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# *Fortune* Favors the Bold

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## Abstract

We investigate whether incentives to join the *Fortune* 500 affect corporate decisions. Firms closer to the cutoff appear to take actions to join the list by engaging in more mergers and acquisitions activity, bidding for larger targets, and paying higher takeover premia. Further, the relation is stronger for firms with more-entrenched chief executive officers, and the stock market reaction to bids is worse when bidders are close to the *Fortune* 500's cutoff. A 1994 methodological change by *Fortune* acts as an exogenous shock for identification. Our results suggest that firms try to increase revenues to join the *Fortune* 500 but that such actions adversely affect shareholders.

## I. Introduction

Jensen and Meckling (1976) suggest that the manager of a firm gains utility from a variety of nonpecuniary activities. We use the *Fortune* 500 ranking as a natural laboratory to investigate how one such nonpecuniary incentive, prestige, affects corporate decision making. Specifically, we examine whether firms close to the 500th position in *Fortune*'s ranking alter their merger and acquisition (M&A) behavior and advertising policies. We also examine how a firm's distance from the *Fortune* 500 cutoff affects incentives to misreport revenues.

Inclusion in the annual *Fortune* 500 list is considered prestigious by corporate executives. For example, the chief executive officer (CEO) of Auto-Owners, Jeff Harrold, is quoted as saying that "Making the *Fortune* 500 list is a significant honor for all Auto-Owners associates," and that "being ranked among the biggest and best-run companies in America is an important distinction in which

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we take pride."[1] If the prestige of being the CEO of a *Fortune* 500 firm affects the manager's decision making, firms that are close to the cutoff have strong incentives to either join the list (if they are just outside the 500th spot) or remain in the list (if they are just inside the top 500). As with other nonmonetary incentives discussed by Jensen and Meckling (1976) and Yermack (2006), these incentives could negatively affect shareholders.

The *Fortune* 500 is a useful setting for a number of reasons. First, *Fortune* imposes an exogenous, arbitrary target for firms to reach in order for managers to realize the nonmonetary benefit of prestige. Therefore, the *Fortune* 500 list creates a unique type of nonlinear performance goal, where the target goal is to be one of the top 500 U.S. firms by revenue.[2] Unlike many other types of incentives, this incentive is not endogenously selected by the board of directors but rather is imposed exogenously by *Fortune*. Further, a change in *Fortune*'s methodology in 1994 creates a setting for a natural experiment and placebo test. This natural experiment allows us to alleviate the endogeneity problems common to many empirical studies on managerial incentives. Second, *Fortune* constructs its listing by ranking all U.S. public and large private firms by sales revenues. A manager can therefore focus on only one easily observable dimension, relative sales revenues, to evaluate his or her firm's chances of inclusion. Any corporate policy that increases revenue, whether it creates or destroys firm value, enhances the firm's chances of joining the *Fortune* 500 list. Finally, *Fortune*'s methodology is public information. Thus, managers and investors know approximately how close a firm is to joining (or being dropped from) the list, and they can act accordingly. This is not necessarily true of other indices explored in extant literature (e.g., the Standard & Poor's (S&P) 500) because the methodology for the inclusion/exclusion of firms is not public information (e.g., Harris and Gurel (1986), Lynch and Mendenhall (1997)).

We begin our empirical tests by investigating whether a firm's distance from the *Fortune* 500 cutoff affects its M&A behavior. Corporate acquisitions increase a firm's total revenues and thus the probability of making (or remaining in) the *Fortune* 500 list, especially for firms closer to the 500th rank threshold. We predict that firms closer to the 500th position on the *Fortune* 500 list are more likely to attempt acquisitions and that their acquisition attempts are for bigger targets. Next, we explore the incentives of the CEO and the firm's shareholders to join the list. We first investigate whether a CEO who joins the *Fortune* 500 during his or her career has more postretirement board seats, perhaps indicating greater postretirement prestige for managers who make the *Fortune* 500 list during their careers. We also explore whether inclusion in the list affects CEO compensation

[1] "Auto-Owners Makes Prestigious Fortune 500 List of U.S. Largest Companies Ninth Straight Year," *Reuters* (May 6, 2011).

[2] The effect of nonlinear incentives and performance goals have also been explored in the literature on option-based executive compensation (e.g., Smith and Stulz (1985), Guay (1999), Coles, Daniel, and Naveen (2006), and Chava and Purnanandam (2010)), peer-group compensation (e.g., Bizjak, Lemmon, and Naveen (2008), Faulkender and Yang (2010)), performance vesting provisions (e.g., Johnson and Tian (2000), Brisley (2006), and Bettis, Bizjak, Coles, and Kalpathy (2010)), bonus plans (e.g., Healy (1985)), internal promotion tournaments (e.g., Kale, Reis, and Venkateswaran (2009), Kini and Williams (2012)), and hedge funds misreporting returns (e.g., Agarwal, Daniel, and Naik (2011)), among others.

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and firm value. We then focus on shareholder outcomes by investigating the effect of governance as well as investor reactions to bid announcements. Ceteris paribus, we expect a well-governed firm to make fewer agency-related M&A bids. Additionally, if a firm makes an M&A bid to join or to stay on *Fortune*'s list, investors should react negatively when the bid is announced. We therefore expect lower announcement returns for bidders that are closer to the 500th position on the *Fortune* 500 list. We also investigate takeover premia and hypothesize that firms closer to the *Fortune* 500 threshold are willing to pay a higher takeover premium in order to successfully acquire their targets.

We also explore the effect of the *Fortune* 500 incentives on policies unrelated to M&A, specifically, advertising and earnings restatements. A manager who myopically focuses on revenues may have the incentive to increase advertising to the detriment of cash flows and net income (Little (1979)). Thus, we expect firms that are close to the *Fortune* 500 cutoff to have higher ratios of advertising expenses to net income (and thus lower advertising efficiency). Finally, we investigate firms' earnings restatements. Because the *Fortune* 500 rankings are strictly based on revenues, incentives could arise to manipulate the recognition of revenues. We therefore expect a higher probability of earnings restatements due to revenue recognition for firms that are closer to the *Fortune*'s cutoff.

Our empirical findings are consistent with our main hypothesis that firms attempt to increase size to improve the probability of joining or remaining in the *Fortune* 500. These incentives are stronger for firms close to the *Fortune* 500 cutoff because they are about to either join or fall out of the list. For the period 1991–2014, we find that firms closer to the final spot on the *Fortune* 500 list are significantly more likely to make M&A bids and that these bids are for larger targets. A natural experiment using *Fortune*'s 1994 methodological change generates results consistent with this intuition. Service firms are ineligible for the ranking prior to 1994, whereas industrial firms are eligible for inclusion during our entire sample period (Stangler and Arbesman (2012)). For service firms, we document a relation between M&A activity and *Fortune*'s ranking only in the post-1994 period. For industrial firms, on the other hand, we find that the relation does not significantly change across the pre- and post-1994 periods. We therefore show that firms exhibit a relation between M&A activity and distance from the 500th position in *Fortune*'s ranking only when they are eligible for inclusion in the list, mitigating concerns that our main result is driven by unobservable characteristics.

Consistent with anecdotal evidence that the *Fortune* 500 is viewed as prestigious, we find that CEOs who enter the *Fortune* 500 at some point during their careers have more postretirement board seats than those who never make the list. Our evidence also suggests that the CEO's *monetary* compensation does not differ significantly among firms that are ranked around *Fortune*'s cutoff or between CEOs who join the list versus those who just miss inclusion. We find no statistical difference in firm value between firms just inside and just outside of the listing. Further, we examine cumulative abnormal returns for the announcement of the *Fortune* 500 list. We again document no statistical difference in returns for firms that just make the list and those that just miss the list. We are therefore unable

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to detect any enhancements in CEO or shareholder wealth due to inclusion in the *Fortune* 500.

We also find that the effect of distance from the 500th position on bidding activity is weaker for firms with less-entrenched CEOs, consistent with the hypothesis that the enhanced M&A activity indicates an agency problem. We further document that cumulative abnormal returns associated with bid announcements are lower when the bidder is close to the 500th position on the *Fortune* 500 list, suggesting that these activities are perceived as value-decreasing. Additionally, we find that firms closer to the cutoff pay higher takeover premia on average. We document similar but weaker effects around the *Fortune* 1000 threshold and show that the relation holds for firms both in and out of the *Fortune* 500. Finally, we find that firms closer to the *Fortune* 500 cutoff spend a higher percentage of their net income on advertising, and are more likely to restate earnings to correct the timing of revenue recognition.

We contribute to the literature in several ways. First, we provide empirical support to the intuition that managers gain utility from nonpecuniary benefits (Jensen and Meckling (1976)). Yermack (2006) finds that the excessive use of corporate jets by executives appears to be viewed unfavorably by shareholders. Grinstein, Weinbaum, and Yehuda (2011) also find evidence that corporate perks are suboptimal for shareholders. Alternatively, Rajan and Wulf (2006) suggest that the use of corporate perks might be optimal in equilibrium. However, Yermack (2006), Rajan and Wulf (2006), and Grinstein et al. (2011) all examine the use of corporate perks, which are an endogenous decision variable by the firm. *Fortune*'s rankings are likely exogenous to any one firm, and the 1994 methodological change also allows the construction of a natural experiment.

Our paper is also related to the literature examining how indices and rankings affect firms and financial markets (see, e.g., Harris and Gurel (1986), Dhillon and Johnson (1991), Lynch and Mendenhall (1997), Edmans (2011), Anginer, Warbuton, and Yıldızhan (2011), Crane, Michenaud, and Weston (2016), and Cao, Myers, Myers, and Omer (2015)). Maug, Niessen-Ruenzi, and Zhivotova (2015) argue that compensation and prestige are substitutes and document a negative relation between inclusion in the "Most Admired Companies" list and CEO compensation. However, to our knowledge, this is the first paper examining how incentives to join the *Fortune* 500 affect corporate policy decisions such as M&A activity.

Third, our work further contributes to the research on managerial decision making and M&A activity (e.g., Harford (1999), Datta, Iskandar-Datta, and Raman (2001), Harford and Li (2007), Masulis, Wang, and Xie (2007), and Malmendier and Tate (2008)). We contribute to this strand of the literature by investigating the effect of managerial prestige on the firm's M&A activity.

## II. Sample and Variable Descriptions

Our sample consists of all U.S. firms listed on Compustat and the Center for Research in Security Prices (CRSP) for the period 1991–2014. *Fortune* changed its inclusion methodology in 1994; we therefore drop the 1994

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fiscal year from our sample to be consistent with Stangler and Arbesman (2012). We obtain data on acquisition attempts from the Securities Data Company (SDC) and data on executive compensation from ExecuComp. We exclude from the sample regulated industries such as financial firms and utilities (Standard Industrial Classification (SIC) codes 4900–4999 and 6000–6999, respectively); we use them only to compute the *Fortune* 500 ranking. All variables are described in the Appendix.

### A. Distance from the *Fortune* 500 Cutoff

Our key independent variable is a firm's distance from the 500th spot on the *Fortune* 500 list each year. We rank all U.S. Compustat firms by sales revenue and compute the variable DISTANCE_500 $= |\text{RANK} - 500|$ for each firm-year. We omit service firms (firms with 2-digit SIC codes greater than or equal to 50) from the ranking prior to 1994 because service firms were not included in *Fortune*'s ranking until after 1994 (Stangler and Arbesman (2012)). We also define the variable REV_DISTANCE, which is the absolute value of the difference between the firm's total revenues and the revenues of the firm in the 500th position, and the variable REV_DISTANCE/REV, which is REV_DISTANCE scaled by the firm's own revenues. By using the absolute value of the distance, we assume that a firm that is just inside the *Fortune* 500 has similar incentives to remain in the listing as a firm just outside has to join the listing. We relax this symmetry assumption in Section V.B.

The *Fortune* 500 includes large private firms if *Fortune* is able to gather revenue data on these firms. Compustat also provides limited data (including sales revenues) for a large number of private firms. Thus, to account for these private firms and more accurately mirror the distance from *Fortune*'s actual cutoff, we use all U.S.-based Compustat firms to construct the DISTANCE_500 variable.[3] The final sample only includes public firms because our tests require accounting and stock market data.

### B. Dependent Variables

We obtain M&A data from the SDC database and construct several dependent variables. First, we identify all domestic M&A bids in the sample and omit multiple bids for the same target. We next define the count variable NUM_BIDS as the number of majority bids a firm makes in a year and the indicator variable BIDDER as a dummy variable equal to 1 if the firm makes at least one majority bid in a given year, and 0 otherwise. We also define TARGET_TRANS_VALUE as the sum of the transaction values for each bidder for a given year from the SDC. If a firm does not make any bids in a year, we assign a value of 0 to these variables. We collect data on the type of merger or acquisition as well as target characteristics if the target is a public company. We compute cumulative abnormal stock returns (CARs) in the windows $(-1, +1)$, $(-2, +2)$, and $(-1, +2)$ around the announcement date to study the market reaction to bid announcements using CRSP data. Further, we compute the takeover premium to

[3] We compare our ranking with the actual hand-matched *Fortune* lists for a subsample of available years and find a correlation of over 93%. However, we are unable to identify firms "just outside" of the ranking using the published lists, and the lists are not publicly available online for our whole sample.

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investigate if the distance from the cutoff affects the price paid by the bidder. To examine the effect of DISTANCE_500 on the firm's advertising, we define the advertising efficiency variable as ADVERTISING/NET_INCOME. Finally, we obtain restatement data from the U.S. Government Accountability Office (GAO). The data include all restatements due to fraud and/or accounting irregularities from 1997 to 2005. Additionally, the GAO supplies the reason for restatement, which allows us to isolate restatements related to revenue recognition. The variable REVENUE_RESTATEMENT is a dummy variable equal to 1 if the firm files a restatement for revenue-recognition reasons, and 0 otherwise. Chen, Greene, and Owers (2015) combine data from Hennes, Leone, and Miller (2008) and Judson Caskey's Web site to compute the variable for the period 1997–2005.[4]

## C. Control Variables

In our multivariate analysis, we use a number of firm characteristics as control variables. For the tests on the bidding activity, many of our control variables are drawn from Harford (1999). SIZE is the firm's total book assets. SALES_GROWTH is the percentage change in revenues from the previous year, and LEVERAGE is defined as the book value of debt divided by the book value of assets minus the book value of common equity plus the market value of equity. We define CASH_HOLDING as cash and short-term investments divided by total assets, PE_RATIO as the year-end stock price divided by earnings per share (EPS) before extraordinary items, and noncash working capital (NONCASH_WC) as current assets minus cash and short-term investments minus current liabilities divided by total assets. TOBINS_Q is computed as the book value of debt plus the market value of common equity divided by the book value of assets. ROA is the firm's operating income divided by assets. ROA_VOL is the standard deviation of ROA over the previous 6 years. SP_500 is an indicator variable equal to 1 if the firm belongs to the S&P 500 index on a given year, and 0 otherwise. In order to account for managerial entrenchment, we use the E_INDEX developed by Bebchuk, Cohen, and Ferrell (2009), available for the period 1990–2006.

We measure the firm's investment opportunities with RD_INTENSITY, defined as research and development (R&D) expenses divided by total assets. COLLATERAL_VALUE is net property, plant, and equipment scaled by total assets, and bankruptcy risk is measured by the variable Z_SCORE (Altman (1968)). We control for a variety of M&A bid characteristics, such as the percentage of the transaction that is equity financed and the relative size of the transaction (all defined in the Appendix). We also use indicator variables for hostile bids, tender offers, and the presence of a competing bid, and we define TOEHOLD as a dummy variable equal to 1 when the bidder owns more than 5% of the target's shares prior to the takeover announcement. CEO_RATIO is a proxy for the CEO's delta and is defined as the ratio of the dollar change in the value of a CEO's stock and options holdings following a 1-percentage-point increase in the company stock price and total compensation (e.g., Bergstresser and Philippon

[4]We thank Daniel Greene for supplying the combined data, and we thank Andrew Leone and Judson Caskey (https://sites.google.com/site/judsoncaskey/data) for making the GAO data publicly available.

(2006)). TOTAL_COMP is defined as in Coles, Daniel, and Naveen (2014), and EXCESS_COMP is computed as in Core, Guay, and Larcker (2008). All continuous variables, with the exception of DISTANCE_500, are winsorized at the 1% and 99% levels. Note that the winsorization results in an average EXCESS_COMP value different from 0; our results are robust to using the unwinsorized value in our tests.

Table 1 reports the univariate statistics for the whole sample. The average distance from the *Fortune* 500 cutoff is 3,026 positions. On average, a firm has an 18% probability of a bid in any given year, and the mean NUM_BIDS is 0.28. Finally, 1% of the firm-years in the sample files restate earnings for revenue-recognition reasons in the period 1997–2005.

TABLE 1
Univariate Statistics

Table 1 reports univariate statistics for the whole sample. The sample consists of firm-years with available data in the period 1991–2014 (excluding 1994). All variables are defined in the Appendix.

| Variables | Mean | Median | Min. | Max. | *N* |
|---|---|---|---|---|---|
| *Panel A. Distance and Dependent Variables* | | | | | |
| DISTANCE_500 | 3,026.00 | 2,705.00 | 0.00 | 8,962.00 | 87,885 |
| REV_DISTANCE | 4,271.40 | 3,594.61 | 0.00 | 461,724.30 | 86,063 |
| REV_DISTANCE/REV | 3,670.49 | 23.68 | 0.00 | 5,541,999.00 | 86,063 |
| NUM_BIDS | 0.28 | 0.00 | 0.00 | 4.00 | 87,885 |
| BIDDER | 0.18 | 0.00 | 0.00 | 1.00 | 87,885 |
| TARGET_TRANS_VALUE | 34.56 | 0.00 | 0.00 | 4,171.00 | 87,885 |
| CAR(−1, +1) | 0.01 | 0.00 | −0.20 | 0.27 | 31,610 |
| CAR(−1, +2) | 0.01 | 0.00 | −0.27 | 0.36 | 31,604 |
| CAR(−2, +2) | 0.01 | 0.00 | −0.24 | 0.32 | 31,605 |
| PREMIUM | 0.56 | 0.47 | 0.00 | 1.99 | 1,170 |
| ADVERTISING/NET_INCOME | 0.20 | 0.00 | 0.00 | 4.85 | 67,589 |
| REVENUE_RESTATEMENT | 0.01 | 0.00 | 0.00 | 1.00 | 39,483 |
| *Panel B. Control Variables: Firm Characteristics* | | | | | |
| SIZE | 1,396.56 | 131.64 | 0.09 | 26,635.00 | 87,885 |
| SALES_GROWTH | 0.19 | 0.06 | −0.97 | 6.42 | 87,885 |
| LEVERAGE | 0.17 | 0.11 | 0.00 | 0.74 | 87,885 |
| CASH_HOLDING | 0.19 | 0.09 | 0.00 | 0.95 | 87,885 |
| PE_RATIO | 10.20 | 9.12 | −168.70 | 251.50 | 87,885 |
| NONCASH_WC | −0.07 | 0.05 | −7.51 | 0.56 | 87,885 |
| TOBINS_Q | 2.34 | 1.19 | 0.24 | 45.00 | 87,885 |
| ROA | −0.08 | 0.10 | −6.02 | 0.41 | 87,885 |
| ROA_VOL | 0.23 | 0.05 | 0.01 | 7.84 | 87,885 |
| SP_500 | 0.09 | 0.00 | 0.00 | 1.00 | 87,885 |
| E_INDEX | 2.36 | 2.00 | 0.00 | 6.00 | 10,451 |
| RD_INTENSITY | 0.07 | 0.00 | 0.00 | 1.04 | 87,885 |
| COLLATERAL_VALUE | 0.26 | 0.19 | 0.00 | 0.91 | 87,796 |
| Z_SCORE | 0.91 | 2.92 | −163.90 | 65.43 | 85,178 |
| *Panel C. Control Variables: Bid Characteristics* | | | | | |
| PCT_EQUITY | 9.84 | 0.00 | 0.00 | 100.00 | 32,130 |
| PRIV_TARGET | 0.85 | 1.00 | 0.00 | 1.00 | 32,130 |
| RELATIVE_SIZE | 0.26 | 0.06 | 0.00 | 380.19 | 16,100 |
| HOSTILE | 0.00 | 0.00 | 0.00 | 1.00 | 32,130 |
| COMPETING_BIDDER | 0.00 | 0.00 | 0.00 | 1.00 | 32,130 |
| TENDER | 0.02 | 0.00 | 0.00 | 1.00 | 32,130 |
| TOEHOLD | 0.01 | 0.00 | 0.00 | 1.00 | 32,056 |
| *Panel D. Control Variables: CEO Compensation* | | | | | |
| CEO_RATIO | 0.25 | 0.17 | 0.00 | 1.00 | 23,639 |
| TOTAL_COMP | 4,637.28 | 2,582.54 | 0.00 | 34,381.22 | 23,655 |
| EXCESS_COMP | −8.29 | −628.88 | −7,680.88 | 20,881.05 | 22,996 |
| TENURE | 7.35 | 5.00 | 1.00 | 36.00 | 4,763 |
| CHAIR | 0.44 | 0.00 | 0.00 | 1.00 | 4,935 |
| AGE | 57.23 | 57.00 | 39.00 | 78.00 | 4,215 |

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## III. *Fortune* 500 and Bidding Activity

We begin our analysis by investigating the effect of the *Fortune* 500 ranking on a firm's M&A activity. First, we study how the distance from the final spot on the *Fortune* 500 list affects the firm's incentive to bid. Next, we estimate our baseline model separately for service firms and for industrial firms to examine whether service firms behave differently before and after *Fortune*'s methodological change.

One expects a mechanical negative correlation between firm size and distance from *Fortune*'s 500th spot. This concern is partially mitigated by the fact that our primary sample is a tight range of firms around the cutoff and therefore consists of large firms only. To further address this concern, we estimate the residuals from the following regression: $\ln(\text{SIZE}) = \alpha + \beta \times \ln(1 + \text{DISTANCE_500}) + \varepsilon$. This size variable is called SIZE_RESIDUALS. We include year and industry (2-digit SIC code) indicator variables in all estimates. Standard errors are robust to heteroskedasticity and are clustered by firm. Explanatory variables are lagged by 1 year.

### A. *Fortune* 500 and Corporate M&A Activity

In this subsection, we analyze the effect of the distance from the *Fortune* 500 cutoff on M&A activity. Specifically, we examine whether DISTANCE_500 significantly affects a firm's propensity to make an M&A bid using ordinary least squares (OLS) and probit estimates. Our baseline model is as follows:

$$(1)\quad \text{NUM_BIDS}_{t+1} = \beta_1 \ln[1 + \text{DISTANCE_500}]_t + \sum_{n=2}^{N} \beta_n (\text{control variable})_{n,t} + \text{year dummies} + \text{industry dummies} + \varepsilon.$$

In models 1–4 of Table 2, the dependent variable is the number of majority bids a firm makes in a given year. Alternatively, in models 5–8, we estimate probit models where the dependent variable is equal to 1 if a firm makes a nonzero number of majority bids in a given year, and 0 otherwise. We estimate the baseline models on the whole sample as well as on a subsample of firms ranked between the 250th and the 750th position. We also control for CEO compensation in even-numbered models because extant literature finds that CEO alignment plays an important role in a firm's acquisition behavior (e.g., Agrawal and Walkling (1994), Bliss and Rosen (2001), Datta et al. (2001), Grinstein and Hribar (2004), and Harford and Li (2007)). The coefficient on DISTANCE_500 is significantly negative in all models, consistent with the prediction that firms closer to the cutoff have the incentive to increase their size through acquisitions in order to be ranked in the *Fortune* 500 list. The effect of DISTANCE_500 on the firm's bid probability is economically significant: the coefficients from column 7 of Table 2 imply that the average firm that is 5 spots away from the cutoff is roughly 25% more likely to be a bidder than that of an average firm that is 50 spots away from the cutoff. Thus, the results in Table 2 support the hypothesis that firms have the incentive to engage in M&A bids to either achieve a position in the *Fortune* 500 or maintain it. As the distance from the cutoff 500th spot decreases, the incentives become stronger.

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TABLE 2

Distance from 500th Rank and Bidding Behavior

Table 2 presents the results from an OLS regression of NUM_BIDS and a probit regression of BIDDER. The sample consists of firm-years with available data in the period 1991–2014 (excluding 1994). All regressions include year and industry (2-digit SIC code) dummies. All continuous variables with the exception of DISTANCE_500 are winsorized at the 1st and 99th percentiles. Standard errors used to compute *t*-statistics (shown in parentheses) are robust and clustered by firm. *, **, and *** indicate significance at the 10%, 5%, and 1% levels, respectively. All variables are defined in the Appendix.

| | OLS: NUM_BIDS | | | | Probit: BIDDER | | | |
|---|---|---|---|---|---|---|---|---|
| | Sample | | | | | | | |
| | Whole Sample | | RANK 250–750 | | Whole Sample | | RANK 250–750 | |
| Variables | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| ln(DISTANCE_500) | −0.126*** | −0.248*** | −0.356*** | −0.541*** | −0.287*** | −0.293*** | −0.410*** | −0.551*** |
| | (−21.33) | (−12.07) | (−5.84) | (−6.65) | (−29.10) | (−11.09) | (−5.10) | (−5.49) |
| SIZE_RESIDUALS | 0.076*** | 0.176*** | 0.215*** | 0.321*** | 0.189*** | 0.204*** | 0.236*** | 0.318*** |
| | (15.90) | (10.29) | (5.59) | (6.20) | (25.05) | (10.59) | (4.77) | (5.12) |
| SALES_GROWTH | 0.023*** | 0.085*** | 0.113** | 0.186** | 0.053*** | 0.142*** | 0.128** | 0.205** |
| | (8.81) | (4.75) | (2.46) | (2.44) | (7.56) | (4.95) | (2.24) | (2.23) |
| LEVERAGE | −0.250*** | −0.571*** | −0.449*** | −0.737*** | −0.725*** | −0.684*** | −0.509** | −0.789** |
| | (−11.41) | (−6.80) | (−3.06) | (−3.05) | (−13.94) | (−5.51) | (−2.25) | (−2.43) |
| CASH_HOLDING | −0.162*** | −0.337*** | −0.245 | −0.072 | −0.351*** | −0.205* | −0.000 | 0.198 |
| | (−8.68) | (−4.82) | (−1.07) | (−0.24) | (−8.02) | (−1.89) | (−0.00) | (0.58) |
| PE_RATIO | 0.000*** | 0.000** | −0.000 | −0.000 | 0.001*** | 0.001*** | −0.000 | −0.000 |
| | (6.08) | (2.17) | (−0.74) | (−0.33) | (6.72) | (3.33) | (−0.43) | (−0.17) |
| NONCASH_WC | −0.019*** | −0.077 | 0.200* | 0.265 | −0.023 | 0.176 | 0.702*** | 0.613** |
| | (−5.90) | (−1.48) | (1.73) | (1.11) | (−1.29) | (1.49) | (3.22) | (2.13) |
| TOBINS_Q | 0.007*** | 0.019*** | 0.032 | 0.019 | 0.023*** | 0.011 | 0.016 | 0.013 |
| | (9.21) | (2.97) | (1.16) | (0.58) | (9.50) | (1.17) | (0.52) | (0.38) |
| ROA | 0.009* | 0.031 | 0.152 | 0.119 | 0.157*** | 0.807*** | 1.026** | 0.731 |
| | (1.88) | (0.56) | (0.51) | (0.31) | (6.14) | (5.60) | (2.33) | (1.45) |
| ROA_VOL | 0.001 | −0.027 | −2.694*** | −3.080*** | 0.027** | −0.575 | −3.863*** | −3.467*** |
| | (0.37) | (−0.55) | (−4.04) | (−3.32) | (2.18) | (−1.08) | (−3.79) | (−2.87) |
| SP_500 | 0.238*** | 0.080** | 0.059 | 0.021 | 0.086** | 0.068 | 0.088 | 0.064 |
| | (7.17) | (2.26) | (1.12) | (0.33) | (2.41) | (1.50) | (1.32) | (0.82) |
| CEO_RATIO | | 0.053 | | −0.137 | | −0.034 | | −0.296* |
| | | (0.89) | | (−1.05) | | (−0.47) | | (−1.88) |
| Intercept | 1.195*** | 2.135*** | 2.416*** | 4.013*** | 0.881*** | 0.950*** | 1.369*** | 2.319*** |
| | (15.28) | (8.94) | (5.84) | (6.48) | (5.57) | (3.14) | (2.79) | (3.91) |
| Adj. $R^2$ | 0.121 | 0.133 | 0.158 | 0.176 | | | | |
| *N* | 87,885 | 23,639 | 6,702 | 4,568 | 87,876 | 23,639 | 6,657 | 4,540 |

Our baseline definition of NUM_BIDS and BIDDER includes all majority bids, regardless of their size. This is appropriate in our setting because the difference in size between firms inside and outside of the *Fortune* 500 is often very small, and this definition allows small bids to be included in the sample. For example, in 2010, the difference between the firm in position 500 and the firm in position 501 was only 0.23% of sales. We note, however, that much of the extant M&A literature imposes various restrictions, such as minimum transaction sizes, for including a bid in the sample (e.g., Harford (1999)). In unreported results, we reestimate the models from Table 2 using further restrictions on bid size and find results comparable to those reported.

The previous tests only consider the decision to bid. We next consider deal size in Table 3 using ln(TARGET_TRANS_VALUE) as our dependent variable. We estimate the same set of models as in Table 2. The coefficients on DISTANCE_500 are still significantly negative, suggesting that firms closer

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TABLE 3
Distance from 500th Rank and TARGET_TRANS_VALUE

Table 3 presents the results from an OLS regression of ln(TARGET_TRANS_VALUE). The sample consists of firm-years with available data in the period 1991–2014 (excluding 1994). All regressions include year and industry (2-digit SIC code) dummies. All continuous variables with the exception of DISTANCE_500 are winsorized at the 1st and 99th percentiles. Standard errors used to compute *t*-statistics (shown in parentheses) are robust and clustered by firm. *, **, and *** indicate significance at the 10%, 5%, and 1% levels, respectively. All variables are defined in the Appendix.

| | Dependent Variable: ln(TARGET_TRANS_VALUE) | | | |
|---|---|---|---|---|
| | Sample | | | |
| | Whole Sample | | RANK 250–750 | |
| Variables | 1 | 2 | 3 | 4 |
| ln(DISTANCE_500) | −0.244*** | −0.483*** | −0.671*** | −0.984*** |
| | (−24.85) | (−14.55) | (−6.93) | (−7.25) |
| SIZE_RESIDUALS | 0.157*** | 0.346*** | 0.379*** | 0.571*** |
| | (19.46) | (12.50) | (6.32) | (6.75) |
| SALES_GROWTH | 0.038*** | 0.168*** | 0.147 | 0.260* |
| | (7.72) | (4.39) | (1.63) | (1.74) |
| LEVERAGE | −0.404*** | −0.917*** | −0.821*** | −1.028*** |
| | (−11.41) | (−6.51) | (−3.34) | (−2.67) |
| CASH_HOLDING | −0.081** | 0.082 | 0.327 | 0.862 |
| | (−2.55) | (0.65) | (0.79) | (1.60) |
| PE_RATIO | 0.001*** | 0.001*** | −0.000 | −0.000 |
| | (5.92) | (2.82) | (−0.77) | (−0.55) |
| NONCASH_WC | −0.046*** | −0.052 | 0.523** | 0.967** |
| | (−9.38) | (−0.63) | (2.54) | (2.57) |
| TOBINS_Q | 0.014*** | 0.056*** | 0.107* | 0.104* |
| | (9.97) | (4.29) | (1.95) | (1.66) |
| ROA | 0.018** | 0.173 | 0.745 | 1.278* |
| | (2.29) | (1.64) | (1.22) | (1.68) |
| ROA_VOL | −0.000 | 0.106 | −1.831 | −1.689 |
| | (−0.04) | (0.97) | (−1.60) | (−1.07) |
| SP_500 | 0.403*** | 0.105* | 0.079 | −0.045 |
| | (7.43) | (1.71) | (0.95) | (−0.42) |
| CEO_RATIO | | −0.072 | | −0.494** |
| | | (−0.75) | | (−2.56) |
| Intercept | 2.175*** | 3.764*** | 4.108*** | 6.773*** |
| | (16.94) | (10.51) | (6.34) | (6.91) |
| Adj. $R^2$ | 0.100 | 0.086 | 0.088 | 0.096 |
| *N* | 87,885 | 23,639 | 6,702 | 4,568 |

to the 500th position make bids for larger targets, consistent with our main hypothesis.[5] Note that we show these results for both the entire Compustat sample and a tighter subsample of firms in the 250–750 range around the 500th position on the list. For the remainder of the paper, we use the subsample as our primary estimation sample, except in tests where this restriction is not feasible due to a small sample size. All of the following results are also robust to using the whole sample instead.

We also graphically explore the economic effect of the results just described. In Graph A of Figure 1, we center the results from model 7 of Table 2 on the 500th position using nonparametric lowess estimates of the relation between the distance from the 500th threshold and M&A activity. Using this nonparametric

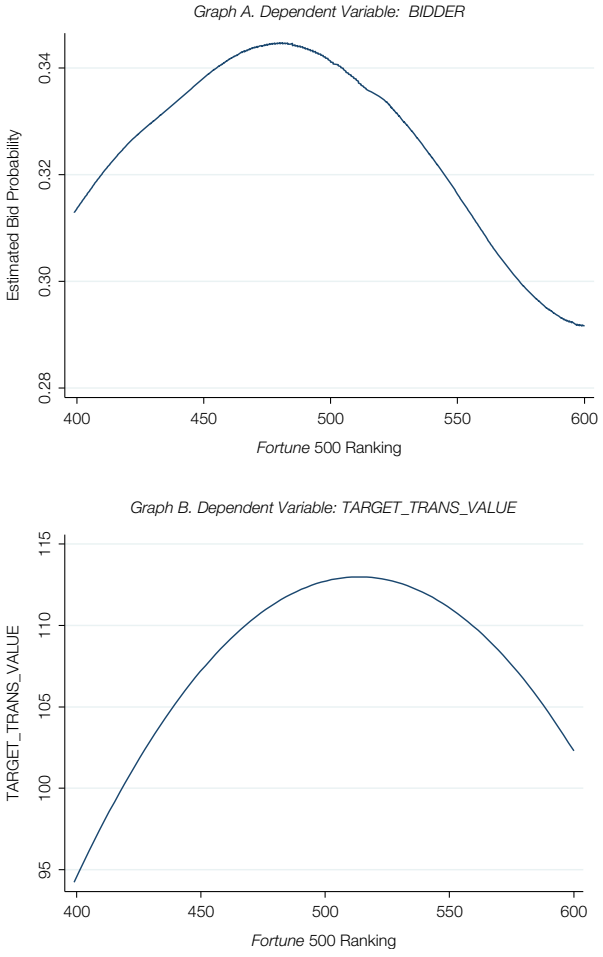
[5]For robustness, we also use target size or revenues as the dependent variable. The results continue to hold, although target size or revenues are only available for public targets, substantially decreasing the sample size.

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FIGURE 1

Nonparametric Estimates of M&A Activity and *Fortune* 500 Ranking

In Figure 1, we report nonparametric lowess estimates of the relation between the distance from the 500th threshold and M&A activity. Graph A reports the predicted bid probability on the *y*-axis, and Graph B reports TARGET_TRANS_VALUE.




estimate, we observe an increase in bid probability from the 400th to near the 500th position, with the probability of observing a bid declining after the 500th position. In Figure 1, Graph B, we present a second lowess estimate using TARGET_TRANS_VALUE and document a similar relation.

## B. Natural Experiment: Methodological Change in *Fortune*'s Rankings

Prior to 1994, *Fortune*'s ranking includes only industrial firms. After this date, the magazine modifies its methodology to also include service firms. The change in methodology allows us to observe M&A activity for a set of firms initially unable to join the *Fortune* 500. Given that the ranking is irrelevant for

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service firms prior to 1994, this test also serves as a placebo test for our main results in Tables 2 and 3. We exploit the time-series variation in *Fortune*'s methodology to test whether service firms alter their M&A behavior in the post-1994 period in response to newly introduced incentives to join the *Fortune* 500 listing. We define firms as belonging to the service industry if their 2-digit SIC code is greater than or equal to 50 and as an industrial firm if their 2-digit SIC is less than 50.[6] Firms with 2-digit SIC codes greater than or equal to 90 are omitted. We next define an indicator variable POST_1994, which is equal to 1 if the fiscal year is greater than 1994, and 0 otherwise. Consistent with Stangler and Arbesman (2012), we omit the transition year 1994.

In our earlier tests, we exclude service firms from the DISTANCE_500 ranking prior to 1994 because they are not eligible for the *Fortune* 500 during this time period. Here, we calculate the hypothetical ranking for service firms (i.e., the position that they *would have had* if they had been eligible). For the post-1994 period, we use their actual ranking. We next estimate our baseline models from Tables 2 and 3 for service firms and for industrial firms in the 250–750 subsample. We interact all independent variables with POST_1994 to evaluate the statistical significance of the difference between the pre-1994 and post-1994 period. We present results for each sample in Table 4. In Panel A, we report OLS models with NUM_BIDS as the dependent variable. Probit models using BIDDER as the dependent variable are presented in Panel B, and in Panel C we report OLS estimates predicting ln(TARGET_TRANS_VALUE).

For all models in Table 4, we find that ln(1 + DISTANCE_500) affects M&A activity only in the post-1994 period for service firms. The coefficient on ln(1 + DISTANCE_500) does not differ meaningfully from 0 in the pre-1994 period. Further, the differences in the coefficients between the pre- and post-1994 periods are statistically significant in all three panels. For industrial firms, ln(1 + DISTANCE_500) is significantly negative in both periods, and there is no statistical difference across periods. The results are therefore consistent with our main hypothesis. The incentives of industrial firms are unchanged pre- and post-1994 because they are eligible for the *Fortune* 500 in both periods.[7] However, service firms display a relation between their ranking and M&A activity only after *Fortune*'s methodological change. We observe no statistically meaningful relation prior to the change. This experiment therefore suggests that firms adjust their M&A activity only once they are eligible to join the *Fortune* 500.

[6] We also verify this broad definition of service firms to ensure that Compustat's SIC definition for service firms is similar to *Fortune*'s definition and to ensure that our experimental firms enter the list for the first time after the 1994 change. We hand check the 250–500 subsample and note that the classification is a close match, with nearly all of our eligible service firms entering after the change. There are 3 firms defined as service firms by Compustat that appear in the *Fortune* 500 rankings prior to 1994. It also appears that 2 firms defined as service firms by Compustat in our 501–750 range were potentially eligible for *Fortune*'s list. The natural experiment is robust to the reclassification of either or both of these groups as "service firms."

[7] In unreported results, we also verify that the effect is not limited to 1 time period in our sample. Our main result holds after splitting the post-1994 sample period into 2 equal time periods.

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TABLE 4

Natural Experiment: 1994 Change in *Fortune* 500's Methodology

In Table 4, the sample consists of firm-years with available data in the period 1991–2014 (excluding 1994) with a ranking between 250 and 750 on the *Fortune* 500 list. All other controls are included and are interacted with an indicator variable equal to 1 if the year is after 1994, and 0 if before 1994. All robust standard errors are clustered by firm, and all models include industry and year dummy variables. Standard errors used to compute *t*-statistics (shown in parentheses) are robust and clustered by firm. *, **, and *** indicate significance at the 10%, 5%, and 1% levels, respectively. All variables are defined in the Appendix.

| | Subsample | | | | | |
|---|---|---|---|---|---|---|
| | Service Firms | | | Industrial Firms | | |
| Variables | Pre-1994 | Post-1994 | Diff. | Pre-1994 | Post-1994 | Diff. |
| *Panel A. Dependent Variable: NUM_BIDS* | | | | | | |
| ln(DISTANCE_500 + 1) | 0.063 | −0.146*** | −0.209** | −0.138*** | −0.059* | 0.079 |
| | (0.73) | (−3.34) | (−2.25) | (−2.79) | (−1.89) | (1.42) |
| Controls | Yes | Yes | | Yes | Yes | |
| *N* | 298 | 1,951 | | 883 | 3,577 | |
| *Panel B. Dependent Variable: BIDDER* | | | | | | |
| ln(DISTANCE_500 + 1) | 0.205 | −0.428*** | −0.633** | −0.519*** | −0.229** | 0.290 |
| | (0.70) | (−3.36) | (−2.03) | (−2.98) | (−2.55) | (1.55) |
| Controls | Yes | Yes | | Yes | Yes | |
| *N* | 298 | 1,951 | | 883 | 3,577 | |
| *Panel C. Dependent Variable: ln(TARGET_TRANS_VALUE)* | | | | | | |
| ln(DISTANCE_500 + 1) | −0.140 | −0.712*** | −0.572* | −0.675*** | −0.569*** | 0.106 |
| | (−0.41) | (−4.54) | (−1.75) | (−4.04) | (−4.26) | (0.52) |
| Controls | Yes | Yes | | Yes | Yes | |
| *N* | 298 | 1,951 | | 883 | 3,577 | |

## IV. CEO Prestige, CEO Compensation, and Agency Problems

Our primary hypothesis is twofold: that firms will undertake actions to join the *Fortune* 500 and that such actions are motivated by an agency problem, specifically, the manager's incentive to be in the prestigious *Fortune* 500 list. This section explores the potential motivations for firms to join the *Fortune* 500. We first test whether CEOs who join the *Fortune* 500 list gain more postretirement board seats as a possible signal of better prestige. We next attempt to rule out changes in CEO pay, CEO career outcomes, and enhanced shareholder value as motivations for joining the list. We then explore how governance affects firms' bidding behavior, shareholder reaction to bids, and the takeover premia paid by the firm.

### A. Postretirement Board Seats and CEO Prestige

In this subsection, we investigate whether CEOs gain prestige by joining the *Fortune* 500. Although it is challenging to empirically measure an abstract concept such as "prestige," it is likely that prestigious CEOs receive more requests to sit on other firms' boards of directors. Thus, CEOs of firms listed in the *Fortune* 500 should hold more seats on boards of directors after retirement.

Our methodology is similar to that of Liu, McConnell, and Xu (2017). Once a CEO leaves his or her current position at an ExecuComp firm, we hand collect data on his or her board seats starting at year $t+2$ using the Institutional Shareholder Services (ISS) director database. ISS coverage begins in 1996, so we

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lose 1 year for CEOs who retire in 1993. We identify the number of unique firms for which the CEO gains a postretirement directorship. We also use all available postretirement years in the ISS data and calculate the number of unique postretirement directorships per year. In Panel A of Table 5, we present univariate statistics for CEOs who make the *Fortune* 500 during their careers versus those who do not. Using the 400–600, 250–750, and ExecuComp samples, we show that CEOs who make the *Fortune* 500 in their careers sit on the boards of more firms after retirement, both in total and per year of retirement. In Panel B, we estimate multivariate results on the entire ExecuComp sample and control for a variety of CEO characteristics (e.g., age, tenure, whether they held their own firm's chairman of the board position, and the number of board seats they already hold).

TABLE 5

*Fortune* 500 and Postretirement Board Activity

In Table 5, the sample consists of all ExecuComp CEOs from 1993–2014 with available postretirement data in the ISS director database. ISS data start in 1996. We also present univariate results for firms in *Fortune* 500's 400–600 and 250–750 ranges. We use the number of unique firms that an ex-CEO holds directorships in, as well as the average number of directorships per year of postretirement. Standard errors used to compute *t*-statistics (shown in parentheses) are robust and clustered by firm. *, **, and *** indicate significance at the 10%, 5%, and 1% levels, respectively. All variables are defined in the Appendix.

*Panel A. Univariate Statistics*

| | Dependent Variable | | | | | |
|---|---|---|---|---|---|---|
| | Unique Postretirement Directorships | | | Postretirement Directorships per Year | | |
| | Sample at Retirement Year | | | | | |
| | RANK | | | RANK | | |
| Variables | 400–600 | 250–750 | ExecuComp | 400–600 | 250–750 | ExecuComp |
| Made *Fortune* 500 during career | 2.56 | 2.59 | 2.59 | 1.66 | 1.68 | 1.68 |
| *N* | 416 | 431 | 448 | 416 | 431 | 448 |
| Never made *Fortune* 500 during career | 1.90 | 1.98 | 1.73 | 1.35 | 1.43 | 1.29 |
| *N* | 48 | 123 | 830 | 48 | 123 | 830 |
| Difference | 0.67*** | 0.62*** | 0.86*** | 0.32*** | 0.25*** | 0.39*** |
| *t*-statistic | (2.83) | (3.87) | (11.21) | (2.76) | (3.14) | (10.26) |

*Panel B. Multivariate Tests*

| | Sample at Retirement Year: ExecuComp | | | | | |
|---|---|---|---|---|---|---|
| | Dependent Variable | | | | | |
| | Unique Postretirement Directorships | | | Postretirement Directorships per Year | | |
| Variables | 1 | 2 | 3 | 4 | 5 | 6 |
| Made *Fortune* 500 during career | 0.822*** | 0.823*** | 0.256*** | 0.374*** | 0.380*** | 0.102** |
| | (8.96) | (7.17) | (2.84) | (8.58) | (6.79) | (2.18) |
| TENURE | | −0.011* | −0.008 | | −0.005* | −0.004 |
| | | (−1.70) | (−1.61) | | (−1.81) | (−1.44) |
| BOARD_CHAIR | | 0.165* | 0.199** | | 0.071 | 0.087* |
| | | (1.66) | (2.30) | | (1.32) | (1.75) |
| AGE | | 0.001 | −0.011** | | 0.002 | −0.005* |
| | | (0.18) | (−2.27) | | (0.57) | (−1.74) |
| NUM_CUR_DIRECTORSHIP | | | 0.805*** | | | 0.377*** |
| | | | (16.68) | | | (15.44) |
| Intercept | 0.829*** | 0.933** | 0.833* | 1.010*** | 1.007*** | 1.026*** |
| | (2.75) | (1.97) | (1.80) | (7.82) | (4.54) | (4.76) |
| Adj. $R^2$ | 0.185 | 0.203 | 0.506 | 0.144 | 0.155 | 0.419 |
| *N* | 1,278 | 986 | 846 | 1,278 | 986 | 846 |

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All variables are as of the CEO's retirement year. We continue to find that the number of postretirement board seats is higher for CEOs who have been in the *Fortune* 500 during their careers, potentially signaling a more prestigious career.

## B. Compensation and Firm Value Outcomes

We next examine the issue of compensation and shareholder value by comparing CEO compensation for firms just outside and just inside the *Fortune* 500 ranking to explore potential monetary incentives for a CEO to join the *Fortune* 500. We compare CEO excess compensation for firms just inside/outside of the index by examining firms from the following ranks: 491–500 versus 501–510 and 476–500 versus 501–525.[8] We present the results in Panel A of Table 6. We find no statistical difference in CEO excess compensation between firms just inside and just outside of the list. Next, in Panel B we examine the time-series dollar change in CEO excess compensation. Specifically, we create a subsample of firms that were out of the *Fortune* 500 in year $t-1$. For this subsample, we compare the change in CEO excess compensation for firms that enter the *Fortune* 500 by year $t+1$ with firms that remained out of the listing. We perform this test for firms that were ranked between 510–501 on the list in year $t-1$, as well as for firms ranked from 551–501. We find no evidence of a meaningful difference in CEO excess compensation between firms that enter the *Fortune* 500 list and firms that remain out of the list in year $t+1$. In fact, the point estimates often have the opposite sign of what would be expected if CEO compensation drives the patterns we observe. We are therefore unable to reject the null hypothesis that CEOs do not benefit monetarily from joining the list. We are thus unable to find evidence that the average CEO benefits monetarily from inclusion in the *Fortune* 500 ranking.

Despite our hypothesis that these M&A activities negatively affect shareholders, inclusion in *Fortune*'s list may instead benefit shareholders via higher stock prices, as discussed in the literature on the S&P index and its effect on stock prices (Harris and Gurel (1986), Dhillon and Johnson (1991), and Lynch and Mendenhall (1997)). We investigate whether there is a valuation difference across firms just inside and just outside the listing by examining TOBINS_Q. Results are reported in the last 2 columns of Panel A of Table 6. We again find no evidence of meaningful cross-sectional differences in TOBINS_Q between firms just inside and just outside of the *Fortune* 500 listing, indicating that our tests are unable to reject the hypothesis that shareholders do not value the *Fortune* 500 firms higher.[9] In Panel B, we also examine the time-series properties of the percentage change in TOBINS_Q, and we again find no evidence that firms that become members of the *Fortune* 500 experience greater valuation increases than firms that remain just outside of the list. We find similar results in unreported tests using industry-year-adjusted TOBINS_Q.

[8] We observe similar results for firms ranked 550–501 versus 500–451. We also find similar results using industry-adjusted compensation. We omit these results for brevity.

[9] We note that the *Fortune* 500 ranking is *not* based on performance, so the listing is not necessarily composed of only well-performing firms. For example, the 2011 ranking included Fannie Mae and Freddie Mac (ranked 5th and 20th, respectively, with losses of $14 billion each), Sprint/Nextel (ranked 85th, with losses of $3.5 billion), and Eastman Kodak (ranked 327th, filed for bankruptcy in 2012).

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TABLE 6

Univariate Statistics around the *Fortune* 500 Cutoff

Panels A and B of Table 6 report univariate statistics for EXCESS_COMP and change in EXCESS_COMP for firms just inside and just outside of the *Fortune* 500 list and for TOBINS_Q and change in TOBINS_Q for firms just inside and just outside of the *Fortune* 500 list. Panel C presents CARs for firms just making and firms just missing the list around the announcement date of the *Fortune* 500 list. The sample consists of firm-years with available data in the period 1991–2014 (excluding 1994). Standard errors used to compute *t*-statistics (reported in parentheses) are robust and clustered by firm. *, **, and *** indicate significance at the 10%, 5%, and 1% levels, respectively. All variables are defined in the Appendix.

*Panel A. Excess Compensation and Tobin's* Q

| | $EXCESS_COMP_t$ | | $TOBINS_Q_t$ | |
|---|---|---|---|---|
| | RANK | | | |
| Subsamples | 491–510 | 476–525 | 491–510 | 476–525 |
| Just outside$_{(t-1)}$ | −151.06 | −271.85 | 1.31 | 1.32 |
| *N* | 102 | 240 | 153 | 383 |
| Just inside$_{(t-1)}$ | −933.71 | −406.17 | 1.4 | 1.4 |
| *N* | 87 | 238 | 146 | 381 |
| Difference | 782.65 | 134.32 | −0.09 | −0.08 |
| *t*-statistic | (1.18) | (0.31) | (−0.89) | (−1.18) |

*Panel B. Change in Excess Compensation and Tobin's* Q

| | Change in $EXCESS_COMP_{(t,t+1)}$ | | % Change in $TOBINS_Q_{(t,t+1)}$ | |
|---|---|---|---|---|
| | RANK | | | |
| Subsamples | 510–501 | 551–501 | 510–501 | 551–501 |
| Did not get in$_{(t-1,t+1)}$ | 572.46 | 253.29 | 6.50% | 1.50% |
| *N* | 33 | 175 | 59 | 335 |
| Got in$_{(t-1,t+1)}$ | −860.77 | 598.63 | 7.00% | −4.40% |
| *N* | 40 | 162 | 64 | 267 |
| Difference | 1,433.22 | −345.33 | −0.50% | 6.10% |
| *t*-statistic | (1.62) | (−0.64) | (−0.04) | (0.85) |

*Panel C. CARs around* Fortune *500 Announcement Date (1995–2014)*

| | RANK | | | | | |
|---|---|---|---|---|---|---|
| | 491–510 | | | 476–525 | | |
| | Window (in days) | | | | | |
| Subsamples | CAR(−1, +1) | CAR(−2, +2) | CAR(−1, +2) | CAR(−1, +1) | CAR(−2, +2) | CAR(−1, +2) |
| Just outside$_{(t-1)}$ | −0.38% | −0.60% | −0.56% | −0.08% | 0.15% | −0.05% |
| *N* | 99 | 99 | 99 | 248 | 248 | 248 |
| Just inside$_{(t-1)}$ | −0.59% | 0.05% | −0.02% | −0.04% | 0.21% | 0.05% |
| *N* | 100 | 100 | 100 | 250 | 250 | 250 |
| Difference | 0.21% | −0.66% | −0.54% | −0.05% | −0.06% | −0.11% |
| *t*-statistic | (0.32) | (−0.99) | (−0.85) | (−0.14) | (−0.14) | (−0.28) |

Finally, we consider announcement returns for the annual announcement of the *Fortune* 500 list. We use Factiva to determine the annual announcement date of the *Fortune* 500 between 1995 and 2014. The list is generally announced in April or May each year. For announcement returns, we use a 6-month estimation window from months (−7, −1) to estimate the baseline model and then calculate CARs for the (−1, +1), (−2, +2), and (−1, +2) day windows. In Panel C of Table 6, we present results for firms that just missed or just made the list. We again consider the 491–510 range as well as the 475–525 range. We find no evidence of a meaningful difference between the two samples, indicating that shareholders do not significantly respond to inclusion in the *Fortune* 500 list. In summary, we find no evidence that M&A activity around the *Fortune* 500 threshold is driven by managerial compensation or shareholder value.

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## C. Corporate Governance and Bidding Behavior

If a potential *Fortune* 500 firm's M&A activity is an indication of an agency problem, better governance should dampen the observed negative relation between DISTANCE_500 and bidding behavior. Conversely, having a relatively powerful CEO may enhance this effect (Morse, Nanda, and Seru (2011)). We use the E_INDEX introduced by Bebchuk et al. (2009) to measure the level of managerial entrenchment and test this hypothesis.

Table 7 reports the results from regressing our M&A activity variables on DISTANCE_500, E_INDEX, and the interaction between E_INDEX and the distance variable. The coefficient on the interaction term is negative when predicting NUM_BIDS and is insignificant but directionally consistent when predicting ln(TARGET_TRANS_VALUE). These results indicate that the negative effect of the firm's distance from the 500th position is even stronger when the manager is

TABLE 7
Governance, Bidding Behavior, and TARGET_TRANS_VALUE

Table 7 presents the results from an OLS regression of NUM_BIDS and ln(TARGET_TRANS_VALUE). The sample consists of Compustat firm-years with available data in the period 1991–2014 (excluding 1994) with a ranking between 250 and 750 on the *Fortune* 500 list. All regressions include year and industry (2-digit SIC code) dummies. All continuous variables with the exception of DISTANCE_500 are winsorized at the 1st and 99th percentiles. Standard errors used to compute *t*-statistics (reported in parentheses) are robust and clustered by firm. *, **, and *** indicate significance at the 10%, 5%, and 1% levels, respectively. All variables are defined in the Appendix.

| | Dependent Variable | | | |
|---|---|---|---|---|
| | NUM_BIDS | | ln(TARGET_TRANS_VALUE) | |
| Variables | 1 | 2 | 3 | 4 |
| ln(1 + DISTANCE_500) | −0.315** | −0.327** | −0.693*** | −0.809*** |
| | (−2.32) | (−1.98) | (−2.96) | (−2.77) |
| E_INDEX | 0.230** | 0.295** | 0.165 | 0.261 |
| | (2.31) | (2.35) | (0.77) | (0.96) |
| E_INDEX × ln(1 + DISTANCE_500) | −0.047** | −0.064** | −0.050 | −0.070 |
| | (−2.17) | (−2.37) | (−1.12) | (−1.23) |
| SIZE_RESIDUALS | 0.269*** | 0.302*** | 0.474*** | 0.576*** |
| | (3.75) | (3.62) | (4.11) | (4.03) |
| SALES_GROWTH | 0.223* | 0.288** | 0.225 | 0.329 |
| | (1.91) | (2.02) | (1.27) | (1.32) |
| LEVERAGE | −1.092*** | −1.286*** | −1.361** | −1.593** |
| | (−3.14) | (−2.92) | (−2.29) | (−2.26) |
| CASH_HOLDING | 0.055 | 0.205 | 0.411 | 0.525 |
| | (0.12) | (0.40) | (0.52) | (0.58) |
| PE_RATIO | 0.000 | 0.000 | −0.000 | −0.000 |
| | (0.01) | (0.29) | (−0.01) | (−0.18) |
| NONCASH_WC | 0.370 | 0.712* | 0.547 | 0.989 |
| | (1.27) | (1.86) | (1.12) | (1.54) |
| TOBINS_Q | 0.006 | 0.003 | 0.132** | 0.146** |
| | (0.16) | (0.08) | (2.05) | (2.17) |
| ROA | −0.633 | −0.892 | 0.114 | −0.115 |
| | (−1.21) | (−1.55) | (0.12) | (−0.10) |
| ROA_VOL | −4.415*** | −4.797*** | −4.862** | −4.994* |
| | (−3.18) | (−2.96) | (−2.11) | (−1.81) |
| CEO_RATIO | | −0.128 | | −0.254 |
| | | (−0.64) | | (−0.72) |
| SP_500 | −0.005 | −0.010 | −0.060 | −0.135 |
| | (−0.04) | (−0.08) | (−0.37) | (−0.69) |
| Intercept | 3.280*** | 3.941*** | 5.231*** | 7.553*** |
| | (3.41) | (3.62) | (3.70) | (4.11) |
| Adj. $R^2$ | 0.199 | 0.214 | 0.118 | 0.118 |
| *N* | 2,294 | 1,857 | 2,294 | 1,857 |

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more entrenched and, thus, has more power. Therefore, better-governed firms are less likely to engage in additional M&A activity close to the *Fortune* 500 cutoff. This result is consistent with our hypothesis that agency problems drive incentives to join the *Fortune* 500, as better-governed firms can reduce managerial incentives to get in (or stay in) the list.

## D. Bidder Behavior and Stock Market Reaction

Markets react unfavorably to actions that are perceived to increase CEO utility at the expense of investors (e.g., Yermack (2006)). Thus, if a firm close to the threshold changes its bidding behavior to increase revenues and get in or remain in the *Fortune* 500, one expects to observe a negative reaction by the markets at the announcement of such bids. Alternatively, if shareholders benefit from the firm's inclusion in the *Fortune* 500, we expect the opposite reaction. We test this hypothesis in Table 8 by measuring market reactions to bids by firms in the 250–750 range of *Fortune*'s ranking. We measure the market reaction to a firm's majority bid with CARs. We use the market model with a value-weighted market index as the benchmark model, and we use 255 trading days as the estimation window. Due to the markup observed by Schwert (1996), we end our estimation window

TABLE 8
Bidder Abnormal Returns: Multivariate Tests

Table 8 reports the results of OLS regressions on announcement CARs. The sample consists of Compustat firm-years with available data in the period 1991–2014 (excluding 1994) with a ranking between 250 and 750 on the *Fortune* 500 list. All continuous variables with the exception of DISTANCE_500 are winsorized at the 1st and 99th percentiles. Standard errors used to compute *t*-statistics (reported in parentheses) are robust and clustered by firm. *, **, and *** indicate significance at the 10%, 5%, and 1% levels, respectively. All variables are defined in the Appendix.

| | Dependent Variables | | | | | |
|---|---|---|---|---|---|---|
| | CAR(−1, +1) | | CAR(−2, +2) | | CAR(−1, +2) | |
| Variables | 1 | RELATIVE_SIZE > 5% 2 | 3 | RELATIVE_SIZE > 5% 4 | 5 | RELATIVE_SIZE > 5% 6 |
| *Panel A. Main Regression* | | | | | | |
| ln(1 + DISTANCE_500) | 0.004*** | 0.011** | 0.005*** | 0.016** | 0.005*** | 0.015** |
| | (2.75) | (2.20) | (2.76) | (2.42) | (2.95) | (2.51) |
| SIZE_RESIDUALS | −0.003*** | −0.009** | −0.005*** | −0.011** | −0.005*** | −0.012*** |
| | (−3.31) | (−2.41) | (−3.62) | (−2.31) | (−3.73) | (−2.71) |
| LEVERAGE | 0.008 | 0.015 | 0.006 | 0.001 | 0.008 | 0.011 |
| | (1.05) | (0.67) | (0.53) | (0.03) | (0.80) | (0.43) |
| CASH_HOLDING | 0.005 | −0.001 | 0.003 | −0.040 | 0.002 | −0.018 |
| | (0.60) | (−0.04) | (0.29) | (−1.06) | (0.19) | (−0.52) |
| TOBINS_Q | 0.000 | 0.001 | 0.000 | 0.002 | 0.000 | 0.002 |
| | (0.28) | (0.41) | (0.12) | (0.53) | (0.25) | (0.56) |
| PCT_EQUITY | −0.000 | −0.000*** | −0.000 | −0.000*** | −0.000 | −0.000*** |
| | (−1.42) | (−3.56) | (−1.47) | (−4.00) | (−1.55) | (−3.79) |
| PRIV_TARGET | −0.002 | −0.003 | −0.004 | −0.006 | −0.002 | −0.004 |
| | (−0.92) | (−0.53) | (−1.23) | (−0.99) | (−0.90) | (−0.70) |
| SP_500 | −0.001 | −0.011* | −0.000 | −0.012 | −0.001 | −0.011 |
| | (−0.47) | (−1.76) | (−0.19) | (−1.61) | (−0.42) | (−1.58) |
| Intercept | −0.017** | −0.046 | −0.024** | −0.059 | −0.023** | −0.062* |
| | (−2.15) | (−1.53) | (−2.09) | (−1.56) | (−2.25) | (−1.77) |
| Adj. $R^2$ | 0.005 | 0.051 | 0.006 | 0.050 | 0.006 | 0.052 |
| *N* | 4,575 | 712 | 4,575 | 712 | 4,575 | 712 |

*(continued on next page)*

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TABLE 8 (continued)
Bidder Abnormal Returns: Multivariate Tests

| | Dependent Variables | | | | | |
|---|---|---|---|---|---|---|
| | CAR(−1, +1) | | CAR(−2, +2) | | CAR(−1, +2) | |
| Variables | 1 | RELATIVE_SIZE > 5% 2 | 3 | RELATIVE_SIZE > 5% 4 | 5 | RELATIVE_SIZE > 5% 6 |
| *Panel B. Additional Control Variables* | | | | | | |
| ln(1 + DISTANCE_500) | 0.008** | 0.018*** | 0.011** | 0.021** | 0.010** | 0.021*** |
| | (2.40) | (2.66) | (2.45) | (2.57) | (2.56) | (2.70) |
| SIZE_RESIDUALS | −0.005** | −0.012** | −0.008** | −0.014** | −0.007** | −0.014** |
| | (−2.17) | (−2.35) | (−2.38) | (−2.21) | (−2.50) | (−2.41) |
| LEVERAGE | 0.017 | 0.033 | 0.013 | 0.028 | 0.018 | 0.035 |
| | (0.97) | (1.11) | (0.59) | (0.78) | (0.88) | (0.99) |
| CASH_HOLDING | 0.011 | 0.050 | 0.013 | 0.027 | 0.006 | 0.040 |
| | (0.66) | (1.33) | (0.64) | (0.65) | (0.32) | (0.96) |
| TOBINS_Q | 0.001 | −0.001 | 0.001 | −0.000 | 0.001 | 0.000 |
| | (1.10) | (−0.24) | (0.75) | (−0.07) | (1.18) | (0.07) |
| PCT_EQUITY | −0.000*** | −0.000*** | −0.000*** | −0.000*** | −0.000*** | −0.000*** |
| | (−2.97) | (−3.64) | (−2.86) | (−4.42) | (−3.02) | (−4.08) |
| PRIV_TARGET | −0.003 | −0.007 | −0.007 | −0.014* | −0.003 | −0.009 |
| | (−0.85) | (−1.06) | (−1.45) | (−1.75) | (−0.76) | (−1.16) |
| ln(RELATIVE_SIZE) | 0.001 | 0.002 | 0.000 | 0.001 | 0.001 | 0.001 |
| | (0.91) | (0.47) | (0.03) | (0.15) | (0.57) | (0.19) |
| HOSTILE | 0.019 | 0.023 | 0.015 | 0.021 | 0.016 | 0.020 |
| | (0.90) | (0.92) | (0.52) | (0.63) | (0.56) | (0.63) |
| COMPETING_BIDDER | −0.024 | −0.031 | −0.032 | −0.038 | −0.022 | −0.028 |
| | (−1.17) | (−1.05) | (−1.22) | (−1.03) | (−0.87) | (−0.77) |
| TENDER | −0.005 | −0.009 | −0.004 | −0.012 | −0.005 | −0.010 |
| | (−0.77) | (−0.83) | (−0.42) | (−0.86) | (−0.56) | (−0.73) |
| CEO_RATIO | −0.004 | −0.014 | −0.005 | −0.023 | −0.007 | −0.026 |
| | (−0.43) | (−0.64) | (−0.46) | (−0.83) | (−0.65) | (−1.02) |
| SP_500 | −0.006 | −0.011 | −0.006 | −0.012 | −0.006 | −0.011 |
| | (−1.42) | (−1.57) | (−1.10) | (−1.30) | (−1.25) | (−1.34) |
| Intercept | −0.030 | −0.072* | −0.043 | −0.080 | −0.041* | −0.086* |
| | (−1.47) | (−1.70) | (−1.59) | (−1.53) | (−1.66) | (−1.73) |
| Adj. $R^2$ | 0.025 | 0.088 | 0.020 | 0.082 | 0.022 | 0.082 |
| *N* | 1,413 | 520 | 1,413 | 520 | 1,413 | 520 |

6 months prior to the bid announcement, using a window of (−382, −127) in trading days.

We examine CAR announcement returns for all bids in the 1991–2014 sample period. We set the announcement date of the bid as $t = 0$, and we compute CARs on the following trading day windows: (−1, +1), (−2, +2), and (−1, +2). Table 8 reports the coefficients of the regressions of CARs on DISTANCE_500 and the control variables. Following extant literature (e.g., Lang, Stulz, and Walkling (1989), Servaes (1991), Harford (1999), and Moeller, Schlingemann, and Stulz (2004), (2005)), we include variables associated with abnormal announcement returns, such as CASH_HOLDING, TOBINS_Q, and SIZE_RESIDUALS, and the percentage of the offer that is equity financed (Travlos (1987)). In Panel B of Table 8, we include additional M&A variables, such as the relative size of the acquisition, computed as the SDC transaction value divided by the equity market capitalization of the acquirer at the end of the fiscal year prior to the

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announcement; dummy variables for hostile and tender offers; and a dummy variable for the presence of competing bids.

In the odd-numbered models, which examine all majority bids for firms in the subsample, the distance from the *Fortune* 500 cutoff is positively related to the bidder CARs at the 1% level. In the even-numbered models, we restrict the sample to bids where the target has a relative size of at least 5% of the bidder. If bids close to the cutoff indeed have a higher probability of occurring for agency-related reasons, we expect the problem to be more pronounced when the bid is for a larger target. Consistent with this intuition, we find that for this subsample of bids, the coefficient on ln(1 + DISTANCE_500) is significantly bigger.[10] We find similar results when we add additional control variables in Panel B of Table 8. Therefore, Table 8 shows that bidder CARs are lower when the bidder is close to the *Fortune* 500 cutoff and that they are even lower when the target is larger, providing additional evidence that these bids are indicative of an agency problem.[11]

## E. Bidder Behavior and Market Premia

Next, we examine the effect of the firm's distance from the *Fortune* 500 threshold on the takeover premium for the subsample of firms that make majority bids for publicly traded targets. On the margin, a manager trying to improve the ranking of his or her firm is likely willing to pay a higher premium to successfully acquire the target. Thus, we expect a negative relation between a firm's distance from the 500th rank and the 4-month takeover premium (PREMIUM).[12] Following the extant literature (e.g., Officer (2003), Chatterjee, John, and Yan (2012)), we control for target size, market-to-book ratio, and volatility; for hostile takeovers, we also control for tender offers and the presence of a competing bid. We also include the TOEHOLD dummy variable, which takes a value of 1 if the bidder owns more than 5% of the target shares prior to the takeover announcement. We estimate the model after eliminating negative premia and premia above 200% (Officer (2003)). Table 9 reports the results of the regression of the takeover premium on DISTANCE_500 and the control variables. As in Table 8, we report results for all majority domestic bids in the odd-numbered columns and then only for targets with a relative size greater than 5% in the even-numbered columns. We estimate this model on the whole sample because there are relatively few available observations in the 250–750 subsample.[13] Consistent with the hypothesis that firms closer to the *Fortune* 500 cutoff pay higher premia, the

[10]Wald tests of the difference in the coefficients on DISTANCE_500 between columns 1 and 2, 3 and 4, and 5 and 6 of Panel A in Table 8 confirm that the coefficients are significantly different at the 10% level, with $\chi^2$ values of 2.76, 3.41, and 3.08, respectively.

[11]In unreported tests, we also estimate a Heckman selection model to control for the fact that DISTANCE_500 may affect both the probability of being a bidder and the market's reaction to the bid. We first estimate the probability of being a bidder based on the model in Harford (1999), and then we estimate CARs in the second stage. These results are similar to those reported in Table 8 and are available from the authors.

[12]Computing the premium relative to the target stock price at 3 months before the takeover announcement does not change the results.

[13]The sample used to investigate the effect of DISTANCE_500 on takeover premia consists of acquisitions of public companies by public companies in the period 1991–2014 (excluding 1994). BID_PRICE is missing for many observations in the SDC data, restricting our sample size (Officer (2003)). Additionally, during our sample period, particularly in the late 1990s, there are many firms

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TABLE 9
Takeover Premia

Table 9 reports the results of OLS regressions on PREMIUM. The sample consists of firm-years with available data on bidders in the period 1991–2014 (excluding 1994). All continuous variables with the exception of DISTANCE_500 are winsorized at the 1st and 99th percentiles. Standard errors used to compute *t*-statistics (reported in parentheses) are robust and clustered by firm. *, **, and *** indicate significance at the 10%, 5%, and 1% levels, respectively. All variables are defined in the Appendix.

| | Dependent Variable: PREMIUM (relative to target price 4 months before bid) | | | | | |
|---|---|---|---|---|---|---|
| | Sample: Whole | | | | | |
| | | RELATIVE_ SIZE > 5% | | RELATIVE_ SIZE > 5% | | RELATIVE_ SIZE > 5% |
| Variables | 1 | 2 | 3 | 4 | 5 | 6 |
| ln(1 + DISTANCE_500) | −0.085*** | −0.112*** | −0.085*** | −0.111*** | −0.084*** | −0.086** |
| | (−3.26) | (−3.36) | (−3.26) | (−3.34) | (−2.89) | (−2.17) |
| SIZE_RESIDUALS | 0.074*** | 0.111*** | 0.074*** | 0.111*** | 0.062*** | 0.081** |
| | (3.58) | (4.09) | (3.56) | (4.06) | (2.86) | (2.56) |
| CASH_HOLDING | 0.064 | 0.047 | 0.060 | 0.042 | 0.108 | 0.002 |
| | (0.80) | (0.54) | (0.76) | (0.49) | (1.00) | (0.01) |
| TOBINS_Q | 0.035*** | 0.067*** | 0.034*** | 0.067*** | 0.024** | 0.047** |
| | (3.09) | (4.26) | (3.07) | (4.25) | (2.11) | (2.35) |
| PCT_EQUITY | −0.000 | −0.000 | −0.000 | 0.000 | 0.000 | 0.000 |
| | (−0.46) | (−0.16) | (−0.08) | (0.19) | (0.42) | (0.18) |
| ln(RELATIVE_SIZE) | 0.064*** | 0.104*** | 0.064*** | 0.106*** | 0.028 | 0.039 |
| | (2.98) | (3.59) | (3.00) | (3.67) | (1.28) | (1.21) |
| TARGET_Q | −0.037** | −0.069*** | −0.037** | −0.069*** | −0.026* | −0.050* |
| | (−2.45) | (−2.91) | (−2.47) | (−2.90) | (−1.80) | (−1.76) |
| TARGET_SIZE | −0.105*** | −0.131*** | −0.103*** | −0.129*** | −0.071*** | −0.082*** |
| | (−5.53) | (−5.45) | (−5.42) | (−5.34) | (−3.62) | (−3.21) |
| TARGET_ROA_VOL | −0.085 | 0.054 | −0.084 | 0.045 | −0.003 | 0.321 |
| | (−0.72) | (0.25) | (−0.69) | (0.21) | (−0.02) | (1.25) |
| HOSTILE | | | −0.057 | −0.038 | −0.142** | −0.121* |
| | | | (−0.56) | (−0.37) | (−2.13) | (−1.83) |
| COMPETING_BIDDER | | | −0.059 | −0.090 | −0.049 | −0.080 |
| | | | (−1.00) | (−1.47) | (−0.75) | (−1.12) |
| TENDER | | | 0.031 | 0.036 | 0.002 | 0.038 |
| | | | (1.00) | (0.97) | (0.02) | (0.23) |
| TOEHOLD | | | 0.027 | 0.022 | 0.035 | 0.042 |
| | | | (0.29) | (0.18) | (1.08) | (1.03) |
| CEO_RATIO | | | | | −0.056 | 0.033 |
| | | | | | (−0.70) | (0.37) |
| SP_500 | −0.005 | 0.035 | −0.006 | 0.035 | −0.072 | −0.043 |
| | (−0.13) | (0.82) | (−0.16) | (0.82) | (−1.44) | (−0.79) |
| Intercept | 1.751*** | 2.076*** | 1.737*** | 2.059*** | 1.511*** | 1.556*** |
| | (6.21) | (5.68) | (6.16) | (5.63) | (5.20) | (3.80) |
| Adj. $R^2$ | 0.069 | 0.103 | 0.072 | 0.107 | 0.062 | 0.086 |
| *N* | 933 | 682 | 933 | 682 | 681 | 454 |

coefficients on DISTANCE_500 are negative and significant in all models. The effect of DISTANCE_500 on the premium is economically significant: The coefficients in model 2 of Table 9 imply that the 4-month premium paid by an average bidder that is 5 spots away from the cutoff is 5.40% higher than that paid by a bidder that is 20 spots away from the cutoff. In short, the results in Section IV are consistent with the hypothesis that agency problems play a role in M&A activity around the *Fortune* 500 cutoff. We also document that CEOs of listed firms hold

with premia greater than 200%, so this restriction further reduces our sample size. We find similar results when we do not apply these filters.

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more directorships than non–*Fortune* 500 CEOs after retirement, consistent with the hypothesis that managers gain prestige by being on the *Fortune* 500 list.

# V. Robustness

## A. Alternative Distance Measures

In Table 10, we consider alternative distance measures. Specifically, we replace ln(1 + DISTANCE_500) with either ln(REV_DISTANCE + 1) in models 1, 2, 5, and 6 or the scaled variable ln(REV_DISTANCE/REV + 1) in models 3, 4, 7, and 8. These measures have the benefit of capturing the revenues that a firm must add to pass the 500th largest firm. We use NUM_BIDS as the dependent variable in models 1–4 and ln(TARGET_TRANS_VALUE) in models 5–8. CEO_RATIO is included in even-numbered models. In all models, we document a significantly negative relation between M&A activity and the distance between the revenues of

TABLE 10

Distance in Revenues from 500th Rank, Bidding Behavior, and TARGET_TRANS_VALUE

Table 10 reports the results of OLS regressions on NUM_BIDS and ln(TARGET_TRANS_VALUE). The sample consists of Compustat firm-years with available data in the period 1991–2014 (excluding 1994) with a ranking between 250 and 750 on the *Fortune* 500 list. All regressions include year and industry (2-digit SIC code) dummies. All continuous variables with the exception of DISTANCE_500 are winsorized at the 1st and 99th percentiles. Standard errors used to compute *t*-statistics (reported in parentheses) are robust and clustered by firm. *, **, and *** indicate significance at the 10%, 5%, and 1% levels, respectively. All variables are defined in the Appendix.

| | Dependent Variable | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | NUM_BIDS | | | | ln(TARGET_TRANS_VALUE) | | | |
| Variables | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| ln(REV_DISTANCE + 1) | −0.061*** | −0.097*** | | | −0.142*** | −0.188*** | | |
| | (−3.90) | (−4.86) | | | (−5.05) | (−5.16) | | |
| ln(REV_DISTANCE/REV + 1) | | | −0.303*** | −0.529*** | | | −0.890*** | −1.136*** |
| | | | (−2.73) | (−3.67) | | | (−4.46) | (−4.25) |
| SIZE_RESIDUALS | 0.222*** | 0.333*** | 0.212*** | 0.313*** | 0.399*** | 0.595*** | 0.364*** | 0.552*** |
| | (5.73) | (6.40) | (5.46) | (5.98) | (6.61) | (6.99) | (6.04) | (6.48) |
| SALES_GROWTH | 0.113** | 0.185** | 0.112** | 0.185** | 0.147 | 0.257* | 0.147 | 0.259* |
| | (2.46) | (2.42) | (2.45) | (2.43) | (1.62) | (1.72) | (1.62) | (1.73) |
| LEVERAGE | −0.453*** | −0.745*** | −0.448*** | −0.736*** | −0.836*** | −1.045*** | −0.812*** | −1.022*** |
| | (−3.08) | (−3.08) | (−3.06) | (−3.05) | (−3.40) | (−2.72) | (−3.30) | (−2.65) |
| CASH_HOLDING | −0.247 | −0.072 | −0.246 | −0.074 | 0.321 | 0.859 | 0.328 | 0.857 |
| | (−1.08) | (−0.24) | (−1.07) | (−0.25) | (0.78) | (1.60) | (0.79) | (1.59) |
| PE_RATIO | −0.000 | −0.000 | −0.000 | −0.000 | −0.000 | −0.000 | −0.000 | −0.000 |
| | (−0.74) | (−0.32) | (−0.73) | (−0.33) | (−0.76) | (−0.54) | (−0.77) | (−0.56) |
| NONCASH_WC | 0.199* | 0.264 | 0.200* | 0.267 | 0.521** | 0.965** | 0.523** | 0.971** |
| | (1.72) | (1.10) | (1.73) | (1.11) | (2.54) | (2.57) | (2.53) | (2.58) |
| TOBINS_Q | 0.032 | 0.018 | 0.032 | 0.019 | 0.105* | 0.102 | 0.108** | 0.105* |
| | (1.14) | (0.56) | (1.16) | (0.59) | (1.93) | (1.64) | (1.96) | (1.67) |
| ROA | 0.161 | 0.143 | 0.146 | 0.097 | 0.775 | 1.331* | 0.714 | 1.222 |
| | (0.54) | (0.38) | (0.49) | (0.25) | (1.27) | (1.75) | (1.17) | (1.61) |
| ROA_VOL | −2.687*** | −3.079*** | −2.699*** | −3.086*** | −1.825 | −1.691 | −1.817 | −1.695 |
| | (−4.03) | (−3.32) | (−4.05) | (−3.32) | (−1.60) | (−1.07) | (−1.59) | (−1.07) |
| SP_500 | | −0.139 | | −0.135 | | −0.497** | | −0.486** |
| | | (−1.05) | | (−1.02) | | (−2.57) | | (−2.51) |
| CEO_RATIO | 0.059 | 0.021 | 0.058 | 0.021 | 0.081 | −0.044 | 0.077 | −0.045 |
| | (1.13) | (0.33) | (1.11) | (0.33) | (0.97) | (−0.42) | (0.92) | (−0.43) |
| Intercept | 0.271 | 0.791** | 0.505* | 1.130*** | 0.352 | 1.036* | 0.631 | 1.591*** |
| | (0.97) | (2.23) | (1.95) | (3.19) | (0.74) | (1.83) | (1.45) | (2.89) |
| Adj. $R^2$ | 0.158 | 0.177 | 0.158 | 0.176 | 0.088 | 0.096 | 0.088 | 0.096 |
| *N* | 6,702 | 4,568 | 6,702 | 4,568 | 6,702 | 4,568 | 6,702 | 4,568 |

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a firm in the 500th position and the firm's own revenues. Consistent with our earlier results, firms make more M&A bids and bid for larger targets the closer their revenues are to the revenues of the 500th firm. These results supplement our main tests; firms appear to increase M&A activity the closer they are to the *Fortune* 500 threshold.

## B. Firms "In" and Firms "Out" of the *Fortune* 500

Up to this point, we have assumed that a firm that is *n* spots "in" the *Fortune* 500 has the same incentives to remain in the listing as a firm that is *n* spots "out" has to join the listing. We next relax this assumption and verify that the effect of the distance from the 500th rank threshold exists for firms both in and out of the *Fortune* 500. For each set of tests in Table 11, we separately estimate our regressions for firms inside the *Fortune* 500 (models 1, 4, 7, and 10) and firms outside the *Fortune* 500 (models 2, 5, 8, and 11). For the remaining models, we include an indicator variable equal to 1 for firms in the *Fortune* 500 (IN_DUMMY) and the interaction of IN_DUMMY with the distance variable to test for significant differences between the 2 groups. Coefficients on the control variables are omitted for brevity but always included. Panel A of Table 11 reports results for the 250–750 sample: The coefficients on the distance variable are significantly negative for both firms on the *Fortune* 500 list and firms not on the list. Additionally, the interaction term is not significantly different from 0, indicating that the effect of the distance from the threshold does not vary across firms that are on the list and not on the list.

TABLE 11

Robustness: Firms On and Not On the *Fortune* 500 List

Table 11 reports the results from OLS regressions of NUM_BIDS and ln(TARGET_TRANS_VALUE). The sample consists of Compustat firm-years with available data in the period 1991–2014 (excluding 1994) with a ranking between 250 and 750 on the *Fortune* 500 list. All regressions include year and industry (2-digit SIC code) dummies. All continuous variables with the exception of DISTANCE_500 are winsorized at the 1st and 99th percentiles. Standard errors used to compute *t*-statistics (reported in parentheses) are robust and clustered by firm. *, **, and *** indicate significance at the 10%, 5%, and 1% levels, respectively. All variables are defined in the Appendix.

*Panel A. Without CEO_RATIO*

| | Dependent Variable | | | | | |
|---|---|---|---|---|---|---|
| | NUM_BIDS | | | ln(TARGET_TRANS_VALUE) | | |
| | Sample: RANK | | | | | |
| | 250–500 | 501–750 | 250–750 | 250–500 | 501–750 | 250–750 |
| Variables | 1 | 2 | 3 | 4 | 5 | 6 |
| ln(1 + DISTANCE_500) | −0.535*** | −0.199** | −0.335*** | −0.872*** | −0.653*** | −0.714*** |
| | (−4.60) | (−2.27) | (−4.67) | (−4.57) | (−4.49) | (−6.29) |
| IN_DUMMY | | | 0.189 | | | 0.133 |
| | | | (1.37) | | | (0.49) |
| IN_DUMMY × ln(1 + DISTANCE_500) | | | −0.036 | | | −0.044 |
| | | | (−1.10) | | | (−0.69) |
| Intercept | 3.227*** | 1.821*** | 2.318*** | 4.920*** | 4.503*** | 4.405*** |
| | (4.37) | (3.21) | (4.91) | (4.72) | (4.53) | (5.98) |
| Controls | Yes | Yes | Yes | Yes | Yes | Yes |
| Adj. $R^2$ | 0.186 | 0.148 | 0.159 | 0.102 | 0.099 | 0.088 |
| *N* | 3,462 | 3,240 | 6,702 | 3,462 | 3,240 | 6,702 |

*(continued on next page)*

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TABLE 11 (continued)
Robustness: Firms On and Not On the *Fortune* 500 List

*Panel B. With CEO_RATIO*

| | Dependent Variable | | | | | |
|---|---|---|---|---|---|---|
| | NUM_BIDS | | | ln(TARGET_TRANS_VALUE) | | |
| | Sample: RANK | | | | | |
| | 250–500 | 501–750 | 250–750 | 250–500 | 501–750 | 250–750 |
| Variables | 7 | 8 | 9 | 10 | 11 | 12 |
| ln(1 + DISTANCE_500) | −0.710*** | −0.353*** | −0.512*** | −1.306*** | −0.851*** | −1.032*** |
| | (−4.47) | (−2.91) | (−5.06) | (−5.19) | (−3.98) | (−6.47) |
| IN_DUMMY | | | 0.214 | | | 0.294 |
| | | | (1.23) | | | (0.85) |
| IN_DUMMY × ln(1 + DISTANCE_500) | | | −0.040 | | | −0.080 |
| | | | (−0.94) | | | (−0.98) |
| Intercept | 5.032*** | 2.845*** | 3.866*** | 9.025*** | 5.527*** | 7.183*** |
| | (4.69) | (3.55) | (5.23) | (5.63) | (3.90) | (6.37) |
| Controls | Yes | Yes | Yes | Yes | Yes | Yes |
| Adj. $R^2$ | 0.210 | 0.158 | 0.177 | 0.117 | 0.102 | 0.096 |
| *N* | 2,452 | 2,116 | 4,568 | 2,452 | 2,116 | 4,568 |

In Panel B of Table 11, we repeat the analysis for firms in the ExecuComp subsample and find similar results when we include CEO compensation as a control variable. Taken as a whole, these results suggest that the observed effect is not driven solely by firms inside or outside; rather, incentives appear to exist on either side of the *Fortune* 500 threshold.

## C. The *Fortune* 1000

Our primary hypothesis is that the prestige of being included in the *Fortune* 500 creates incentives that affect corporate decision making. However, *Fortune* also publishes a list of the top 1,000 firms by revenues, the *Fortune* 1000. Although still considered prestigious, the *Fortune* 1000 is not as widely mentioned in the business press as the *Fortune* 500. Because our main hypothesis is that prestige influences corporate decision making, we expect the *Fortune* 1000 listing to create similar but weaker incentives to increase revenues. We create the variable DISTANCE_1000 = |RANK − 1000| and estimate the models from Tables 2 and 4 (bidding activity) using DISTANCE_1000 as the distance measure.

Table 12 reports the results. Coefficients for the control variables are omitted for brevity but are included in all specifications. For comparison purposes, we also re-report the coefficients on DISTANCE_500 from the original regressions in Tables 2 and 4. The coefficient on DISTANCE_1000 is negative and significant in all specifications. As predicted, it is significantly smaller than the coefficient on DISTANCE_500. For example, a Wald test indicates that the coefficients on DISTANCE_500 (−0.356) and DISTANCE_1000 (−0.175) from column 1 are significantly different at the 5% level ($\chi^2 = 6.27$). We find similar results when we use ln(TARGET_TRANSACTION_COST) as the dependent variable and when we control for CEO compensation for the subsample of ExecuComp firms in Panel B. This is consistent with the hypothesis that the incentives created by the *Fortune* 1000 are similar to, but significantly weaker than, the incentives created by the *Fortune* 500.

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TABLE 12

Robustness: Distance from 1000th Rank and Bidding Behavior

Table 12 reports the results from OLS regressions of NUM_BIDS and ln(TARGET_TRANS_VALUE). The sample consists of Compustat firm-years with available data on bidders in the period 1991–2014 between positions 250 and 750 in the *Fortune* 500 ranking. The sample for tests including CEO compensation consists of ExecuComp firms from 1993–2014. Control variables for all models are identical to those in Tables 2 and 3 but are omitted for brevity. All continuous variables with the exception of DISTANCE_500 and DISTANCE_1000 are winsorized at the 1st and 99th percentiles. Standard errors used to compute *t*-statistics (reported in parentheses) are robust and clustered by firm. *, **, and *** indicate significance at the 10%, 5%, and 1% levels, respectively. All variables are defined in the Appendix.

| | Sample: −250 to +250 Window around the 500th Rank (DISTANCE_500) and the 1,000th Rank (DISTANCE_1000) | | | |
|---|---|---|---|---|
| | Estimation | | | |
| | OLS: NUM_BIDS | | OLS: ln(TARGET_TRANS_VALUE) | |
| Variables | 1 | 2 | 3 | 4 |
| *Panel A. Without CEO_RATIO* | | | | |
| ln(1 + DISTANCE_500) | −0.356*** (−5.84) | $N$=6,702 $R^2$=0.158 | −0.671*** (−6.93) | $N$=6,702 $R^2$=0.088 |
| ln(DISTANCE_1000 + 1) | −0.175*** (−3.43) | $N$=7,001 $R^2$=0.105 | −0.442*** (−5.02) | $N$=7,001 $R^2$=0.072 |
| Wald test $\chi^2$ | 6.27** | | 3.57* | |
| *Panel B. With CEO_RATIO* | | | | |
| ln(1 + DISTANCE_500) | −0.541*** (−6.65) | $N$=4,568 $R^2$=0.176 | −0.984*** (−7.25) | $N$=4,568 $R^2$=0.096 |
| ln(DISTANCE_1000 + 1) | −0.189** (−2.46) | $N$=4,300 $R^2$=0.116 | −0.566*** (−4.26) | $N$=4,300 $R^2$=0.065 |
| Chow test $\chi^2$ | 11.38*** | | 5.55** | |

## D. Advertising Activity and the Distance from the *Fortune* 500 Cutoff

We next consider whether the *Fortune* 500 affects other revenue-related firm decisions, specifically, advertising efficiency and revenue recognition. Extant literature in marketing and operations research explores how firms invest in advertising to improve revenues (e.g., Lambin (1969), Little (1979), and Aaker and Carman (1982)). Because the *Fortune* 500 ranks firms by sales revenues, firms that are closer to the *Fortune* 500 cutoff might have the incentive to spend more on advertising to boost sales revenue to join or remain on the *Fortune* 500 list, even at the expense of cash flows. We test this hypothesis in Table 13. The first column reports the coefficients from the regression of our measure of advertising efficiency, ADVERTISING/NET_INCOME, on DISTANCE_500 and the control variables. The coefficient on DISTANCE_500 is negative and marginally significant at the 10% level. In the second column, we add CEO_RATIO and continue to find a significantly negative effect at the 5% level. The effect of the distance on advertising is economically significant: The coefficients imply that the percentage of net income spent on advertising by an average firm that is 5 spots away from the cutoff is 3.77% higher than that of an average firm that is 20 spots away from the cutoff. Overall, the results in models 1 and 2 of Table 13 suggest that firms that are close to the cutoff position in the *Fortune* 500 have higher levels of advertising expenses relative to net income, or they have lower levels of advertising efficiency. These results are consistent with the prediction that firms spend more on advertising in an attempt to increase revenues in an effort to join the *Fortune* 500.

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TABLE 13

Distance from 500th Rank, Advertising, and REVENUE_RESTATEMENT

Table 13 reports the results of OLS regressions on ADVERTISING/NET_INCOME and probit regressions on REVENUE_RESTATEMENT. The advertising sample consists of firm-years with available data in the period 1991–2014 (1993–2014 for the ExecuComp subsample). The year 1994 is excluded. The restatement sample consists of firm-years from 1997–2005. All regressions include year and industry (2-digit SIC code) dummies. All variables with the exception of DISTANCE_500 are winsorized at the 1st and 99th percentiles. Standard errors used to compute *t*-statistics (reported in parentheses) are robust and clustered by firm. *, **, and *** indicate significance at the 10%, 5%, and 1% levels, respectively. All variables are defined in the Appendix.

| | Sample | | | |
|---|---|---|---|---|
| | RANK 250–750 | | Whole Sample | |
| | Dependent Variable | | | |
| | ADVERTISING/NET_INCOME | | REVENUE_RESTATEMENT | |
| Variables | 1 | 2 | 3 | 4 |
| ln(1 + DISTANCE_500) | −0.028* | −0.037** | −0.137*** | −0.111* |
| | (−1.89) | (−2.31) | (−6.02) | (−1.81) |
| SIZE_RESIDUALS | −0.034 | −0.035 | 0.135*** | 0.102** |
| | (−0.87) | (−0.80) | (7.28) | (2.30) |
| SALES_GROWTH | −0.068** | −0.100** | 0.012 | −0.008 |
| | (−1.98) | (−2.09) | (0.51) | (−0.10) |
| LEVERAGE | 0.204 | 0.100 | −0.052 | 0.261 |
| | (1.14) | (0.43) | (−0.46) | (0.89) |
| Z_SCORE | −0.003 | −0.007 | −0.002 | −0.005 |
| | (−0.46) | (−0.99) | (−1.13) | (−1.18) |
| ROA | −0.574** | −0.473 | 0.147** | −0.022 |
| | (−2.15) | (−1.59) | (2.01) | (−0.09) |
| ROA_VOL | −0.242 | −0.102 | 0.051 | 0.030 |
| | (−0.46) | (−0.18) | (1.28) | (0.26) |
| TOBINS_Q | −0.015 | −0.002 | 0.000 | 0.002 |
| | (−0.57) | (−0.10) | (0.03) | (0.11) |
| RD_INTENSITY | −0.046 | 0.036 | 0.198 | 0.087 |
| | (−0.07) | (0.04) | (1.12) | (0.14) |
| COLLATERAL_VALUE | −0.344** | −0.291 | −0.727*** | −1.048*** |
| | (−2.02) | (−1.51) | (−4.96) | (−3.58) |
| CEO_RATIO | | 0.053 | | −0.011 |
| | | (0.48) | | (−0.07) |
| SP_500 | 0.006 | −0.056 | −0.077 | 0.004 |
| | (0.10) | (−0.75) | (−0.89) | (0.04) |
| Intercept | 0.426*** | 0.079 | −4.682*** | −4.596*** |
| | (3.00) | (0.37) | (−16.97) | (−8.78) |
| Adj. $R^2$ | 0.166 | 0.177 | | |
| *N* | 5,414 | 3,830 | 35,854 | 8,509 |

## E. Misreported Revenues and the Distance from the *Fortune* 500 Cutoff

Finally, we examine the possibility that managers misreport revenues in an attempt to join the *Fortune* 500. The incentives to misreport revenues should be stronger for firms that are closer to the 500th spot on the listing. We test this hypothesis in the last 2 columns of Table 13, where we report the coefficients from a probit estimation of REVENUE_RESTATEMENT on distance and control variables on the whole sample and on the ExecuComp subsample, respectively. We use the whole Compustat sample in these tests because there are very few revenue restatements in the 250–750 sample. In the third column of Table 13, the coefficient on DISTANCE_500 is negative (−0.137) and statistically significant at the 1% level. Therefore, consistent with the prediction, firms closer to the 500th position in the *Fortune* 500 listing are more likely to restate earnings for revenue-recognition reasons. Burns and Kedia (2006) find that CEO equity

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compensation significantly affects the probability of misreporting. We therefore reestimate the probit model of REVENUE_RESTATEMENT and include the variable CEO_RATIO in model 3. The coefficients from the last column of Table 13 indicate that the negative relation between DISTANCE_500 and the probability of a restatement continues to hold.

## VI. Conclusion

Our study adds to the growing body of literature on the effect of nonpecuniary incentives on corporate decision making. We employ a novel approach to examine the effects of one such incentive, prestige. Evidence in the press suggests that corporate executives view inclusion in the *Fortune* 500 list as prestigious. Thus, if prestige affects the manager's decision making, firms that are close to the *Fortune* 500 cutoff have the incentive to engage in activities that can increase sales revenue, and thus the probability of inclusion in the index, even if the activity does not necessarily increase shareholder wealth.

Our contribution to the existing literature is twofold. First, we provide evidence that a nonmonetary incentive, prestige, affects corporate decisions, specifically, the firm's M&A activity, advertising policies, and accounting treatment of revenue. Further, our methodology allows us to alleviate endogeneity concerns. Unlike other managerial incentives investigated in the extant literature, the prestige of being the CEO of a *Fortune* 500 firm is not endogenously determined within the firm; rather, it is exogenously created as a side effect by the *Fortune* rankings. Additionally, a methodological change by *Fortune* creates a natural experiment that allows us to better identify a causal relation.

We find that firms that are closer to the *Fortune* 500 threshold are more likely to be bidders, make more bids, and bid for larger targets. In our natural experiment, we document these relations for industrial firms across the entire sample period. For service firms, however, the relation is statistically significant only after 1994 when they become eligible for *Fortune*'s list. We also note that the effect of distance is stronger for poorly governed firms. Further, our results show that the bidder returns at the announcement of a bid are lower when the bidder is closer to the *Fortune* 500 cutoff, and the takeover premia are higher. These results suggest that firms that are just outside (or just inside) of the list engage in size-increasing bidding activities and are willing to pay higher takeover premia to join (or remain in) the *Fortune* 500. Consistent with the intuition that prestige affects corporate decisions, we find no change in CEO monetary compensation but do find evidence of an increase in postretirement board seats.

We find that firms that are close to the 500th rank tend to spend a higher percentage of their net income on advertising compared with firms that are further away from the cutoff. The negative relation between the distance from the *Fortune* 500 threshold and advertising expense supports the hypothesis that firms spend more of their income on advertising expenses, presumably to join or remain on the *Fortune* 500 list. Finally, we find that firms that are closer to the *Fortune* 500 cutoff are more likely to misreport revenues. Overall, our results are consistent with the predictions of Jensen and Meckling (1976) that nonmonetary incentives play

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a role in managerial decision making and that such incentives are not necessarily value-creating for shareholders.

## Appendix. Variable Construction

### 1. Key Independent Variables

RANK: Estimate of *Fortune*'s rank by ranking all Compustat firms by sales revenues.

DISTANCE_500: Absolute value of the distance from the 500th spot in the *Fortune* rankings.

DISTANCE_1000: Absolute value of the distance from the 1,000th spot in the *Fortune* rankings.

IN_DUMMY: Dummy variable equal to 1 if the firm has a ranking between 250 and 500.

REV_DISTANCE: Absolute value of the difference between the firm's total revenues and the revenues of the firm in the 500th position in the *Fortune* rankings.

REV_DISTANCE/REV: REV_DISTANCE scaled by the firm's own revenues.

### 2. Dependent Variables

NUM_BIDS: Number of majority bids a firm makes in a given year (excluding multiple bids for the same target).

BIDDER: Dummy variable equal to 1 if NUM_BIDS $> 0$.

TARGET_TRANS_VALUE: Target transaction value from SDC (in millions).

CAR: Cumulative abnormal return for the $(-1, +1)$, $(-2, +2)$, or $(-1, +2)$ windows. Abnormal returns are estimated with the market model (value-weighted index), and the estimation period is $(-382, -127)$.

PREMIUM: Premium relative to the stock price 4 months before bid announcement, computed as (bid price − target price)/target price.

ADVERTISING/NET_INCOME: Measure of advertising efficiency (0 if missing, deleted if NI $< 0$). (Compustat variables: XAD/NI.)

REVENUE_RESTATEMENT: Dummy variable equal to 1 if firm restates earnings for revenue recognition.

### 3. Firm Characteristics

SIZE: Total assets (in millions). (Compustat variable: AT.)

SALES_GROWTH: Sales growth rate. (Compustat variables: $(\text{SALE}_t - \text{SALE}_{t-1})/\text{SALE}_{t-1}$.)

LEVERAGE: Firm market leverage. (Compustat variables: $(\text{DLTT} + \text{DLC})/(\text{AT} - \text{CEQ} + \text{CSHO} \times \text{PRCC_F})$.)

CASH_HOLDING: Measure of firm's cash stock. (Compustat variables: CHE/AT.)

PE_RATIO: Ratio of stock price to EPS. (Compustat variables: PRCC_F/EPSPX.)

NONCASH_WC: Noncash working capital. (Compustat variables: $(\text{ACT} - \text{CHE} - \text{LCT})/\text{AT}$.)

TOBINS_Q: Ratio of firm's market value of assets to book value of assets. (Compustat variables: $(\text{DLTT} + \text{DLC} + \text{CSHO} \times \text{PRCC_F})/\text{AT}$.)

ROA: Firm's operating income to assets. (Compustat variables: OIBDP/AT.)

ROA_VOL: Standard deviation of ROA over previous 6 years.

SP_500: Dummy equal to 1 for firms that belong to the S&P 500 list in a given year, and 0 otherwise.

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E_INDEX: Entrenchment index from Bebchuk et al. (2009).

RD_INTENSITY: R&D expenses scaled by total assets (0 if missing). (Compustat variables: XRD/AT.)

COLLATERAL_VALUE: Ratio of plant, property, and equipment to total assets. (Compustat variables: PPENT/AT.)

Z_SCORE: Altman (1968) measure of bankruptcy risk. (Compustat variables: 1.2(WCAP/AT) + 1.4(RE/AT) + 3.3(OIADP/AT) + 0.6(CSHO × PRCC_F/LT) + 0.999(SALE/AT).)

### 4. Bid Characteristics

PCT_EQUITY: % of transaction financed with equity. *Source:* SDC.

PRIV_TARGET: Dummy equal to 1 if the target is private. *Source:* SDC.

RELATIVE_SIZE: Relative size of the transaction. This is calculated as the transaction value (SDC) divided by the equity market capitalization of the acquirer at the end of the fiscal year prior to the acquisition announcement (Compustat), where the transaction value is the total value of consideration paid by the acquirer, excluding fees and expenses. *Source:* SDC and Compustat.

HOSTILE: Dummy equal to 1 for hostile bids. *Source:* SDC.

COMPETING_BIDDER: Dummy equal to 1 if there are competing bids. *Source:* SDC.

TENDER: Dummy equal to 1 for tender offers. *Source:* SDC.

TOEHOLD: Dummy equal to 1 if bidder owns more than 5% of the target shares prior to the takeover announcement. *Source:* SDC.

### 5. CEO Compensation and Characteristics

CEO_RATIO: Ratio of dollar change in the value of a CEO's stock and option holdings for a 1% increase in stock price divided by total compensation (Bergstresser and Philippon (2006)). (CRSP and ExecuComp variables: Price × 0.01 × (number of stocks + number of options)]/[price × 0.01 × (number of stocks + number of options) + SALARY + BONUS.)

TOTAL_COMP: CEO's total compensation. (ExecuComp variables: TDC1(before 2006) = SALARY + BONUS + OTHANN + ALLOTHTOT + value of stock grants + Black–Scholes value of option grants + LTIP. TDC1(after 2005) = SALARY + BONUS + NONEQ_INCENT + OTHCOMP + value of stock grants + Black–Scholes value of option grants + DEFER_RPT_AS_COMP_TOT.)

EXCESS_COMP: Residual from regression on TOTAL_COMP on controls from Core, Guay, and Larcker (2008).

AGE, TENURE, BOARD_CHAIR: The CEO's age, years of tenure, and whether he or she is also chairman of the board, respectively, all as of the retirement year. *Source:* ExecuComp.

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