

Explicit vs. Implicit Contracts: Evidence from CEO Employment Agreements*

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Abstract

In the nexus of contracts that comprise the modern corporation, those with the CEO are among the most important. Yet we know relatively little about how firms contract with their CEOs. We construct a dataset of explicit CEO employment agreements for S&P 500 firms, and find that, despite this importance, roughly half of the S&P 500 CEOs work under implicit rather than explicit contracts. The cross-sectional variation in the choice between explicit and implicit agreements is consistent with contracting theory, and is found to be related to the probability of opportunistic behavior by the firm, the required investment by the CEO, the firm's labor market reputation, and the degree of information asymmetry and uncertainty surrounding the relationship.

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The contract between a Chief Executive Officer (CEO) and a firm is complex agreement that has significant implications for firm value. In addition to specifying elements of the CEO's compensation, such as salary, bonus, long-term accounting and stock-based compensation, this contract addresses other aspects of the relationship between the CEO and the firm. It often specifies, in detail, the perquisites that the CEO will receive, restrictions on the CEO's ability to engage in other activities, such as board service at other firms, contingencies for a change in control, retirement or severance payments, and procedures governing conflict resolution between the CEO and the firm, amongst others. All of these features have implications for a CEO's incentives and, thereby, firm value.

Despite the complexity of these contracts, many public companies, including some of the largest, do not have comprehensive explicit (written) employment agreements with their CEOs. In fact, less than half of the firms in the S&P 500 had an explicit agreement with their CEO at the beginning of 2000. The other firms either had an explicit agreement that covered only limited aspects of their relationship with the CEOs, such as a change of control agreement, or had no explicit agreement at all. In lieu of an explicit agreement, these latter firms and their CEOs rely on implicit contracts through which the CEO is employed "at will."

In this study, we examine the choice between relying on an explicit or an implicit employment agreement. In doing so, we provide insights on two related questions: In attempting to mitigate agency costs arising from the relationship between the firm and its CEO, under what circumstances is the contract between these parties left implicit and allowed to be governed primarily by market forces? And, more broadly, what factors drive the choice to codify the

terms of a supplier/producer relationship, a choice that provides structure and protection, but sacrifices flexibility?

The literature has devoted considerable attention to modeling the conditions under which implicit contracts are more or less likely to exist than explicit contracts (e.g., see Telser, 1980; Bull, 1987; Hart and Holmström, 1987; Klein, 1996; and Baker, Gibbons and Murphy, 2002). In these models, a producer typically contracts with a supplier to provide an input that requires a firm-specific investment by the supplier. In this environment, the models predict that the contracting parties can rely on implicit contracts only when there are sufficient incentives in place for both sides to adhere to such an agreement. This is likely to occur where there is a low probability of the producer renegeing on the agreement after the supplier has made the required investment or of the supplier holding up the producer in some way.¹

In the theoretical literature, the incentives of the contracting parties to adhere to an implicit agreement typically arise from rewards that are received, or penalties that are borne in future periods, making an implicit contract feasible only if the relationship is expected to continue. A reward for adhering to the contract might be the potential for sharing future profits that arise from the relationship. Penalties might include the damage to one party's reputation from renegeing on the contract. Such damage can make it harder for a producer to find another supplier or, in the case where the supplier violates the agreement, for the supplier to find new customers.

Given the above theory, we expect explicit contracts to be more prevalent where reputation concerns are low, where the parties' horizons are short, and where a greater level of investment is required by either side. Furthermore, we also expect to observe fewer explicit

¹ The Fisher Body-General Motors example, described by Klein, Crawford, and Alchian (1978), illustrates how the supplier can hold up the producer.

agreements in highly uncertain environments, where the flexibility inherent in implicit agreements is more valuable.

Despite the well-developed theory, there is little empirical evidence on the circumstances under which implicit or explicit contracts are more likely to be observed. We provide such evidence from a study of employment contracts at firms in the S&P 500. In our study, the CEO can be viewed as a supplier of labor to the firm in a relationship in which there is the potential for both parties to make investments that are specific to one another.

We first note that CEO employment agreements generally appear to be designed to limit opportunistic behavior on the part of the firm rather than on the part of the CEO. Consistent with predictions generated by applying the general contracting theory above, we find that the use of explicit employment agreements is increasing in proxies for the probability of opportunistic behavior by the firm, including the independence of its board, CEO stock ownership, and CEO age. Explicit contracts are also more likely to be used when the CEO is expected to make a larger firm-specific investment in human capital and when he or she knows less about the firm. CEOs that are hired from outside the firm are likely to make larger firm-specific investments and to face more uncertainty regarding their relationship with the firm than CEOs who are promoted internally. These CEOs are also much more likely to have an explicit contract with the firm. Similarly, CEOs in heterogeneous industries, who tend to invest more heavily in firm-specific human capital, are also more likely to have an explicit contract. The likelihood of an explicit contract is decreasing in the firm's reputation in the labor market, based on proxies for abnormal operating performance and its past relationships with senior managers, as measured by whether the firm recently fired a previous CEO. Finally, explicit agreements are found to be used less often in highly uncertain environments.

The paper is organized as follows. Section I discusses the trade-offs inherent in the choice between implicit and explicit contracts in general, and in the context of CEO employment agreements. Section II describes the data used in the empirical analysis and the empirical specification. Section III presents the evidence and Section IV concludes with a discussion of the implications of the evidence from this study.

I. CEO Contracting

A. Implicit vs. Explicit Contracts

For an implicit employment agreement to be feasible, it is necessary that both the CEO and the firm (i.e., its board) believe that the benefits from continuing the agreement exceed the costs. Telser (1980) argues that any implicit contract must involve a sequence of transactions in which there is always a positive probability of the sequence continuing. The contracting parties anticipate benefits from future transactions and this anticipation provides them with incentives to abide by the terms of the agreement. If the timing of the last transaction is known with certainty, Telser suggests that both of the contracting parties will have an incentive to violate the terms of the agreement because no benefits will be lost by foregoing subsequent transactions. While a strict interpretation of Telser's arguments is not appropriate for contracting between a CEO and the firm (Telser does not consider costs such as those due to a damaged reputation) his analysis provides the insight that implicit contracts require a sequence of transactions in which the benefits from abiding by the contract exceed the costs.

This suggests that explicit (implicit) agreements are more (less) likely to exist where there is a high probability of post-contractual opportunistic behavior, of the sort described by Klein, Crawford, and Alchian (1978), in which one party changes the terms of the agreement ex post. The expectation that one party might be able to renegotiate the terms of the agreement in a

way that reduces the benefits to the other party increases the attractiveness of an explicit agreement, which can be used to restrict the ability of either party to engage in such behavior. Explicit agreements are more effective means of protection against these actions where it is easier to identify ex ante the important states of the world (and cover them in the contract), where contract law is well established, and where the legal system is reliable (so the contracts are more enforceable). While such protections can have benefits, they can also have costs. For instance, an explicit contract subjects the agreement to the rigidities of the legal system and to the judgment of a third party who may not be fully informed.

The potential for opportunistic behavior is also greater where one party must make a significant up-front investment. In the context of CEO contracting, this might occur when a new CEO is hired from outside the firm. For an outside manager to successfully assume the CEO position, he or she might have to invest heavily in firm-, or even, industry-specific human capital. Once the manager has made such an investment, the firm might have incentives to renege on an implicit agreement, perhaps by paying the manager less than initially promised (Hart and Holmström, 1987). On the other hand, the firm might face post-contractual opportunistic behavior on the part of the manager if the firm invests in developing the manager's abilities and the costs of switching managers are high.

The choice between implicit and explicit contracts is also influenced by the existence of information asymmetries. Concerns about opportunistic behavior are heightened in an implicit contracting framework when one party is more informed than the other. Even in the absence of the potential for opportunistic behavior, information asymmetries can reduce the expected benefits from an implicit contract because of the uncertainties they introduce into the relationship. In the context of CEO employment agreements, this is likely to be especially

important when a firm hires an outsider for the CEO position. Outside appointees tend to know less about the firm and the CEO position than inside managers. Even if they understand the business, outsiders will know less about the decision-making dynamics within the firm than insiders. While CEOs from outside the firm often bring their own team with them, they still face uncertainty regarding the nature of their relationships with the boards that hire them and with other parties that contract with the firm.

The potential for opportunistic behavior by either party can be mitigated by mechanisms other than entering into an explicit agreement. Klein (1996) notes that two types of sanctions facilitate enforcement of unwritten terms of a contract: the potential loss of subsequent transactions described by Telser (1980), and reputational concerns. Reputational concerns can provide incentives to abide by an agreement even if the date of the last transaction is known with certainty. In contracting between a CEO and a firm, the CEO has an incentive to abide by the agreement because not doing so can affect his or her reputation and, therefore, value in the labor market. On the other hand, it is generally in the best interest of the firm to adhere to the terms of the agreement because not doing so affects its ability to recruit managers in the future.

Since reputational concerns reduce the gains from opportunistic behavior, explicit contracts are more likely to be observed where these concerns are smaller. For instance, reputational concerns on the part of the manager are likely to be smaller as the manager nears retirement. Reputational concerns on the part of the firm are likely to be lower where there is a higher probability of takeover, bankruptcy, or some other circumstance that increases the probability of board turnover and therefore increases board myopia (Knoeber, 1986). Reputational concerns will also tend to be smaller where either party has little reputational

capital or where reputation is not sensitive to information (e.g., performance is a poor signal of effort).

The general information environment also affects the efficacy of implicit and explicit contracts. Where benefits from future transactions are less certain, they are valued less by the contracting parties. Managers at firms that are especially susceptible to unpredictable economic shocks are likely to prefer explicit contracts to the extent that such shocks may cause the firm to alter the terms of an implicit agreement. This will be especially true where the manager must make a substantial investment in firm-specific human capital. It will be in the best interest of firms to offer explicit contracts in such circumstances in order to attract and retain good managers. On the other hand, Klein (1996) notes that explicit contracts can be less desirable in uncertain environments. He argues that not having a formal agreement makes it less expensive for the contracting parties to terminate the relationship if conditions change. Whether uncertainty increases or decreases the likelihood of explicit employment agreements for CEOs is an empirical question.

B. CEO Employment Agreements

Contracting theory does not provide substantial insights concerning which party is more likely to renege in an agreement between a CEO and a firm. In most models, either the supplier (CEO) or producer (firm) may renege. However, some insights into this question can be obtained from an examination of the features found in CEO employment agreements. This section describes key classes of provisions we observe in explicit contracts for CEOs at S&P 500 firms in 2000. For more on the structure of these agreements, see Schwab and Thomas (2004).

A review of these agreements reveals protections for both the CEO and the firm. However, the strongest and most pervasive protections are for the manager. In general, the

contract provisions indicate that managers are concerned about the firm lowering the benefits they receive by either reducing their compensation and perquisites below promised amounts, or by terminating the relationship early.

Focusing on simply the number of pages in CEO contracts suggests that their complexity varies substantially. For example, the agreements in our sample range from relatively straightforward, one- or two-page letter agreements, to detailed, 60-page documents. Although the specifics vary, a typical agreement includes provisions pertaining to: employment duties and term, compensation, termination and resignation, and governing law and dispute resolution. The contracts typically begin by specifying the CEO's responsibilities, which may include additional titles, such as President or Chairman of the Board. The contract term, or duration, commonly comprises an initial period with provisions for renewal, but may also provide for indefinite employment at will.²

While some contracts do not renew, others, such as that between Waste Management and A. Maurice Myers, renew automatically on a daily basis. All else equal, contract duration is one measure of the degree of protection provided by the contract; longer contracts provide more structure, legal protection over a longer horizon, and greater guaranteed compensation for the CEO. Of course, contract renewal or extension features may also be beneficial to both parties in that they reduce the transactions costs of subsequent negotiations.

The compensation section of the contract typically specifies details on the CEO's salary, bonus (sometimes specifying target and maximum bonus amounts), option grants, stock grants, and any signing bonus (which in turn, can be composed of cash, options, and/or stock). Where specified, signing bonuses can be large, such as Global Crossing's contract with Robert

² Even in the case where the explicit agreement provides for employment at will, it still provides more structure than a purely implicit agreement, for example, by specifying any payments that occur upon a separation of service.

Annunziata, which promised a signing bonus of \$10 million in cash, plus options on 2 million shares that were issued \$10 in-the-money.

In addition, many contracts describe the particulars of benefit plans and perquisites. Benefit plan details include retirement coverage from supplemental employee retirement plans (SERPs), defined benefit plans, and, in some cases, specify additional years of service for the calculation of retirement benefits. Perquisites for the CEO may include automobiles or automobile allowance, the use of company aircraft, and country club memberships among others. These can be specified in great detail. For example, Annunziata's contract with Global Crossing specifies that, "the Company shall purchase, on behalf of Executive, a brand-new 1999 model Mercedes-Benz SL 500," and, "monthly first class airfare to Los Angeles for members of Executive's immediate family (spouse, mother and all children including the child of his wife, Patricia)."³

Provisions protecting CEOs against early termination include clauses that specify 1) the conditions under which a manager can be terminated by the firm for "good cause" (e.g., following a felony conviction), or conditions under which the CEO can leave the firm for "good reason." (e.g., due to a change in duties or place of employment) and 2) payments that the CEO is entitled to receive, depending on the circumstances under which he or she leaves the firm. These provisions also specify payments the firm must make to the CEO in the event of termination for good reason, whether by the firm, with or without good cause, or by the CEO. We do not observe contract features compensating the firm for loss of the manager's services if he or she terminates the contract early without good reason. However, in such cases the CEO typically forgoes unvested stock and option grants and may be exposed to claw-back provisions for signing bonuses and other up-front payments. In general, such contract features have the

³ See Rajan and Wulf (2004) and Yermack (2004b) for in-depth analyses of perquisites.

potential to protect both parties from the possibility that the other behaves opportunistically by terminating the agreement early.

Another contract feature associated with CEO departures is the “change-of-control” provision that protects managers in the event of unforeseen changes in the conditions of employment. This provision does not necessarily protect managers from opportunistic behavior on the part of the firm, but rather from changing business conditions. In this sense, it reduces uncertainty to the manager, *ex ante*. Knoeber (1996) argues that if the board is replaced following a takeover, the new board does not face the reputational costs the old board would from altering the manager’s contract since the new board did not enter into that agreement. Of course, as discussed in the literature, change of control provisions can also provide managers with stronger incentives to act in shareholder interests when faced with a takeover bid or merger opportunity (DeAngelo and Rice, 1983).

Although contractual provisions protecting the CEO dominate agreements, there are also protections for the firm. Firm protections generally restrict the CEO’s activities during the period of employment, disclosure of confidential information, or the CEO entering into competition with the firm. Restrictions on other activities, such as limits on outside board memberships, help assure the firm that the CEO will focus on its business. The confidentiality and non-compete provisions largely provide for legal remedies to the firm if information and knowledge that the acquired during the term of employment is used opportunistically by the CEO after he or she leaves the firm.

The final common set of provisions we observe in CEO employment agreements specify the choice of legal jurisdiction or the requirement that both parties enter into arbitration in the

event of a dispute. These provisions help reduce uncertainty over the legal interpretation of the contract, and reduce expected enforcement costs in the event of a dispute.

II. Data and Empirical Specification

We begin construction of our sample with a set of CEO employment agreements provided to us by The Corporate Library. We identify from this sample, all agreements at firms that were part of the S&P 500 and that were in force during the year 2000. Since this initial sample does not include all firms that were in the S&P 500 as of 2000, we then search the disclosures filed by the firms that are not in the sample for any mention of an employment agreement with the individual who was CEO in 2000. Since Securities and Exchange Commission (SEC) Regulation S-K requires that firms disclose all employment contracts with their named officers and directors, we assume that all such agreements are disclosed. Finally, we search for the actual employment agreements for all firms where the existence of such an agreement is disclosed.

We consider an employment agreement to be any agreement that covers, in broad terms, the relationship between the firm and the CEO. As such, we exclude agreements that are only applicable upon on a change in control (36 firms in the sample), or separation of service (eight firms). Similarly, we also do not consider pure compensation plans that cover other officers in addition to the CEO and that discuss only one aspect of pay. Finally, we exclude six non-U.S. firms from the sample altogether. Based on these criteria, we identify 237 firms with a CEO employment agreement and 257 firms without one. We are not able to locate a copy of the agreement for 33 of the 237 firms that disclose the existence of such an agreement. Thus, our final dataset consists of 204 employment agreements, 33 firms that have an agreement that cannot be found, and 257 firms that have no formal employment agreement. The 33 firms with

an agreement that we are unable to locate are classified as having an agreement that is “reported, but not found”. They are identified as having an explicit agreement in the indicator variable we create to reflect the existence of such an agreement, denoted *Contract*.

For each contract we are able to locate, we collect two measures of the degree of formality of the arrangements specified in it. First, is the contract’s duration in years, *Contract Duration*. Second is the contract’s length in pages, *Contract Length*, which we use as a proxy for its complexity and scope. Both of these variables are defined as missing for firms for which we are unable to locate the explicit agreements, and receive values of zero for those that do not have explicit agreements. Having no contract is, in a sense, the limiting case of what these two variables are measuring.

Of course, while the overall agreement between the CEO and the firm comprises both explicit and implicit elements, our goal is to measure where a given agreement lies on the spectrum from a largely implicit arrangement to one that is largely explicit. At one extreme, we view the contract as implicit in the absence of a written agreement. Then, among the relationships governed by written agreements, one can view the implicit portion of the overall agreement as decreasing in the complexity and specificity of the contract (although even the most complex explicit contracts certainly will leave some of the relationship under the influence of implicit agreements). Our three primary dependent variables – the presence of a written contract, its duration, and its length – are proxies for where CEOs and firms lie on this continuum of implicit to explicit arrangements.

To analyze firms’ propensities to protect themselves against opportunistic behavior on the part of the CEO, we use indicator variables for the two provisions designed for this purpose, confidentiality and non-compete clauses. *Confidentiality* equals 1 if the explicit employment

agreement has a confidentiality clause and zero otherwise. *Non-Compete* equals 1 if there is a non-complete clause and zero otherwise. Of course, some firms may have stand-alone agreements in these areas that we do not observe. From this perspective, we focus on the extent to which such provisions are incorporated in the CEO's formal employment agreement.

In trying to explain whether firms have explicit employment agreements, and the terms of these agreements where they exist, we seek to capture the environment in place at the time the contract was signed. Thus, our study is cross-sectional, but in event time. The event we focus on is the date the CEO and firm entered into an employment agreement. While the agreements all cover the CEO in place as of the beginning of 2000, they were signed on various dates from 1986 to 2002. We identify the date of the contract as most recent of either 1) the date the contract was initially signed or 2) the date of the most recent amendment. We use the latter of these two dates because the date of a written amendment is clearly a point in time when both parties revisited their decision to have an explicit contract. Consistent with this choice, and in an effort to maximize the power of our tests, we include 10 contracts with 2001 dates, and two with 2002 dates in the sample. For firms with no explicit employment agreements, we use the beginning of 2000 as the date of interest.

Using the dates identified in this way, we merge the contract data with explanatory and control variables. Where possible, we collect the data as of the period prior to the contract date. For example, we collect returns as of the month before the contract date, and financial and proxy-based data as of the fiscal year that ended immediately prior to the contract date.

As discussed in Section I, the theory predicts that explicit contracts will be used more frequently when there is a greater probability of post-contractual opportunistic behavior, a larger required up-front investment by one party, a greater degree of information asymmetry, and

parties are less concerned about their reputation in the labor market. In addition, the degree of overall uncertainty in the environment could predict either greater or smaller incidence of explicit agreements. In structuring our tests, we focus on factors that predict opportunistic behavior on the part of the firm because most of the contract features described in Section I.B. appear to be designed to protect the CEO rather than the firm. Nevertheless, we also examine the use of the two most common protections for the firm: non-disclosure and non-compete agreements.

In order to measure the CEO's belief about the likelihood of eventual opportunistic behavior by the firm, we identify variables associated with the firm's governance structure, the CEO's horizon, and the CEO's power in the firm. Independent directors and institutional investors are two groups who have fiduciary responsibilities to shareholders, and been shown to monitor management (e.g., see Weisbach, 1988; Borokovich, Parrino, and Trapani, 1996; and Hartzell and Starks, 2003). As such, firms with more independent boards or greater institutional ownership might be expected to act less capriciously in their relationship with the CEO.⁴ We calculate the fraction of independent directors on the board, *Board Independence*, where independent directors are neither employees of the firm, nor directors that might have some relationship with the firm or CEO (e.g., relatives of the CEO, former employees of the firm, consultants, investment or commercial bankers, or employees of insurance firms). We also calculate the fraction of the outstanding shares that are owned by institutions, *Institutional Ownership*, using the Thomson Financial database of investors that file Form 13F with the SEC.⁵ All investors with at least \$100 million in equity holdings are required to file 13F forms in which

⁴ Alternatively, independent directors and institutional investors might be viewed as more concerned with the firm's long-term reputation.

⁵ In addition to institutional ownership, we also examined the effect of the percentage of stock owned by independent blockholders in our tests. Including ownership of blockholders does not noticeably affect the results, and the blockholder variable itself is not significant in our tests. For brevity, we present tests excluding this variable.

they report their equity holdings to the SEC. We expect to find that the use of explicit employment agreements is negatively related to the independence of the board and institutional ownership.

CEOs with short horizons are less likely to face opportunistic behavior by their employer as there is less time for changes in the business or relationship to occur that would lead firms to break an implicit agreement. Even when such opportunistic behavior occurs, the cost to a CEO with a short horizon is lower. For example, the impact of being fired on the present value of a CEO's future earnings will tend to be lower for a CEO who is nearing retirement age than for a CEO who has a significant portion of his or her career remaining. Consequently, we expect that CEOs who are nearing retirement age will be less concerned about opportunistic behavior on the part of the firm and will be less likely to require explicit employment agreements. To capture this horizon effect, we use the age of the CEO as of the date of the contract, which we denote *CEO Age*. We expect *CEO Age* to be negatively related to the likelihood of an explicit agreement.

We also expect that CEOs who own more stock will tend to have more power in the boardroom, and are more likely to be able to resist firm actions that are not in their interest. Consequently, CEOs with larger stock holdings will be less likely to need the protections afforded by an explicit employment agreement. To test this prediction, we compute the fraction of shares outstanding owned by the CEO from data in proxy statements immediately preceding the contract date and denote this variable *CEO Ownership*.

From the theory discussed in the previous section, we expect to observe a greater incidence of explicit agreements when 1) CEOs are required to make greater investments in firm-specific human capital or 2) they know less about the firm they are hired to run. To construct a

proxy for the level of firm-specific investment required of the CEO, we identify the number of geographic or business segments the firm operated, from the Compustat segment tapes, as of the fiscal year prior to the contract date.⁶ We expect that managing a firm operating more segments requires a greater investment in firm-specific knowledge on the part of the CEO. Therefore, we define *Number of Segments* as the maximum of the number of geographic segments, or the number of business or operating segments. If more complex firms require greater investment on the part of the CEO, and our choice of *Number of Segments* is a reasonable proxy for firm complexity, then we would expect to see a positive relation between *Number of Segments* and the likelihood of an explicit agreement.

As a proxy for uniqueness, which we also expect to be associated with the required level of investment in firm-specific human capital, we use a measure of the homogeneity of the industry in which each firm operates. This measure, denoted *Industry Homogeneity*, is computed as the mean cross-sectional standard deviation of the year-to-year percentage change in revenue. It is calculated for each year between 1960 and 1989 for each two-digit SIC group that has at least 10 observations in Compustat. The yearly estimates are then averaged to obtain an overall mean standard deviation for the 30-year period.⁷

The rationale for this industry homogeneity proxy is straightforward. If the firms in an industry operate in similar product markets, changes in the demand for their products will tend to affect their revenue in a similar manner. Where an industry is characterized by substantial product differentiation, on the other hand, the revenue of the member firms will tend to react differently to changes in demand. This idea can be illustrated by considering an industry that consists only of wheat farmers. Holding cultivated acreage and yields (production technology)

⁶ Firms are allowed to report either business or operating segments.

⁷ The 1960 to 1989 period ends before all but one of the contract dates in our sample.

constant, a change in the demand for wheat will have the same affect on the revenue of each firm and the standard deviation of the percent change in revenue will be zero.

In industries with more similar firms, the human capital possessed by the CEO is more likely to be transferable, implying less concern over the loss of firm-specific human capital in the event of opportunistic actions by the firm. Thus, we expect to see lower incidence of explicit contracts in homogeneous industries.

CEOs that are hired from outside the firm are more likely to be required to make large investments in firm-specific capital. They are also more likely to face information asymmetries with respect to the firm. Unfortunately, these effects are difficult to separate empirically. Both predict a greater reliance on explicit contracts, in order to induce the greater investment, and because the CEO is more concerned about an unknown board's likelihood of acting opportunistically in the future. Nevertheless, to test these predictions we construct an indicator that takes a value of one if the CEO was appointed to that position within one year of joining the firm, which we label *Outside CEO*. We expect to observe a positive relation between *Outside CEO* and the likelihood of an explicit employment agreement.⁸

Our next set of explanatory variables is designed to measure the degree to which a given firm (or, more accurately, its board) is concerned with its reputation. The theory suggests that explicit contracts will be more prevalent when reputational concerns are lower among firms. As proxies for firm reputational concerns, we use measures of firm performance and treatment of the firm's previous CEO. We expect that firms that have recently performed poorly will have poorer reputations in the labor market and will therefore have less to lose by behaving opportunistically. Firms that fired their previous CEO will have revealed a willingness to sever

⁸ We obtain similar results with an alternative definition of an outside succession in which outside CEOs are defined as CEOs that join the firm as of the contract date.

such agreements and are assumed to be less likely to place less weight on the reputational effects of behaving opportunistically.

As a measure of market performance, we calculate the difference between the six-month buy-and-hold return on the firm's stock, ending the month prior to the contract, and the return on the Center for Research in Security Prices (CRSP) value-weighted index over the same period. We call this measure *Market-Adjusted Return*. As a measure of operating performance, we calculate the firm's earnings before interest and taxes (EBIT) during the fiscal year ending immediately before the contract date and scale this value using total book assets at the beginning of that fiscal year.⁹ We adjust this EBIT/Assets ratio by subtracting the median of this ratio for the same industry in the same year, where the industry for each firm is defined according to Fama and French's (1997) classification system. We label the resulting operating performance measure *Industry-Adjusted EBIT/Assets*.

We also identify all sample firms at which a CEO that was forced from office within five years of the contract date, using the forced turnover classification scheme described by Parrino (1997). With this information, we construct an indicator variable that takes the value of one if a CEO was fired within the last five years and label this variable as *Prior CEO Fired*. We expect that explicit contracts will be observed more frequently at firms with poor market-adjusted stock returns or industry-adjusted accounting performance, and at firms that recently fired a CEO.

Our final explanatory variables are designed to capture the degree of uncertainty surrounding the future of the firm and, therefore, the contracting relationship. Here, the theory provides conflicting predictions. On the one hand, parties might place less weight on future outcomes with greater uncertainty, making implicit agreements less feasible. On the other hand the rigidity associated with explicit contracts might make them less attractive in uncertain

⁹ Defined as (Compustat item 13 – item 14 – item 15)/(Previous year's item 6).

environments. We use two proxies for the degree of uncertainty, and leave the sign of the net effects of these proxies on the likelihood that explicit employment agreements are used as a question to be resolved in our tests.

The first of these proxies is an estimate of the survival rate in the firm's industry. Specifically, for each contract year and each Fama-French (1997) industry, we calculate *Industry Survival Rate* as one minus the percentage of firms in the industry that were de-listed during that year due to mergers and acquisitions. The number of de-listings and the total number of firms at the beginning of the year are obtained from the CRSP database. We posit that firms in industries with higher survival rates face less uncertainty about the future.

Our second proxy for uncertainty is based on the standard deviation of the firm's monthly stock returns over the twelve months ending in the month immediately preceding the month in which the contract is signed. In order to control for time series variation in market-wide volatility, we divide this standard deviation by the standard deviation in the CRSP value-weighted index return over the same twelve months. In order to mitigate the effects of outliers, we use the natural logarithm of this ratio, which we denote $\text{Ln}(\text{Stock Volatility}/\text{Market Volatility})$. We expect that uncertainty is increasing in this volatility measure.

Finally, as control variables, we include proxies for the ownership of insiders, other than the CEO, and the size of the firm. Specifically, for each firm we calculate the fraction of the outstanding shares that is owned by officers and directors, excluding the CEO. This fraction, *Director & Officer Ownership*, is computed using data from the most recent proxy as of the

contract date. As a proxy for firm size, we use the natural logarithm of the firm's total book assets, $\ln(\text{Total Assets})$.¹⁰

III. Evidence

A. Sample Statistics and Univariate Evidence

Table I presents descriptive statistics for our sample and statistics from univariate tests on differences in CEO, firm, and industry characteristics between firms with and firms without explicit CEO employment agreements as of the beginning of the year 2000. Mean and median values are presented for each variable, for the full sample, and for the subsamples of firms with and without explicit CEO employment agreements. Univariate statistics are reported for tests of differences in both the mean and the median values across the two subsamples.

The Employment Agreement Characteristics reported in Table I are the dependent variables we examine in subsequent tests. Forty eight percent (237/494) of the CEOs in the sample have explicit agreements. Among firms with such an agreement, the typical (median) contract duration is three years and the typical contract length is 13 pages. About 77.5 percent of explicit agreements have confidentiality clauses while non-compete provisions are a found in 57.4 percent.

Variables representing CEO characteristics indicate that the average (median) CEO, across the entire S&P 500 sample, is 54.7 (55) years of age and owns 1.85 percent (0.19 percent) of the firm's stock. Almost 31 percent of the CEOs were hired from outside the firm and 11.3 percent work for firms that experienced a forced CEO departure within the previous five years. The univariate tests indicate that younger CEOs are significantly more likely to have explicit

¹⁰ The evidence reported in Section III is robust to including the ratio of research and development expenses (Compustat item 46) to sales (Compustat item 12) as a control for firm growth opportunities. In the interest of brevity we do not include this variable in the reported results.

agreements, as are CEOs hired from outside the firm and CEOs working at firms with recent forced CEO turnover.

The third set of variables in Table I reflect firm characteristics at the time of the contract or in the year 2000 if no contract exists or can be found. The average (median) fraction of independent directors at sample firms is 65.5 percent (66.6 percent). Directors and officers own an average (median) of 5.63 percent (2.01 percent) of the firm's stock, while institutional investors hold 61.18 percent (62.41 percent). The mean (median) number of geographic or business segments reported by sample firms is 4 (4) and both the stock and operating performance measures for sample firms are above their respective benchmarks on average. The mean (median) market-adjusted return over the six months preceding the contract date is 8.9 percent (-5.7 percent), while the mean (median) industry-adjusted ratio of EBIT to assets is 0.11 (0.06). Univariate tests based on these firm characteristics indicate that the presence of an explicit employment agreement is associated with a less independent board of directors, fewer firm segments, weaker operating performance, and lower stock-market volatility.

The final set of variables in Table I represent industry characteristics. Approximately 58 percent of the sample firms are in industries classified as heterogeneous.¹¹ Furthermore, the mean (median) survival rate for industries in which the sample firms compete is 92.6 percent (93.1 percent), indicating that 7.4 percent (6.9 percent) of the firms' industry peers are delisted due to mergers and acquisitions in the year the employment agreement is signed or in the year 2000 if no contract exists or can be found. Explicit employment agreements are significantly

¹¹ An indicator variable is used throughout the analysis to distinguish between heterogeneous and homogeneous industries. This variable equals one if the standard deviation of the year-to-year percentage change in revenue for an industry is above the median standard deviation. Since a larger standard deviation implies greater heterogeneity, a value of zero for this measure indicates a homogeneous industry. Therefore, the mean (median) value of 0.5870 (0.0000) reported at the bottom of Table I is the fraction of observations in heterogeneous industries.

more likely to be observed at firms that operate in heterogeneous industries and industry survival rates are significantly higher for firms having explicit employment agreements with their CEO.

The univariate evidence in Table I is broadly consistent with the relations predicted by contract theory. CEOs who are less likely to be concerned about opportunistic behavior by the firm, CEOs of firms with more independent boards, and older CEOs are less likely to have explicit employment agreements. CEOs who are likely to make significant investments in firm-specific human capital or who face greater information asymmetries, those at firms with more segments (more complex firms), those from heterogeneous industries, and those hired from outside the firm, are more likely to have explicit agreements. CEOs are also more likely to have explicit agreements when they are employed at firms that are likely to place lower weight on their future reputation, for example, firms with weaker recent operating performance and in which a CEO has been fired during the last five years. Finally, while the effect of uncertainty on the choice of explicit versus implicit agreements is an empirical issue, the univariate evidence is consistent with the argument that explicit agreements are more likely to be observed when there is less uncertainty, as measured by stock-market volatility or industry survival rates.

Table II presents the correlations between the variables in Table I and p-values for two-tailed tests that they differ significantly from zero. Two notable patterns are apparent in this table. First, the evidence for the two continuous measures of the degree to which the CEO's terms of employment are specified, the contract duration and length in pages, is generally consistent with the univariate evidence in Table I. Most of the variables that are significantly related to the presence of a contract are also significantly related to contract duration and length. Second, none of our explanatory variables exhibit a great deal of pairwise collinearity. Among

the explanatory variables in Table II, the largest absolute value of a correlation coefficient is the correlation between *Board Independence* and *Officer and Director Ownership* of 0.3642.

Since provisions that protect the CEO dominate the explicit agreements in our sample, we focus much of our analysis on the use of explicit agreements to protect CEOs against opportunistic behavior by firms. However, Table II also presents univariate evidence for the two measures of protection for firms, confidentiality clauses and non-compete agreements. In general, the presence of these two provisions is significantly related to the same variables that are associated with the presence of an explicit contract. This is not surprising, since an explicit agreement must exist in order for us to observe an explicit confidentiality or non-compete clause. In the following section, we present multivariate tests of our hypotheses.

B. Multivariate Evidence

The theory suggests that if explicit CEO employment agreements are designed, at least in part, to protect CEOs from opportunistic behavior by their employers, the likelihood of observing an explicit agreement should be increasing in the probability of post-contractual opportunistic behavior by the firm, the required up-front investment by the CEO, the degree of information asymmetry, and decreasing in the weight the firm places on its reputation. The overall degree of uncertainty surrounding the relationship could also influence the choice between implicit and explicit contracts, although the direction of this influence is unclear.

Table III presents the results from probit regressions that examine the above relations. Rather than coefficient estimates, we present the partial derivative with respect to each continuous independent variable, holding all other variables at their mean values. For indicator variables, we report the partial effect for a change in that variable from zero to one.

Model 1 in Table III includes our proxies for the likelihood of post-contractual opportunistic behavior by the firm, the size of the firm-specific investment required of the CEO, and the degree of information asymmetry as explanatory variables. The evidence indicates that, the presence of an explicit agreement is significantly negatively related to board independence at the 1 percent level. This is consistent with the idea that CEO's are less concerned about opportunistic behavior when boards are more independent because such boards are less likely to act capriciously, perhaps due to greater concern over the firm's long-term reputation. The presence of an explicit agreement is also negatively related to the CEO's stock ownership and age, at the 5 percent and 10 percent significance levels, respectively. This is consistent with the idea that CEOs are more willing to enter into implicit agreements when they are less concerned about opportunistic behavior by the firm because they exercise greater control over the firm or because they have a shorter horizon. The evidence is also consistent with the idea that explicit agreements are more likely to be observed where the level of investment by the CEO in firm-specific human capital and information asymmetries are likely to be substantial. The likelihood of an explicit agreement is larger if the firm is in a heterogeneous industry and for outside hires. The latter relation is especially strong. In fact, CEOs who come from outside the firm are almost 34 percent more likely to have an explicit agreement, all else equal. This relation is significant at the 1 percent level and is consistent with explicit agreements being used to encourage large investments in firm-specific human capital by CEOs who change firms and tend to face substantial information asymmetries. Neither of the coefficients on the control variables, director and officer ownership and firm size, is significantly related to the use of an explicit contract.

Model 2 in Table III is similar to Model 1. However, here the explanatory variables include proxies for the firm's reputation concerns and the overall uncertainty in the firm's operating environment. Two patterns are apparent in the evidence from Model 2. First, firms that one would expect to have weak reputations in the labor market, due to poor recent operating performance or a recent CEO dismissal, are more likely to have an explicit agreement. This is consistent with the prediction that CEOs are concerned that such firms place less weight on their future reputation when deciding how to behave with regards to an implicit agreement, thereby rendering implicit agreements less feasible. Both of the coefficient estimates for these variables have large economic and statistical significance. A 10 percentage point drop in industry-adjusted EBIT/Assets is associated with a 4.0 percent increase in the likelihood of an explicit contract. In addition, if the firm has fired a CEO within the previous five years, there is a 30 percent greater chance of an explicit contract.

The second noteworthy pattern in Model 2 is that explicit agreements are less likely to be observed in environments with greater uncertainty. This is consistent with the argument that contracting parties prefer the flexibility of implicit agreements over the rigidity of explicit agreements when future outcomes are less predictable. This effect can be seen in both the positive coefficient on the industry survival rate and the negative coefficient on stock-market volatility, both of which are significant at the 1 percent level.

In Model 3, we include the variables from both Model 1 and Model 2. The evidence here is quite similar, although with changes in the statistical significance of some variables. Specifically, the coefficient estimate for the CEO ownership variable is no longer significant while the significance of the coefficient for the CEO age variable increases from the 10 percent level to the 5 percent level. In addition, the statistical significance of the coefficient for the

industry homogeneity variable increases from the 10 percent level to the 1 percent level. The explanatory power of Model 3 is considerably greater than those of the other models, with a Pseudo R-squared of 0.21, implying that the two sets of variables are not merely explaining the same variation in contracting choice. Overall, the evidence in Table III is consistent with the theoretical predictions discussed in Section I, and with the broader idea that contracting parties consider economic factors when deciding whether to rely on implicit or explicit agreements.

As noted in section II, there is likely to be a continuum of contract complexity with an entirely implicit agreement at one end of the scale, and a very detailed contract with a long duration at the other. To capture differences in the complexity of the explicit agreements in our sample we use *Contract Duration*, where we associate longer lasting contracts with a more explicit relationship, and *Contract Length* (number of pages in the agreement), which reflects the observation that “thicker” contracts specify more facets of the relationship. Klein (1996) argues that when implicit contracts are more feasible, contracts will be thinner.

Table IV presents estimates for Tobit models of the relations between contract duration on our explanatory variables. The Tobit specifications account for the fact that duration is bounded below at zero, which is the value we assign to the duration variable when there is no explicit agreement. The table is structured similarly to Table III, with Model 1 incorporating our proxies for the likelihood of post-contractual opportunistic behavior by the firm, the size of the investment in human capital by the CEO, and the degree of information asymmetry as explanatory variables. Model 2 focuses on proxies for the firm’s reputation concerns and the overall uncertainty in the firm’s operating environment, while Model 3 incorporates all variables from Models 1 and 2. To facilitate interpretation of the economic significance of the relations, rather than coefficient estimates, in Table IV we present the partial derivative of contract

duration with respect to each independent variable, holding other variables at their means, conditional on the presence of a contract.

The evidence in Table IV for *Contract Duration* is broadly similar to the probit results in Table III for the presence of an explicit contract. *Contract Duration* is decreasing with board independence (significant at the 1 percent level) and in CEO ownership and age (albeit not statistically significant). These relations are consistent with greater use of implicit, rather than explicit, contracts where CEOs are less concerned about firms behaving opportunistically. Explicit employment agreements are of longer duration in heterogeneous industries (significant at the 5 percent level in Model 3) and outside appointees receive longer contracts (significant at the 1 percent level). These results are consistent with increased contract duration when a greater investment of human capital is required or there is greater information asymmetry. CEOs at firms with poor recent operating performance and that recently fired their CEO also have contracts with longer durations. This is consistent with reputation concerns playing a role in contracting choices. Finally, in environments with greater uncertainty (low survival rates or high stock-market volatility), explicit contracts are significantly shorter in duration, a sign of the cost of long-term rigidity in these settings.

Table V presents results for Tobit models similar to those in Table IV, but where the focus is on the complexity of the contract, as proxied by its length in pages, rather than its duration. The results in Table V are consistent with those in Table IV, with the notable exception that board independence is not significantly related to the contract's complexity.

As discussed in Section I.B, while most of the provisions in explicit employment agreements protect the CEO, non-compete agreements and confidentiality clauses are two common provisions that protect the firm. We next use probit models to estimate the likelihood

that these provisions exist. One caveat of this analysis is that our sampling procedure does not capture stand-alone confidentiality or non-compete agreements unless they are referenced in the full employment agreement. We address this issue by first classifying CEOs without explicit employment agreements as if they have neither non-compete nor confidentiality provisions. While advantageous in that it results in a greater number of observations and, we hope more power, this approach may underestimate the propensity of CEOs to have these provisions. Thus, as an alternative, we focus on the subsample of observations for which an explicit employment agreement exists and is observable. While this reduces our sample size, and ignores some information in the no-agreement sample, it is a more conservative approach.

The results of these tests are presented in Table VI. In the interest of brevity, we present only the models with the full set of explanatory variables. The results in Model 1, which uses the full sample, and Model 2, which uses only the subsample of CEOs that have explicit employment agreements, indicate that the likelihood of a non-compete provision is significantly associated with CEO age and the volatility of monthly stock returns. These results are consistent with the idea that when the relevant horizon is short, due to the CEOs age, there is less likely to be an explicit contractual provision restricting the CEO's ability to compete with the firm in the future. Moreover, in the full sample, there is evidence that non-compete provisions are more likely to be observed in explicit agreements at firms with outside appointees and poor prior operating performance and in environments with more certainty. These findings are consistent with implicit contracts being more practical when information about the CEO is less noisy and where greater flexibility is especially important, as in highly uncertain environments.

Models 3 and 4 in Table VI present similar regressions focusing on the presence of a confidentiality provision. The only variables that are significantly related to the presence of a

confidentiality provision for both samples are CEO age and the outside CEO indicator variable. Older CEOs are less likely to be covered by confidentiality agreements. This is consistent with contracts tilting toward being more implicit rather than explicit for short-horizon CEOs. In contrast, outside appointees are more likely to be covered by such agreements. This is consistent with the firm seeking to protect proprietary information that is disclosed after the outsider is hired and when there is uncertainty regarding how long the relationship with that CEO will last. Although we observe several significant coefficients in the regression estimated with the full sample (Model 3), this may be due, at least in part, to the lack of variation in the explicit contract group. Seventy eight percent of the explicit agreements contain a confidentiality provision. Perhaps not surprisingly, then, for the full sample, our results on the presence of a confidentiality agreement mirror the results for the presence of an explicit contract. Confidentiality clauses are more common for outside CEOs, less likely when the firm is expected to have a poor reputation, and less likely in uncertain environments.

IV. Conclusion

The nature of the employment relationship between firms and their CEOs has long been the focus of scrutiny by academics, practitioners, and regulators alike. This study contributes to our understanding of this relationship, and the contracting process more generally, by providing evidence from a unique database of employment contracts for CEOs of S&P 500 at the beginning of 2000.

We find that about half of the S&P 500 CEOs are employed under explicit agreements – agreements that specify terms of the employment relationship - rather than implicit arrangements. The evidence supports theoretical arguments regarding when we might expect to observe explicit rather than implicit contracts. Specifically, explicit agreements are more likely

to exist where the potential for post-contractual opportunistic behavior on the part of a firm is greater, larger firm-specific human capital investment by the CEO is likely, and information asymmetries are greater. In particular, we find that explicit agreements are less likely at firms with more independent boards and where CEOs own more of the firm's shares, suggesting that implicit agreements are more feasible when firms are less likely to behave opportunistically. Explicit contracts are more likely to be observed where the firm's reputation is weaker, due to past poor prior performance or a recent CEO dismissal, and the firm is therefore more likely to engage in opportunistic behavior. We also find that explicit arrangements are more likely for CEOs appointed from outside the firm, for whom information asymmetries and firm-specific investments in human capital are likely higher. In addition, general uncertainty in the firm's operating environment decreases likelihood of observing an explicit agreement, suggesting that both of the contracting parties value the flexibility of implicit arrangements in uncertain environments.

We also examine the scope and complexity of explicit agreements, as measured by both the duration and page length of the contracts, and the presence of contractual provisions that may protect firms from opportunistic behavior by CEOs, namely non-compete and confidentiality agreements. Our results are generally consistent with the evidence on where explicit contracts are more or less likely to be used. We find that explicit contracts have less scope and are less complex, indicating a greater reliance on implicit contracting, when the propensity for opportunistic behavior by firms is lower. Similarly, CEOs have longer, more detailed contracts if they come from outside the firm, or if a predecessor CEO was recently dismissed. Interestingly, firms with more independent boards and firms in more uncertain environments tend to use shorter, or less explicit contracts. Our findings further suggest that confidentiality

agreements are less likely for CEOs with a shorter employment horizon and at firms that have been performing poorly, but more likely if the environment is more certain or the CEO is an outside appointee. For confidentiality provisions, the primary finding is that these provisions are less likely to be in contracts with older CEOs, suggesting that the CEOs horizon influences contract design.

On balance, the evidence supports the theoretical literature on the choice between explicit and implicit agreements. The degree to which contracts explicitly specify terms of the employment relationship varies with the nature of the contracting environment. Given the variation we find in the use of explicit agreements, and in their scope and complexity, the evidence we report suggests that a more detailed examination of the variation in employment agreement features will provide a rich area for future research.

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Table I
Descriptive Statistics

CEO employment agreement (EA), CEO, firm, and industry characteristics for domestic firms in the S&P 500 at the beginning on the year 2000. *Contract* is an indicator variable that equals 1 if the firm had a comprehensive EA with the CEO at the beginning of 2000, *Confidentiality* is an indicator variable that equals 1 if the EA has a confidentiality or non-disclosure clause, *Non-Compete* is an indicator variable that equals 1 if the EA has a non-compete clause, *Contract Duration* is the contract length in years, *Contract Length* is the length of the contract in pages, *CEO Age* is the age of the CEO on the EA date, *CEO Ownership* is the fraction of outstanding shares owned by the CEO from the proxy prior to the EA date, *Outside CEO* is an indicator variable that equals 1 if the CEO was appointed to that position within one year of joining the firm, *Prior CEO Fired* is an indicator variable that equals 1 if the previous CEO is identified as fired using the criteria outlined in Parrino (1997), *Board Independence* is the fraction of independent directors on the board on the EA date (the date the agreement is entered into), *Officer and Director Ownership* is the fraction of shares owned by officers and directors, excluding the CEO, at the EA date, *Institutional Ownership* is the fraction of outstanding shares held by institutional investors at the beginning of the quarter including the EA date, *Number of Segments* is the maximum of the number of geographic or business segments that the firm operates in as reported in the Compustat segment tapes, *Market-Adjusted Return* is the return on the firm's stock, adjusted using the CRSP value-weighted Index, over the six months preceding the EA date, *Industry-Adjusted EBIT Assets* is firm's EBIT/Assets in the fiscal year preceding the EA date, less the median value of that ratio for the primary industry in which the firm competes, *Natural Log of Stock/Market Volatility* is the natural log of the ratio of the standard deviation of the firm's stock price to the standard deviation of the CRSP value-weighted Index over the 12 months immediately preceding the EA date, *Natural Log of Assets* is the natural log of assets in the fiscal year ending immediately before the EA date, *Industry Homogeneity* is an indicator variable that equals 1 if the industry is classified as heterogeneous based on the cross-sectional standard deviation of the year-to-year percentage change in revenue in the industry from 1960 to 1989, and *Industry Survival Rate* equals one minus the fraction of firms in the industry that were delisted due to mergers and acquisitions in the year that includes the EA date. Industries are defined using the classification system proposed by Fama and French (1997). Standard deviations are reported in parentheses below the mean values. Two-tailed p-values for tests of differences in mean and median values are reported in parentheses below the t-value and Wilcoxon Z statistics.

Variable	Total Sample			Firms with Employment Agreements			Firms without Employment Agreements			Statistics for Tests of Differences in Mean and Median Values for Firms With and Without Agreements	
	N	Mean	Median	N	Mean	Median	N	Mean	Median	t-value	Wilcoxon Z
Employment Agreement Characteristics:											
Contract	494	0.4798 (0.5001)	0.0000	237	1.0000 (0.0000)	1.0000	257	0.0000 (0.0000)	0.0000		
Contract duration (years)	461	1.5811 (2.3140)	0.0000	204	3.5729 (2.2321)	3.0000	257	0.0000 (0.0000)	0.0000		
Contract length (pages)	461	6.2061 (9.2871)	0.0000	204	14.0245 (9.2334)	13.0000	257	0.0000 (0.0000)	0.0000		
Confidentiality	461	0.3427 (0.4751)	0.0000	204	0.7745 (0.4189)	1.0000	257	0.0000 (0.0000)	0.0000		
Non-compete	461	0.2538 (0.4357)	0.0000	204	0.5735 (0.4958)	1.0000	257	0.0000 (0.0000)	0.0000		
CEO Characteristics:											
CEO age	491	54.7291 (6.8176)	55.0000	234	53.7265 (7.0548)	54.0000	257	55.6420 (6.4738)	56.0000	3.1374 (0.0018)	3.479 (0.0005)
CEO ownership (%)	494	1.8476 (6.0093)	0.1900	237	1.6987 (7.0045)	0.2100	257	1.9849 (4.9268)	0.1700	0.5284 (0.5975)	1.285 (0.1988)
Outside CEO	494	0.3077 (0.4620)	0.0000	237	0.4430 (0.4978)	0.0000	257	0.1829 (0.3873)	0.0000	-6.5098 (0.0000)	-6.253 (0.0000)
Prior CEO fired	494	0.1134 (0.3174)	0.0000	237	0.1603 (0.3677)	0.0000	257	0.0700 (0.2557)	0.0000	-3.1887 (0.0015)	-3.159 (0.0016)
Firm Characteristics:											
Board independence	494	0.6549 (0.1691)	0.6667	237	0.6349 (0.1835)	0.6667	257	0.6734 (0.1527)	0.6923	2.5445 (0.0112)	2.055 (0.0399)
Officer and director ownership (%)	494	5.6281 (10.4663)	2.0050	237	5.6740 (11.0651)	1.9000	257	5.5857 (9.9037)	2.1200	-0.0936 (0.9255)	0.7 (0.4839)
Institutional ownership (%)	461	0.6118 (0.1764)	0.6241	215	0.6070 (0.1952)	0.6283	246	0.6160 (0.1584)	0.6220	0.5487 (0.5835)	0.53 (0.5963)
Number of segments	454	4.0176 (1.9177)	4.0000	213	3.8028 (1.7587)	4.0000	241	4.2075 (2.0327)	4.0000	2.2539 (0.0247)	2.471 (0.0135)
Market-adjusted return	471	0.0891 (0.6715)	-0.0574	219	0.0367 (0.6151)	-0.0630	252	0.1346 (0.7150)	-0.0538	1.5805 (0.1147)	1.239 (0.2155)
Industry-adjusted EBIT/assets	451	0.1117 (0.1574)	0.0644	207	0.0919 (0.1474)	0.0527	244	0.1285 (0.1637)	0.0771	2.4790 (0.0135)	2.504 (0.0123)
Natural log of stock/market volatility	471	0.8962 (0.4499)	0.8625	219	0.8267 (0.5038)	0.8060	252	0.9566 (0.3882)	0.9196	3.1541 (0.0017)	3.278 (0.0010)
Natural log of assets	472	9.0340 (1.4614)	8.9664	220	8.9142 (1.4307)	8.8380	252	9.1385 (1.4827)	9.0205	1.6666 (0.0963)	1.464 (0.1432)
Industry Characteristics:											
Industry homogeneity	494	0.5870 (0.4929)	0.0000	237	0.6371 (0.4818)	0.0000	257	0.5409 (0.4993)	0.0000	-2.1772 (0.0299)	-2.169 (0.0301)
Industry survival rate	468	0.9260 (0.0337)	0.9309	215	0.9311 (0.0319)	0.9342	253	0.9218 (0.0347)	0.930556	-2.9936 (0.0029)	-2.553 (0.0107)

Table II
Correlation Matrix

CEO employment agreement (EA), CEO, firm, and industry characteristics for domestic firms in the S&P 500 at the beginning on the year 2000. *Contract* is an indicator variable that equals 1 if the firm had a comprehensive EA with the CEO at the beginning of 2000, *Confidentiality* is an indicator variable that equals 1 if the EA has a confidentiality or non-disclosure clause, *Non-Compete* is an indicator variable that equals 1 if the EA has a non-compete clause, *Contract Duration* is the contract length in years, *Contract Length* is the length of the contract in pages, *Board Independence* is the fraction of independent directors on the board on the EA date (the date the agreement is entered into), *Institutional Ownership* is the fraction of outstanding shares held by institutional investors at the beginning of the quarter including the EA date, *CEO Ownership* is the fraction of outstanding shares owned by the CEO from the proxy prior to the EA date, *CEO Age* is the age of the CEO on the EA date, *Industry Homogeneity* is an indicator variable that equals 1 if the industry is classified as heterogeneous based on the cross-sectional standard deviation of the year-to-year percentage change in revenue in the industry from 1960 to 1989, *Number of Segments* is the maximum of the number of geographic or business segments that the firm operates in as reported in the Compustat segment tapes, *Outside CEO* is an indicator variable that equals 1 if the CEO was appointed to that position within one year of joining the firm, *Market-Adjusted Return* is the return on the firm's stock, adjusted using the CRSP value-weighted Index, over the six months preceding the EA date, *Industry-Adjusted EBIT Assets* is firm's EBIT/Assets in the fiscal year preceding the EA date, less the median value of that ratio for the primary industry in which the firm competes, *Prior CEO Fired* is an indicator variable that equals 1 if the previous CEO is identified as fired using the criteria outlined in Parrino (1997), *Industry Survival Rate* equals one minus the fraction of firms in the industry that were delisted due to mergers and acquisitions in the year that includes the EA date, *Natural Log of Stock/Market Volatility* is the natural log of the ratio of the standard deviation of the firm's stock price to the standard deviation of the CRSP value-weighted Index over the 12 months immediately preceding the EA date. *Officer and Director Ownership* is the fraction of shares owned by officers and directors, excluding the CEO, at the EA date, and *Natural Log of Assets* is the natural log of assets in the fiscal year ending immediately before the EA date. Industries are defined using the classification system proposed by Fama and French (1997). Two-tailed p-values for tests that the correlations equal zero are reported in parentheses.

	Contract	Confidentiality	Non-Compete	Contract Duration (Years)	Contract Length (Pages)	Board Independence	Institutional Ownership (%)	CEO Ownership (%)	CEO Age	Number of Segments	Industry Homogeneity	Outside CEO	Market-Adjusted Return	Industry-Adjusted EBIT/Assets	Prior CEO Fired	Industry Survival Rate	Log of Stock/Market Volatility	Officer and Director Ownership (%)	Natural Log of Assets
Contract	1.0000																		
Confidentiality	0.8105 (0.0000)	1.0000																	
Non-Compete	0.6546 (0.0000)	0.7446 (0.0000)	1.0000																
Contract Duration (Years)	0.7677 (0.0000)	0.6551 (0.0000)	0.5071 (0.0000)	1.0000															
Contract Length (Pages)	0.7509 (0.0000)	0.7747 (0.0000)	0.6554 (0.0000)	0.6053 (0.0000)	1.0000														
Board Independence	-0.1140 (0.0112)	-0.1026 (0.0276)	-0.0141 (0.7633)	-0.1730 (0.0002)	-0.0048 (0.9180)	1.0000													
Institutional Ownership (%)	-0.0256 (0.5835)	0.0018 (0.9702)	0.0061 (0.8990)	-0.1073 (0.0263)	0.0026 (0.9576)	0.1684 (0.0003)	1.0000												
CEO Ownership (%)	-0.0238 (0.5975)	0.0029 (0.9497)	0.0282 (0.5453)	0.0359 (0.4422)	0.0579 (0.2150)	-0.2182 (0.0000)	-0.1281 (0.0059)	1.0000											
CEO Age	-0.1405 (0.0018)	-0.1583 (0.0007)	-0.1757 (0.0002)	-0.0480 (0.3058)	-0.1005 (0.0316)	0.0161 (0.7226)	0.0866 (0.0641)	0.1529 (0.0007)	1.0000										
Number of Segments	-0.1054 (0.0247)	-0.0905 (0.0617)	-0.1284 (0.0079)	-0.1044 (0.0310)	-0.1133 (0.0192)	0.1781 (0.0001)	0.0006 (0.9903)	-0.0194 (0.6806)	0.1466 (0.0018)	1.0000									
Industry Homogeneity	0.0977 (0.0299)	0.1033 (0.0266)	0.0706 (0.1304)	0.0828 (0.0758)	0.0734 (0.1157)	-0.0652 (0.1477)	0.0218 (0.6399)	0.0592 (0.1893)	-0.1002 (0.0264)	-0.0049 (0.9178)	1.0000								
Outside CEO	0.2816 (0.0000)	0.3022 (0.0000)	0.2738 (0.0000)	0.2672 (0.0000)	0.2787 (0.0000)	-0.0874 (0.0522)	-0.0112 (0.8104)	0.1484 (0.0009)	-0.0646 (0.1531)	-0.1279 (0.0063)	0.1227 (0.0063)	1.0000							
Market-Adjusted Return	-0.0728 (0.1147)	-0.0629 (0.1876)	-0.0688 (0.1496)	-0.0798 (0.0945)	-0.0914 (0.0553)	-0.1016 (0.0275)	0.0410 (0.3847)	0.0592 (0.1997)	-0.0921 (0.0464)	-0.0805 (0.0935)	0.1472 (0.0014)	0.0948 (0.0398)	1.0000						
Industry-Adjusted EBIT/Assets	-0.1162 (0.0135)	-0.1236 (0.0110)	-0.1231 (0.0113)	-0.1194 (0.0140)	-0.1457 (0.0027)	-0.1158 (0.0139)	0.0668 (0.1651)	0.0036 (0.9396)	-0.1342 (0.0044)	-0.1096 (0.0242)	0.0587 (0.2135)	0.1021 (0.0302)	0.3241 (0.0000)	1.0000					
Prior CEO Fired	0.1423 (0.0015)	0.1372 (0.0032)	0.1493 (0.0013)	0.1177 (0.0115)	0.1621 (0.0005)	0.0384 (0.3948)	0.0555 (0.2341)	-0.0671 (0.1367)	-0.1513 (0.0008)	0.0217 (0.6444)	0.0535 (0.2352)	0.1628 (0.0003)	-0.0430 (0.3516)	-0.0253 (0.5926)	1.0000				
Industry Survival Rate	0.1374 (0.0029)	0.1538 (0.0012)	0.1516 (0.0015)	0.1805 (0.0001)	0.1116 (0.0195)	-0.1043 (0.0240)	0.0140 (0.7685)	0.0377 (0.4164)	-0.0040 (0.9307)	-0.1482 (0.0019)	-0.0151 (0.7452)	0.0565 (0.2226)	0.0260 (0.5828)	0.0083 (0.8606)	0.0406 (0.3810)	1.0000			
Natural Log of Stock/Market Volatility	-0.1441 (0.0017)	-0.1304 (0.0062)	-0.0454 (0.3424)	-0.0640 (0.1805)	-0.1531 (0.0013)	-0.1524 (0.0009)	0.0425 (0.3679)	0.1194 (0.0095)	-0.1291 (0.0051)	-0.1049 (0.0287)	0.1646 (0.0003)	0.1963 (0.0000)	0.2737 (0.0000)	0.2195 (0.0000)	0.1208 (0.0087)	0.1616 (0.0006)	1.0000		
Officer and Director Ownership (%)	0.0042 (0.9255)	0.0239 (0.6084)	-0.0224 (0.6307)	-0.0071 (0.8797)	0.0021 (0.9638)	-0.3642 (0.0000)	-0.2085 (0.0000)	0.1513 (0.0007)	-0.1470 (0.0011)	-0.0695 (0.1393)	0.0059 (0.8964)	0.0737 (0.1020)	0.0677 (0.1421)	0.0277 (0.5579)	-0.0097 (0.8291)	0.0328 (0.4786)	0.1364 (0.0030)	1.0000	
Natural Log of Assets	-0.0766 (0.0963)	-0.0509 (0.2853)	-0.0679 (0.1540)	-0.0312 (0.5129)	0.0218 (0.6469)	0.1527 (0.0009)	-0.0707 (0.1366)	-0.1018 (0.0270)	0.2253 (0.0000)	0.3247 (0.0000)	-0.1104 (0.0164)	-0.1861 (0.0000)	-0.1691 (0.0003)	-0.3121 (0.0000)	0.0029 (0.9495)	-0.1615 (0.0005)	-0.3180 (0.0000)	-0.1886 (0.0000)	1.0000

Table III
Probit Models Predicting Explicit Contract

Probit models predicting whether firms in the S&P 500 have comprehensive explicit employment agreements (EA) with their CEOs as of the beginning of the year 2000. The dependent variable equals 1 if the firm has such an agreement and zero otherwise. The partial derivative with respect to the independent variable and the t-statistic for the model coefficient (in parentheses) are reported. The partial derivative is computed holding other variables at their mean values. *, **, and *** denote significance at the 10%, 5%, and 1% levels, respectively, in two-tailed tests. *Board Independence* is the fraction of independent directors on the board on the EA date (the date the agreement is entered into), *Institutional Ownership* is the fraction of outstanding shares held by institutional investors at the beginning of the quarter including the EA date, *CEO Ownership* is the fraction of outstanding shares owned by the CEO from the proxy prior to the EA date, *CEO Age* is the age of the CEO on the EA date, *Number of Segments* is the maximum of the number of geographic or business segments that the firm operates in as reported in the Compustat segment tapes, *Industry Homogeneity* is an indicator variable that equals 1 if the industry is classified as heterogeneous based on the cross-sectional standard deviation of the year-to-year percentage change in revenue in the industry from 1960 to 1989, *Outside CEO* is an indicator variable that equals 1 if the CEO was appointed to that position within one year of joining the firm, *Market-Adjusted Return* is the return on the firm's stock, adjusted using the CRSP value-weighted Index, over the six months preceding the EA date, *Industry-Adjusted EBIT Assets* is firm's EBIT/Assets in the fiscal year preceding the EA date, less the median value of that ratio for the primary industry in which the firm competes, *Prior CEO Fired* is an indicator variable that equals 1 if the previous CEO is identified as fired using the criteria outlined in Parrino (1997), *Industry Survival Rate* equals one minus the fraction of firms in the industry that were delisted due to mergers and acquisitions in the year that includes the EA date, *Natural Log of Stock/Market Volatility* is the natural log of the ratio of the standard deviation of the firm's stock price to the standard deviation of the CRSP value-weighted Index over the 12 months immediately preceding the EA date. *Officer and Director Ownership* is the fraction of shares owned by officers and directors, excluding the CEO, at the EA date, and *Natural Log of Assets* is the natural log of assets in the fiscal year ending immediately before the EA date. Industries are defined using the classification system proposed by Fama and French (1997).

	Model 1	Model 2	Model 3
Constant	0.484 (1.62)	-1.238 (-1.65)*	-1.191 (-1.33)
Board independence	-0.443 (-2.62)***		-0.521 (-2.79)***
Institutional ownership (%)	-0.024 (-0.15)		-0.064 (-0.35)
CEO ownership (%)	-0.012 (-2.28)**		-0.008 (-1.48)
CEO age	-0.007 (-1.85)*		-0.009 (-2.03)**
Number of segments	-0.005 (-0.37)		-0.003 (-0.19)
Industry homogeneity	0.093 (1.72)*		0.164 (2.76)***
Outside CEO	0.336 (5.83)***		0.400 (6.07)***
Market-adjusted return		-0.001 (-0.03)	-0.037 (-0.84)
Industry-adjusted EBIT/assets		-0.396 (-2.24)**	-0.436 (-2.29)**
Prior CEO fired		0.302 (3.96)***	0.265 (2.90)***
Industry survival rate		2.151 (2.79)***	2.700 (3.02)***
Natural log of stock/ market volatility		-0.270 (-4.29)***	-0.343 (-4.82)***
Officer and director ownership (%)	-0.002 (-0.77)	-0.001 (-0.40)	-0.003 (-0.89)
Natural log of assets	0.007 (0.33)	-0.061 (-3.15)***	-0.041 (1.78)*
Total observations	413	441	395
Observations with explicit employment agreement	186	198	173
Log likelihood	-255	-278	-214
Pseudo R-squared	0.10	0.08	0.21

Table IV
Tobit Models Predicting Contract Duration

Tobit models predicting the duration of comprehensive explicit employment agreements (EA) between firms in the S&P 500 and their CEOs as of the beginning of the year 2000. The dependent variable is the duration of the EA in years. The partial derivative with respect to the independent variable and the t-statistic for the model coefficient (in parentheses) are reported. The partial derivative is computed holding other variables at their mean values and are conditional on the existence of an EA. *, **, and *** denote significance at the 10%, 5%, and 1% levels, respectively, in two-tailed tests. *Board Independence* is the fraction of independent directors on the board on the EA date (the date the agreement is entered into), *Institutional Ownership* is the fraction of outstanding shares held by institutional investors at the beginning of the quarter including the EA date, *CEO Ownership* is the fraction of outstanding shares owned by the CEO from the proxy prior to the EA date, *CEO Age* is the age of the CEO on the EA date, *Number of Segments* is the maximum of the number of geographic or business segments that the firm operates in as reported in the Compustat segment tapes, *Industry Homogeneity* is an indicator variable that equals 1 if the industry is classified as heterogeneous based on the cross-sectional standard deviation of the year-to-year percentage change in revenue in the industry from 1960 to 1989, *Outside CEO* is an indicator variable that equals 1 if the CEO was appointed to that position within one year of joining the firm, *Market-Adjusted Return* is the return on the firm's stock, adjusted using the CRSP value-weighted Index, over the six months preceding the EA date, *Industry-Adjusted EBIT Assets* is firm's EBIT/Assets in the fiscal year preceding the EA date, less the median value of that ratio for the primary industry in which the firm competes, *Prior CEO Fired* is an indicator variable that equals 1 if the previous CEO is identified as fired using the criteria outlined in Parrino (1997), *Industry Survival Rate* equals one minus the fraction of firms in the industry that were delisted due to mergers and acquisitions in the year that includes the EA date, *Natural Log of Stock/Market Volatility* is the natural log of the ratio of the standard deviation of the firm's stock price to the standard deviation of the CRSP value-weighted Index over the 12 months immediately preceding the EA date. *Officer and Director Ownership* is the fraction of shares owned by officers and directors, excluding the CEO, at the EA date, and *Natural Log of Assets* is the natural log of assets in the fiscal year ending immediately before the EA date. Industries are defined using the classification system proposed by Fama and French (1997).

	Model 1	Model 2	Model 3
Constant	0.435 (0.45)	-9.147 (-3.10)***	-8.716 (-2.91)***
Board independence	-1.710 (-3.13)***		-1.672 (-3.18)***
Institutional ownership (%)	-0.602 (-1.16)		-0.490 (-0.95)
CEO ownership (%)	-0.020 (-1.08)		-0.005 (-0.31)
CEO age	-0.006 (-0.47)		-0.009 (-0.71)
Number of segments	-0.037 (-0.74)		-0.022 (-0.46)
Industry homogeneity	0.286 (1.57)		0.408 (2.31)**
Outside CEO	1.117 (5.45)***		1.139 (5.56)***
Market-adjusted return		-0.005 (0.03)	-0.083 (-0.63)
Industry-adjusted EBIT/assets		-1.570 (-2.37)**	-1.256 (-2.05)**
Prior CEO fired		0.856 (3.10)***	0.576 (2.19)**
Industry survival rate		11.139 (3.74)***	11.366 (3.83)***
Natural log of stock/ market volatility		-0.702 (-3.37)***	-0.739 (-3.77)***
Officer and director ownership (%)	-0.012 (-1.34)	-0.002 (-0.21)	-0.010 (-1.11)
Natural log of assets	0.078 (1.14)	-0.107 (-1.58)	-0.012 (-0.18)
Total observations	387	414	371
Observations with explicit employment agreement	186	198	173
Explicit agreements with well defined duration	141	149	130
At will contracts	19	22	19
Log likelihood	-550	-590	-492
Pseudo R-squared	0.04	0.03	0.09

Table V
Tobit Models Predicting Contract Length

Tobit models predicting the length of comprehensive explicit employment agreements (EA) between firms in the S&P 500 and their CEOs as of the beginning of the year 2000. The dependent variable is the length of the EA in pages. The partial derivative with respect to the independent variable and the t-statistic for the model coefficient (in parentheses) are reported. The partial derivative is computed holding other variables at their mean values and are conditional on an the existence of an EA. *, **, and *** denote significance at the 10%, 5%, and 1% levels, respectively, in two-tailed tests. *Board Independence* is the fraction of independent directors on the board on the EA date (the date the agreement is entered into), *Institutional Ownership* is the fraction of outstanding shares held by institutional investors at the beginning of the quarter including the EA date, *CEO Ownership* is the fraction of outstanding shares owned by the CEO from the proxy prior to the EA date, *CEO Age* is the age of the CEO on the EA date, *Number of Segments* is the maximum of the number of geographic or business segments that the firm operates in as reported in the Compustat segment tapes, *Industry Homogeneity* is an indicator variable that equals 1 if the industry is classified as heterogeneous based on the cross-sectional standard deviation of the year-to-year percentage change in revenue in the industry from 1960 to 1989, *Outside CEO* is an indicator variable that equals 1 if the CEO was appointed to that position within one year of joining the firm, *Market-Adjusted Return* is the return on the firm's stock, adjusted using the CRSP value-weighted Index, over the six months preceding the EA date, *Industry-Adjusted EBIT Assets* is firm's EBIT/Assets in the fiscal year preceding the EA date, less the median value of that ratio for the primary industry in which the firm competes, *Prior CEO Fired* is an indicator variable that equals 1 if the previous CEO is identified as fired using the criteria outlined in Parrino (1997), *Industry Survival Rate* equals one minus the fraction of firms in the industry that were delisted due to mergers and acquisitions in the year that includes the EA date, *Natural Log of Stock/Market Volatility* is the natural log of the ratio of the standard deviation of the firm's stock price to the standard deviation of the CRSP value-weighted Index over the 12 months immediately preceding the EA date. *Officer and Director Ownership* is the fraction of shares owned by officers and directors, excluding the CEO, at the EA date, and *Natural Log of Assets* is the natural log of assets in the fiscal year ending immediately before the EA date. Industries are defined using the classification system proposed by Fama and French (1997).

	Model 1	Model 2	Model 3
Constant	0.990 (0.28)	-26.818 (-2.59)***	-26.904 (-2.56)**
Board independence	-2.878 (-1.42)		-2.956 (-1.55)
Institutional ownership (%)	0.006 (0.00)		0.168 (0.09)
CEO ownership (%)	-0.096 (-1.41)		-0.032 (-0.51)
CEO age	-0.103 (-2.07)**		-0.104 (-2.22)**
Number of segments	-0.289 (-1.55)		-2.100 (-1.20)
Industry homogeneity	1.021 (1.52)		1.411 (2.23)**
Outside CEO	4.640 (6.07)***		4.620 (6.20)***
Market-adjusted return		0.014 0.03	-3.780 (-0.77)
Industry-adjusted EBIT/assets		-6.464 (-2.71)***	-4.981 (-2.26)**
Prior CEO fired		4.887 (4.71)***	2.898 (2.99)***
Industry survival rate		35.077 (3.36)***	37.057 (3.53)***
Natural log of stock/ market volatility		-3.320 (-4.40)***	-3.371 (-4.74)***
Officer and director ownership (%)	-0.020 (-0.59)	-0.007 (-0.22)	-0.011 (-0.35)
Natural log of assets	0.540 (2.13)**	-0.417 (-1.71)*	0.092 (0.37)
Total observations	387	414	371
Observations with explicit employment agreement	186	198	173
Explicit agreements with measurable page length	160	171	149
Log likelihood	-805	-861	-725
Pseudo R-squared	0.03	0.03	0.07

Table VI
Probit Models Predicting Presence of Explicit Non-Compete and Confidentiality Clauses

Probit models predicting whether firms in the S&P 500 have explicit non-compete clauses in explicit employment agreements (EA) with their CEOs as of the beginning of the year 2000. The dependent variable equals 1 if the firm has an explicit non-complete clause and zero otherwise. The partial derivative with respect to the independent variable and the t-statistic for the model coefficient (in parentheses) are reported. The partial derivative is computed holding other variables at their mean values. *, **, and *** denote significance at the 10%, 5%, and 1% levels, respectively, in two-tailed tests. *Board Independence* is the fraction of independent directors on the board on the EA date (the date the agreement is entered into), *Institutional Ownership* is the fraction of outstanding shares held by institutional investors at the beginning of the quarter including the EA date, *CEO Ownership* is the fraction of outstanding shares owned by the CEO from the proxy prior to the EA date, *CEO Age* is the age of the CEO on the EA date, *Number of Segments* is the maximum of the number of geographic or business segments that the firm operates in as reported in the Compustat segment tapes, *Industry Homogeneity* is an indicator variable that equals 1 if the industry is classified as heterogeneous based on the cross-sectional standard deviation of the year-to-year percentage change in revenue in the industry from 1960 to 1989, *Outside CEO* is an indicator variable that equals 1 if the CEO was appointed to that position within one year of joining the firm, *Market-Adjusted Return* is the return on the firm's stock, adjusted using the CRSP value-weighted Index, over the six months preceding the EA date, *Industry-Adjusted EBIT Assets* is firm's EBIT/Assets in the fiscal year preceding the EA date, less the median value of that ratio for the primary industry in which the firm competes, *Prior CEO Fired* is an indicator variable that equals 1 if the previous CEO is identified as fired using the criteria outlined in Parrino (1997), *Industry Survival Rate* equals one minus the fraction of firms in the industry that were delisted due to mergers and acquisitions in the year that includes the EA date, *Natural Log of Stock/Market Volatility* is the natural log of the ratio of the standard deviation of the firm's stock price to the standard deviation of the CRSP value-weighted Index over the 12 months immediately preceding the EA date. *Officer and Director Ownership* is the fraction of shares owned by officers and directors, excluding the CEO, at the EA date, and *Natural Log of Assets* is the natural log of assets in the fiscal year ending immediately before the EA date. Industries are defined using the classification system proposed by Fama and French (1997).

	Non-Compete		Confidentiality	
	Model 1	Model 2	Model 3	Model 4
Constant	-1.379 (-1.86)*	-0.020 (-0.01)	-2.170 (-2.48)**	-0.510 (-0.36)
Board independence	-0.079 (-0.58)	0.470 (1.81)*	-0.346 (-2.19)**	0.019 (0.09)
Institutional ownership (%)	0.056 (0.43)	0.128 (0.50)	0.073 (0.46)	0.221 (0.98)
CEO ownership (%)	0.001 (0.19)	0.016 (1.49)	-0.003 (-0.51)	0.007 (0.81)
CEO age	-0.012 (-3.36)***	-0.019 (-2.81)***	-0.011 (-2.77)***	-0.011 (-2.02)**
Number of segments	-0.014 (-1.07)	-0.027 (-0.96)	-0.004 (-0.26)	-0.000 (-0.01)
Industry homogeneity	0.048 (1.05)	-0.062 (-0.66)	0.150 (2.78)***	0.109 (1.43)
Outside CEO	0.209 (4.55)***	0.048 (0.54)	0.351 (6.22)***	0.148 (2.02)**
Market-adjusted return	-0.011 (-0.33)	0.010 (0.13)	-0.015 (-0.38)	0.018 (0.24)
Industry-adjusted EBIT/assets	-0.468 (-2.72)***	-0.410 (-1.28)	-0.431 (-2.26)**	-0.053 (-0.21)
Prior CEO fired	0.122 (1.99)**	-0.050 (-0.45)	0.139 (1.89)*	-0.105 (-1.18)
Industry survival rate	2.017 (2.75)***	0.608 (0.38)	3.150 (3.58)***	0.989 (0.72)
Natural log of stock/ market volatility	-0.089 (-1.77)*	0.148 (1.65)*	-0.259 (-4.20)***	0.001 (0.02)
Officer and director ownership (%)	-0.001 (-0.51)	-0.001 (-0.21)	-0.002 (-0.74)	-0.002 (-0.41)
Natural log of assets	0.000 (0.01)	0.026 (0.70)	-0.009 (-0.44)	0.015 (0.47)
Sample	All Obs.	Obs with EA	All Obs.	Obs with EA
Total observations	371	149	371	149
Observations with explicit employment agreement	149	149	149	149
Explicit agreements with indicated clause	86	86	114	114
Log likelihood	-165	-92	-176	-75
Pseudo R-squared	0.18	0.09	0.23	0.07