thomas M. Siebel	The salaries of certain of our executives were reduced by 20% in April 2001 as part of our cost control initiatives. Effective January 1, 2003, the salaries of these executives were returned to the levels prior to the reduction in April 2001. In addition, the salary of Mr. Siebel was reduced to $1 at his request in January 2001 as part of our cost control initiatives, and remained at that level for the next three years. Effective January 1, 2004, Mr. Siebel's salary was restored to $1,000,000
2001	Helix Energy Solutions Group (formerly Cal Dive International)	Owen Kratz	During 2000, the Board of Directors approved a "Stock Option in Lieu of Salary Program" for Mr. Kratz. Under the terms of the program, Mr. Kratz may annually elect to receive non-qualified stock options (with an exercise price equal to the closing stock price on the date of grant) in lieu of cash compensation with respect to his base salary and any bonus earned under the annual incentive compensation program....the Committee believes the executive officer compensation program provides incentive to attain strong financial performance and is strongly aligned with shareholder interests...For 2003, Mr. Kratz has elected to take his salary and bonus (if any) in cash, rather than receiving non-qualified stock options.
2002	Bank Of Hawaii Corp	Michael E. O'Neill	Mr. O'Neill serves as Chairman and CEO of the Company pursuant to a written employment agreement effective as of November 3, 2000. The agreement includes a base salary of $900,000, subject to annual review ...To ease the expense burden of the Company... Mr. O'Neill elected to waive his base salary and any bonus for 2002 and 2003.

2002	Ford Motor Co	William Clay Ford, Jr.	at Mr. Ford's request, the Committee and Mr. Ford agreed that Mr. Ford would forego any new compensation (including salary, bonus, or other awards) until such time as the Committee and Mr. Ford determine that our Automotive sector has achieved sustained profitability. [The great-grandson of company founder Henry Ford has said he won't accept a cash salary this year as the automaker tries to restore profit. (LexisNexis)]
2002	Lilly (Eli) & Co	Sidney Taurel	In light of the reduction in the company's Prozac sales, Mr. Taurel voluntarily reduced his base salary to $1.00 for the year 2002. The company did not offset this reduction in salary by any additional compensation but provided a benefits allowance to preserve his employee benefits at their normal level. Mr. Taurel requested this reduction to demonstrate his confidence in the company's future results and to set an example for employees. ["Since I'm asking sacrifices of everyone," he said. "I thought I should provide an example." (LexisNexis)]
2002	COGNEX Corp	Robert J. Shillman	Mr. Shillman elected to forego his 2002 (/2003) base salary due to the slowdown in the Corporation's business... Dr. Shillman elected to forgo both his base compensation for 2004 of $350,000, which represented an increase of approximately 7.7% over 2003, as well as his annual bonus of $336,000... Dr. Shillman elected to forgo both his base compensation for fiscal 2005 of $350,000, which represented an increase of 0% over 2004, as well as his annual bonus of $181,650, and requested that the Corporation donate his 2005 bonus to a public charity ... Dr. Shillman elected to forgo his base salary of $350,000 in 2008, 2007 and 2006, as well as his annual bonus of $44,100, $52,500 and $130,200 in 2008, 2007 and 2006, respectively, and, as requested by him, we donated these amounts to a public charity. Although these amounts were donated, they are included in the amount shown in the "Total Compensation" column
2002	Cisco Systems Inc	John T. Chambers	On April 1, 2001, Mr. Chambers requested that his base salary be lowered to a rate of $1.00 annually(until the recognition of a recovery in Cisco's performance). On May 11, 2001, the Committee agreed to honor this request until such a time as the Committee deems it appropriate to return Mr. Chambers' base salary to a market competitive level. For fiscal year 2002 Mr. Chambers' base salary remained at $1.00.
2002	Franklin Covey Co	Robert A. Whitman	The agreement has an initial term expiring August 31, 2007, and provides for an annual base salary of $500,000...Mr. Whitman has voluntarily not taken his base salary or bonus compensation since May 2001... In June 2001, Mr. Whitman asked the Committee to discontinue paying his salary and annual incentives until the Company's performance improves.
2003	Micron Technology Inc	Steven R. Appleton	In June of 2001 base salaries of Company officers were reduced by ten percent as a result of industry conditions and Company performance. Similarly, in October of 2001, base salaries for Company officers were reduced by an additional ten percent. At the time of the second reduction, Mr. Appleton reduced his base salary to $0 until the Company returned to profitability.
2003	Bombay Co Inc	James D. Carreker	Pursuant to his employment agreement, he was entitled to receive a base salary of $600,000 or, if he elected to receive his base salary in the form of restricted stock vesting in full at the end of three years, he was entitled to a grant of restricted stock valued at 1.25 times base salary. He elected to take stock and was granted 81,256 shares. At January 30, 2004, the shares had a value of $611,858. Similar elections may be made each year on or about the anniversary date of Mr. Carreker's appointment.
2004	CPI Corp	David M. Meyer	Mr. Meyer's compensation reflects the Company's commitment to aligning executive compensation with stockholder value.
2004	Duke Energy Corp	Paul M. Anderson	When Anderson returned, he decided to pass up a salary as a sign of his confidence in the company, opting instead to be paid only in Duke stock.

2004	USANA Health Sciences Inc	Myron W. Wentz	The Company's Founder and Chairman, Dr. Myron W. Wentz, has also served with the title of Chief Executive Officer of USANA since its inception. Dr. Wentz does not receive any compensation for his services and he has in the past declined to accept any options or other awards under any stock option or stock incentive plan that he might otherwise have been entitled to receive as an executive officer.
2005	Fossil Inc	Kosta N. Kartsotis	For 2005, the CEO requested that he receive no salary... Based upon a consideration of these factors, the Compensation Committee determined that the compensation level proposed by the CEO was well below the market median. However, in light of the request by the CEO, a 2005 salary level of $0 was approved. The CEO did not receive any grants of stock options in 2005...For 2006/2007/2008, Mr. Kartsotis refused all forms of compensation for fiscal 2006. Mr. Kartsotis is one of the initial investors in our Company and expressed his belief that his primary compensation is met by continuing to drive stock price growth
2005	Google Inc	Eric E. Schmidt	We view named executive officer base salaries as a tool that provides executives with a reasonable base level of monthly income relative to the jobs they are doing and market-competitive salaries. In 2004, Eric, Sergey and Larry requested that their salaries each be reduced to $1 per year. However, due their strong leadership and Google's strong overall performance, we offered each of them market-competitive salaries at the beginning of each of 2005-now. Due to their own preferences not to receive salary compensation, Eric, Sergey and Larry each rejected these offers and continue to receive base salaries of $1... we increased executive officer cash compensation levels for 2007, other than for Eric, Larry and Sergey, to better reflect the competitive opportunities that Google executives have and help attract and retain senior-level executives

Appendix B

List of Variables

"$1 CEO": dummy variable that equals 1 if the CEO earns a dollar-a-year (or less) salary, and zero otherwise.

"# years as a prior director (and/ or executive)": number of years as a board director (and/ or executive) prior to becoming a $1 CEO (Source: Bloomberg).

"All other total": compensation that does not belong under other categories, which includes items such as: (1) Severance payments, (2) Debt forgiveness, (3) Imputed interest, (4) Payouts for cancellation of stock options, (5) Payment for unused vacation, (6) Tax reimbursements, (7) Signing bonuses, (8) 401K contributions, (9) Life insurance premiums (Source: Execucomp).

"Alpha": intercept of the market model estimated over the three-year period using daily returns (Source: CRSP).

"Assets growth (3 years)": 3-year average of the annual growth rate of assets (Source: Compustat).

"Beta": *beta* coefficient estimated from the market model based on stock daily returns over an entire fiscal year.

"Board size": total number of directors that compound the board (Source: IRRC).

"Bonus": the dollar value of a bonus earned by the named executive officer during the fiscal year (Source: Execucomp)

"Cautious"/ "Confident" (# articles in the press): number of articles about the CEO published in a variety of sources: the main financial press (Wall Street Journal, Financial Times, Business Week, and The Economist), online financial news (PR News Wire and Business Wire), and the regular press (NY Times, Washington Post, Boston Globe, USA Today, The Times, The Guardian, and The Independent). An article is classified as "confident" when it mentions the CEO as using the words "confident", "optimistic", "confidence" or "optimism"; and it is classified as "cautious" when the CEO uses the words "reliable", "practical", "conservative", "frugal", or "steady". This methodology is based on Malmendier and Tate (2005).

"CEO Age": age of the CEO measured in years (Source: IRRC).

"Change in capex (-1, +2)": relative change in capital expenditures from one year before the CEO earns $1 salary to two years after (Source: Compustat).

"Come-back CEO": dummy variable that equals 1 if the CEO was re-hired as a CEO by the company, and zero otherwise (Source: Execucomp).

"Continue as a CEO": dummy variable that identifies whether the CEO kept his job after the last year he received $1 salary (Source: Execucomp).

"Coverage ratio": operating income after depr./ interest expenses (Source: Compustat).

"Delta" is the dollar change in the CEO stock and option holdings for a 1% change in the stock price (Source: CRSP/ Execucomp).

"Dividend payout": total dividends/ net income (Source: Compustat).

"Dividend yield": dividends per share/ stock price (fiscal year-end; close) (Source: CRSP).

"Duality": dummy variable that equals 1 if the CEO is also the chairman, and zero otherwise (Source: IRRC).

"Education": four dummy variables that identify whether the CEO has a PhD, Graduate (MBA, Master), College, or High School education (Source: Hoovers and Bloomberg).

"FCF/ Total assets": free cash flow/ total assets, where "free cash flow" = net income – capital expenditures – changes in working capital + depr. and amortizations (Source: Compustat).

"First-time CEO": dummy variable that equals 1 if the CEO became a CEO in the year he starts earning $1, and zero otherwise (Source: Bloomberg).

"First-time CEO with any prior appoint.": identifies first-time CEOs with prior appointments as director and/ or executives (Source: Bloomberg).

"First-time CEO with prior directorship": dummy variable that equals 1 if the CEO simultaneously is a "first-time CEO" and had a prior appointment as a board director (Source: Bloomberg).

"Forbes": dummy variable that equals 1 if the CEO is in the Forbes 400 list of wealthy people, and zero otherwise (Source: Forbes Magazine).

"Founder": dummy variable that identifies whether the CEO is a founder of the company (Source: Compact Disclosure).

"Gain from stockholdings" = (# shares held by the CEO*stock price at the beginning of the fiscal year)*annual stock return (Source: Execucomp/ CRSP).

"Gender": dummy variable that equals 1 if the CEO is a female, and zero otherwise (Source: IRRC).

"G-Index" and "E-index" are, respectively, the Gompers, Ishii, and Metrick (2003) and Bebchuk, Cohen, and Ferrell (2005) corporate governance indexes.

"Idiosyncratic risk": natural log of the annualized variance of the residuals from the market model (estimated for every fiscal year). The market model is estimated with five leads and five lags of CRSP value-weighted daily returns (Source: CRSP).

"Independent committee": dummy variable that equals one if all the compensation committee members are independent; and zero otherwise.

"Institutional ownership": percentage of stock held by institutions, as reported by as of the fiscal-year end (Source: Thomson Financial 13-F).

"Lambda": inverse Mills ratio to correct for potential sample bias.

"Leverage": total liabilities/ total assets (Source: Compustat).

"LT abnormal ret": three-year cumulative return on the stock minus the three-year cumulative return on the CRSP VW index (Source: CRSP).

"LT CAR": the sum, over a three-year period, of the difference between stock daily returns and the daily return on CRSP VW index (Source: CRSP).

"LTIP payouts": amount paid out to the executive under the company's long-term incentive plan. These plans measure company performance over a period of more than one year (generally three years). (Source: Execucomp).

"Market-to-book": market value of equity/ book value of equity, winsorized at the 1% and 99% percentiles (Source: Compustat/ CRSP).

"Market value": the sum of total liabilities plus the market value of equity (shares outstanding*stock price) at the fiscal year-end. In $MM, adjusted to reflect 2005 prices (Source: CRSP/ Compustat).

"Non-firm CEO wealth": estimate of CEO non-firm wealth used in Dittmann and Maug (2007), calculated by cumulating all historical cash inflows and outflows as documented in Execucomp.

"Option grants": value of option-related awards (e.g. options, stock appreciation rights, and other instruments with option-like features). Valuation is based upon the value of options that vested during the year as detailed in FAS123R. The amount here is the cost recorded by the company on its income statement as well as any amounts that were capitalized on the balance sheet for the fiscal year. It discloses the cost that was charged to the company (and thus to shareholders) for the year, as distinct from the grant date fair value of the awards (Source: Execucomp).

"Options exercised": value realized from option exercises during the year. This value is calculated as of the date of exercise and is based on the difference between the exercise price and the market price of the stock on the exercise date (Source: Execucomp).

"Other annual": the dollar value of other annual compensation not properly categorized as salary or bonus. This includes items such as: (1) Perquisites and other personal benefits, (2) Above market earnings on restricted stock, options/SARs or deferred compensation paid during the year but deferred by the office, (3) Earnings on long-term incentive plan compensation paid during the year but deferred at the election of the officer, (4) Tax reimbursements, (5) The dollar value of difference between the price paid by the officer for company stock and the actual market

price of the stock under a stock purchase plan that is not generally available to shareholders or employees of the company (Note: This does not include value realized from exercising stock options). (Source: Execucomp). "Percentage held by top-five institutions": the sum of the five largest institutional holdings (Source: Thomson Financial 13-F).

"Prct independents": total number of directors that are not employees or affiliated to the firm / board size (Source: IRRC).

"Prct of shares owned by the CEO": number of shares held by the CEO divided by the total shares outstanding (in %). (Source: Execucomp).

"Presence of an inst. blockholder" is a dummy variable that equals 1 if the firm has an institutional shareholder holding more than 5% of the company stock, and zero otherwise (Source: Thomson Financial 13-F).

"Presence of blockholder (comp. committee)": dummy variable that equals 1 if at least one of the compensation committee members is a blockholder with the total voting power larger than one percent.

"Restricted stock grants": value of restricted stock granted during the year (determined as of the date of the grant). (Source: Execucomp).

"Risk changes": variables under this category are computed as the difference between the three-year average of each annual risk measure after the first year the CEO earns $1(or less), minus the three-year average of the same annual risk measure before the first year the CEO earns $1. Risk changes are measured in terms of "Total Risk", "Systematic Risk", and "Idiosyncratic Risk".

"ROA": net income/ total assets (Source: Compustat). Note: in the probit regressions it is used a 3-year average of ROA prior to the year of $1 salary.

"Salary": the dollar value of the base salary earned by the named executive officer during the fiscal year (Source: Execucomp).

"Sales growth (3 years)": 3-year average of the annual growth rate of sales, winsorized at 1% and 99% levels (Source: Compustat).

"Systematic risk": natural log of the annualized variance of the product between beta and the daily market return (CRSP value-weighted index) over an entire fiscal year (Source: CRSP).

"Tenure as CEO": number of years as a CEO (Source: Execucomp).

"Tenure with the firm": number of years the CEO works for the firm (Source: Execucomp).

"Tobin's Q" = (total assets – total equity + market value of equity)/total assets) as of the fiscal-year end, winsorized at the 1% and 99% percentiles (Source: CRSP/ Compustat).

"Top tercile - Value of CEO shares": dummy variable that equals 1 if the value of the CEO stockholdings is in the top tercile of both sample and control firms, and zero otherwise (Source: Execucomp).

"Total assets": value of total assets ($MM) as of the fiscal-year end (Source: Compustat).

"Total compensation:" Salary + Bonus, + Other Annual + Total Value of Restricted Stock Granted + Long-Term Incentive Payouts + All Other Total (Source: Execucomp).

"Total Compensation Incl Options Exercised": Salary + Bonus, + Other Annual + Total Value of Restricted Stock Granted + Value Realized From Option Exercises during the year + Long-Term Incentive Payouts + All Other Total (Source: Execucomp, definition TDC2).

"Total Compensation Incl Option Grants": Salary + Bonus, + Other Annual + Total Value of Restricted Stock Granted + Total value of Options Granted (using Black-Scholes) + Long-Term Incentive Payouts + All Other Total (Source: Execucomp, definition TDC1).

"Total current compensation": Current compensation, or SALARY + BONUS (Source: Execucomp, definition TCC).

"Total options" = options granted + unexercised exercisable options + unexercised unexercisable options (Source: Execucomp).

"Total risk": natural log of the annualized variance of daily returns of an entire fiscal year (Source: CRSP).

"Vega" is the dollar change in the CEO option holdings for a 1% change in the stock volatility (Source: CRSP/ Execucomp).

"Volatility": past 60-month standard deviation of stock returns.

"Z-score" = 0.33*EBIT/total assets + 0.999*net sales/total assets + 0.6*Mkt value of equity/total liabilities + 1.2*working capital/total assets + 1.4*retained earnings/total assets (Source: Compustat).

Note: all variables expressed in US$ are adjusted to reflect 2005 prices.

Table 1: Proxy Information on $1 CEOs, 1992-2005

"Sample firms" are not repeated: whenever the CEO of a "sample firm" earns a $1 (or less) salary for more than 1 consecutive year, only the first year is considered. Panel A shows the reasons for adopting a $1CEO salary, Panel B show other forms of compensation earned by the CEOs of sample firms, and Panel C shows how many of the sample CEOs are first-time CEOs and in how many cases the CEO appointment is simultaneous to the $1 salary arrangement.

Panel A: Reason for adoption of $1 salaries (out of 50 sample firms)

Reason	N	%
No reason cited	19	38%

No. of times the reason was cited by the remaining 31 firms (62% of sample), incl. repetitions:

	N	%
To align interests of CEO and shareholders	20	40%
To reduce costs/ aid in recovery	12	24%
To convey CEO's confidence in future	3	6%
To fund CEO's preferred charitable cause	2	4%
To attract superior executive (i.e., the CEO)	1	2%
To share at the top in sacrifice towards recovery	1	2%

Panel B: Non-salary form of compensation (out of 50 sample firms)

Non-salary forms of compensation	N	%
Bonus awards	6	12%
Options	35	70%
Equity-based awards	39	78%
Explicit statement that equity-based compensation are *in lieu* of salary	19	38%
Automatic gain as major stockholder (holdings > 5% of outst. stock)	25	50%

Panel C: Appointment of $1 salary CEO (out of 50 sample firms)

Appointment of $1 salary CEOs	N	%
Simultaneous appointment as CEO with a $1 salary arrangement	23	46%

43

Table 2: Incidence of $1 CEOs

Panel A shows the number and percentage of total and new cases per year of CEOs that were paid a $1 (or less) salary. It also shows the distribution of new cases according to the exchange on which they are listed. Panel B shows the frequency and selected descriptive statistics of the number of consecutive years the CEO earns $1. Panel C shows the incidence of cases per industry.

Panel A: Incidence of $1 salary CEOs: all cases, new cases, by exchange and year

Year	exchange			Total New cases	New cases (%)	All cases	All cases (%)
	NYSE	Nasdaq	OTC				
1992	1	0	0	1	2.00	1	0.74
1993	2	0	0	2	4.00	3	2.21
1994	1	0	0	1	2.00	3	2.21
1995	0	1	0	1	2.00	3	2.21
1996	5	0	0	5	10.00	7	5.15
1997	4	2	0	6	12.00	11	8.09
1998	4	1	1	6	12.00	14	10.29
1999	5	2	0	7	14.00	17	12.50
2000	4	1	0	5	10.00	13	9.56
2001	1	2	0	3	6.00	13	9.56
2002	4	2	0	6	12.00	16	11.76
2003	2	0	0	2	4.00	14	10.29
2004	2	1	0	3	6.00	11	8.09
2005	0	2	0	2	4.00	10	7.35
Total	*35*	*14*	*1*	*50*	*100*	*136*	*100*

Panel B: Number of consecutive years the CEO earns a $1 salary

Mean	Media	Max	Min
2.7	2	8	1

Number of consecutive years of $1 salary	Frequency
1	16
2	13
3	10
4	5
5	1
6	1
8	4

*Panel C: **Incidence by industry (only new cases, no repeated firms)***

	# Industries	Industry Names
1 FIRM	46	VARIOUS
2 FIRMS	3	NATURAL GAS TRANSMISSION
		PHARMACEUTICAL
		TELEVISION BROADCAST
5 FIRMS	1	PREPACKAGED SOFTWARE

Table 3: CEO profile

"Sample firms" are not repeated: whenever the CEO of a "sample firm" earns a $1 (or less) salary for more than 1 consecutive year, only the first year is considered. Control firms are from the CRSP universe, matched with sample firms by 4-digit SIC codes and year. The variables in this table characterize the CEO profile. All variables are defined in **Appendix B**. The last two columns show t-stats and Wilcoxon-stats from the tests of equality of means and medians, respectively. *, **, *** stand for statistical significance at 10%, 5%, and 1%, respectively.

Panel A: Personal Characteristics

Variables	Sample firms				Control firms				Sample - Controls	
	Mean	N	50th Pctl	Std Dev	Mean	N	50th Pctl	Std Dev	t-stats means	Wilcoxon medians
CEO Age	54.1	50	53.5	7.941	52.9	243	53	7.856	1.01	0.66
Gender (% of female CEOs)	0.00%	0			0.41%	1			-1.00	
Education:										
PhD	20.00%	10			14.63%	36			0.87	
Graduate (MBA, Master)	32.00%	16			31.71%	78			0.04	
College	28.00%	14			28.46%	70			-0.06	
High School	6.00%	3			1.22%	3			1.38	
Unknown	14.00%	7			23.98%	59			-1.76*	
"Cautious" (# articles in the press)	0.26	50	0.00	0.69	0.35	246	0.00	0.84	-0.77	-0.67
"Confident" (# articles in the press)	0.98	50	0.50	1.38	0.55	246	0.00	0.86	2.88***	2.17**
Total observations		50				246				

Panel B: Indicators of personal wealth

Variables	Sample firms				Control firms				Sample - Controls	
	Mean	N	50th Pctl	Std Dev	Mean	N	50th Pctl	Std Dev	t-stats means	Wilcoxon medians
Forbes	30.00%	15			4.47%	11			3.82***	
Value of CEO shares - top tercile	68.00%	34			30.08%	74			5.21***	
Value of CEO shares - top quintile	40.00%	20			17.48%	43			3.04***	
Forbes and/or Value of CEO shr - top tercile	76.00%	38			31.30%	77			6.59***	
Non-firm CEO wealth ($ MM)	49.52	36	3.71	175.99	184.65	207	6.28	1790.45	-0.45	-1.50
Total observations		50				246				

Panel C: History with the firm

Variables	Sample firms				Control firms				Sample - Controls	
	Mean	N	50th Pctl	Std Dev	Mean	N	50th Pctl	Std Dev	t-stats	Wilcoxon
Tenure as CEO (years)	2.60	50	1.0	2.416	4.07	246	3.0	2.688	-3.84***	-4.26***
Tenure with the firm (years)	9.05	50	3.7	11.575	9.88	246	7.1	9.215	-0.48	-1.99**
Founder	18.00%	9			17.07%	42			0.15	
Come-back CEO	4.00%	2			2.44%	6			0.53	
First-time CEO	46.00%	23			19.92%	49			4.12***	
First-time CEO with prior directorship	10.00%	5			10.98%	27			-0.42	
First-time CEO with any prior appointment	26.00%	13			13.41%	33			2.32***	
# Years as a prior director	6.44	34	4.50	6.14	7.96	218	6.00	7.55	-1.3	-1.07
# Years as a prior director and/or executive	9.91	34	6.50	9.56	11.40	220	10.00	9.09	-0.85	-1.13
Continue as CEO	48.00%	24			54.07%	133			1.24	
Prct shares owned by the CEO	10.09%	47	3.75%	12.57	3.21%	216	1.15%	6.61	3.64***	5.06***
Total observations		50				246				

Table 4: Firms characteristics (sample versus control firms)

"Sample firms" are not repeated: whenever the CEO of a "sample firm" earns a $1 (or less) salary for more than 1 consecutive year, only the first year is considered. Control firms are from the CRSP universe, matched with sample firms by 4-digit SIC codes and year. Accounting variables are from Compustat as of the end of the respective fiscal year. Stock price data are from CRSP. Variables expressed in dollars are adjusted to reflect 2005 prices. All variables are defined in **Appendix B**. The last two columns show t-stats and Wilcoxon-stats from the tests of equality of means and medians, respectively. *, **, *** stand for statistical significance at 10%, 5%, and 1%, respectively.

| | Variables | Sample Firms | | | Control Firms | | | Sample - Controls | |
		Mean	N	50th Pctl	Mean	N	50th Pctl	t-stats means	Wilcoxon medians
Size	Total assets ($MM)	14,459.27	50	1,830.45	10,843.36	246	2,005.28	0.69	-0.31
	Market value ($MM)	26,576.86	50	4,173.04	24,221.61	245	5,268.34	0.23	-0.79
Growth	Tobin's Q	2.880	47	1.865	3.301	244	1.667	-0.74	-0.14
	Sales growth (3 years)	0.492	50	0.149	0.226	246	0.134	3.23***	0.36
	Assets growth (3 years)	0.740	50	0.130	0.386	246	0.174	1.92*	-1.15
	Change capex (-1, +2)	1.580	36	0.427	0.497	176	0.050	2.17*	1.52
	Past sales/assets growth	0.055	47	-0.022	-0.026	244	-0.042	2.56**	0.97
Risk changes	Total Risk	-0.135	48	-0.089	-0.115	245	-0.031	-0.14	-0.11
	Systematic Risk	0.137	48	-0.056	0.155	245	0.223	-0.12	-0.36
	Idiosyncratic risk	-0.197	48	-0.097	-0.219	245	-0.179	0.16	0.21
Betas and volatility	Avg. beta (ex-ante)	1.182	48	1.187	1.300	246	1.225	-0.99	-0.68
	Avg. beta (ex-post)	1.209	49	1.083	1.351	245	1.184	-1.00	-1.46
	Change in beta	0.021	48	-0.206	0.058	245	0.108	-0.30	-1.60
	Volatility	0.491	49	0.439	0.526	235	0.498	-0.90	-0.30
Capital Structure	Leverage	0.566	50	0.565	0.504	245	0.495	1.58	1.63
	Change in leverage	0.013	50	0.009	0.011	245	-0.001	0.11	0.00
	Coverage ratio	78.96	43	2.73	280.62	170	2.96	-0.46	-0.08
	Z-score	8.814	46	3.122	11.010	216	4.053	-0.50	-1.16
Past performance (three years)	ROA	0.020	50	0.030	0.042	246	0.038	-1.40	-1.48
	LT abnormal ret	2.012	49	-0.063	0.685	246	-0.016	1.96*	0.58
	LT CAR	0.542	49	0.194	0.464	246	0.319	0.50	-0.23
	Alpha (10^3)	0.644	48	0.412	0.648	246	0.420	-0.02	-0.56
Dividends & Cash	Cash/ Total assets	0.123	50	0.078	0.130	239	0.092	-0.34	-0.54
	FCF/ Total assets	-0.036	30	-0.011	-0.023	136	-0.022	-0.33	-0.52
	Dividend yield	0.007	50	0.000	0.012	246	0.000	-1.64	-1.18
	Dividend payout	0.140	37	0.000	0.137	202	0.000	0.04	-0.90

Table 5: Corporate Governance

"Sample firms" are not repeated: whenever the CEO of a "sample firm" earns a $1 (or less) salary for more than 1 consecutive year, only the first year is considered. Control firms are from the CRSP universe, matched with sample firms by 4-digit SIC codes and year. Except from institutional ownership, data come from IRRC. All variables are defined in **Appendix B**. Whenever data on sample firms were missing we attempted to obtain it manually from Proxy Statements. The last two columns show t-stats and Wilcoxon-stats from the tests of equality of means and medians, respectively. *, **, *** stand for statistical significance at 10%, 5%, and 1%, respectively.

Variables	Sample firms				Control firms				Sample - Controls	
	Mean	N	50th Pctl	Std Dev	Mean	N	50th Pctl	Std Dev	t-stats means	Wilcoxon medians
Board										
Size	8.83	47	8.00	3.17	8.84	243	8.00	3.13	-0.02	-0.03
Number of independents	5.32	47	5.00	2.70	5.84	243	5.00	2.91	-1.13	-0.62
Prct independents	59.05%	47	62.50%	0.19	64.53%	243	66.67%	0.16	-2.10**	-1.61
Duality (% of CEOs that are also chairman)	74.47%	47	1.00	0.44	65.02%	243	1.00	0.48	1.26	1.25
Owbership										
Prct of shares owned by the CEO	10.09%	47	3.75%	12.57	3.21%	216	1.15%	6.61	5.34***	5.06***
Institutional ownership	53.30%	50	56.27%	0.21	61.19%	246	62.07%	0.18	-2.78**	-2.13**
Presence of an inst. blockholder	84.00%	50	1.00	0.37	88.62%	246	1.00	0.32	-0.91	-0.91
Anti-takeover protection										
G-index	8.20	30	8.00	2.85	8.54	210	8.00	2.57	-0.67	-0.61
E-index	1.80	30	1.00	1.54	1.90	210	2.00	1.29	-0.37	-0.58
Compensation Committee										
Independent committee	34.00%	50	0.00	0.48	67.48%	246	1.00	0.47	-4.52***	
Presence of a blockholder	2.00%	50	0.00	0.14	6.10%	246	0.00	0.24	-1.63	

Table 6: Compensation variables

"Sample firms" are not repeated: whenever the CEO of a "sample firm" earns a $1 (or less) salary for more than 1 consecutive year, only the first year is considered. Control firms are from the CRSP universe, matched with sample firms by 4-digit SIC codes and year. All variables are adjusted to reflect 2005 prices. For definitions see **Appendix B**. The last two columns of Panel A show t-stats and Wilcoxon-stats from the tests of equality of means and medians, respectively. Panel B shows intertemporal changes in CEO compensation variables: (a) first year of $1 CEO salary minus the previous year and (b) year after minus last year of $1 CEO salary. *, **, *** stand for statistical significance at 10%, 5%, and 1%, respectively.

Variables	Sample firms				Control firms				Sample - Controls	
	Mean	N	50th Pctl	Std Dev	Mean	N	50th Pctl	Std Dev	t-stats means	Wilcoxon medians
Salary ($Thous)	0.00	50	0.00	0.00	673.59	246	610.44	349.45	13.61***	-11.14***
Bonus ($Thous)	161.49	50	0.00	468.33	695.70	246	438.07	1,265.63	-2.91***	-6.87***
Total Current Compensation	161.49	50	0.00	468.33	1,369.30	246	1,082.24	1,428.97	-5.91***	-9.68***
Other Annual ($Thous)	60.51	50	0.00	182.78	39.68	246	0.00	199.43	0.68	0.36
Restricted Stock Grants ($Thous)	763.89	50	0.00	3,960.36	516.00	246	0.00	2,058.09	0.64	-1.01
LTIP Payouts ($Thous)	64.55	50	0.00	348.75	366.99	246	0.00	2,548.53	-0.84	-1.95*
All Other Total ($Thous)	1,157.29	50	0.00	7,363.22	252.08	246	12.32	1,338.98	1.80*	-4.77***
Total Compensation	2,207.73	50	25.87	11,284.48	2,544.06	246	1,288.48	4,649.56	-0.35	-7.81***
Gain from stock holdings ($Thous)	76,594.18	40	2,078.08	607,561.65	112,578.11	230	182.75	1,528,834.41	-0.15	1.48
Option Grants ($Thous)	12,675.56	50	3,349.17	38,970.58	5,853.02	246	1,343.12	13,914.75	2.16**	0.92
Total Comp. plus gain from stk. holdings	77,241.56	40	2,583.01	607,513.69	114,803.49	230	2,296.41	1,528,740.67	-0.15	0.42
Total Compensation Incl Option Grants	14,883.30	50	4,465.69	41,439.21	8,397.07	246	3,680.78	14,954.21	1.92*	1.11

Table 7: Regressions of total compensation

The observations used in these regressions include "sample firms" and "control firms". "Sample firms" are those which CEO earns a salary of $1 (or less). "Sample firms" are not repeated: whenever The CEO earns $1 (or less) for more than one consecutive year, only the first year is considered. "Control firms" are from CRSP universe, matched with sample firms by 4-digit SIC codes and year. The table shows OLS regressions of total compensation. Variables expressed in dollars are adjusted to reflect 2005 prices. All variables are defined in **Appendix B**. White-robust t-stats (absolute value) are shown in parenthesis. *, **, and *** stand for statistical significance at 10%, 5%, and 1%, respectively.

	Log total compensation		Log total compensation incl.	
	(1)	(2)	(3)	(4)
Log of total assets (t-1)	0.131	0.230***	0.275***	0.243***
	(1.19)	(2.86)	(2.90)	(4.06)
ROA (past 3-year avg.)	2.562	2.717*	2.341*	2.525**
	(1.57)	(1.73)	(1.97)	(2.12)
Total risk (t-1)	-0.349**		0.269*	
	(2.21)		(1.83)	
Beta (t-1)		-0.150		0.368***
		(0.97)		(2.98)
$1 CEO	-3.321***	-3.335***	-1.053*	-0.967
	(4.25)	(4.16)	(1.67)	(1.57)
Constant	8.823***	5.546***	3.910**	5.760***
	(4.36)	(7.14)	(2.18)	(10.49)
Observations	279	279	289	289
R-squared	0.33	0.31	0.08	0.09

Table 8: Probit regressions – "Alignment Hypothesis"

The observations used in these regressions include "sample firms" and "control firms". "Sample firms" are those which CEO earns a salary of $1 (or less). "Sample firms" are not repeated: whenever The CEO earns $1 (or less) for more than one consecutive year, only the first year is considered. "Control firms" are from CRSP universe, matched with sample firms by 4-digit SIC codes and year. The dependent variable is a dummy variable that equals 1 when the CEO earns a salary of $1 (or less), and 0 otherwise. All variables are defined in **Appendix B**. "Delta" and "Vega" are measured in 10^5. The table reports marginal effects of the probit regressions. White-robust t-stats (absolute value) are shown in parenthesis. *, **, and *** stand for statistical significance at 10%, 5%, and 1%, respectively.

	(1)	(2)	(3)	(4)
Log total assets (t-1)	-0.018	0.008		
	(0.85)	(0.42)		
FCF/ Total assets (t-1)	-0.044	-0.014		
	(0.26)	(0.10)		
Leverage (t-1)	0.027	-0.071		
	(0.18)	(0.53)		
Delta (t-1)		-0.019		
		(0.53)		
Market-to-book (t-1)			-0.006	-0.005
			(1.08)	(0.93)
Total options (t-1)			0.030**	0.022
			(2.53)	(1.46)
Volatility (t-5:t-1)			-0.055	-0.061
			(0.71)	(0.75)
Vega (t-1)				4.093
				(0.58)
Observations	166	135	258	243
Pseudo R-squared	0.01	0.00	0.03	0.03
Actual Prob.	0.14	0.09	0.14	0.14

Table 9: Probit regressions – "Signaling" and "Managerial Power" hypotheses

The observations used in these regressions include "sample firms" and "control firms". "Sample firms" are those which CEO earns a salary of $1 (or less). "Sample firms" are not repeated: whenever The CEO earns $1 (or less) for more than one consecutive year, only the first year is considered. "Control firms" are from CRSP universe, matched with sample firms by 4-digit SIC codes and year. The dependent variable is a dummy variable that equals 1 when the CEO earns a salary of $1 (or less), and 0 otherwise. All variables are defined in **Appendix B**. The table reports marginal effects of the probit regressions. White-robust t-stats (absolute value) are shown in parenthesis. *, **, and *** stand for statistical significance at 10%, 5%, and 1%, respectively.

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Log total assets (t-1)	-0.009	0.007	-0.001	-0.001	0.007	0.011	-0.008
	(0.47)	(0.39)	(0.05)	(0.07)	(0.39)	(0.65)	(0.46)
ROA (t-1)	-0.205	-0.315*	-0.210	-0.173	-0.173	-0.145	-0.048
	(1.14)	(1.66)	(1.29)	(0.99)	(1.06)	(0.91)	(0.29)
Leverage (t-1)	0.290**	0.270*	0.147	0.270*	0.145	0.141	0.217
	(2.09)	(1.81)	(1.14)	(1.87)	(1.08)	(1.00)	(1.63)
Assets growth (past 3-year average)	0.019	-0.025	0.022	0.015	0.019	0.022*	0.024*
	(1.24)	(0.85)	(1.42)	(1.03)	(1.30)	(1.79)	(1.82)
Prct Shares owned by the CEO	0.007***	0.008**	0.007**	0.006**	0.006**	0.006**	0.006**
	(2.64)	(2.30)	(2.44)	(2.30)	(2.14)	(2.47)	(2.28)
Top tercile - Value of CEO shares	0.194***	0.178***	0.209***	0.201***	0.214***	0.206***	0.204***
	(3.39)	(2.95)	(3.72)	(3.45)	(3.84)	(3.80)	(3.58)
Institutional Ownership				-0.263**	-0.218*	-0.227**	-0.247**
				(2.09)	(1.76)	(2.05)	(2.00)
Board size				-0.010	-0.011	-0.010	-0.011
				(1.09)	(1.24)	(1.10)	(1.23)
Prct independents				0.084	0.064	0.222	0.079
				(0.54)	(0.43)	(1.41)	(0.54)
"Confident" (# articles in the press)							0.051**
							(2.24)
"Cautious" (# articles in the press)							-0.010
							(0.35)
Independent committee						-0.141***	
						(3.03)	
Presence of a blockholder						-0.057	
						(0.60)	
Change capex (-1, +2)		0.028**					
		(2.09)					
Tobin's Q (t-1)			-0.020*		-0.021**	-0.014*	-0.018**
			(1.91)		(2.22)	(1.77)	(2.14)
LT abnormal ret (past 3 years)			0.011		0.010*		
			(1.38)		(1.92)		
LT CAR (past 3 years)			-0.007				
			(0.20)				
Observations	262	210	261	262	261	262	262
Pseudo R-squared	0.18	0.21	0.22	0.20	0.23	0.26	0.25
Actual Prob.	0.18	0.17	0.18	0.18	0.18	0.18	0.18

Table 10: CEO overconfidence

"Sample firms" are those which CEO earns a salary of $1 (or less). "Sample firms" are not repeated: whenever The CEO earns $1 (or less) for more than one consecutive year, only the first year is considered. "Control firms" are from CRSP universe, matched with sample firms by 4-digit SIC codes and year. Figures in Panel A include articles published in the year when the CEO started earning a dollar-salary and Panel B includes articles published in the previous year. As described in **Appendix B**, the articles are from a variety of sources and their classification as "confident" or "cautious" follow the methodology of Malmendier and Tate (2005). *, **, and *** stand for statistical significance at 10%, 5%, and 1%, respectively.

Panel A: articles are from the first year when the CEO started earning a dollar-a-year salary

	Total Number of articles			Average number of articles		Median number of articles		Sample-Controls	
	All firms	Sample	Controls	Sample	Controls	Sample	Controls	t-stats means	Wilcoxon medians
Number of articles									
Confident	184	49	135	0.98	0.55	0.5	0	2.88***	2.17**
Cautious	98	13	85	0.26	0.35	0	0	-0.68	0.67
Total	282	62	220						
Number of observations	296	50	246	50	246	50	246		

Panel B: articles are from the year before the CEO started earning a dollar-a-year salary

	Total Number of articles			Average number of articles		Median number of articles		Sample-Controls	
	All firms	Sample	Controls	Sample	Controls	Sample	Controls	t-stats means	Wilcoxon medians
Number of articles									
Confident	127	31	96	0.62	0.39	0	1	1.85*	1.40
Cautious	50	2	48	0.04	0.20	0	0	-1.74*	-1.73*
Total	177	33	144						
Number of observations	296	50	246	50	246	50	246		

53

Table 11: Regressions of Tobin's Q

The observations used in these regressions include "sample firms" and "control firms". "Sample firms" are those which CEO earns a salary of $1 (or less). "Sample firms" are not repeated: whenever The CEO earns $1 (or less) for more than one consecutive year, only the first year is considered. "Control firms" are from CRSP universe, matched with sample firms by 4-digit SIC codes and year. Data are mainly from Compustat and Execucomp. All variables in dollars are adjusted to reflect 2005 prices. To control for selection bias affecting firms, which CEOs earn a salary of $1 (or less), we use the Heckman's (1979) procedure. The first-stage regression (selection equation) is a probit model that estimates the likelihood of a firm having a $1 CEO. The dependent variable is a dummy that equals 1 if the CEO of a firm earns $1 (or less) and zero otherwise. The dependent variable of the second-stage equations (valuation equations) is the Tobin's q as of the fiscal-year end (winsorized at the 1% and 99% percentiles). All variables are defined in **Appendix B**. White-robust t-stats (absolute value) are shown in parenthesis. *, **, and *** stand for statistical significance at 10%, 5%, and 1%, respectively.

| | | Tobin's Q regressions corrected for sample | |
| | Tobin's Q | Tobin's Q | Selection equation Dep. Variable: $1 CEO |
	(1)	(2)	(3)
Log total assets (t-1)	-0.021	-0.049	-0.001
	(0.14)	(0.35)	(0.07)
ROA (t-1)	12.086***	12.361***	-0.173
	(4.54)	(4.61)	(0.99)
Leverage (t-1)	-4.201***	-5.427***	0.270*
	(4.85)	(4.56)	(1.87)
Assets growth (past 3-year average)	0.421*	0.285	0.015
	(1.75)	(1.10)	(1.03)
Prct Shares owned by the CEO	0.030	-0.026	0.006**
	(1.06)	(0.87)	(2.30)
$1 CEO	-0.807**	-1.171**	
	(2.03)	(2.54)	
Institutional ownership			-0.263**
			(2.09)
Constant	4.799***	8.684***	
	(4.45)	(4.35)	
Lambda		-1.652**	
		(2.28)	
Board size			-0.010
			(1.09)
Prct independents			0.084
			(0.54)
Top tercile - Value of CEO shares			0.201***
			(3.45)
Observations	257	257	262
R-squared	0.29	0.31	
Pseudo R-squared			0.20
Actual Prob.			0.18

Table 12: Additional analyses

Panel A: Post-adoption performance (next three years)

Measure	Sample Firms			Control Firms			Sample - Controls	
	Mean	N	50th Pctl	Mean	N	50th Pctl	t-stats means	Wilcoxon medians
LT abnormal ret	-0.023	43	-0.225	0.197	242	-0.031	-0.84	-1.72*
LT CAR	-0.083	43	0.143	0.344	242	0.295	-3.40***	-2.55***
Alpha (10^3)	-0.138	44	0.400	0.7682	207	0.7226	-3.57***	-2.79***

Panel B: Bankruptcies, mergers, and delistings (next three years)

	Sample firms (N=50)		Control Firms (N=246)		Sample - Controls
	N	%	N	%	t-stats means
Bankruptcies	3	6.00%	0	0.00%	2.96***
Mergers	6	12.00%	30	12.20%	-0.41
Delistings	11	22.00%	33	13.41%	2.32**

Panel C: "Recovery" sample

	Recovery (N=12)		Control (N=246 max.)		Sample - Controls	
	Mean	Median	Mean	Median	t-stats means	Wilcoxon medians
"Confident articles"	1.08	0.50	0.55	0.00	1.93*	0.93
Top-tercile holdings	0.67	1.00	0.30	0.00	2.68***	2.65***
Tobin's Q	2.00	1.40	3.30	1.70	-1.21	-1.05
ROA (t-1)	0.01	0.00	0.04	0.04	-0.94	-1.74*