

Afraid of your Workers? CEOs, strikes and financing decisions[☆]

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Abstract

We analyze how strike threats affect firms' financing decisions. For identification, we focus on CEOs who experience a strike in *another* firm in which they serve as director. A matching approach controls for the potential endogeneity of outside directorships. Theoretically, CEOs may either increase leverage and decrease cash to improve the bargaining position with labor or apply more conservative financial policies to enhance their financial flexibility. We find evidence for both perspectives. If CEOs experience an actual strike, they subsequently reduce leverage and increase cash in their firms. By contrast, CEOs engage in the opposite behavior after observing labor negotiations in which a strike could be averted.

Keywords: Strikes, CEOs, capital structure, collective bargaining, financial flexibility, behavioral corporate finance

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1. Introduction

Despite a growing literature on how labor affects finance (and vice versa), identification is still challenging in this field. The main problem is that the influence of labor is, in most settings, endogenously determined. In this paper, we analyze how an exogenous increase in the perceived probability for a strike affects firms' financing decisions. In particular, we look at how CEOs react to the experience of a strike in *another* firm in which they serve as director.

Psychologically, the actual experience of a strike as a director, which comes at huge costs for a firm, may call the attention of the CEO to the possibility of a strike in her company. Strikes often involve thousands of employees, last for months, and come at huge costs for any company. A recent example for a major strike is the 44-day work stoppage by about 36,000 employees in the landline division of Verizon Communications. For the second quarter of 2016, Verizon reported \$400m incremental costs due to strike activities and a drop in revenue by \$200m compared to 2015. This shows that strikes are alarming events that draw the attention of management and directors.¹ As a consequence, the perceived probability for a strike increases for a CEO who observes such an event, although the objective probability remains unchanged.² Thus, a strike experience is an exogenous event for the CEO's firm, enabling us to draw causal inferences on how strike threats affect financing decisions.

Theoretically, two reactions are possible. First, CEOs may increase financial leverage and lower their cash holdings to improve their bargaining position with labor. Prior literature in the context of labor provides evidence for this perspective (e.g., [Bronars and Deere, 1991](#); [Perotti and Spier, 1993](#); [Klasa, Maxwell and Ortiz-Molina, 2009](#); [Matsa, 2010](#); [Benmelech, Bergman and Enriquez, 2012](#); [Agrawal and Matsa, 2013](#)). Second, CEOs may reduce financial leverage to improve their financial flexibility. In this sense, a higher unused debt capacity enables them to react to operational needs in case of a costly strike event ([Denis and McKeon, 2012](#)).

¹The [The Wall Street Journal \(2000\)](#) reports a controversial discussion in the boardroom of the Boeing Co. about a 40-day labor strike in 2000. Following the release of plans to cut medical-cost sharing provisions, 23,349 engineers went on strike in February and parts of March. Some directors have expressed doubts about the necessity of the strike and worried about long-term labor relations.

²In psychology, it is well documented that past experiences play an important role for decision making. However, not all experiences will have the same impact on future decision making. First, negative experiences may have a bigger effect than positive ones due to loss aversion ([Kahneman and Tversky, 1979](#)). Second, the perceived likelihood for a rare event may be overestimated if it is easy for someone to think of an example for such an event due to availability heuristic ([Tversky and Kahneman, 1973](#)). This is consistent with models of decision-making under limited attention (e.g., [Bordalo, Gennaioli and Shleifer, 2012](#)). CEOs are highly time-constrained decision-makers who may pay more attention to recent, salient risks (see [DellaVigna, 2009](#), for a survey of the literature).

Although this perspective received less attention in the labor context³, empirical evidence generally supports the idea that operating risk has an impact on firms' debt-equity choice (e.g., [Ferri and Jones, 1979](#); [Mauer and Triantis, 1994](#); [MacKay, 2003](#); [Reinartz and Schmid, 2016](#)).

Our data set is based on S&P 1500 firms between 1999 and 2012. Information on strikes is obtained from the Bureau of Labor Statistics (BLS), the Federal Mediation and Conciliation Service (FMCS), and the National Mediation Board (NMB). We focus on large strikes with more than 100 striking employees. For data on CEOs and their directorships, we use the Boardex and Execucomp databases. With this information, we build up a network based on CEOs' outside directorships. A CEO experiences a strike at another firm if she sits on the board of a strike-hit firm during the strike period. To keep our setting clean, a CEO has to be in duty already before the strike experience and remain in duty for at least 360 days following the experience. Moreover, there must not occur a strike at the CEO's firm in the year of the experience and in the following year.⁴ Overall, we identify 97 CEO strike experiences, which are based on a total of 72 different strikes. To account for the potential endogeneity of CEOs' outside directorships, we conduct a matching approach. The basic idea follows [Malmendier and Tate \(2009\)](#), i.e., we model the propensity to experience a strike as outside director. In our setting, this is largely determined by a CEO's number of outside directors which we observe.

Based on panel regressions and the matching approach, we find that CEOs reduce financial leverage and increase cash in their companies after experiencing a strike at another company. This effect is economically meaningful: on average, the strike experience leads to an aggregated effect in net leverage of about four percentage points percentage points (or about ten percent in relative terms). We also analyze potential threats to our identification strategy. One possible concern may be that the strike at the director firm affects the CEO firm via other channels than the CEO's experience. To mitigate such concerns, we exclude firms in the same industry, same region, or with supplier/customer relations in robustness tests. We also conduct placebo tests in which we analyze the pre-experience time period and the effect of CEOs who step down shortly after their strike experience. For both placebo tests we find no significant results. Overall, these findings provide strong evidence that CEOs react to a strike experience with more financial conservatism.

³Two notable exceptions are [Kuzmina \(2013\)](#) who documents that firms increase leverage in response to more flexible labor contracts and [Schmalz \(2015\)](#) who finds that financially unconstrained firms increase their financial flexibility after unionization.

⁴A strike event at a firm may have a direct impact on its capital structure, as for instance documented by [Myers and Saretto \(2016\)](#). We exclude these events because we are interested in the effect of an exogenous increase of the perceived strike probability.

As next step, we extend our analysis and analyze how CEOs react to averted strike events. These are tough negotiations with labor for which a strike could finally be averted. These events are quite different from the strike experiences because the CEO only observed the positive negotiation outcome, and not the adverse consequences of an actual strike. In line with this reasoning, we find that CEOs actually react with an increase in financial leverage and a decrease in cash to averted strike events. Thus, experiencing such events seems to spur collective bargaining.

Our findings contribute to the literature on the interplay between labor and financing by showing that both the collective bargaining and the financial conservatism perspective play an important role. The fact that averted strikes are, in general, more common than actual strikes⁵, may explain why prior literature which did not specifically analyze strikes found mainly evidence for the collective bargaining perspective. We also contribute to the literature on how (past) experiences shape managerial decision making (e.g., [Malmendier, Tate and Yan, 2011](#); [Dittmar and Duchin, 2015](#); [Benmelech and Frydman, 2015](#); [Bernile, Bhagwat and Rau, 2016](#); [Schoar and Zuo, 2016](#)). In this context, our findings show that not only past, but also contemporary experiences of events affect CEOs' behavior.

The paper proceeds as follows. Section 2 outlines our empirical strategy. Section 3 describes the sample construction and specifies the definition of a CEO's strike experience. Section 4 shows the empirical results for the relationship between a CEO's strike experience and financing decisions. Further, it presents a battery of robustness tests. Finally, Section 5 concludes.

2. Empirical strategy

We examine how CEOs react to the contemporaneous experience of a strike in another company in which they serve as director. This setting benefits identification in multiple ways: (i) The CEO experiences the strike after she has already been appointed as CEO. Hence, this mitigates the concern of an endogenous selection of the CEO, e.g., due to the strike experience. (ii) The CEO makes the strike experience as director at another firm. Therefore, it is unlikely that the strike affects the CEO's firm via other channels as the CEO herself. This is particularly the case if we exclude events where the CEO firm and the strike-hit firm operate in same industry, are located in same state and have customer/supplier relations in a robustness test. (iii) Given that, it is most probably the case that labor activities at the CEO's firm remain unaffected by a labor strike at another firm. (iv) Moreover,

⁵In our whole sample period, only 192 strikes with more than 100 employees occurred at S&P 1500 firms.

it is likely that employees at the CEO's firm do not even realize a CEO's strike experience. Altogether, this setting allows us to isolate one effect: An increase in the CEO's perceived probability of a strike at her firm. The objective probability of a strike remains unchanged since the strike experience alters neither labor activities at the CEO's firm nor unions' attitude towards the CEO. It solely calls the CEO's attention to the possibility of a strike in her company.

However, a CEO's director positions are still endogenous in this setting. Firm and CEO characteristics might be related to both a firm's decision to allow its CEO to serve as outside director and the other firm's decision to appoint the CEO to its board. [Booth and Deli \(1996\)](#) provide evidence on firm and CEO characteristics affecting CEO's number of outside directorships. Further, [Fahlenbrach, Low and Stulz \(2010\)](#) indicate that CEOs are likely to join the boards of firms that are quite similar in size and age. Thus, if we do not control for a CEO's number of directorships and remaining differences in firm and CEO characteristics between firms whose CEO experiences a strike (treated firms) and non-treated firms, we would mix up the effect of CEO strike experiences with a selection effect.

To isolate the effect of CEO strike experiences, our empirical strategy is a nearest-neighbor matching estimator based on propensity score, following [Rosenbaum and Rubin \(1983\)](#) and [Abadie and Imbens \(2011, 2016\)](#). The matching approach enables us to compare the reaction of CEOs who actually experience a strike with CEOs who had a similar probability of such an experience. We construct the matched control group in two steps. First, we use a probit regression to predict CEOs' propensity to experience a strike as director at another firm. Our propensity score model includes a CEO's number of outside directorships as well as observable firm and CEO characteristics that might be related to a CEO's type of director positions and a CEO's new appointment as director. All variables are lagged by one period. Further, we include year as well as industry fixed effects. In the second step, we match to each firm whose CEO experiences a strike the three non-treated firms with the closest propensity scores. We use the propensity score to overcome the curse of dimensionality that comes along with multiple matching criteria. The matching is conducted with replacement option, allowing for non-treated firms to be used as match more than once. Since we do not observe the criteria defining a CEO's number and type of director positions, remaining differences between firms whose CEO experiences a strike and the matched control group might bias our results. Therefore, we test differences between the two groups along a range of characteristics that are not included in our propensity score model.

Then, the matching estimator estimates the change of leverage and cash holdings from one year before the strike experience to one year thereafter between the firms whose CEO experiences a strike and the respective matched control firms.

This difference in differences estimator should take care of remaining time-invariant differences between the two groups. We also apply the procedure of [Abadie and Imbens \(2011, 2016\)](#) for bias-correction and variance-adjustment. The bias-correction by [Abadie and Imbens \(2011\)](#) estimates an OLS regression to adjust the estimator for bias resulting from remaining differences between treated firms and matched control firms. The variance-adjustment by [Abadie and Imbens \(2016\)](#) takes into account that the propensity score cannot be observed and has to be estimated in the first place. For the estimation of an average treatment effect, as in our setting, the variance-adjustment can be positive or negative. Hence, ignoring variance-adjustment may lead to less or more significant estimates.

3. Data

3.1. Sample construction

Our data set contains information on the S&P 1500 firms between 1998 and 2012. Since we require characteristics lagged by one period for the propensity score model and our outcome variables measure the change from one year before the experience to one year thereafter, we examine CEOs' strike experiences in the 1999-2011 period. For identification of CEOs' director positions, we rely on information from the Boardex database which starts in 1999. Therefore, we choose 1999 as starting point.

The final data set construction comprises two steps. First, we exclude firms from the financial services industry (SIC 6000-6999). Second, we use Boardex and Execucomp to identify the CEO in every firm-year. We exclude all firm-years with missing information on the CEO. These steps lead to a final data set of 18,140 firm-year observations.

3.2. Strikes and CEOs experiencing a strike

Information on labor strikes is obtained from the Bureau of Labor Statistics (BLS), the Federal Mediation and Conciliation Service (FMCS) and the National Mediation Board (NMB). The BLS provides data on major labor strikes involving 1,000 or more workers. The FMCS provides information on labor strikes of any size. The NMB provides information on labor strikes in railroad and airline industries.

In the first step, we merge the strike data from BLS, FMCS and NMB. For strikes to be included, we require minimum information on the employer name, the number of idling workers, the state, the begin date and the end date. Further, we drop smaller strikes with less than 100 striking employees.⁶ In the second step, we

⁶This threshold is consistent with the minimum number of 100 employees participating in polls that is introduced by [Lee and Mas \(2012\)](#) to the literature on union elections.

manually match the strike events by the employer name to the S&P 1500 firms. We validate our matching by press articles, 10-K filings and internet search. Following this procedure, we end up with 192 strike events that occur at S&P 1500 firms in the 1999-2011 period.

We define CEO strike experiences as follows: A CEO experiences a strike at another firm if she sits on the board of the strike-hit firm during the strike period. By this definition, we assume that a large strike with greater or equal 100 workers involved is discussed in the firm’s boardroom or is at least reported to the board members. We consider this assumption to be reasonable given the alarming character of strike events. Further, we impose three additional restrictions: (i) In our propensity score model, we use CEO characteristics lagged by one period. Therefore, we require the CEO to be already in duty in the fiscal year before the strike experience. (ii) The CEO has to remain in her position for at least 360 days following the strike experience to ensure a meaningful amount of time to adjust her firm’s leverage and cash. (iii) There must not be a strike at the CEO’s firm in the year of the strike experience and in the following year. This restriction shall strengthen the assumption that labor relations remain unchanged in the CEO’s firm and that we are solely measuring the effect due to an increase of the strike probability perceived by the CEO.

Figure 1 further illustrates our procedure to identify CEO strike experiences by a network graph for the year 2001. In 2001, there are 1,228 firms in our sample of which 386 firms have a CEO with at least one outside directorship at another S&P 1500 firm. In that year, 23 firms are hit by strikes that are experienced by 7 CEOs serving on the boards of the strike-hit firms. One of them is the CEO of Norfolk Southern Corp, David R. Goode, who experiences a strike at Delta Airlines. During the strike 1,300 pilots of Comair, a regional carrier wholly owned by Delta, grounded the fleet for 89 days. Before the strike, Comair was carrying 25,000 passengers a day. The pilots were seeking a large pay increase and a company-financed retirement package. Delta estimated a daily loss of about \$2m due to the strike activities.

— Figure 1 about here —

In total, 97 CEOs make a strike experience during the 1999-2011 period. They experience 72 different labor strikes. Table 1 provides summary statistics on the strikes experienced by CEOs. On average, 3,310 workers are striking. The strike duration is 75 days in the mean and 33 days in the median. Firms suffer an average loss of 186,132 man-days (duration * # of workers idling).

— Table 1 about here —

3.3. Averted strikes and CEOs experiencing an averted strike

The ideal averted strike event would be a company with tough labor negotiations that are just before an escalation into a strike, but the parties finally reach an agreement and a strike could narrowly be averted. Although averted strikes are, in general, more common than actual strike, it is challenging to identify clear events. For the identification of potential events, we start with 6,400 labor-related announcements in the 2001-2011 period from the Capital IQ database.⁷ By ticker and company name, we match 3,800 announcements to the S&P 1500 firms. Then, we study the headlines and detailed descriptions of these announcements. We consider three types of events: (i) protest actions by unions (e.g., rallies and picketing at the shareholder meeting) (ii) labor contract offers that are overwhelmingly rejected by the union members, and (iii) imminent strike threats due to a union voting authorizing a strike or due to an announced strike deadline. Usually, there is a larger number of announcements covering one event. For potential events, we research the number of affected employees from the text of the announcements or the Factiva database. Analogous to the strikes, the number of employees must be at minimum 100. Moreover, we require for an event to be an averted strike that there does not occur a strike in the fiscal year of the event and in the year thereafter. This procedure leads to 131 averted strikes at the S&P 1500 firms in the 2001-2011 period.

To identify CEOs experiencing an averted strike, we follow the event specification of the strike events that is explained in Section 3.2. On top, we impose the restriction that a CEO may not experience an actual strike in the period from one year before to one year after the averted strike. The reason behind is that an actual strike should be the more severe and therefore the more salient experience. In total, 43 CEOs experience an averted strike as director at another S&P 1500 firm.

3.4. Main variables

Data for the construction of our outcome and control variables comes from Compustat, Execucomp and Boardex. In our empirical design, the outcome variables measure the change during one year before the experience to one year thereafter. We are interested in a CEO's choice of leverage and cash holdings following the experience of a strike. LEVERAGE is defined as total debt ($d1c + d1tt$) divided by total debt plus book value of common equity (ceq). CASH HOLDINGS are cash plus short-term investments (che) deflated by total assets (at). In order to quantify the aggregated shift of leverage and cash, our main variable is NET LEVERAGE. It is defined as total debt minus cash equivalents (che) divided by total debt and book value of common equity.

⁷The information in Capital IQ traces back to 2001. That is why we choose 2001 as start year.

In our propensity score model, we use firm and CEO controls lagged by one period. Here, the key variable is a CEO’s number of outside directorships at other S&P 1500 firms (DIRPOS). The detailed definitions and sources of all variables are stated in [Appendix A](#).

4. Results

4.1. Descriptive statistics and propensity score matching

Descriptive statistics for firms with the CEO experiencing a strike and the full set of not-treated firms can be found in [Table 2](#). Firms whose CEO experiences a strike differ from firms whose CEOs do not experience a strike along most firm and CEO characteristics. They are larger, have a higher leverage and more interlocking director with other S&P 1500 firms. Further, they operate in higher unionized industries and have more employees. CEOs who experience a strike at another firm possess more director positions, a shorter tenure and are more likely to hold an MBA degree.

— [Table 2](#) about here —

These observable differences reflect the endogeneity issue discussed in full length in [Section 2](#). In order to isolate the effect of strike experiences on a CEO’s financing decisions, we apply the nearest-neighbor matching based on propensity score. [Table 3](#) shows the step by step development of our propensity score model using probit regressions. Our baseline model incorporates a CEO’s number of directorships which addresses the main concern of endogeneity in our setting as well as year and industry fixed effects. Unsurprisingly, CEOs with a larger number of director positions have a higher likelihood to experience a strike as director at one of the firms. Based on remaining differences in firm characteristics, we add controls for firm size and profitability in Model II. CEOs of larger and more profitable firms are more likely to experience a strike on another board. This is consistent with the evidence by [Fahlenbrach, Low and Stulz \(2010\)](#) that CEOs are more likely to join boards of large established firms and of firms that are quite similar in terms of size. In our final model, we include tenure, age and gender of the CEO as well as an MBA dummy to control for remaining differences in CEO characteristics.

— [Table 3](#) about here —

Next, we use the estimated propensity scores from the probit regression to construct a matched control group. For each firm whose CEO experiences a strike, we identify the three non-treated firms with the closest propensity score. Then, we

test for remaining differences between the treated firms and the matched control group. Table 2 displays also the descriptive statistics for the matched control group. Matching on the propensity score takes care of all differences along firm and CEO characteristics.

4.2. CEO strike experiences and financing

Before we investigate the relationship between a CEO’s strike experience and her financing decisions with the nearest-neighbor matching on the propensity score, we provide first results using the well-established regression framework and graphical evaluation. Table 4 presents the outcomes of pooled OLS regressions. The dependent variables are leverage, cash holdings and net leverage. The variables are measured as the change over a two-year period, since we are interested in the change from one year before the strike experience [-1] to one year thereafter [+1]. To mitigate the selection effect, we restrict the sample to firms whose CEOs have at least one outside directorship during the two-year period. The variable of interest is STRIKE EXP which is a dummy that equals one if a firm’s CEO experiences a strike as outside director. First, we run the regressions including only the strike experience dummy as well as industry and year fixed-effects. In the next step, we include also firm-level controls.⁸ We find first evidence that firms whose CEO experiences a strike reduce leverage and increase cash.

— Table 4 about here —

Next, we present a graphical evaluation. In Figure 2, we display the development of the mean leverage, cash holdings and net leverage from three years before the experience to two years thereafter for firms whose CEO experiences a strike and the matched control firms. We norm the levels to one in three years before the strike experience. Before the strike experience, we observe a similar development. From the year of the experience on, the development of the two groups deviates. Whereas, firms whose CEO experiences a strike decrease leverage substantially in the year of the experience and the year after, matched control firms show a stable leverage. For cash holdings, firms whose CEO experiences a strike increase considerably their cash position, while matched control firms keep their cash holdings constant. The net leverage shows the aggregated effect of leverage and cash.

— Figure 2 about here —

⁸We largely follow Frank and Goyal (2009) for leverage and Dittmar and Duchin (2015) for cash holdings.

The main analysis is presented in Table 5. It analyzes the change in leverage, cash and net leverage from one year before to one year after the strike experience. Firms whose CEO experiences a strike reduce leverage by 2.8 percentage points and increase cash by 1.3 percentage points. The combined effect on net leverage is -5.1 percentage points.⁹ In contrast, for the matched control firms, the changes over the two-year period are statistically insignificant and economically close to zero. Hence, the simple difference in differences confirms our first results that firms whose CEO experiences a strike reduce leverage and increase cash holdings.

— Table 5 about here —

The matching estimator is the Abadie/Imbens estimator including a bias-correction and variance-adjustment. The average treatment effect on the treated (ATT) is -3.1 percentage points for leverage, 0.8 percentage points for cash and -5.0 percentage points for net leverage. The estimates for leverage and net leverage are close to the simple difference in differences. Hence, the bias-correction for remaining differences between the two groups has only an impact on the estimate for cash. While, the ATT for leverage and net leverage is significant at the 1%-level, the estimate for cash is statistically insignificant.

The effects are economically meaningful: on average, a strike experience leads to a decrease in leverage of -6.8 percent and a combined effect on net leverage of -14.1 percent in relative terms over a two-year period.¹⁰ The finding of a lower leverage and the tendency towards more cash holdings following a CEO strike experience is against the intuition of collective bargaining. Rather, it is in line with the view that CEOs engage in financial conservatism following a recent strike experience and enhance financial flexibility in the form of unused debt capacity.

4.3. *Potential threats to identification*

In this section, we address potential threats to our identification strategy. We focus on net leverage as outcome variable since it aggregates both the effect on leverage and cash. Table 6 presents the outcomes of the matching estimator under exclusion of critical events. The main concern with our setting is an omitted link between the strike-hit firm and the CEO firm. In Panel A, we use our matching estimator under the exclusion of three types of critical events. These are events for which the strike-hit firm and the CEO firm operate in the same industry (4 events), the headquarters of the two firms are located in the same state (17 events), and

⁹The coefficients on leverage and cash holdings do not sum up to the coefficient on net leverage since leverage is scaled by total debt plus common equity and cash holdings by total assets.

¹⁰The relative change is calculated as the change scaled by the mean of the treated firms in the year before the strike experience.

the two firms have a supplier/customer relation (1 event). In all three cases, the matching estimator is negative and significant. The effect size ranges from -4.2 to -6.0 percentage points. Hence, neither of the three links between the strike-hit firm and the CEO firm seems to drive our results.

— Table 6 about here —

In Panel B, we address three further concerns. First, we have several CEOs who make multiple strike experiences during our sample period. Therefore, we exclude all events that are not the first strike experience by the CEO (24 events). The outcome of the matching estimator remains almost unchanged. Second, the financial conservatism of CEOs may be related to the financial crisis. Therefore, we exclude all strike experiences after 2006 (15 events). The matching estimator is still statistically significant and the effect size with -3.5 percentage points economically meaningful. Finally, we exclude all strike-hit firms from the universe of control firms and rerun our matching approach. Still, CEOs decrease their net leverage by 3.4 percentage points following a strike experience.

4.4. Placebo and robustness tests

In this section, we provide two placebo tests and show the robustness of our main results to different matching approaches and specifications. Table 7 presents the placebo tests. In Panel A, we examine the change of net leverage from three years before to one year before the strike experience using the 87 of the 97 CEO strike experiences for which we observe the necessary information. This test helps to rule out alternative explanations. E.g., unobserved differences between treated firms and matched control firms that are not taken into account by the matching procedure could be the driver behind both the CEO's strike experience and our findings. This is very likely to be the case if we observe a difference between treated firms and matched control firms also in the pre-experience period. However, both the simple difference in differences and the matching estimator are statistically insignificant. Moreover, the matching estimator is also close to zero. Hence, this validates the parallel pre-trend assumption.

— Table 7 about here —

In Panel B, we rerun our main analysis of Table 5 using strike experiences by CEOs who step down as CEO shortly after the strike experience. To ensure a meaningful amount of time to adjust a firm's financing, our event specification requires that a CEO has to remain for at least 360 days following a strike experience. In the placebo test, we use the 16 strike experiences by CEOs that do not fulfill this

restriction. If we observe similar results for these events, there is a likely another channel than the CEO via which the strike affects the CEO firms. However, the simple difference in differences estimator and the matching estimator are positive and statistically insignificant.

Next, we apply several modifications to our matching procedure. Table 8 presents the results for three matching approaches. Since the choice of the number of nearest-neighbors is to some extent arbitrary, we show the results using one, three, five and seven nearest neighbors. The dependent variable is again net leverage since it incorporates both the effect on leverage and cash. In Panel A, we follow our default approach which is a probit regression to estimate the propensity score. Instead of that, we use a logit regression in Panel B. Independent of the regression type and the number of nearest neighbors, we find that CEOs decrease their net leverage following a strike experience. The effect size ranges from -3.8 to -6.5 percentage points.

— Table 8 about here —

In Panel C, we do not aggregate the firm and CEO characteristics via propensity score. In lieu, we match directly on the multiple covariates. We use all variables that are included in our propensity score model. For industry and fiscal year, we require exact matches. The estimates range from -3.5 to -5.5 percentage points. Independent of the number of nearest neighbors, all estimates are statistically significant. Overall, our main result does not seem to depend on the matching approach and the number of nearest neighbors.

4.5. CEOs averted strike experiences and financing

In this section, we examine averted strike experiences by CEOs to isolate the effect that is directly attributable to the experience of a strike. Averted strikes are labor relations that are just before escalation into a strike. In contrast to the strike experiences, management and employees finally reach an agreement and a strike is narrowly averted. Hence, these events are quite different to actual strikes since the CEO only observes the positive negotiation outcome, and not the adverse consequences of an actual strike. Table 9 presents our main analysis using the averted strike experiences. The simple difference in difference estimator shows that firms whose CEO experiences an averted strike increase leverage and decrease cash. The matching estimator confirms these results. Compared to the matched control firms, firms whose CEO experiences an averted strike increase their leverage by 4.3 percentage points and decrease the cash by 2.0 percentage points. These results strongly support the bargaining view. Thus, it seems to be the case that the reaction by the CEO strongly depends on the outcome of the stressed labor relations. While,

in the case of a strike CEOs engage in financial conservatism, a positive negotiation outcome leads to bargaining behavior by CEOs.

— Table 9 about here —

4.6. *Plausibility*

In this section, we provide evidence for the strategic use of debt and cash following a strike and averted strike experience. There to, we split the treated firms by the median of the outcome variables in the year before the experience. Then, we compare the change from one year before the experience to one year thereafter for firms with high and low level of the respective outcome variable. Table 10 presents the results.

— Table 10 about here —

In Panel A, we look at the 97 strike experiences by CEOs. If CEOs who experience a strike engage in financial conservatism, we would expect to see a stronger reaction by CEOs of firms with high leverage and low cash holdings before the experience. This is exactly what we find. While, CEOs of firms with low net leverage reduce their net leverage moderately by 1.6 percentage points, firms with high net leverage show a substantial drop in net leverage by 8.5 percentage points following a strike experience. Even though the outcomes for leverage and cash holdings are not statistically significant, they point into the same direction.

Panel B presents the results for the 43 CEOs experiencing an averted strike. In line with the bargaining view, we expect that firms with low leverage and high cash show a stronger reaction. The outcomes support this hypothesis. The increase in leverage stems particularly from the firms with low leverage before the averted strike experience, and the decrease in cash from firms with high cash holdings. However, it has to be mentioned that with 21 (low) and 22 firms (high) the two sub-samples are getting pretty small. The plausibility test provides evidence that following a strike experience and following an averted strike experience CEOs adjusted their leverage and cash positions strategically.

5. Conclusion

In this paper, we identify CEOs who experience a strike in another firm in which they serve as director. This may increase the perceived probability of a strike at their firms, although the objective likelihood remains unchanged. We find evidence that CEOs react to such strike experiences by decreasing financial leverage and increasing cash. This is consistent with the view that they try to improve their

financial flexibility in the form of unused debt capacity. Additional tests reveal that CEOs react to averted strike events with increased leverage and reduced cash. Thus, our findings provide evidence for that both financial flexibility considerations and collective bargaining perspective are important for the interplay between labor and finance.

Identification in our setting comes from the fact that we analyze contemporaneous events in other firms. The contemporaneous nature reduces concerns about endogenous board member selection as the CEO experiences the strike after becoming CEO. As the strike does not hit the firm of the CEO, but another firm where she serves as a director eliminates concerns about any direct influence of strike propensity or labor power on our dependent variable. However, CEOs can choose to have outside directorships. To control for this endogeneity of outside directorships, we perform different matching approaches to compare CEOs who experience a strike with other CEOs who had the same probability of experiencing such an event.

These findings have important implications. First, they show that CEOs decision are not only affected by past experiences, but also by contemporary experiences made in other firms. In this sense, our results that experiences during their tenure shape their decisions may provide an explanation why managers adjust their style over time. Second, strikes do not only have an impact on the firm which experience the strike. Rather, strikes may also affect other firms via experiences of CEOs. Third, our results have implications for the labor and finance literature. Most importantly, we show that both the financial conservatism effect and the bargaining effect are important for the interplay between labor and finance. The fact that previous literature did not explicitly focus on strikes but more on (mostly successful) bargaining situations may provide an explanation why evidence for financial conservatism is scarce so far.

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Figure 1

CEO outside directorships and CEO strike experiences in 2001

This figure presents the network connections between S&P 1500 firms based on CEOs' outside directorships in the year 2001. Further, it illustrates our setting to identify a strike experience by a CEO as director at another firm. In 2001, there are 1,228 firms in our sample of which 386 firms have a CEO with at least one outside directorship at another S&P 1500 firm. In that year, 23 firms are hit by strikes that are experienced by 7 CEOs serving on the boards of these firms. E.g., the CEO of Norfolk Southern Corp, David R. Goode, experiences an 89-day strike as director on the board of Delta Airlines. Delta Airlines is hit by a strike by 1,300 pilots at Comair which was a regional carrier wholly owned by Delta. The company estimated a daily loss of about \$2m due to the strike activities. The strike at Delta Airlines occurs from the 26th of March to the 22nd of June 2001. David R. Goode serves as CEO of Norfolk Southern from 1992 to November 2005 and as director on the board of Delta from April 1999 to June 2016.

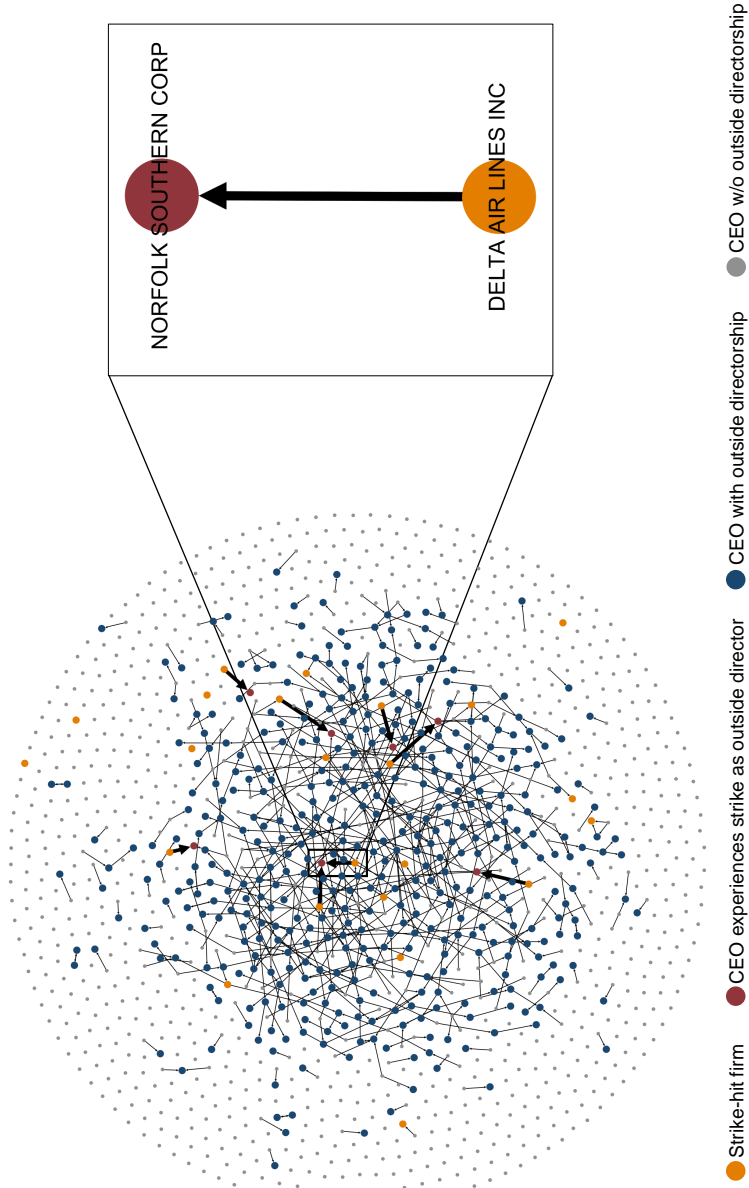


Figure 2

CEO experiences strike

This figure shows the development of LEVERAGE, CASH HOLDINGS and NET LEVERAGE from three years before the strike experience [-3] to two years thereafter [+2] for the firms whose CEO experiences a strike (red) and the matched control firms (blue). In [-3], the variables are set to one. The matched control group is constructed by the nearest neighbor matching approach identifying for each treated firm the three non-treated firms with the closest propensity scores. Matching is conducted with replacement option. The propensity score is estimated by a probit regression. A detailed description of all variables can be found in [Appendix A](#).

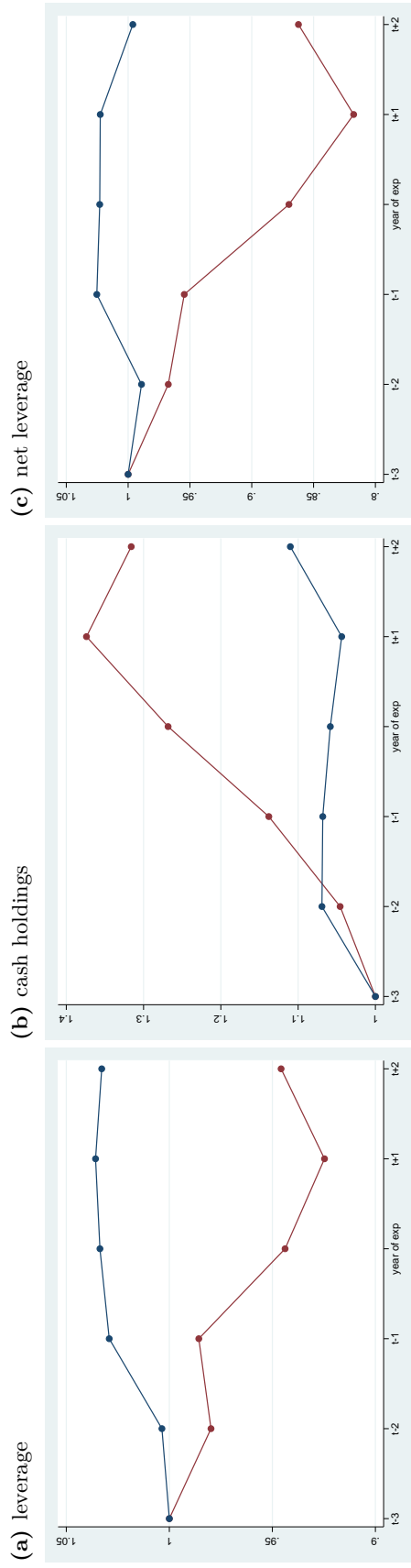


Table 1

Descriptive statistics: strikes experienced by CEOs

	N	Mean	SD	P25	P50	P75
Duration [days]	72	75	159	17	33	64
Workers idling	72	3,310	8,983	267	675	2,013
Workers idling/emp	72	0.049	0.075	0.006	0.022	0.06
Man-days	72	186,132	704,603	7,719	29,091	107,850

The table presents summary statistics of the strikes in the 1999-2011 period that are experienced by the CEOs (STRIKE EXP). A detailed description of all variables can be found in [Appendix A](#).

Table 2
Descriptive statistics: sample

	CEO experiences strike (S)			Control (C)			Matched Control (M)			Diff. in means				
	N	Mean	SD	P50	N	Mean	SD	P50	N	Mean	SD	P50	S-C	S-M
Panel A: Firm characteristics														
Size	97	8.49	1.36	8.32	13170	7.52	1.49	7.37	291	8.48	1.37	8.57	0.97***	0.01
Leverage	97	0.45	0.19	0.45	13170	0.32	0.25	0.31	291	0.44	0.24	0.45	0.14***	0.01
Market leverage	97	0.27	0.16	0.24	13160	0.20	0.19	0.15	291	0.27	0.19	0.24	0.07***	0.00
Cash holdings	97	0.06	0.08	0.04	13169	0.14	0.16	0.08	291	0.08	0.10	0.04	-0.08***	-0.02
Net leverage	97	0.35	0.23	0.39	13169	0.11	0.40	0.18	291	0.32	0.33	0.38	0.24***	0.03
Roa	97	0.15	0.06	0.14	13151	0.15	0.09	0.14	291	0.15	0.06	0.14	0.00	0.00
M/b	97	1.76	0.93	1.44	13160	2.05	1.39	1.59	291	1.78	0.82	1.51	-0.28**	-0.02
Fixed assets	97	0.33	0.21	0.29	13160	0.30	0.23	0.23	291	0.31	0.19	0.28	0.03	0.02
Cash flow	97	0.10	0.04	0.09	12323	0.10	0.06	0.10	282	0.10	0.05	0.10	0.00	0.00
Cf industry volatility	97	0.05	0.03	0.04	13170	0.07	0.05	0.05	291	0.05	0.04	0.04	-0.02***	0.00
Board size	97	9.90	3.08	10.00	13166	8.65	3.21	9.00	291	9.96	3.46	10.00	1.25***	-0.07
Interlocks	97	8.39	4.69	8.00	13170	3.97	4.10	3.00	291	7.43	5.74	7.00	4.42***	0.97
Panel B: CEO characteristics														
DirPos	97	1.62	1.10	1.00	13170	0.41	0.73	0.00	291	1.72	1.30	2.00	1.21***	-0.10
Age	97	56.08	5.31	57.00	13156	55.57	7.43	56.00	291	56.29	5.59	57.00	0.52	-0.21
Tenure	97	6.08	4.59	5.00	13140	7.93	7.75	5.00	291	6.13	5.02	5.00	-1.84***	-0.05
MBA	97	0.43	0.50	0.00	13056	0.33	0.47	0.00	291	0.45	0.50	0.00	0.10*	-0.02
Gender	97	0.07	0.26	0.00	13170	0.02	0.14	0.00	291	0.10	0.30	0.00	0.05	-0.02
Panel C: Labor-related characteristics														
Industry unionization	97	15.06	14.81	11.00	13170	10.46	10.58	6.30	291	14.36	11.35	12.20	4.60**	0.70
Ln(emp)	97	2.87	1.34	2.85	13075	1.84	1.54	1.79	289	2.85	1.27	2.75	1.03***	0.02
RTW dummy	96	0.35	0.48	0.00	12976	0.33	0.47	0.00	284	0.31	0.46	0.00	0.02	0.04

The table compares firm, CEO and labor-related characteristics of firms whose CEO experiences a strike as director at another firm (S) with the non-treated firms (C) and the matched control firms (M). For each of three groups, it presents the number of observations (N), mean, standard deviation (SD), and median (P50). The descriptive statistics cover the 1998-2010 period since characteristics lagged by one period [-1] are used to identify matched control firms (M) for the firms whose CEO experiences a strike (S). The matched control group is constructed by a nearest-neighbor matching approach identifying for each treated firm the three non-treated firms with the closest propensity scores. Matching is conducted with replacement option. The propensity score is estimated by a probit regression. The column (S-M) shows the differences in means between firms whose CEO experiences a strike and the control firms, and the column (S-M) shows the differences in means between firms whose CEO experiences a strike and the matched control firms. ***, **, and * indicate significance differences in means at the 1%, 5%, and 10%-levels, respectively. Standard errors are clustered by firms. A detailed description of all variables can be found in [Appendix A](#).

Table 3
Propensity score model

Model	I	II	III
DirPos	0.479*** (10.783)	0.420*** (8.209)	0.445*** (8.748)
Size		0.176*** (3.778)	0.176*** (3.808)
Roa		1.013* (1.713)	1.062* (1.776)
Tenure			-0.015* (-1.669)
Age			-0.011 (-1.453)
MBA			0.100 (0.912)
Gender			0.397 (1.384)
Year FE	x	x	x
Industry FE	x	x	x
N	11,622	11,604	11,452
R-squared	0.216	0.239	0.257

The dependent variable is STRIKE EXP. STRIKE EXP is a dummy which equals one if a firm's CEO experiences a strike as director at another firm. Estimation model is a pooled probit regression. All independent variables are lagged by one period. Industry fixed-effects are based on Fama/French 48 industry classifications. T-statistics based on Huber/White robust standard errors clustered by firms are presented in parentheses. ***, **, and * indicate significance at the 1%-, 5%-, and 10%-levels, respectively. A detailed description of all variables can be found in [Appendix A](#).

Table 4
CEO strike experiences: regressions over two-year periods [-1;+1]

Model	Ia	IIa	IIIa	Ib	IIb	IIIb
$\Delta[-1; +1]$	Δ leverage	Δ cash holdings	Δ net leverage	Δ leverage	Δ cash holdings	Δ net leverage
Strike experience	-0.027** (-1.986)	0.009* (1.959)	-0.042** (-2.577)	-0.023* (-1.725)	0.009** (1.994)	-0.032** (-2.034)
Δ size			0.059*** (4.246)		-0.029*** (-4.666)	0.152*** (9.030)
Δ roa			-0.415*** (-9.730)			-0.455*** (-8.372)
Δ m/b			-0.003 (-0.720)		0.007*** (3.038)	-0.012** (-2.133)
Δ fixed assets			0.143*** (2.628)			0.770*** (10.770)
Δ cash flow					0.032** (2.198)	
Δ cf industry volatility					0.451*** (3.086)	
Year FE	x	x	x	x	x	x
Industry FE	x	x	x	x	x	x
N	5,208	5,207	5,207	5,197	4,968	5,196
R-squared	0.064	0.070	0.086	0.115	0.095	0.188

The dependent variables are indicated in each column. All models are pooled OLS regressions. The dependent variables and firm controls (besides CASH FLOW) are measured as the change over a two-year period, since we are interested in the change from one year before the strike experience [-1] to one year after [+1]. CASH FLOW is measured as the sum of [0] and [+1]. STRIKE EXP is a dummy which equals one if a firm's CEO experiences a strike at another firm. The control group are all firms whose CEO possesses at least one outside directorship in [-1] or [0]. Industry fixed-effects are based on Fama/French 48 industry classifications. Huber/White robust standard errors clustered by firm are provided in parentheses. ***, **, and * indicate significance at the 1%, 5%, and 10%-levels, respectively. A detailed description of all variables can be found in [Appendix A](#).

Table 5
CEO strike experiences: nearest-neighbor matching on propensity score

	Leverage			Cash holdings			Net leverage		
	[-1]	[+1]	Difference	[-1]	[+1]	Difference	[-1]	[+1]	Difference
Strike experience	0.452	0.424	-0.028** (-2.002)	0.062	0.075	0.013*** (2.963)	0.354	0.303	-0.051*** (-3.056)
Matched control	0.444	0.447	0.003 (0.321)	0.082	0.080	-0.002 (-0.570)	0.320	0.319	-0.001 (-0.092)
Difference	0.008 (0.256)	-0.022 (-0.755)	-0.031* (-1.868)	-0.020 (-1.590)	-0.005 (-0.355)	0.015*** (2.717)	0.034 (0.832)	-0.016 (-0.408)	-0.050*** (-2.618)
Matching estimator (ATT)			-0.031*** (-2.626)			0.008 (1.444)			-0.050*** (-3.629)

The dependent variables are LEVERAGE, CASH HOLDINGS and NET LEVERAGE. The table presents an estimate of the change from one year before the strike experience [-1] to one year thereafter [+1]. The average in one year before the strike experience and in the year thereafter is calculated for the firms whose CEO experiences a strike and the matched control firms, as well as the difference in differences between the two groups of firms over the two year period. The matched control group is constructed by the nearest-neighbor matching approach identifying for each treated firm the three non-treated firms with the closest propensity scores. Matching is conducted with replacement option. The propensity score is estimated by a probit regression. The matching estimator is the Abadie/Imbens bias-corrected and variance-adjusted matching estimator for the average treatment effect on the treated. For the differences, t-statistics based on robust standard errors clustered by firms are presented in parentheses. For the matching estimator, z-statistics based on robust Abadie/Imbens standard errors are presented in parentheses. ***, **, and * indicate significance at the 1%, 5%, and 10%-levels, respectively. A detailed description of all variables can be found in [Appendix A](#).

Table 6
Potential threats to identification

Panel A: Possible links between strike-hit firm and CEO firm			
	Same industry	Same state	Supplier/customer
Matching estimator (ATT)	-0.060*** (-3.33)	-0.043*** (-2.772)	-0.042** (-2.264)
Events excluded	4	17	1
Panel B: Other threats			
	Multiple experience	Financial crisis	Strike at control firms
Matching estimator (ATT)	-0.047*** (-3.976)	-0.035* (-1.651)	-0.034** (-2.04)
Events excluded	24	15	-

The dependent variable is $\Delta_{\text{NET LEVERAGE}}$ from one year before the strike experience [-1] to one year thereafter [+1]. The table presents the outcomes of the matching estimator given the exclusion of critical events and control firms. In Panel A, we exclude events with critical links between the strike-hit firm and the CEO firm. These are events for which the strike-hit firm and the CEO-firm operate in the same Fama/French 48 industry, the headquarters are located in the same state, and the two firms have a supplier/customer relation. In Panel B, we keep only the first strike experience by CEOs who experience more than one strike during our sample period. Further, we exclude events after 2006 and control firms that are hit by a strike at any point in time. The matching estimator is the Abadie/Imbens bias-corrected and variance-adjusted nearest-neighbor matching estimator on the estimated propensity score. It estimates the average treatment effect on the firms whose CEO experiences a strike (ATT). The matched control group is constructed by the nearest-neighbor matching approach identifying for each treated firm the three non-treated firms with the closest propensity scores. Matching is conducted with replacement option. The propensity score is estimated by a probit regression. Z-statistics based on robust Abadie/Imbens standard errors are presented in parentheses. ***, **, and * indicate significance at the 1%-, 5%-, and 10%-levels, respectively. A detailed description of all variables can be found in [Appendix A](#).

Table 7
Placebo tests

Panel A: Three years vs. one year before experience			
	[-3]	[-1]	Difference
Strike experience	0.371	0.356	-0.015 (-0.754)
Matched control	0.312	0.317	0.005 (0.421)
Difference	0.059 (1.183)	0.039 (0.874)	-0.020 (-0.867)
Matching estimator (ATT)			0.003 (0.188)
Panel B: CEOs stepping down within 360 days			
	[-1]	[+1]	Difference
Strike experience	0.308	0.326	0.017 (0.340)
Matched control	0.392	0.396	0.003 (0.111)
Difference	-0.084 (-1.083)	-0.070 (-0.689)	0.014 (0.246)
Matching estimator (ATT)			0.014 (0.276)

The dependent variables is $\Delta_{\text{NET LEVERAGE}}$. The table presents the outcomes of two placebo tests. In Panel A, we examine the change from three years before [-3] to one year before the strike experience [-1]. It is based on 87 of the 97 events used in Table 5 for which we observe information in [-3] and [-1]. In Panel B, we rerun the analysis of Table 5 using 16 CEOs who make a strike experience but do not remain CEO for at least 360 days following a strike experience. The analyses follow the procedure of Table 5. For the differences, t-statistics based on robust standard errors clustered by firms are presented in parentheses. For the matching estimator, z-statistics based on robust Abadie/Imbens standard errors are presented in parentheses. ***, **, and * indicate significance at the 1%-, 5%-, and 10%-levels, respectively. A detailed description of all variables can be found in [Appendix A](#).

Table 8
Robustness tests

Panel A: Matching on propensity score from probit regression				
n	1	3	5	7
Matching estimator (ATT)	-0.065*** (-3.481)	-0.050*** (-3.629)	-0.039*** (-2.618)	-0.041*** (-2.855)
Panel B: Matching on propensity score from logit regression				
n	1	3	5	7
Matching estimator (ATT)	-0.058*** (-2.691)	-0.042*** (-2.714)	-0.038** (-2.574)	-0.039*** (-2.626)
Panel C: Matching on multiple covariates within industry/year				
n	1	3	5	7
Matching estimator (ATT)	-0.054* (-1.664)	-0.049** (-2.432)	-0.055*** (-2.896)	-0.035* (-1.909)

The dependent variable is $\Delta_{\text{NET LEVERAGE}}$ from one year before the strike experience [-1] to one year thereafter [+1]. The table presents estimates for the average treatment effect on the treated (ATT) using various matching approaches and specifications. In Panel A, we repeat the analysis of Table 5 using the one, three, five and seven firms with the closest propensity scores. In Panel B, we reproduce the analysis of Panel A using a logit regression to estimate the propensity score. In Panel C, we rerun the analysis of Panel A using a bias-corrected nearest-neighbor matching estimator on multiple matching criteria. The matching criteria are the control variables included in the propensity score model. Further, matched control firms must come from the same Fama/French 48 industry and the same year. ***, **, and * indicate significance at the 1%-, 5%-, and 10%-levels, respectively. A detailed description of all variables can be found in [Appendix A](#).

Table 9
CEO averted strike experiences: nearest-neighbor matching on propensity score

	Leverage			Cash holdings			Net leverage		
	[-1]	[+1]	Difference	[-1]	[+1]	Difference	[-1]	[+1]	Difference
Averted strike experience	0.403	0.439	0.036 (1.555)	0.120	0.106	-0.014 (-1.027)	0.210	0.269	0.058 (1.671)
Matched control	0.434	0.427	-0.007 (-0.631)	0.095	0.106	0.011** (2.077)	0.282	0.262	-0.020 (-1.357)
Difference	-0.031 (-0.721)	0.012 (0.282)	0.043* (1.688)	0.026 (0.795)	0.000 (0.003)	-0.025* (-1.717)	-0.072 (-0.854)	0.006 (0.086)	0.078** (2.088)
Matching estimator (ATT)			0.043* (1.673)			-0.020** (-2.017)			0.078*** (4.582)

The dependent variables are LEVERAGE, CASH HOLDINGS and NET LEVERAGE. The table presents an estimate of the change from one year before the averted strike experience [-1] to one year thereafter [+1]. The average in one year before the averted strike experience and in the year thereafter is calculated for the firms whose CEO experiences an averted strike and the matched control firms, as well as the difference in differences between the two groups of firms over the two year period. The matched control group is constructed by the nearest-neighbor matching approach identifying for each treated firm the three non-treated firms with the closest propensity scores. Matching is conducted with replacement option. The propensity score is estimated by a probit regression. The matching estimator is the Abadie/Imbens bias-corrected and variance-adjusted matching estimator for the average treatment effect on the treated. For the differences, t-statistics based on robust standard errors clustered by firms are presented in parentheses. For the matching estimator, z-statistics based on robust Abadie/Imbens standard errors are presented in parentheses. ***, **, and * indicate significance at the 1%, 5%, and 10%-levels, respectively. A detailed description of all variables can be found in [Appendix A](#).

Table 10
Plausibility

Panel A: CEO experiences strike						
[-1;+1]	<median (low)		>=median (high)		Difference in means	
	N	Mean	N	Mean	H - L	T-statistic
Δ leverage	48	-0.007	49	-0.049	-0.042	-1.585
Δ cash holdings	48	0.017	49	0.009	-0.008	-0.846
Δ net leverage	48	-0.016	49	-0.085	-0.069**	-2.196
Panel B: CEO experiences averted strike						
[-1;+1]	<median (low)		>=median (high)		Difference in means	
	N	Mean	N	Mean	H - L	T-statistic
Δ leverage	21	0.099	22	-0.025	-0.123***	-3.062
Δ cash holdings	21	0.023	22	-0.050	-0.073***	-2.879
Δ net leverage	21	0.200	22	-0.077	-0.277***	-4.887

The dependent variables are Δ LEVERAGE, Δ CASH HOLDINGS and Δ NET LEVERAGE from one year before the respective experience [-1] to one year thereafter [+1]. Panel A uses the 97 CEOs experiencing a strike and Panel B the 43 CEOs experiencing averted strikes. The table splits the treated firms by the median level of the outcome variables in [-1] into two groups, firms below the median (low) and firms above the median (high), and compares the differences in means (high-low) between the two groups. ***, **, and * indicate significance differences in means at the 1%-, 5%-, and 10%-levels, respectively. Standard errors are clustered by firms. A detailed description of all variables can be found in [Appendix A](#).

Appendix

Appendix A

Definition of variables

Variable	Description
<i>Main variables</i>	
Strike exp	Dummy which equals one if the firm's CEO experiences a strike as director at another firm. Source: Own calculation.
Averted strike exp	Dummy which equals one if the firm's CEO experiences tough negotiations with labor for which a strike could narrowly be avoided. Source: Own calculation.
Leverage	Total debt divided by total debt plus book value of common equity (ceq). Total debt includes current and long-term liabilities (dlc + dltt). Source: Compustat (CS).
Cash holdings	Cash and cash equivalents (che) scaled by total assets (at). Source: CS.
Net leverage	Total debt minus cash and cash equivalents (che) divided by total debt plus book value of common equity (ceq). Total debt includes current and long-term liabilities (dlc + dltt). Source: CS.
DirPos	Number of a CEO's outside director positions on the board of S&P 1500 firms. Source: Boardex (BE).
<i>Other firm characteristics</i>	
Size	Natural logarithm of total assets (at) in \$m. Source: CS.
Market leverage	Total debt divided by total debt plus market value of common equity (prcc.f * csho). Total debt includes current and long-term liabilities (dlc + dltt). Source: CS.
Roa	Earnings before interest, depreciation and amortization (ebitda) scaled by total assets (at). Source: CS.
M/b	Total assets minus book value of common equity plus market value of common equity divided by total assets ($\frac{at-ceq+prcc.f*csho}{at}$). Source: CS.
Fixed assets	Property, plant and equipment (ppnt) scaled by total assets (at). Source: CS.
Cash flow	Earnings before interest, depreciation and amortization (ebitda) minus interest (xint) and taxes (txt) scaled by total assets (at). Source: CS.
Cf industry volatility	Ten-year rolling window median volatility of cash flow calculated on the Compustat Universe using the Fama/French 48 industry classification. Source: CS.
Board size	Number of director sitting on a firm's board of directors. Source: BE.
Interlocks	Number of interlocking directors with other S&P 1500 firms that sit on the board of the firm. Source: BE.
<i>Other CEO characteristics</i>	
Age	Number of years since the firm's CEO was born. Source: BE and Execu-comp (EC).
Tenure	Number of fiscal years that the firm's CEO holds the position as CEO. Source: BE.

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Definition of variables - continued

Variable	Description
MBA	Dummy which equals one if the firm's CEO holds an MBA degree. Source: BE.
Gender	Dummy which equals one if the firm's CEO is female. Source: EC.
<i>Labor-related firm characteristics</i>	
Unionization	Average fraction of industry workforce covered by collective bargaining in %. Source: Unionstats of Barry Hirsch and David Macpherson (www.unionstats.com).
Ln(employees)	Natural logarithm of number of employees (emp). Source: CS.
RTW dummy	Dummy which equals one if the firm's headquarter is located in a state which has incorporated the Right-to-Work Law. Source: Hand collected.
<i>Strike characteristics</i>	
Duration	Number of days that the strike lasts. Source: Bureau of Labor Statistics (BLS), Federal Mediation and Conciliation Service (FMCS) and National Mediation Board (NMB).
# workers	Number of workers that went on strike. Source: BLS, FMCS, NMB.
# workers/emp	Number of workers that went on strike scaled by total number of employees (emp). Source: BLS, FMCS, NMB, CS.
Man-days	Duration in days multiplied by the number of workers that went on strike. Source: BLS, FMCS, NMB.

CS stands for Compustat, BE for Boardex, EC for Execucomp, BLS for Bureau of Labor Statistics, FMCS for Federal Mediation and Conciliation Service, NMB for National Mediation Board.