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Golden Handshakes: Separation Pay for Retired and Dismissed CEOs

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Abstract

This paper studies separation payments made when CEOs leave their firms. In a sample of 179 exiting *Fortune 500* CEOs, more than half receive severance pay and the mean separation package is worth $5.4 million. The large majority of severance pay is awarded on a discretionary basis by the board of directors and not according to terms of an employment agreement. For the subset of exiting CEOs who are dismissed, separation pay generally conforms to theories related to bonding and damage control. Shareholders react negatively when separation agreements are disclosed, but only in cases of voluntary CEO turnover.

JEL classification codes: G34, J33

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Golden Handshakes:
Separation Pay for Retired and Dismissed CEOs

1. Introduction

This paper studies "golden handshakes," the colloquial name for separation packages awarded to CEOs at retirement or termination. These severance agreements, somewhat similar to "golden parachutes" received by CEOs whose firms are acquired, can lead to controversy between shareholders and boards of directors.[1] Because separation pay occurs when a CEO exits the firm, critics assert that it represents a giveaway that cannot influence future performance and may indicate broader governance problems. However, counter-arguments suggest that separation pay may be part of an efficient multi-period incentive contract. For successful CEOs, a separation package could represent the payoff from an "ex post settling up" implicit contract (Fama, 1980), under which a board of directors assesses a CEO's achievements at the end of his career and compensates him accordingly. For CEOs who fail, severance compensation might be predicted by one or more related bonding theories. In these models, contingent severance pay is promised in advance to managers, providing insurance for their human capital value. CEOs are thereby encouraged to take risk (Almazan and Suarez, 2003) and discouraged from concealing adverse information (Inderst and Mueller, 2005), entrenching themselves in office (Almazan and Suarez, 2003), or shirking when their dismissal appears possible (Berkovitch, Israel, and Spiegel, 2000). Under a separate theory, separation pay may serve as an instrument of damage control when CEOs are ousted, helping the board protect corporate secrets and head off litigation or adverse publicity.

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[1] For example, in June 2000 Procter & Gamble Co. ousted Chairman and CEO Durk I. Jager, age 57, who in a brief tenure of 18 months had presided over a sizeable drop in P&G's stock price. P&G paid $9.5 million to Jager in exchange for future consulting services and a promise not to compete, citing his "loyal and distinguished service" and "arrangements provided by other companies to retiring chief executive officers." Jager also retained his previously awarded pension and stock options. A shareholder resolution at the company's next annual meeting assailed the package as "obscene" and proposed a ban on future severance pacts.

Although golden parachutes have been investigated at length by researchers,[2] no study has studied separation agreements for CEOs who retire or get dismissed by their boards. This paper examines a data set of 179 CEOs of *Fortune 500* CEOs who leave their firms between 1996 and 2002. I gather data about the terms of each CEO's departure and classify separation pay into five categories. More than half of the CEOs in the sample collect compensation upon leaving their position, with a mean present value of $5.4 million including the zero-valued observations. Nineteen of the 179 sample CEOs receive packages with present values exceeding $10 million. However, in most cases separation pay appears modest, as the mean package equals 0.06 percent of the average market capitalization of sample firms and is less than the value of one year's average CEO compensation.

Though their value is not dramatic relative to certain benchmarks, separation packages represent a puzzle because firms usually are not required to pay them. The large majority of separation pay in my sample – 83 percent – is not delivered pursuant to existing employment contracts but instead is granted to CEOs on a discretionary basis by their boards of directors.

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[2] The classic study of golden parachutes is Lambert and Larcker (1985), and a more recent treatment is Lefanowicz, Robinson, and Smith (2000). The relation between golden parachutes and other target CEO gains from acquisitions is investigated by Agrawal and Knoeber (1998) and Hartzell, Ofek and Yermack (2004).

CEOs who are dismissed are far more likely to obtain separation pay compared to CEOs who retire voluntarily (91 percent vs. 47 percent), and their awards are several times larger, with a mean value of $15.1 million (median $6.5 million) compared to a mean of $2.3 (median zero) in cases of normal retirements. Dismissed CEOs also obtain the large majority of their separation pay – 76 percent – from discretionary awards rather than existing employment contracts.

For insight into why firms award severance pay, I estimate a regression model based upon the ex post settling up, bonding, and damage control theories referred to above, and an additional theory related to managerial rent extraction (Bebchuk and Fried, 2004). I also analyze stock market returns upon disclosure of CEOs' exit packages. For the subsample of CEOs who retire voluntarily, regression analysis fails to support either the ex post settling up or rent extraction theories. However, for the subsample of CEOs who are dismissed, severance pay appears to occur in patterns that match the predictions of several bonding theories as well as the damage control theory, though the countervailing predictions of certain bonding theories make interpretation of the results somewhat difficult. Analysis of abnormal stock returns upon the disclosure of separation packages reveals a negative and significant reaction in cases of voluntary CEO retirements and an insignificant reaction in cases of forced CEO removal. These results are consistent with a prediction of the rent extraction theory.

Payouts to CEOs when they leave their posts indicate that turnover, whether planned or forced, serves as a type of "compensation event" in which top managers can obtain extraordinary one-time rewards on top of their regular annual pay. The findings complement other recent research into one-time rewards for CEOs who agree to sell their firms (Hartzell, Ofek and Yermack, 2004), CEOs who change jobs (Fee and Hadlock, 2003), and CEOs who make acquisitions (Grinstein and Hribar, 2004). Together these studies indicate that understanding top management incentives requires looking beyond routine annual compensation and examining one-time events, which might also include spinoffs, IPOs, equity carveouts, and even bankruptcies or liability restructurings.

The remainder of the paper is organized as follows. Section 2 reviews theoretical models of separation pay for top managers. Section 3 describes the data and sample selection. Section 4 presents regression analysis of the value of separation packages. Section 5 contains analysis of stock market reactions to the disclosure of these pacts. Section 6 concludes the paper.

2. Theories of CEO separation pay

The passages below discuss four theories of severance pay: ex post settling up, managerial rent extraction, bonding, and damage control. The first two theories apply mainly to voluntary CEO turnover, while the other two seem more relevant for involuntary dismissals.

A. Ex post settling up

When a CEO concludes a successful career, the ex post settling up theory would predict a lump-sum exit payment if the CEO had been underpaid during his career. Fama's (1980) intertemporal model of CEO wages serves as the foundation of this theory, under which a board of directors continually obtains new information about a CEO's human capital value, decoding noisy signals sent via the company's performance. Changes to CEO compensation take account of this new information period by period, through a wage smoothing dynamic that Fama labels "ex post settling up." So long as the performance signal received by the board has uncertain precision, the board will not engage in full settling up with the manager period-by-period, but instead will revise wages gradually over time as new signals are received. Fama's infinite-horizon model does not deal explicitly with a CEO who reaches retirement, but a clear implication is that a manager who retires after a successful career may receive a large exit package, since his human capital contributions could have exceeded those perceived by the board during his career (this will not be true of all retiring CEOs, since boards might realize ex post that some had been overpaid). The board could refuse to acknowledge an implicit ex post settling up arrangement and deny a good CEO the exit package, but this would send adverse signals to other managers in the organization including the successor CEO.

Empirically, ex post settling up predicts an inverse association between separation pay and the extent to which a CEO is overcompensated, relative to the market value of his human capital, in years leading up to retirement. For dismissed CEOs, the expected level of separation pay should be zero for ex post settling up purposes, since these CEOs' ex post human capital value likely fell below the level perceived ex ante by the board. Importantly, an inverse association between prior compensation and a CEO's severance could exist for other reasons than ex post settling up. Some CEOs may enter into employment contracts assuring them of large separation packages or work for firms with histories of awarding large severance pay. Holding all else constant, these CEOs should obtain reduced annual compensation as a tradeoff for the security of a large prospective exit package. The resulting coincidence of low annual compensation and high separation pay would result from ex ante endogenous relations rather than ex post settling up.

B. Rent extraction

In line with the frequent portrayal of separation agreements in the news media, a further theory of severance pay is that it represents rent extraction by powerful managers who are able to obtain extra compensation beyond the value of their human capital (see, e.g., Bebchuk and Fried, 2004). The rent extraction theory of severance pay should apply only in cases of voluntary turnover, since CEOs who are fired would appear to lack influence over their firms' governance. The main empirical predictions of the theory would be a positive association between prior annual excess compensation and the level of severance pay, since CEOs' ability to obtain excess compensation should be high at both the middle and the end of their careers, and a negative association between severance pay and the quality of corporate governance. In addition, the theory suggests that severance pay should be delivered in a non-transparent form, since boards might want to conceal from shareholders payments representing unearned economic rents.

C. Bonding

When CEOs are dismissed for poor performance, separation payments might represent payoffs of explicit or implicit contracts under which the firm provides insurance for the CEOs' human capital value. Models of severance pay in this framework appear in Berkovitch, Israel, and Spiegel (2000), Ju, Leland, and Senbet (2002), Almazan and Suarez (2003), and Inderst and Mueller (2005). These papers generally analyze moral hazard or governance problems that arise when CEOs alter their behavior because they fear dismissal. These problems are related to inadequate risk-taking, shirking, entrenchment in office, and incomplete disclosure of information. Risk taking is analyzed in all four papers as well as the CEO compensation literature generally. With either a concave utility function and/or private benefits from his position, the CEO may avoid investments that have a positive net present value but increase the probability of adverse outcomes leading to dismissal. Shirking may arise if a CEO feels that his replacement has become likely, and that additional effort would do little to help him keep his job; Berkovitch et. al (2000) analyze this case most closely. CEO entrenchment, modeled by Almazan and Suarez (2003) as an alternative rationale for severance pay that is distinct from their examination of risk aversion, refers to the possibility that a CEO could be monitored by a weak board of directors and elect to remain in his position and collect a stream of rents, though shareholders would prefer that he be removed. Incomplete disclosure, the focus of Inderst and Mueller (2005), represents an alternative strategy for CEOs to remain in office and collect rents by keeping shareholders unaware of negative information.

Severance pay in each model serves as a bonding device through which shareholders promise the CEO a minimum income level while also raising the costs to themselves of changing managers. In cases of risk aversion or effort avoidance, CEOs would be more likely to pursue value maximizing strategies due to the security provided by severance pay. In cases of CEO entrenchment, whether arising from weak governance or information asymmetry, severance pay may make retirement more attractive to an under-performing CEO than staying in his position, even if the board lacked the strength or accurate information that would cause it to remove him.

Individually or collectively, these models imply a number of empirical predictions, all of which should apply more to CEO dismissals than to voluntary retirements. Due to the range of hypotheses presented in the various models, not all of these empirical predictions are unambiguous and internally consistent, though they are not necessarily mutually exclusive either. To serve as insurance for the CEO's human capital value, severance pay should be positively associated with the present value of expected future income until retirement, a prediction that appears to be implied by all of the theory papers that study risk aversion except Berkovitch et. al (2000). Leverage should be negatively associated with severance pay, according to the Berkovitch et. al model, since severance pay increases the costs to shareholders of removing a CEO and risky debt does the opposite, if one assumes that CEO replacement increases the variability of expectations about future cash flows. However, one could also justify a prediction of a positive association between leverage and severance pay based on the idea of human capital insurance, since leverage puts a CEO at greater risk of removal, ceteris paribus. Almazan and Suarez's (2003) model of CEO entrenchment predicts that severance pay should be stronger when corporate governance quality is weaker and CEOs are more easily entrenched, though an opposite prediction about governance quality would seem to apply to their model of severance pay in the context of CEO risk aversion. Finally, one would expect greater separation packages for CEOs hired outside the firm, since these managers face greater uncertainty of success due to lack of familiarity with the company and therefore should obtain greater insurance for their human capital; Gillan, Hartzell, and Parrino's (2005) study of CEO employment agreements shows a high incidence of formal contracts (which generally lead to severance pay after dismissals) for CEOs hired from outside.

D. Damage control

Most CEOs leave their posts with valuable corporate secrets as well as firm-specific human capital that may be useful to the company in some form. For this reason, separation packages often pay the CEO for agreeing to a variety of non-competition, non-disclosure, non-hire, and consulting provisions. Severance pay may also prevent an ex-CEO from becoming an adversary of the company, a role in which he might initiate litigation, sound off in the news media, sabotage the transition to his successor, cooperate with regulatory investigations, or take part in hostile takeover attempts.[3] Litigation by disgruntled ex-CEOs is perhaps the most common of these problems, and its basis is usually not the dismissal event itself, but instead the costs incurred by the CEO if the company abridges various compensation instruments, such as unvested stock options, executive loans, deferred compensation, or pensions.[4] Separation agreements therefore often require the ex-CEO to release the firm from any legal liability in connection with his termination.[5] If severance pay helps limit costs related to litigation, adverse publicity, information disclosure, and related problems, then a positive relation should exist between severance pay and expected future compensation of dismissed CEOs, because lost compensation represents the opportunity cost to these managers of termination.

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[3] Two well-known cases of retired CEOs assisting raiders in hostile takeover attempts are Lee Iacocca, who cooperated with Kirk Kerkorian in his unsuccessful 1995 bid for Chrysler Corp., and J. Paul Sticht, who assisted Kohlberg Kravis Roberts in its 1989 leveraged buyout of RJR Nabisco Inc.

[4] A number of prominent companies have in recent years become engaged in lawsuits with ex-CEOs after the company dismissed them and then sought to limit or cancel certain aspects of their compensation. Examples include Richard Grasso and the New York Stock Exchange, Jean-Marie Messier and Vivendi Universal, Bernard Ebbers and MCI, Albert Dunlap and Sunbeam, Conrad Black and Hollinger, and Stephen Hilbert and Conseco.

[5] W.R. Grace & Co. and Sprint Corp. are representative examples of companies that negotiated generous separation packages with dismissed CEOs under circumstances in which litigation would have been unsurprising. In both cases, the agreements included mutual liability releases. At W.R. Grace, CEO J.P. Bolduc left in 1995 after a boardroom power struggle with his predecessor, in which the two sides traded allegations of sexual harassment and financial irregularities involving family members. Bolduc, age 55, received a separation package valued at more than $20 million. At Sprint, CEO William T. Esrey, age 63, was ousted in 2003 after a 17 year tenure. Esrey had followed the advice of the company's auditing firm and established a personal tax shelter that was challenged by the Internal Revenue Service. The CEO received a large bill for back taxes, and a public three-way conflict developed between the CEO, the auditors, and the company. Esrey received a separation package worth about $12.5 million.

3. Sample selection and description

I analyze CEO turnover events in a panel of 237 companies that were members of the *Fortune 500* in 2002. Beginning with the entire *Fortune 500*, I drop non-public firms and all firms not covered by ExecuComp continuously from 1993 to 2002. Because certain computations below require three years of lagged compensation data, the sample for turnover analysis spans the seven-year period 1996-2002, with 1993-95 data reserved for use as lagged values. The panel includes seven observations for each of 237 firms, or 1,659 company-years.

Table 1 describes construction of the sample of turnover events. Within the panel, companies change CEOs 211 times, including CEOs in the final sample year 2002 who are replaced in 2003. The departure frequency of 12.7 percent is slightly higher than in past turnover studies but in line with a rising turnover trend over the past 40 years (see studies cited by Denis and Denis, 1995). Because this study focuses on CEO severance packages, I narrow my sample by eliminating 32 observations for which separation pay is either irrelevant or extraordinary, leaving 179 cases for analysis. The 32 excluded observations include four cases of death or ill health; four CEOs who left for better positions (three became CEOs elsewhere, and one became U.S. Secretary of the Treasury); six acting CEOs who left after short tenures; three CEOs who left amid scandals (one each for narcotics, sexual harassment, and fraud); 13 mergers or spinoffs in which the CEO's exit was negotiated as an antecedent; one case in which the CEO's compensation information was undisclosed, in violation of SEC rules; and one CEO demoted to a lower position. I follow the standard approach of the CEO turnover literature by partitioning the observations into "voluntary" and "forced" subsamples. For the large majority of observations, whether turnover is voluntary can be ascertained from news reports and/or language in company proxy statements. In borderline cases, I also consider such factors as the exiting CEO's age and performance, his continuing role with the firm if any, time elapsed between announcement of the CEO's exit and his actual departure, and whether the successor CEO came from outside the firm. I classify 43 events, or 24.0 percent of the turnovers, as forced with the remainder as voluntary. This percentage is close to that found by Huson, Parrino and Starks (2001), who classify 23.4 percent of turnover events as forced in a 1989-94 sample.

Table 2 presents descriptive statistics for the sample of 179 turnover events, with the full sample's properties shown in the left column and data for voluntary and forced subsamples in the other two columns. Exiting CEOs have a mean age of 61 years with an average of ten years service, and unsurprisingly, CEOs who leave voluntarily have significantly higher means for age and service compared to CEOs who are forced out. Dismissed CEOs are significantly less likely to belong to the company's founding family. CEOs hired recently outside the firm comprise a greater fraction of the forced compared to voluntary turnover observations, but the difference is not significant. CEOs own a mean of $532.7 million (median of $43.1 million) of stock plus options in their firms, with option values calculated with Black-Scholes methods based upon option inventories disclosed in proxy statements (the very high mean value of ownership is largely due to a single observation, Bill Gates of Microsoft). Median equity ownership is significantly lower for CEOs whose departures are forced as opposed to voluntary, because the accumulation of equity compensation is linked to tenure in office.

Annual compensation, equal to the sum of salary, bonus, and option and restricted stock award values, has a mean of $8.1 million (median of $4.8 million) for CEOs in their last full year prior to departure (CEOs who leave after less than two years in office are not counted in this calculation). I estimate whether CEOs have been over- or under-compensated in the past relative to their peers, as a prelude to tests of the ex post settling up and rent extraction theories. I estimate each CEO's past excess compensation using the ExecuComp variable for three-year compensation, for the period ending in the last full year prior to the turnover year (this year must be omitted from the calculation because it may include the value of the separation package). I regress the log of each CEO's three-year compensation against the log of sales, the firm's three-year net-of-market stock return compounded continuously, and dummy variables for two-digit SIC industries and individual years. The regression sample includes the latest observation for all ExecuComp CEOs with at least three years tenure for whom the three-year compensation and stock return variables are not missing. The sample analyzed contains 2,087 observations, the estimated regression has an r-squared of 0.456, and estimated coefficients are 0.41 for the log of sales and 0.14 for the three-year stock return, both statistically significant. For the 179 exiting CEOs in my sample, 147 have enough information to appear in the regression sample. From the excess compensation regression, I save the expected values of the log of three-year compensation and exponentiate them. I then estimate prior excess compensation as the difference between actual three-year compensation and the regression's expected value.

About one-third of the CEOs in my sample have employment contracts at the time of their exits, and this frequency is somewhat higher though not significantly different for CEOs who are dismissed compared to those who retire voluntarily. As shown in data below, the existence of an employment contract is important for a departing CEO, because the company must continue making payments for the duration of the contract or honor any severance clauses if the CEO does not retire voluntarily.

Exiting CEOs often enter into written separation agreements with their firms. I search SEC filings to obtain all such agreements, and I locate them for just under half of the sample observations.[6] If no written agreement exists, I rely on disclosures in companies' proxy statements to provide information about the separation pay received by exiting CEOs (many are covered by proxy disclosure rules for several years after leaving office, since they often continue serving on the board of directors). In cases in which no formal agreement is negotiated, separation payments to the CEO can occur due to unilateral action by the board or its compensation committee. A large, unsurprising disparity exists in the frequency of formal separation agreements for dismissed CEOs (74.4 percent) compared to voluntary retirements (41.9 percent).

I track subsequent positions, if any, that exiting CEOs hold with their firms. Of the 136 voluntary turnover cases, 99 former CEOs (nearly three-quarters) remain as Chairman of the Board for at least a period of transition, while another 15 remain as directors. Only 21 of 136 resign all their positions immediately. In the subsample of 43 forced CEO turnovers, about two-thirds, or 29 CEOs, leave all positions immediately, while 11 others become Chairman of the Board for a nominal period.

Table 2 also tabulates various information about the size and governance of the sample firms included in the analysis. No unusual patterns or significant differences exist for these variables in the overall sample or in the forced vs. voluntary turnover subsamples.

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[6] Both employment contracts and negotiated separation agreements with company officers are required to be filed with the Securities and Exchange Commission as exhibits to the company's Form 10-Q or 10-K that covers the period in which the contract becomes effective, according to SEC Regulation S-K,17 CFR 229.601(a)(4) (see Instructions to Exhibit Table, paragraph (10)(ii)(D)(iii)(A)). The filing deadline for an agreement is therefore the same as the filing deadline for the 10-Q or 10-K. Of the 89 negotiated separation agreements in my sample, 42 were filed in a 10-K at fiscal year-end and 39 were filed mid-year in a 10-Q. The remaining eight contracts were filed ahead of disclosure deadlines in either a Form 8-K (extraordinary events) or S-4 (registration statement). The majority of contracts are filed within several months after the CEO's departure, although 20 of 89 agreements were filed in advance. In seven cases in which the ex-CEO remained for a period as Chairman of the Board, the separation agreements did not become effective immediately and were not filed for more than a year after his departure as CEO.

A. Contracted and discretionary separation pay

When a CEO works under an employment contract and is dismissed, in most cases the contract specifies minimum separation pay either directly, in a special contract term, or indirectly, since the CEO continues receiving compensation until the contract expires. A CEO who retires voluntarily in the middle of a contract generally is not entitled to severance unless the board awards it discretionarily or the CEO negotiates to retain his status as an employee, perhaps while serving as Chairman of the Board. Employment contracts therefore affect the amount of separation pay that a CEO receives and also its form of delivery.

An empirical study of CEO employment contracts appears in Gillan, Hartzell, and Parrino (2005). That study's sample of S&P 500 firms, analyzed in 2000, overlaps considerably with the sample for this paper. The authors find that employment contracts are more common when a CEO is young, when he has been hired outside the firm, when the board has a high percentage of independent directors, when a predecessor CEO had been fired in the past five years, when the firm competes in a non-homogenous industry, and when the firm's stock has low volatility. Several of these relations, such as CEO age, board independence, and a past history of CEO dismissals, suggest a positive association between the incidence of employment contracts and the ex ante probability of CEO removal, though the volatility relation does not.

Table 3 tabulates the separation pay for CEOs in my sample, with observations partitioned according to whether or not the CEO was working under an employment contract and whether turnover was voluntary or forced. Data for the entire sample appear in the right column. I divide the total severance package for each subsample into two quantities, those that are mandated by the employment contract (which equal zero by definition for the no-contract subsamples), and those that are awarded discretionarily by the board. Table 3 shows that CEOs who leave voluntarily and have employment contracts rarely receive contracted severance pay (7 out of 43 observations). Boards make discretionary separation payments of almost identical size and frequency to voluntarily retiring CEOs who do and do not have employment contracts; 42 percent of those with contracts get additional separation pay with a mean value of $2.2 million, while 44 percent of those without contracts get separation pay with a mean of $2.3 million. The overall mean separation package for voluntarily exiting CEOs is vastly lower than the mean for dismissed CEOs, $2.3 million compared to $15.1 million. For the entire sample, CEOs with employment contracts receive the same mean separation pay as those without contracts – $5.4 million. Only about 17 percent of separation pay is delivered pursuant to employment contracts, and this statistic is only modestly higher, 24 percent, for the subsample of dismissed CEOs.

Data for forced CEOs turnover events presents several clear contrasts to the data for voluntary turnover. When a CEO is fired and has an employment contract, he receives a contracted settlement in 17 out of 19 observations. The mean contracted settlement to this subgroup, including the two zero-valued observations, has a present value of $8.1 million (median of $3.1 million) Most of these CEOs (11 out of 19) also receive discretionary separation pay, with a mean value of $3.9 million (median of $1.1 million), making their total mean package worth $12.0 million. Somewhat surprisingly, CEOs who are dismissed without an employment contract do even better. Nearly all of these CEOs (21 out of 24) receive discretionary separation pay, with a mean value of \$17.5 million (median of \$6.0 million).

B. Elements of discretionary CEO separation pay

I disaggregate data about discretionary separation pay into four categories. Table 4 presents descriptive statistics about each category and the total values of packages received by the 179 exiting CEOs in the sample, with the table again divided into sections for voluntary turnover, forced turnover, and the entire sample. The data show that about half of all CEOs, and about three-quarters of CEOs who are dismissed, receive discretionary packages with positive value, with significantly larger payments awarded to the forced turnover subsample. Categories of discretionary separation pay include:

- *Lump-sum payments.* These can include cash, forgiveness of loans from the company, and new awards of stock or options. Rather than label these as "severance pay," firms generally characterize them euphemistically as consideration for such things as "effecting a smooth transition to his successor," "leadership in the management transition process," or the CEO's "personal sacrifice of electing early retirement."

- *Consulting and non-compete agreements.* Many companies enter into contracts that will be paid out over a number of years, in consideration for the exiting CEO's agreement not to compete against the company and/or to serve as a consultant. I take the present value of these payments, discounted at the firm's cost of debt as inferred from its bond rating.

- *Pension augmentations.* Some companies adjust the terms of CEOs' lifetime defined benefit pensions. Pension benefits often depend upon length of service, and some firms add extra service time or permit CEOs to begin drawing full pensions earlier than the normal age (usually 65). Value consequences of these changes are usually opaque.[7]

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[7] Most CEO pensions are defined benefit life annuities. For pension changes, I calculate the value impact as the difference of actuarial life annuity values before and after the change. Inputs to these calculations include the fixed annual pension amount payable to the CEO, the CEO's age, a discount rate, and forecast mortality probabilities. A CEO's annual pension entitlement can be inferred from disclosures in firms' proxy statements, though the process can require significant research. I use mortality data tabulated by the U.S. Social Security Administration. The company's cost of debt, based upon its bond rating, serves as the discount rate. See Sundaram and Yermack (2005) for further details. As an example, J.P. Morgan Chase CEO Walter Shipley retired in 1999 at age 63, and according to the company's 1999 proxy statement, he was entitled to a pension of \$897,577 beginning at age 65 in a joint and 50% survivor life annuity. The next year, the 2000 proxy statement reported that Shipley had begun drawing a \$1,600,000

- *Adjustments to equity compensation.* Most exiting CEOs hold unvested stock options and restricted shares. All companies have policies for how to treat these awards when executives leave the company, and in some cases, the company deviates from its standard policies in ways that add considerable value to a CEO's holdings.[8]

I do not take account of compensation that some ex-CEOs receive for subsequent service on the board. Often exiting CEOs remain as Chairman of the Board, even in some cases of forced turnover, and their compensation may remain at the CEO level for at least one to two years. It is not clear whether this remuneration should be viewed as disguised severance pay or whether the former CEO is genuinely earning additional pay for duties performed as Chairman; the sample probably includes observations of both types. Also, many exiting CEOs obtain fringe benefits in retirement such as country club memberships, automobiles, office space, premium health coverage, personal security, and so forth. One CEO in my sample negotiated for continued control over his company's box seats at the U.S. Open tennis championships, and no

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annual pension at age 64 in a joint and 100% survivor life annuity. These three adjustments -- increasing the annual amount, changing the survivor payout from 50% to 100%, and beginning payments one year earlier -- increased its actuarial value by more than $7.5 million, assuming that Shipley had a wife the same age as him. The company gave no explanation for the changes, nor did it disclose their value consequences.

[8] Each firm's default treatment of equity compensation for exiting employees appears in the documents associated with its executive compensation plans, which are filed as attachments to company proxy statements or Forms 10-K or 10-Q. Stock options and restricted shares that have not yet vested are generally forfeited when an executive leaves the firm, unless he has attained a minimum retirement age such as 55 or 60. If he has reached retirement age, the executive retains his shares or options, and some companies also allow unvested equity awards to vest. The remaining exercise period for stock options under these conditions will generally be truncated. For CEOs in my sample, I observe a variety of deviations from companies' standard policies, including waiver of forfeiture rules, more generous vesting than usual, and longer exercise periods. I compare the treatment of each CEO's equity compensation to the company's standard policies, and I calculate the resulting value impact for each CEO. For stock options, these calculations involve Black-Scholes valuations before and after any adjustments of their terms. For restricted stock, calculations involve multiplying the number of shares that the CEO obtains extraordinarily by the stock price on his date of exit. Within the sample, maximum values of these adjustments are extremely large, as two dismissed CEOs obtain more than $100 million. In both cases the CEOs were younger than the company's standard retirement age for retaining equity awards but were nevertheless permitted to keep millions of unvested shares and/or options. Minimum sample values are below zero, as a few CEO separation agreements call for shortening option lives even more than under ordinary circumstances. Some CEOs' employment contracts include pre-negotiated terms for the treatment of equity compensation if the CEO leaves the firm. In these cases I compare the contracted terms to the company's default policies, and the value of any benefit for the CEO counts as part of his contractual separation pay. Any further change in the treatment of the CEO's equity awards, when compared to the contracted terms, is counted as discretionary separation pay.

less than 16 exiting CEOs, all of them cases of voluntary turnover, received access to company aircraft for personal travel for periods ranging from five years to life. I do not include these perks in my calculations due to the difficulty of valuing them.

Finally, I do not include gains or losses to a CEO when the firm's stock price reacts to the announcement of his departure. In some cases of forced turnover, company stock prices rise substantially, giving the exiting CEO consolation of a large appreciation in his equity holdings.[9]

4. Regression analysis of separation pay

I analyze whether CEO separation packages conform to the theories of severance pay detailed above. Since separate theories predict patterns of separation pay for voluntary and forced CEO turnover, I estimate separate regressions for these two subsamples. Because of the large number of zero-valued separation packages, I estimate Tobit regressions, and the dependent variable for each regression equals the total value of each CEO's separation package.

The key explanatory variables in the regressions are related to each ex-CEO's compensation and career concerns as well as the firm's financial and governance structure. For voluntary turnover, the ex post settling up paradigm predicts an inverse association between a CEO's separation package and the extent to which he was paid during his career at above-market levels. An opposite, positive prediction between severance pay and prior compensation is implied by the rent extraction theory. I therefore include a variable estimating the CEO's compensation over the prior three years, calculated according to methods discussed above. For CEOs with less than three years tenure (32 observations out of 179), I assume that this variable equals zero; this assumption is probably reasonable since CEOs whose compensation is out of line with market practices typically have served long tenures in office.

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[9] For example, when Bank One Corp. announced CEO John B. McCoy's departure on December 22, 1999, the company's stock rose more than 10 percent. McCoy's personally owned shares and options increased in value by more than $3 million as a result. McCoy, age 57, left the company completely, not remaining as a director. His separation package was unusually large compared to others in the sample, as it included a $10.3 million lump-sum payment; a pension increase with an actuarial value exceeding $15 million; office space and secretarial support for life; moving expenses; and a reimbursement for any loss on the sale of his residence. The company wrote in its 2002 proxy statement that the board's compensation committee was "satisfied as to the appropriateness of the terms of [McCoy's] agreement," but Bank One's stock fell by a market-adjusted 1.61 percent upon its disclosure.

For forced turnover, various bonding hypotheses suggest that separation pay should exhibit a positive association with CEO age, since age should be related to the lifetime stream of earnings that a CEO would expect had he worked until normal retirement. The damage control theory implies a similar prediction of a positive association between severance and age. I therefore include a variable measuring the CEO's expected years to retirement, equal to the difference between 65 and the CEO's age or zero for all CEOs age 65 and older. Certain bonding theories also expect associations between severance and the firm's financial leverage (negative), its quality of corporate governance (either positive or negative, according to the two cases studied by Almazan and Suarez (2003)), and whether the CEO was hired recently outside the firm (positive). I include measures of these three variables: for leverage I use total debt over total assets, for corporate governance I use the anti-shareholder rights index of Gompers, Ishii and Metrick (2003),[10] and I set an indicator variable equal to 1 for CEOs hired outside the firm in the past five years. Note that higher values of the index imply weaker governance, since it counts the number of a firm's takeover defenses and related provisions. Because the data source, the Investor Responsibility Research Center, generally reports the variable in intervals three or four years apart, I use the value closest in time to each observation. The governance index is also used to test the damage control theory, which predicts a negative association between governance quality and separation pay. This prediction is based upon a conjecture that poorly governed firms are more vulnerable to disclosures of damaging information than well governed firms. However, the opposite prediction could also be supported. The governance index mainly measures the strength of a firm's takeover defenses, and a company at low risk of takeover may feel a diminished need to use severance pay to deter an ex-CEO from participating in a hostile raid. Regressions also include the log of total assets to control for firm size, and year and industry dummy variables. Due to the relatively small number of observations, industry dummies are measured at the one-digit SIC level.

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[10] The Gompers-Ishii-Metrick index is a count variable measuring the incidence of 24 separate takeover defenses and other anti-shareholder rights provisions, some of which arise under various state laws and others of which are due to corporate charters or bylaws. The index has come into wide use as an empirical proxy for the quality of a firm's corporate governance. However, a separate literature has begun to question the efficacy of the index as a measure of governance; see Core, Guay and Rusticus (2006) and Brown and Caylor (2004).

Regression estimations appear in Table 5. On the left of the table, estimates within the subsample of voluntary CEO turnover observations show no significant associations with any key explanatory variables, and the pseudo r^2 statistic is far lower than for the estimation with forced turnover observations on the right. The absence of significant associations for the voluntary turnover observations provides no evidence in support of the ex post settling up or rent extraction theories. However, the ex post settling up and rent extraction theories generate opposite predictions for the sign of the excess compensation variable's estimate. Since these two hypotheses are not mutually exclusive, it is possible that each influences the data significantly but in an offsetting pattern that makes their joint effect appear to be zero.

Regression estimates for the subsample of forced turnover observations exhibit a contrast to those for voluntary turnover, as the leverage, governance, and years to expected retirement coefficient estimates all have expected signs and are statistically significant, though the leverage and governance variables could arguably be expected have either a positive or negative estimates. All three of these estimates support certain models of separation pay as a bonding device between the CEO and shareholders. Only the coefficient for the dummy variable for CEOs hired recently outside the firm, which bonding theories might predict to have a positive estimate, fails to match the prediction of the theory. The positive and significant estimate for years until expected retirement also supports the damage control theory, since this variable is used as a proxy for a CEO's expected income over the remaining years of his career.

I test robustness of the regression results in several ways. First, I delete two outlier forced turnover observations whose severance packages exceed $100 million. All estimates retain their sign and significance except the coefficient for leverage, which moves closer to zero and sees its t-statistic change to -1.07. For years until expected retirement and the governance index, t-statistics increase after deletion of the two outliers to 2.44 and 2.56, respectively. As a further sensitivity test, I truncate the dependent variable from its previous specification as the total CEO separation package value, and redefine it is the non-contracted, discretionary value. The subsample of voluntary turnover observations continues to exhibit no significant coefficient estimates for the key variables. Among the forced turnover observations, two variables no longer have significant estimates – years to expected retirement and the governance index – though the estimate for the leverage variable remains significant. These estimates indicate that pre-contracted severance pay helps importantly to influence the overall severance package in the directions prediction by theory. A final robustness test involves deleting from both samples the 32 CEOs with less than three years service prior to the turnover year. The rationale for dropping these observations is related to the estimation of excess compensation, which requires three years of lagged data and is assumed to equal zero in the regressions shown in Table 5. Dropping these observations may reduce the measurement error in the excess compensation variable and change its coefficient estimate. However, I find no such effect, as the variable's estimate remains insignificant and quite close to zero in both subsamples. Other coefficient estimates do not vary meaningfully, except that the years to expected retirement coefficient loses its significant estimate in the forced turnover subsample; this may occur because the deleted observations tend to be the youngest CEOs in the sample.

Under the rent extraction theory, I expect that as severance packages grow larger, firms may disclose them less transparently. I investigate this conjecture in a regression model using the subsample of observations in which the separation package has positive value for discretionary pay. The dependent variable is an "opacity index," equal to the present value of a CEO's pension enhancements, plus the value of adjustments to equity compensation, divided by the total value of his discretionary separation package. This index, which I compound continuously, takes a value between zero and one, and higher values occur when the values of CEO separation agreements are more difficult to ascertain. However, a high value of the index might also occur when stock- or pension-based pay appears advantageous to for reasons other than reducing costs of disclosure; income tax reduction, smoothing accounting earnings, or the firm's liquidity may also deter the company from delivering separation pay in cash. The key explanatory variable is the size of the CEO's incremental separation pay compared to its predicted level. This difference is assumed to be the residual from the Tobit regression model in Table 5, estimated over the full sample and augmented by a dummy variable for forced turnover observations (results are insensitive to using instead the separate residuals from the two subsample regressions in Table 5). Control variables include return on assets, since profitable firms may be less reluctant to report high compensation, and dummy variables for years and one-digit SIC indicators. The regression estimates, which are untabulated in order to save space, indicate that a significantly negative association exists between the transparency of a CEO's separation package and the extent to which a package is larger than expected (the result is robust and somewhat stronger if the model is estimated for voluntary turnover observations only). In addition, packages for dismissed CEOs have significantly less transparency than packages for voluntarily retired CEOs. Together, these findings provide mixed support for the rent extraction theory of separation pay. Under this theory, it is not surprising that larger packages are delivered in a non-transparent form, but it is unexpected to find the least transparent packages being awarded to CEOs who are dismissed.

5. Stock returns upon disclosure of separation packages

I evaluate shareholder reactions to CEO separation agreements by calculating abnormal stock returns for dates of disclosure of these packages for the 179 CEOs in the sample. It is not clear ex ante whether shareholders should view severance payments positively or negatively. Under the ex post settling up theory, for example, a large separation package might indicate that the CEO had performed better than previously understood, which would be good news for shareholders. Alternatively, a high package for a mediocre CEO might signal that the board had little skill at evaluating managers, which would be bad news. The various bonding theories of severance pay yield similarly ambiguous predictions. Severance pay may indicate that the CEO had made positive NPV investments that didn't work out, which would perhaps convey positive information about the firm's governance. Alternatively, severance pay may indicate that the CEO possessed adverse inside information about the firm's governance quality or its future performance and elected to resign because he forecast low future compensation for himself. Under the damage control theory, the expected reaction of shareholders to separation pay is also ambiguous. Severance packages could be positive news for shareholders, indicating that the firm had acted to limit certain costs that might have been high. However, they could also indicate possible problems within the firm and therefore send an adverse signal. Only the rent extraction theory seems to yield a clear prediction, that severance pay should result in negative stock returns, since its disclosure would indicate that the firm's governance was too ineffective to prevent expropriation of rents by management. Even if shareholders had believed governance to be poor, payment of large severance might resolve uncertainty about such beliefs.

In my event study analysis, the event date is the earliest of (i) the proxy statement filing describing the terms of the CEO's separation, (ii) the Form 10-K, 10-Q, or other filing in which a negotiated separation agreement is included as an exhibit, or (iii) the date on which a company news release publicizes details of the CEO's exit package. For CEOs receiving zero separation pay, the event date is the first proxy statement filed after the year of their departure, the latest point at which any separation package would ordinarily be disclosed. I drop five events in which the CEO's dismissal is announced simultaneously with his separation package. Abnormal stock returns are calculated over an interval beginning four trading days prior to the event day and ending one trading day after, using standard market model methods with the CRSP value-weighted index as the market portfolio. Results below are generally insensitive to reasonable variations in the estimation procedure. Abnormal stock returns at the disclosure of separation packages are nearly orthogonal to the abnormal returns at the announcement of CEOs' departures, with a correlation coefficient of -0.037.

Results in Table 6 indicate that shareholders have negative overall reactions to disclosures of CEO severance packages. Abnormal returns have mean and median values slightly less than -1.0%, with statistical significance at the 7 percent level (mean) or 12 percent level (median). If the sample is restricted to the 88 CEOs whose discretionary separation pay has positive value, mean and median abnormal returns remain negative but move closer to zero and are insignificant. The middle two columns in Table 6 illustrate market reactions in cases of planned and forced turnover. Planned turnover agreements are accompanied by stock returns more negative than those for the overall sample and are statistically significant below the 2 percent level. In contrast, agreements in cases of forced turnover are accompanied by abnormal stock returns that are positive and insignificant. This pattern of results provides some evidence in support of the rent extraction theory of severance pay, which predicts negative returns at the disclosure of severance pacts in cases of voluntary CEO turnover.

6. Conclusions

This paper studies separation payments to CEOs when leaving their firms, compensation commonly known as “golden handshakes.” Just over half of exiting CEOs in my sample from *Fortune 500* firms receive separation pay, with a mean value of $5.4 million. The majority of separation pay is awarded by boards of directors discretionarily, rather than under employment contracts, and CEO dismissals generally lead to larger packages than voluntary retirements.

I discuss and evaluate theories for why firms award severance pay, including ex post settling up, bonding, damage control, and rent extraction. No results in the paper clearly support the ex post settling up theory despite its economic appeal. Regression analysis supports certain predictions of bonding theories in cases of forced CEO turnover, with CEOs receiving pay in proportion to expected years to future retirement and in negative association with leverage and governance quality (the leverage result is not robust to deletion of outliers). The association of severance pay with expected years to retirement also supports the damage control theory. Theories related to rent extraction fail to receive support from the regression analysis but are consistent with negative stock market reactions to the disclosure of separation packages in cases of voluntary turnover, as well as an apparent association between the transparency of separation packages and their size compared to expected value.

Several results appear to support an ad hoc interpretation that boards use severance pay to assure CEOs of a minimum lifetime wage level. CEOs who retire voluntarily receive less severance than CEOs who are forced out, perhaps because the former will continue to obtain benefits from board service and will probably retire with higher values of accumulated equity compensation. In cases of forced turnover, younger CEOs, for whom the costs of dismissal are higher, get more severance than older CEOs who are forced out, and the overall value of separation pay generally seems unrelated to whether a CEO had an employment contract. All of these patterns suggest that certain norms of equity or fairness influence firms' decisions about how to compensate exiting CEOs, without clear attention to any theory of economic optimization.

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Table 1
Sample selection

Sample selection procedure for observations used in a study of CEO separation agreements. The candidate sample includes seven annual observations for each of 237 Fortune 500 firms that were public continuously between 1996 and 2002 and are covered by ExecuComp. Certain CEO turnover events are excluded from the analysis for extraordinary reasons listed in the table. Excluded events either did not require the board to decide about the terms of the CEO's separation, or involved significant external considerations in conjunction with the CEO turnover. Voluntary and forced turnover events are identified mainly from news reports and language in company proxy statements.

Total sample: 237 firms x 7 years	1,659	candidate observations
CEO turnover events	211	12.7% of sample
Events excluded from analysis		
Succession agreements in mergers	9	
Acting CEOs	6	
Resigned to take better position	4	
Death or poor health	4	
Resigned in connection with spinoff	4	
Cause (fraud, drugs, sexual harassment)	3	
Demoted to lower position	1	
Data omitted from SEC filings	1	
Final sample for analysis	179	observations
Forced turnover	43	24.0% of analyzed sample
Voluntary turnover	136	76.0%

Table 2
Descriptive statistics

Descriptive statistics for a sample of 179 CEOs who left their positions in *Fortune 500* firms between 1996 and 2002. Prior year compensation includes salary, bonus, option awards, and restricted stock awards; and this variable is missing on the ExecuComp database for nine CEOs. The value of shares and options is computed at the end of the year prior to the CEO's departure. All stock option values are computed according to the Black-Scholes method. Three-year excess compensation is based upon the residual from a regression of the log of compensation against the log of firm size, three-year stock return net of market, and industry and year dummy variables; this variable is missing for 32 CEOs with less than three years tenure. Financial data is obtained from ExecuComp, and the anti-shareholder rights index is obtained from the Investor Responsibility Research Center, based on the method of Gompers, Ishii, and Metrick (2003).

		Full sample	Voluntary turnover	Forced turnover	
Observations		179	136	43	
Age of exiting CEO	(mean)	61	63	56	a
Years tenure in office	(mean)	10	11	6	a
Member of company's founding family	(mean)	12.3%	14.0%	7.0%	
External hire, within past five years	(mean)	7.3%	4.4%	16.3%	a
Working under employment contract	(mean)	34.6%	31.6%	44.2%	
Negotiated separation agreement filed	(mean)	49.7%	41.9%	74.4%	a
Value of shares and options (millions)	(mean)	$532.7	$674.9	$83.1	
Value of shares and options	(median)	$43.1	$50.9	$22.5	a
Compensation in prior year (millions)	(mean)	$8.1	$7.8	$9.5	
Compensation in prior year	(median)	$4.8	$4.4	$6.2	
Three-year excess compensation (millions)	(mean)	$6.3	$5.6	$10.0	a
Three-year excess compensation	(median)	$1.6	$1.6	$2.3	
Next position with firm	Chairman	110	99	11	
	Vice Chairman	1	1	0	
	Director	18	15	3	
	None	50	21	29	
Debt / total assets	(mean)	0.395	0.379	0.443	
Total assets (billions)	(mean)	$35.4	$37.9	$27.5	
Total assets	(median)	$12.7	$12.8	$12.7	
Anti-shareholder rights index	(mean)	9.8	9.9	9.6	

Differences in right two columns are significant at 1% (a), 5% (b), and 10% (c) levels, according to T-tests (means) and Wilcoxon rank-sum tests (identical distributions).

Table 3
Contracted and discretionary CEO separation payments

Descriptive statistics for compensation paid to CEOs of 179 *Fortune 500* companies who left their positions between 1996 and 2002. Data are tabulated according to whether the CEO had been working under an employment contract. All values are in millions, and when payments are spread over time, data reflect present values discounted at the company's cost of debt. Information is obtained from each company's proxy statements and other SEC filings.

		CEO had employment contract	No employment contract	Total
Voluntary turnover	Observations	43	93	136
	Contracted separation payments	7	- -	7
	Frequency	16%	- -	5%
	Mean	$0.3	- -	$0.1
	Additional discretionary payments	18	41	59
	Frequency	42%	44%	43%
	Mean	$2.2	$2.3	$2.2
Forced turnover	Observations	19	24	43
	Contracted separation payments	17	- -	17
	Frequency	89%	- -	40%
	Mean	$8.1	- -	$3.6
	Median	$3.1	- -	- -
	Additional discretionary payments	11	21	32
	Frequency	58%	88%	74%
	Mean	$3.9	$17.5	$11.5
	Median	$1.1	$6.0	$4.7
Full sample	Observations	62	117	179
	Contracted separation payments	24	- -	24
	Frequency	39%	- -	13%
	Mean	$2.7	- -	$0.9
	Additional discretionary payments	29	62	91
	Frequency	47%	53%	51%
	Mean	$2.7	$5.4	$4.5
	Median	- -	$0.4	$0.2

Table 4
Elements of CEO separation payments

Descriptive statistics for compensation paid to CEOs of 179 *Fortune 500* companies who left their positions between 1996 and 2002. All values are in millions, and when payments are spread over time, data reflect present values discounted at the company's cost of debt. Equity compensation adjustments reflect increases in stock option and restricted stock values due to changes in award maturities or vesting conditions, with all option values computed according to Black-Scholes methods. Information is obtained from each company's proxy statements and other SEC filings.

Voluntary turnover	Freq.	Mean		Median	75th %ile	Maximum	
Lump-sum payments	16%	$0.7		0	0	$21.9	
Consulting or non-compete	25%	$0.4		0	$0.1	$6.5	
Augmentations of pension	10%	$0.5		0	0	$11.1	
Equity award adjustments	8%	$0.6		0	0	$24.1	
Sub-total: discretionary	43%	$2.2		$0.0	$1.3	$24.1	
Contracted severance payments	5%	$0.1		0	0	$4.7	
Total of all payments	47%	$2.3		$0.0	$1.7	$24.1	
Forced turnover							
Lump-sum payments	37%	$1.3		0	$0.6	$10.4	a
Consulting or non-compete	44%	$1.5	a	0	$2.3	$9.5	a
Augmentations of pension	44%	$2.2	a	0	$2.4	$15.5	a
Equity award adjustments	40%	$6.5	a	0	$2.9	$109.1	a
Sub-total: discretionary	74%	$11.5	a	$4.7	$9.9	$121.1	a
Contracted severance payments	40%	$3.6	a	0	$2.9	$36.1	a
Total of all payments	91%	$15.1	a	$6.5	$14.2	$121.1	a
Entire sample							
Lump-sum payments	21%	$0.9		0	0	$21.9	
Consulting or non-compete	30%	$0.7		0	$0.5	$9.5	
Augmentations of pension	18%	$0.9		0	0	$15.5	
Equity award adjustments	16%	$2.0		0	0	$109.1	
Sub-total: discretionary	51%	$4.5		$0.2	$4.3	$121.1	
Contracted severance payments	13%	$0.9		0	0	$36.1	
Total of all payments	58%	$5.4		$0.7	$5.0	$121.1	

Differences in top two panels are significant at 1% (a), 5% (b), and 10% (c) levels, according to T-tests (means) and Wilcoxon rank-sum tests (identical distributions).

Table 5
Regression estimates of separation pay

Tobit estimates of the total value of separation pay for 179 *Fortune 500* CEOs who left their positions between 1996 and 2002. Excess compensation is estimated over the three years prior to CEO turnover based upon the residual from a standard compensation regression model and is set equal to zero for all CEOs with less than three years service. Expected years to retirement equals the greater of zero and 65 minus the CEO's age. The indicator for recent outside hire equals 1 if the exiting CEO was hired from outside the firm within the past five years. The anti-shareholder rights index is based on the method of Gompers, Ishii, and Metrick (2003). Pseudo r^2 is calculated according to Veall and Zimmermann (1994). Compensation variables are measured in millions of dollars, and firm size is measured in billions.

	Voluntary turnover sample			Forced turnover sample		
Variable	Prediction	Coef.	t-stat	Prediction	Coef.	t-stat
Excess prior compensation	- or +	-0.04	-1.01		0.12	0.47
Expected years to retirement		-0.21	-0.81	+	2.11	1.99 ^{b}
Recent outside hire indicator		2.85	0.76	+	-0.10	-0.01
Leverage (debt / total assets)		3.55	0.91	-	-38.00	-2.37 ^{b}
Anti-shareholder rights index	-	-0.14	-0.42	- or +	3.48	1.65 ^{c}
Firm size (log of total assets)		0.86	1.26		11.87	2.23 ^{b}
Year indicators	Yes			Yes		
Industry indicators, 1-digit	Yes			Yes		
SIC	136			43		
Total observations	64			39		
Positive observations	0.356			0.882		
Pseudo r^2						

Significant at 1% (a), 5% (b), and 10% (c) levels.

Table 6
Abnormal stock returns at announcement of separation packages

Mean cumulative abnormal stock returns around the disclosure of separation packages for a sample of 179 exiting CEOs of *Fortune 500* companies between 1996 and 2002. Abnormal returns are calculated for an event window beginning four days prior to the disclosure date and ending one day after, using standard market model methodology. Disclosure dates occur when a company makes an SEC filing that describes details of the CEO's package, or, in a small number of cases, by making a public news announcement. The top rows of the table include data for the entire sample, excluding five disclosure events that took place simultaneously with the announcement of the CEO's dismissal. The bottom rows omit observations for exiting CEOs who received zero discretionary separation payments. For CEOs receiving zero payments, the event date is the first proxy statement filing after the CEO leaves office.

	Full sample	Voluntary turnover	Forced turnover	(Forced - voluntary) difference
All CEOs				
Observations	174	136	38	
Mean cumulative abnormal return	-0.80%	-1.17%	0.51%	1.68%
Median cumulative abnormal return	-0.82%	-0.99%	0.89%	1.88%
T-statistic p-value	0.07 [c]	0.02 [b]	0.54	0.08 [c]
Wilcoxon statistic p-value	0.12	0.02 [b]	0.47	0.11
Positive : negative	80 : 94	58 : 78	22 : 16	
CEOs with discretionary payments				
Observations	88	59	29	
Mean cumulative abnormal return	-0.06%	-0.75%	1.36%	2.11%
Median cumulative abnormal return	-0.37%	-0.83%	3.05%	3.88%
T-statistic p-value	0.93	0.56	0.33	0.26
Wilcoxon statistic p-value	0.86	0.14	0.34	0.09 [c]
Positive : negative	43 : 45	25 : 34	18 : 11	

Significant at 1% (a), 5% (b), and 10% (c) levels, based upon T-tests and Wilcoxon rank-sum and signed-rank tests.

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