

# The Effect of the Political Power of Unions on Firm Value\*

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## Abstract

Prior research has established a relationship between union bargaining power and firm value and financial decisions. However, researchers have not fully explored how unions establish this power. In this study, we find that a union's bargaining power depends significantly on the union's political power. We explore this connection by making use of a recent law in New South Wales, Australia that prohibits unions from making political contributions and restricts their political activities, but leaves their ability to collectively bargain unchanged. We find that the value of unionized firms in New South Wales significantly increased in the wake of this legislation and that these firms were able to negotiate more favorable labor contracts relative to their unionized peers in other states. We propose that unionized labor uses political power to increase its ability to extract rents from shareholders.

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# 1 Introduction

Organized labor is an important stakeholder of firms. Labor unions affect firm value and cost of capital (for example, Blaylock, Edwards, and Stanfield, 2013; Chen, Kacperczyk, and Ortiz-Molina, 2011, 2012; Lee and Mas, 2012). Ashenfelter and Johnson (1969) and Grout (1984) model the interaction between firms and organized labor, finding that each entity's bargaining power is directly proportional to its share of economic profit in a Nash equilibrium. Thus, to improve their bargaining power relative to unions, firms strategically modify their capital structure and how they manage cash (for example Bronars and Deere, 1991; Klasa, Maxwell, and Ortiz-Molina, 2009; Matsa, 2010; Perotti and Spier, 1993).

Early labor economic research emphasized that a union's bargaining position derives both from its collective bargaining capacity and its ability to influence government policy. Ashenfelter and Johnson (1969) and Calmfors, Driffill, Honkapohja, and Giavazzi (1988) discuss the importance of unions' political connections, which play a role in influencing government policy and have a first-order effect in determining a union's bargaining position with firms. Recent studies by Francia (2012) and Kerrissey and Schofer (2013) find that unions have maintained or increased their political capital and influence despite the general decline in union membership<sup>1</sup>.

Most empirical studies in labor and finance have examined proxy variables for collective bargaining power, such as the proportion of union membership, new unionization events, and "right-to-work" laws<sup>2</sup>. In this paper, we focus on the important, but previously ignored, role that a union's political power has on its bargaining position. Does the political power of unions improve their bargaining position relative to firms and therefore provide a mechanism for unionization to affect firm value and financial policy?

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<sup>1</sup>In addition to academic studies, several articles in the popular press have made similar observations regarding the continued political power of organized labor (McGinty and Mullins, 2012; McQuillen, 2012)

<sup>2</sup>Moore and Newman (1984) and Moore (1998), for example, survey evidence regarding "right-to-work" laws and union

On March 26, 2011, the voters of New South Wales (NSW), Australia elected a new Coalition state government. The Coalition had campaigned on a legislative agenda to reduce political corruption and, to this end, passed the Election Funding, Expenditure and Disclosures Amendment Bill 2011. The Bill was in effect for approximately two years until Australia's High Court ruled it unconstitutional. During this period, it prohibited labor unions, corporations, and other lobbying groups from making political donations. It banned unions from channeling funds through affiliated organizations in order to make substantial donations to political parties. The Bill also severely restricted other political activities of unions, such as voting drives and having union representatives directly involved with party governance.

The election and the surprise surrounding the Bill's passage (discussed in detail in Section 3) provide us with a pseudo-natural experiment to test the effect of union political power on firm value. The Bill limited union political power, but left the ability of workers to unionize and collectively bargain unchanged. We hypothesize that a unionized firm in New South Wales enjoyed improved bargaining power relative to labor unions as a result of this law. As predicted by Ashenfelter and Johnson (1969) and Grout (1984), economic rents will transfer from labor to corporations. We address the High Court ruling that declared the Bill unconstitutional separately from our main analysis. This decision left open a possibility for the Coalition to pass revised legislation and, therefore, has unclear implications for union and firm bargaining.

Consistent with the above hypothesis, unionized firms affected by the Election Funding, Expenditure and Disclosures Amendment Bill 2011 experienced significantly positive abnormal stock returns around key event dates. These results are robust to controlling for firm political contributions, the inclusion of industry effects, and to performing a procedure sim-

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bargaining power.

ilar to that of Sefcik and Thompson (1986) to account for the cross-sectional correlation between firms with shared event days.

Critically, the results demonstrate that political power directly impacts the relative bargaining position of firms and unionized employees. Using a difference-in-difference framework with a sample of hand-collected union contracts, we find that contractual salary growth significantly decreased for workers affected by this law relative to those that were unaffected by it. This effect exists both between and within firms, and is robust to the inclusion of firm-level controls and fixed effects.

In further support of our hypothesis, and to ensure the relevance of our results outside of Australia, we consider the impact of the United States Supreme Court *Citizens United v. Federal Election Commission* decision on unionized firms as a robustness test. As detailed in Section 6, we analyze the effect of *Citizens United* on the political power of both unions and firms. The results support our prediction that unionized firms will experience negative abnormal returns around the ruling. To our knowledge, we are the first to empirically test the effect of the *Citizens United* decision on unionized firms.

Our results provide support for a broad literature that seeks to explain the determinants of the bargaining positions between unions and firms. We discuss the economic and political science mechanisms of this relationship in Section 2. Ashenfelter and Johnson (1969), Oswald (1982), and Grout (1984) provide important theoretical frameworks for examining negotiations between unions and firms<sup>3</sup>. Our paper empirically supports these theories. We find that, holding union membership constant, a change in union political power alters the contracted wage, suggesting that political power is a key factor affecting bargaining between firms and labor.

Moreover, this paper contributes to the literature on the effect of unions and union rent-

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<sup>3</sup>Recent empirical studies, such as Lee and Mas (2012), Matsa (2010), and Frandsen (2012), use these fundamental models of union bargaining position to test the relationships among unionization, firm value, and firm financial decisions.

seeking on shareholders and other stakeholders. Cohen, Coval, and Malloy (2012) find that unions can hurt general economic growth. Agrawal (2012), Faleye, Mehrotra, and Morck (2006), and Del Guercio and Woidtke (2013) find that union interests may not be aligned with shareholder interests. Faleye, Mehrotra, and Morck (2006), Lee and Mas (2012), and Frandsen (2012) find that the presence of a union reduces firm-value. Blaylock, Edwards, and Stanfield (2013) and Chen, Kacperczyk, and Ortiz-Molina (2011, 2012) find that unions are an important determinant of firms' cost of capital. Our paper suggests that these relationships between labor and firms are shaped by union political activities and not only the presence of a union.

The existing literature on the determinants of the interaction between shareholders and organized labor mentioned above has focused on the presence of a unionized workforce or work stoppages. Using changes in "right-to-work" laws in the 1980s and 1990s, several studies find evidence that the ability to bargain collectively has an important effect on the relationship between shareholders and organized labor (see Moore and Newman (1984) and Moore (1998) for excellent reviews). Additionally, many of the previously cited papers use the proportion of unionized workers as a proxy for union bargaining power. For example, Matsa (2010) argues that bargaining power should increase with the proportion of unionized employees.

We complement the existing literature by providing evidence that union political power, and not simply union coverage or the ability of unions to bargain collectively, is an important mechanism allowing unions to influence firm value by seeking to maximize labor's share of economic rents. Blaylock, Edwards, and Stanfield (2013) find indirect evidence that union political power influences firm value. However, we are unaware of any other study that directly tests the influence of union political power on firm value or decision-making.

Finally, Bronars and Deere (1991), Klasa, Maxwell, and Ortiz-Molina (2009), Matsa

(2010), Myers and Saretto (2011), and Perotti and Spier (1993), among others, find that firms use capital structure and cash policy as strategic variables in negotiations with unions. However, a change in financial policy in response to unionization is only implicit evidence that firms strategically adjust policy to improve their bargaining position relative to labor unions. If firm bargaining power increases due to these strategic decisions, then the impact should be seen both in union contracts and firm value. Therefore, we bridge a gap in the literature by providing evidence that an improvement in a firm's bargaining position improves its ability to negotiate favorable contracts with unions. Additionally, we confirm that the findings of the previous literature hold in our sample; firms strategically adjusted leverage in response to the passing of Election Funding, Expenditure and Disclosures Amendment Bill 2011.

The remainder of the paper proceeds as follows. Section 2 derives our hypothesis about how political influence affects bargaining between firms and unions from the known economic and political science mechanisms. Section 3 discusses the institutional background of the Election Funding, Expenditure and Disclosures Amendment Bill 2011. Section 4 details the empirical methodology and sample selection. Section 5 presents the empirical results. Section 6 details the robustness of our results to alternate specification and samples. Finally, Section 7 concludes.

## **2 Hypothesis Development**

The economic and political science literature demonstrates that government legislation influences firm and labor union negotiations. The legislative reach of both federal and state governments into labor negotiations is extensive, affecting, among other things, wages, hiring practices, workplace environment, retirement plans, and unemployment. Each of these legislative areas directly affects the bargaining between firms and labor by establishing

a baseline contractual relationship and focusing the scope of negotiations (Bennett and Taylor, 2001).

Government labor policy is not limited to legislation; bureaucratic agencies significantly affect policy as well. McCubbins, Noll, and Weingast (1987) argue that elected officials, given limited time and resources, must delegate considerable policymaking authority to bureaucratic agencies. Delegation of labor policy has resulted in the creation of federal agencies responsible for arbitrating disagreements between firms and unions. These include Australia's Fair Work Commission (FWC) and the United States' National Labor Relations Board (NLRB). Other agencies monitor workplace standards, ensure employee welfare, and regulate commerce. The expected decisions of these agencies will affect bargaining between firms and unions.

With all these different avenues for governments to influence bargaining between labor unions and firms, unions have strong incentives to be politically active. Desired political outcomes for labor unions may include the passage of legislation or ensuring a favorable composition of key bureaucratic agencies. Moe (1985) finds that NLRB decisions are more pro-business when appointments occur under conservative political regimes and are relatively pro-labor under liberal regimes. In Australia, both major political parties have been accused of stacking the FWC with members to implement desired policies (Norington and Hannan, 2007; Gillard, 2007).

Unions expend considerable effort to influence governmental policy through donations to political candidates, advertisements, and political action committees. The Center for Responsive Politics (2013) reports that labor unions spent approximately \$143 million in the U.S. during the 2012 election cycle, of which 91% went to Democratic Party candidates. Similarly, in Australia, union political donations are significant and made almost exclusively to the Australian Labor Party (ALP). Unions derive additional political influence from the

effectiveness of their members in voting drives and the placement of union representatives on governing bodies of political parties.

Anecdotal evidence indicates that union political efforts may be very effective, influencing legislation and the enforcement of labor laws. In the United States, labor unions were critical in helping pass the Fair Labor Standards Act of 1938 (FLSA), which established a national minimum wage. In Australia, union campaigns resulted in the introduction of Fair Work Laws in 2009 and paid maternity leave in 2011. These laws serve as examples of legislation that benefits workers, but is costly to the owners of the firm.

Union political power may also increase the threat of government intervention on behalf of organized labor in the contracting process. During the Chrysler bankruptcy, the U.S. government was accused of supporting unsecured union pension liabilities over secured debt (see Roe and Skeel, 2010). Several critics of the U.S. government's involvement in the Chrysler bankruptcy argued that the intervention occurred due to the political contributions of unions<sup>4</sup>. Blaylock, Edwards, and Stanfield (2013) find evidence that this intervention increased the cost of borrowing and reduced the value of debt and equity for other unionized firms.

The theoretical, empirical, and anecdotal evidence above shows that union political power can influence government policies. These policies can affect the relative bargaining position of both firms and organized labor. Our hypothesis formalizes the relationship between union political influence and bargaining.

**Hypothesis 1.** *Laws and legal decisions that decrease the ability of labor unions to exert political influence will lower the bargaining position of unions relative to firms.*

Ashenfelter and Johnson (1969) and Grout (1984) provide models in which business profits

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<sup>4</sup>For example, Clifford Asness, founder of AQR Capital Management, a hedge fund that had not invested in Chrysler, stated “the President’s attempted diktat takes money from bondholders and gives it to a labor union that delivers money and votes for him . . . Shaking down lenders for the benefit of political donors is recycled corruption and abuse of power” (Kouwe, 2009)

are split between firms and labor based on relative bargaining power. The empirical evidence is extensive, including several papers examining firm value and unionization cited earlier (for example, Blaylock, Edwards, and Stanfield, 2013; Chen, Kacperczyk, and Ortiz-Molina, 2011, 2012; Lee and Mas, 2012).

Therefore, the hypothesis implies that the owners' share of firm profit will increase as the ability of unions to exert political influence declines. This insight has two clear empirical implications. As union political influence declines, we expect (i) firm value to increase and (ii) that the terms of negotiated contracts will be more favorable for the firm. Furthermore, these two implications should be linked: in efficient markets, firms with the greatest increase in value will negotiate the most favorable contracts.

### **3 Background**

On March 26, 2011, a Coalition consisting of the Liberal Democratic Party (Liberals) and the National Party of Australia (Nationals) prevailed over the incumbent Australian Labor Party (ALP) in the election of NSW's bicameral Parliament. Responding to corruption charges against the ALP, the Coalition campaigned on a policy of restricting the political activities of corporations, unions, and special interest groups. To this end, the Coalition passed the Election Funding, Expenditure and Disclosures Amendment Bill 2011 (Bill) through the NSW Legislative Assembly (lower house) on October 12, 2011. The Bill was then considered by the NSW Legislative Council (upper house). While the Coalition had an outright majority in the lower house, it held only a plurality in the upper house and required support from third-party members to pass the Bill. Despite initially opposing the Bill, members of the Australian Greens ultimately decided to support it, providing the critical swing votes needed for the Bill to pass the Legislative Council on February 16, 2012 (Tovey and Nicholls, 2012; Tobin, 2012).

The Bill reduced the political power of unions by limiting political donations and restricting other political activities (for example, the Bill effectively makes union representatives ineligible to serve on the governing body of a political party). The political influence of firms making donations to NSW state parties was similarly limited, since the law prohibited NSW state political parties from accepting donations from donors not listed as “individuals” on the electoral roll. The Bill provides an ideal and unique setting for testing our hypothesis for four key reasons. First, we are able to disentangle the economic effects of union political power on bargaining from the effects due to other sources of union bargaining power. As mentioned earlier, the Bill reduces a union’s political influence, but does not directly alter a union’s size or its ability to bargain collectively. Second, the Bill affects state-level donations and political activities within NSW, but not in other Australian states. Our empirical tests examine differences in firm outcomes within industry, but across state boundaries. Therefore, we are able to identify the economic impact of union political influence on firms separate from confounding macroeconomic factors affecting all Australian firms.

Third, states in Australia have a level of political autonomy and regulatory authority typically reserved for federal governments elsewhere. Australian states, for example, have primary responsibility for workplace matters, such as employee composition, occupational health and safety, workplace monitoring, and anti-discrimination policy. The political power of states extends to other important business activities, as well. For example, the state government determines the initial approval of all resource projects, places limits on how minerals are extracted (once permits are sold by the federal government), and requires environmental controls on firms’ exploration and extraction projects.

Fourth, Australia’s unionization is representative of global union levels. An Organisation for Economic Co-operation and Development (2013) survey reports that 17.6% of workers globally were involved in labor unions in 2010. Australia had 18.1% of its workforce unionized

at that time. While slightly above average, Australia’s unionization was below the median, ranking 18<sup>th</sup> highest out of the 29 countries with data available.

### 3.1 Event Dates

Our study examines the two dates on which there was a significant “surprise” regarding the likelihood that NSW political contributions and advocacy legislation would be passed into law: March 26, 2011 , the date of the Liberal-National Coalition election victory; and February 16, 2012, the date the Election Funding, Expenditure and Disclosures Amendment Bill 2011 Bill passed the upper house. We hypothesize that these events increased investors’ perception that the political power of unions had been weakened.

Despite opinion polls favoring the Liberal-National Coalition in the lead-up to the March 26, 2011 election, there was significant uncertainty as to whether the ultimate composition of the NSW Parliament would permit easy passage of Coalition legislation. Pre-election polls accurately predicted that the Coalition would easily secure a majority in the Legislative Assembly (lower house)<sup>5</sup>. However, in the Legislative Council (upper house), only half of the seats were up for election and the ALP held a plurality of the continuing seats. Experts were divided as to whether the left-of-center parties, consisting of the ALP and the Australian Greens, would be able to maintain a majority in the upper house or if the balance of power would shift to the Liberal-National Coalition and other right-of-center parties (Australian Associated Press, 2011; Druery, 2011).

While membership in the lower house is determined by voting at the district level, membership in the upper house is determined by statewide proportional representation and, so, ignores electoral districts. Final membership in both houses is decided using a complex instant-runoff (preference) voting system<sup>6</sup>. When applied statewide, the voting system

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<sup>5</sup>Despite this, anecdotal evidence suggests that Liberal candidates did better than expected, winning the majority of toss-up districts (Norrie, 2011; West, 2011).

<sup>6</sup>In the Australian optional preferences voting (OPV) scheme, in the event that a candidate is unable to secure a majority or

makes the composition of the Legislative Council hard to predict and enables third parties to have a significant presence in the Legislative Council. The election resulted in the Coalition earning a strong plurality in the upper house, holding 19 of 42 total seats. This outcome benefited the Coalition, which would need to convert only four of nine third-party seats to pass legislation.

Passage of the Election Funding, Expenditure and Disclosures Amendment Bill 2011 required approval by both houses of Parliament. The coalition campaigned on a policy of political reforms and held an outright majority of seats in the lower house. Therefore, the Bill's passage through the Legislative Assembly was largely a formality and was anticipated by the markets.

Passage of the Bill by the upper house, however, was far from certain. The Liberal-National Coalition had to gain third-party support in the Legislative Council, which was complicated by the contrasting ideological and financial implications of the Bill. While all the third parties supported principles focusing government on the interests of individual voters, those parties also relied on financial contributions from special interest groups and community organizations. Parliamentary documents and relevant media reports prior to the final vote on the Bill indicate there was significant uncertainty around the Coalition's ability to gain minor party support. The conservative third parties, consisting of the Shooters and Fishers and the Christian Democrats, decided to vote against the Bill, forcing the Coalition to seek the support of the Australian Greens, who initially opposed the legislation. However, the Greens switched their support and provided the key deciding votes. Therefore, it is likely that investors did not expect the final passage of the Bill through the Legislative Council on February 16, 2012.

On December 18, 2003, the High Court of Australia ruled the Bill unconstitutional. We

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certain proportion of the popular vote, the least popular candidate is removed from consideration and their votes are reallocated to remaining candidates based on optional voter and/or party guidance. This procedure is repeated until all remaining candidates exceed a threshold proportion of the popular vote.

do not include events around this ruling in our main analysis. This ruling does not meet our requirement that it change the perceived likelihood that effective legislation limiting political contributions and advocacy would ultimately be in place in NSW. Immediately following the High Court decision, both the Coalition and the Greens indicated a desire to quickly revisit the reforms in the Bill and pass constitutionally valid legislation (Bibby and Hasham, 2013; Kaye, 2013). Therefore, we reserve analysis of events surrounding the High Court decision for robustness tests in Section 6.

## **4 Empirical Methodology and Sample Selection**

We test the implications of our hypothesis on both firm value and the contracts negotiated between firms and labor. The two types of tests have different data requirements and methodologies. The firm value tests examine stock returns around the key event dates. The contract tests use panel data analysis to evaluate how union contract terms changed after the election and the Bill reduced union political power. Therefore, we build a core sample consisting of all Australian publicly traded firms. We collect financial and price data from Bloomberg. In those instances where company financial data was missing in the Bloomberg database, we obtained their financials from firm annual reports, as filed with the Australian Securities Exchange. This core sample is restricted to match the requirements of our two groups of tests as described in the sections that follow.

### **4.1 Firm Value Methodology**

Our hypothesis implies that the Bill will decrease union bargaining power and result in an increase in unionized firm value. To test this, we perform short window event tests of stock returns around the dates presented in Section 3. We begin with our core sample of all Australian firms and eliminate firms that either do not trade around our event dates or

having missing price data. We eliminate small stocks, often trading at less than \$0.01 per share, by restricting our sample to firms with a total market capitalization greater than or equal to \$100 million. This yields a sample of 639 firm-event day observations, with 329 unique firms that trade on at least one event day.

We use the following model to test for changes in equity value for unionized firms in NSW around our key event dates:

$$CAR_{i,t} = \beta_0 + \beta_1 Union_{i,t} + \beta_2 NSW_i + \beta_3 Union_{i,t} \times NSW_i + \beta_4 Controls_{i,t} + \epsilon_{i,t} \quad (1)$$

Following Brown and Warner (1980),  $CAR_{i,t}$  is defined as the sum of  $Ret_{i,t} - Ret_{m,t}$  over the three-day window surrounding each event date.  $Ret_{i,t}$  is the daily return of firm  $i$  on day  $t$ . We define  $Ret_{m,t}$  as the daily return on the S&P500 index. We use the S&P500 index to capture the market return index of the marginal investor in Australia<sup>7</sup>. The Reserve Bank of Australia reports that the Australian stock market has a large international presence, with approximately half of investor capital from outside Australia (Black and Kirkwood, 2010). Domestic investment in Australia is largely in the form of passive funds. In untabulated results, our findings are robust to using an Australian market index, such as the return on the Australian All Ordinaries Index or the S&P ASX 200, as our measure of expected returns.

We use the proportion of unionized workers as a proxy for union political power. Union political power consists of both pecuniary components (such as direct, indirect, and affiliated political contributions) and non-pecuniary power (such as voter drives and party governance). Both these factors should be highly correlated with the proportion of unionized workers. An alternate measure of union political power, union political contributions, is less reliable than

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<sup>7</sup>This index choice is similar to that used by Ahern and Dittmar (2012).

the proportion of unionized workers for several reasons. First, union political contributions can take several forms (as stated above) that can be difficult to observe. Second, identifiable union political contributions demonstrate a striking homogeneity among unions. The vast majority of union contributions go to the ALP, and there is little variation between unions in the level of contributions. Third, political contributions do not necessarily correlate with the non-pecuniary power of the union.

Following Klasa, Maxwell, and Ortiz-Molina (2009), Chen, Kacperczyk, and Ortiz-Molina (2011, 2012), and Blaylock, Edwards, and Stanfield (2013), we define *Union* as the percentage of unionized workers at the industry level. Australian firms are not required to report unionization. We therefore obtain industry unionization data from the Australian Bureau of Statistics and merge it to each firm by GICS code. *NSW* is an indicator variable equal to one if the firm’s headquarters is located in New South Wales and zero otherwise.  $Union \times NSW$  is defined as the interaction between *Union* and *NSW*. Our hypothesis predicts a positive coefficient on the interaction between *Union* and *NSW* ( $\beta_3 > 0$ ).

Since our events occur on the same day for all firms, it is possible that we are underestimating our standard errors by not properly controlling for the cross-sectional correlation present within our sample. For completeness, we estimate a model similar to Sefcik and Thompson (1986). We first determine portfolio weights to transform our observed firm characteristics into a set of orthogonal control variables. The portfolio weighting matrix,  $\mathbf{W}$ , is:

$$\mathbf{W} = (\mathbf{F}'\mathbf{F})^{-1} \mathbf{F}' \tag{2}$$

where  $\mathbf{F}$  is a matrix containing a vector of ones and the firm characteristics, which are the same independent variables used in equation (1).

We use the weighting matrix to generate a set of portfolio returns:

$$\mathbf{r}_t = \mathbf{W}'\mathbf{R}_t \quad (3)$$

where  $\mathbf{R}_t$  is a vector containing the firm returns. Each row in  $\mathbf{W}$  provides weights that would give an investor a unit loading on a firm characteristic. Therefore, each element in  $\mathbf{r}_t$  represents the time  $t$  return to an investor holding a portfolio with a unit loading on one firm characteristic and zero allocation to all other characteristics.

We then estimate the system of equations in model (4) using a Seemingly Unrelated Regression (SUR) approach:

$$\left\{ \begin{array}{l} r_{0,t} \\ r_{Union,t} \\ r_{NSW,t} \\ r_{Union \times NSW,t} \\ r_{Controls,t} \end{array} \right. = \left\{ \begin{array}{l} \theta_0 \\ \theta_{Union} \\ \theta_{NSW} \\ \theta_{Union \times NSW} \\ \boldsymbol{\theta}_{Controls} \end{array} \right. + \left\{ \begin{array}{l} \sum_{e=1}^2 \lambda_0^e Event_t^e \\ \sum_{e=1}^2 \lambda_{Union}^e Event_t^e \\ \sum_{e=1}^2 \lambda_{NSW}^e Event_t^e \\ \sum_{e=1}^2 \lambda_{Union \times NSW}^e Event_t^e \\ \sum_{e=1}^2 \boldsymbol{\lambda}_{Controls}^e Event_t^e \end{array} \right. + \left\{ \begin{array}{l} \beta_0 Ret_{m,t} \\ \beta_{Union} Ret_{m,t} \\ \beta_{NSW} Ret_{m,t} \\ \beta_{Union \times NSW} Ret_{m,t} \\ \boldsymbol{\beta}_{Controls} Ret_{m,t} \end{array} \right. + \left\{ \begin{array}{l} \epsilon_{0,t} \\ \epsilon_{Union,t} \\ \epsilon_{NSW,t} \\ \epsilon_{Union \times NSW,t} \\ \boldsymbol{\epsilon}_{Controls,t} \end{array} \right. \quad (4)$$

The dependent variables are the portfolio returns from model (3). The independent variables are a constant,  $Event_t^e$ , and the market return  $Ret_{m,t}$ .  $Event_t^e$  is an indicator variable equal to one if day  $t$  was part of the three-day window for event  $e$  and zero otherwise. We are interested in the  $\lambda^e$  terms, which capture the effect of a firm characteristic on stock returns during an event window. This methodology allows us to fully account for cross-sectional correlation in our standard error estimates, as well as remove any average effect that variables of interest may have on both event and non-event days. The analysis looks at daily portfolio

returns for each day of our two 3-day event windows and for the 6 months prior to the first event day (March 26, 2011) and the 6 months following the second event day (February 16, 2012)<sup>8</sup>.

Since we are measuring the effect of unionization for firms in NSW and marking this against similar firms operating in the same industry groups in the other states, the use of extensive controls for changes in firm value relating to non-event related factors and other market news is not critical in these models. However, we control for differences in firms to factors that have been previously shown to influence unionization, such as leverage (Perotti and Spier, 1993; Myers and Saretto, 2011), the market-to-book ratio of equity (Connolly, Hirsch, and Hirschey, 1986; Salinger, 1984), and size (Hirsch and Berger, 1984).

We define *Size* as the natural log of the total book value of assets, *MB* as the ratio of firm market value of equity to firm book value of equity, and *Leverage* as the book value of interest-bearing debt scaled by the book value of assets<sup>9</sup>. We control for size, market-to-book, and leverage to reduce the likelihood that our unionization measure is capturing other risk effects at the industry level. These concerns are further reduced by comparing unionization across states (but within industries) and by including industry effects, defined at the 2-digit GICS level<sup>10</sup>. Standard errors are clustered at the industry level.

Although not the primary purpose of our paper, we also include several controls for corporate political contributions. To ensure our results are not being driven by corporations' loss of ability to make political contributions, which may be associated with unionization, we include controls motivated by Myers (2005), Mathur and Singh (2011), and Aggarwal, Meschke, and Wang (2012). To test the firm value implications of our hypothesis using these controls, we include *Political* in equation (1), defined as the natural log of one plus the

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<sup>8</sup>In untabulated estimates, results are robust to estimating abnormal portfolio returns from model (3) on days between the two events.

<sup>9</sup>Results are qualitatively and quantitatively similar if *Size* is defined as the natural log of the market value of equity.

<sup>10</sup>Industry effects and clustering are robust to defining industries at the 4-digit GICS level.

firm's political contributions to NSW political parties over the past four years (in thousands of A\$). We obtain political contributions data from the Australian Electoral Commission (AEC). All corporations are required to disclose political contributions above \$11,900 to the AEC. Any direct political contributions made by a firm in our sample or their wholly owned subsidiary, as reported to the AEC, was matched to the respective firm's ticker.

## 4.2 Contract Methodology

Our hypothesis implies that the terms of negotiated contracts will be more favorable for firms, as the Bill reduces union bargaining power. We test this hypothesis using a panel of hand collected contracts between unions and firms.

All collective bargaining agreements in Australia must be filed with the Australian Fair Work Commission (FWC). We collect contract-level data between our core sample of firms, or their subsidiaries, and collective bargaining units from the FWC. Collective bargaining units are defined at the work-site level, because a union may represent a firm's workers at multiple locations. For each contract filed after the Coalition victory, we find the matching contract agreed upon before the election between the same collective bargaining unit and firm<sup>11</sup>. This yields a sample of 110 unique firms and 643 contract pairs (1,286 contracts).

The contracts generally use a standardized format to describe worker compensation. A contract initially specifies a base salary that will be in effect during the first year of the contract; salaries for multiple types of employees may be included in a single union contract. A contract will also enumerate all wage increases for the life of the contract. Wage growth is almost always constant across the types of employees covered by the contract.

Our tests emphasize salary growth as the key negotiated monetary factor in observed contracts. While the initial salary may appear to be an important negotiated benchmark, it

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<sup>11</sup>Our contract data runs through the end of 2012. The results are robust to excluding contracts agreed to between our first and second event dates and only examining contracts (and their matched pairs) agreed to following the Bill's passage through the upper house.

is, in fact, often set as a function of initial salary growth. That is, the initial salary level in the new contract is generally equal to the prevailing salary in the existing union contract plus an increase at the guaranteed wage growth rate in the new contract. Additionally, stated employee salary levels may be difficult to compare between collective bargaining units, even within the same firm. Wage growth allows comparison across bargaining units and types of employees.

We use the following model to test for changes in labor contract terms for unionized firms in NSW before and after our events:

$$\begin{aligned} \text{Salary Growth}_{i,j,t} = & \beta_0 + \beta_1 \text{NSW}_{i,j} + \beta_2 \text{Post-Event}_t + \beta_3 \text{NSW}_{i,j} \times \text{Post-Event}_t \quad (5) \\ & + \beta_4 \text{Controls}_{i,j,t} + \epsilon_{i,j,t} \end{aligned}$$

*Salary Growth*<sub>*i,j,t*</sub> is defined for firm *i*, collective bargaining unit *j*, and in year *t*. It is either (i) the average annual contracted salary growth for the length of the contract, or (ii) the annual salary growth in the year proximate to the event. For contracts agreed upon prior to the event, the proximate salary growth is equal to the salary growth in the last year of the contract. For contracts agreed upon following the event, the proximate salary growth is equal to the salary growth in the first year of the contract<sup>12</sup>.

*NSW* is an indicator variable equal to one if the contract is between the firm (or subsidiary of the firm) and a collective bargaining unit that is located in New South Wales and zero otherwise. Firms located in several states will have contracts with both NSW and non-NSW bargaining units. *Post-Event* is an indicator variable equal to one if the contract is agreed upon following the first event date and zero otherwise. *NSW* × *Post-Event* is defined as the interaction between *NSW* and *Post-Event*. The labor contracting implications of our

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<sup>12</sup>We use salary growth and not contract length, as the predictions of firms preferred contract length are unclear. However, there is not a significant change in contract lengths for either NSW or non-NSW, or the difference between the two labor contracts following the event.

hypothesis imply that the salary growth in affected contract declined relative to unaffected contracts following this event. Specifically, our hypothesis predicts a negative coefficient on the interaction between *NSW* and *Post-Event* ( $\beta_3 < 0$ ).

Following Klasa, Maxwell, and Ortiz-Molina (2009), we control for *Cash*, defined as the amount of cash and short-term investments scaled by the book value of assets. Similar to the firm value analysis, we also control for size, market-to-book, and leverage to reduce the likelihood that the changes in salary growth we observe are being driven by changes in control variables. These concerns are further reduced by including year, firm, and union fixed effects, which allow us to analyze changes within firms, but across states. Standard errors are double-clustered at the year and firm levels<sup>13</sup>.

### 4.3 Firm Value and Contracts Methodology

Another implication of our hypothesis is that, in efficient markets, firms with the greatest increase in value around our event will negotiate the most favorable contracts. Specifically, we expect the market to effectively predict which firms will be able to negotiate the most favorable contracts as a result of this law. We test this implication using both the value and contract samples and utilizing a model similar to the above contract methodology:

$$\begin{aligned} \text{Salary Growth}_{i,j,t} = & \beta_0 + \beta_1 \text{NSW}_{i,j} + \beta_2 \text{Post-Event}_t + \beta_3 \text{NSW}_{i,j} \times \text{Post-Event}_t \\ & + \beta_4 \text{NSW}_{i,j} \times \epsilon_{i,CAR} + \beta_5 \text{Post-Event}_t \times \epsilon_{i,CAR} \\ & + \beta_6 \text{NSW}_{i,j} \times \text{Post-Event}_t \times \epsilon_{i,CAR} + \beta_7 \text{Controls}_{i,j,t} + \epsilon_{i,j,t} \end{aligned}$$

We first obtain the residual,  $\epsilon_{i,CAR}$ , from estimating equation 1 (with industry fixed effects) around the first event day (March 26, 2011)<sup>14</sup>. We then interact this residual with *NSW*, *Post-Event*, and *NSW*  $\times$  *Post-Event*. Our hypothesis predicts a negative coefficient

<sup>13</sup>Results are robust to using industry fixed effects and clustering at the industry level rather than firm level. In addition, results are robust to interacting firm and year fixed effects.

on the triple interaction of the residual, *NSW*, and *Post-Event* ( $\beta_6 < 0$ ).

We use the same sample as in the previous contract methodology. However, since we require a firm to be actively traded around the first event date, our sample reduces to 83 unique firms and 473 contract pairs (946 contracts).

*NSW*, *Post-Event*, and all other controls are as defined above and found in equation (5). Similar to above, we include year, firm, and union fixed effects, and standard errors are double-clustered at the year and firms levels. Since the residual obtained from estimating equation (1) is at the firm level, estimating a regression with firm fixed effects spans the firm-level residual, and thus is not tabulated<sup>15</sup>.

Standard errors are double-clustered at the year and firm levels. The errors are also corrected for the two-step procedure with generated regressors as described in Murphy and Topel (1985).

#### 4.4 Descriptive statistics

Panel A of Table 1 reports descriptive statistics for the entire equity sample. All variables are winsorized at the 1<sup>st</sup> and 99<sup>th</sup> percentiles. The average unionization rate in our sample is roughly 16%. The average total direct political contributions made by contributing firms over the previous four years is \$18.4 million. Firms in our sample average \$744 million in total assets and have an average market-to-book ratio of 4.7. Panel B compares the means of several variables of NSW and non-NSW firms. As expected, NSW firms contributed significantly more to NSW political parties. In addition, NSW firms have significantly higher book asset value and leverage. No other variables used in our analysis are significantly different between NSW and other Australian states. In unreported univariate tests, we

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<sup>14</sup>We estimate the residual around the first event day since all post-event contracts were negotiated following this time. In untabulated tests, our results are robust to excluding the interaction between *NSW* and *Union* from equation (1) when estimating the residual.

<sup>15</sup>Similar to the contract analysis, results are robust to using industry fixed effects and clustering at the industry level rather than firm level. In addition, results are robust to interacting firm and year fixed effects.

find that NSW firms in unionized industries have negative and significantly lower average *CAR* than that of similarly unionized firms outside NSW (whose *CAR* was statistically indistinguishable from zero).

Panel A of Table 2 reports descriptive statistics for the contract sample. All variables are winsorized at the 1<sup>st</sup> and 99<sup>th</sup> percentiles. The mean average salary growth over the life of the contract is 3.9%, and the average contract length is 2.5 years. Panel B compares the means of several variables of NSW and non-NSW contracts both pre- and post-event. The average salary growth of NSW and non-NSW contracts are not significantly different pre-event. However, consistent with the labor contracting implications of our hypothesis, NSW contracts have significantly lower salary growth than non-NSW contracts post-event. Firms with NSW contracts have marginally more leverage and are larger, however this difference does not significantly change from pre- to post-event contracts. Finally, the average contract length is not significantly different between NSW and non-NSW contracts or between pre- and post-event contracts.

## 5 Results

### 5.1 Firm Value

Table 3, columns 1, 2, 5, and 6 present the results from regression equation (1). Columns 1 and 2 report results for cumulative abnormal returns around the first event day, March 26, 2011, the date of the NSW election<sup>16</sup>. Columns 5 and 6 present results for cumulative abnormal returns around the second event day, February 16, 2012, when the Bill was passed into law<sup>17</sup>. Standard errors are clustered by industry. Consistent with our hypothesis,

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<sup>16</sup>The NSW election took place on a Saturday. Therefore, our three-day event window includes the trading day before the election, March 25, and the two trading days after the election results were known, March 28 and 29.

<sup>17</sup>The Australian Greens announced their support for the Bill at the close of the market on February 15. Our event window runs from February 15 through 17.

the coefficient on the interaction of Union and NSW is positive and significant: unionized firms in NSW experienced significantly positive abnormal returns relative to their non-NSW counterparts on both event days. Given the potential variation in industrial make-up between NSW and non-NSW firms, we include industry fixed effects in columns 2 and 6; our results are robust to their inclusion. This supports the notion that political power enables unions to extract rents from equity holders. Additionally, in untabulated results, our findings are robust to fully interacting all control variables with the NSW indicator variable and to using Tobin's Q as the measure of firm value.

Economically, after controlling for industry fixed effects, the average unionized firm in NSW experienced positive abnormal returns (relative to their non-NSW counterparts) of 77 basis points and 105 basis points around March 26, 2011 and February 16, 2012 respectively, or 1.82% in total<sup>18</sup>. Lee and Mas (2012) estimate that new unionization is associated with a 10% decline in firm market value, establishing an upper-bound on the average value impact of unions on firms. We believe that our estimate of 1.82% (or 18.2% of the value impact estimated by Lee and Mas (2012)) is both reasonable and significant.

As discussed in the hypothesis section, our events occur on the same day for all firms. Therefore, it is possible that we are underestimating our standard errors by not properly controlling for the cross-sectional correlation present within our sample. Using regression equations (3) and (4), we perform analysis similar to that of Sefcik and Thompson (1986) and report the results in Table 3, columns 3, 4, 7, and 8. Each coefficient estimate reported is the SUR estimate on the event indicators; constants and market betas in these regressions were included in the analysis, but are suppressed for brevity. Columns 3 and 4 report results for the three-day window surrounding the first event day (March 26, 2011). Columns 7 and 8 report results for the three-day window surrounding the second event day (February 16,

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<sup>18</sup>These estimates were obtained by multiplying the coefficient estimates on  $NSW \times Union$  in columns 2 and 6 of Table 3 by the mean unionization rate for NSW (15.4%).

2012).

As can be seen in the results, the coefficients estimated around either event day are positive and statistically and economically significant. This provides continued evidence in support of the firm value implications of our hypothesis: unionized firms in NSW experienced positive abnormal returns around each event day that significantly exceeded estimates on non-event days. Similar to our results using regression equation (1), including industry fixed effects within the regressions in columns 4 and 8 does not change inferences. Finally, the control variable estimates on Size, MB, and Leverage are no longer statistically significant when compared to other event days. This reduces the likelihood that we are simply capturing industry-level risk factors that varied around our event days.

Overall, the findings of Table 3 provide evidence consistent with our hypothesis. Specifically, we find evidence that a reduction in the political power of unions due to the law coincided with an economically significant increase in firm value for unionized firms in NSW. Our results are robust to controlling for known factors that influence unionization, industry effects, and cross-sectional correlation of standard errors on the event days.

Since the Election Funding, Expenditure and Disclosures Amendment Bill 2011 affected corporations in addition to unions, our results could be driven by the elimination of corporate political contributions in NSW. Corporate political donations are associated with firm value (Myers, 2005; Aggarwal, Meschke, and Wang, 2012; Mathur and Singh, 2011). Our estimated effect may, therefore, be biased if corporate political donations are also associated with unionization. We think this is unlikely given the low correlation ( $\rho = 0.050$ ) between unionization and political contributions within NSW. However, to ensure our results are not being driven by an omitted variable bias, Table 4 presents the results from regression equation (1) by explicitly controlling for firm political contributions in NSW. *Political* is the natural log of one plus the firm's political contributions to NSW political parties over the

past 4 years. Similar to Table 3, columns 1 through 4 report results around the first event day, while columns 5 through 8 present results around the second event day. Columns 1, 2, 5, and 6 present results using the standard OLS methodology from equation (1). Columns 3, 4, 7, and 8 present results using the Sefcik-Thompson SUR methodology from equations (3) and (4).

We find continued support for our hypothesis through all specifications: unionized firms in NSW experienced positive and significant returns around the events even after controlling for total political contributions in NSW. In addition, our results continue to be significant after controlling for industry effects or the cross sectional correlation of our standard errors. The results are robust to including separate regressors capturing firm donations by political party, retaining both economic and statistical significance in unreported results.

An alternate explanation for our firm-value results is that investors expected underlying performance to improve at unionized firms following the events. However, we find that, affected firms realized lower operating performance, as measured by return on assets, return on assets excluding personnel expenses, and asset turnover. These changes are relatively small economically and generally statistically insignificant. This finding suggests that the positive CARs we observe for unionized firms in NSW arise from transfers between unions and equity, and are not the result of the market anticipating improved operating performance relative to unaffected firms. We now directly assess this second implication of our hypothesis by examining the impact of the events on contracts negotiated between firms and labor unions.

## 5.2 Contracts

Table 5 presents the results from regression equation (5). Columns 1 and 2 report results using the average salary growth over the life of the contract as the dependent variable, while

columns 3 and 4 report results using the proximate salary growth (the salary growth in the final year of the pre-event contract and in the first year of the post-event contract). Standard errors are clustered by firm and by year. All regressions include year, firm, and union fixed effects.

The results show that the salary growth of contracts in NSW experienced a statistically significant decline ( $p$ -value  $< 0.001$ ) relative to non-NSW contracts following the event in all specifications. Economically, the average annual salary growth of NSW contracts decreased by 0.4%, and the proximal annual salary growth (the last year's growth of the pre-event contract compared to the first year's growth of the post-event contract) decreased by 0.5%. This evidence supports the labor-contracting implications of our hypothesis: union political power is an important determinant in the bargaining position of unions in the labor-firm contracting relationship.

Due to the inclusion of the fixed effects, as described above, the estimates we observe occur both between and within firms, but across states (many firms have contracts both in and out of NSW simultaneously). In unreported regressions, our estimates are robust to fully interacting all coefficients with *Post-Event*, including industry effects rather than firm fixed effects, controlling for state-level economic growth, dropping any post-event contracts negotiated following the first event (March 26, 2011) but before the second event (February 16, 2012), interacting year and firm fixed effects, and estimating the regressions without fixed effects<sup>19</sup>.

### 5.3 Firm Value and Contracts

The prior results show that the change in union political power resulting from the Bill affected firm value and contract negotiations independently. However, we have not explicitly

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<sup>19</sup>In unreported regressions, we find no evidence that the average contract length changed as a result of the Bill. In separate, unreported tests, we find that our firm value results holds for the subsample of 110 firms that negotiated a contract with a union.

demonstrated that the increase in firm value was, in part, the result of investors expecting firms to negotiate more favorable contract with unions. To better understand this, we now examine whether observed changes in firm value from the Bill accurately predicted future contracting outcomes.

Table 6 presents the results from regression equation (6). Similar to Table 5, columns 1 and 2 report results using the average salary growth over the life of the contract as the dependent variable and columns 3 and 4 report results using the proximate salary growth. Standard errors are clustered by firm and by year. These errors are also corrected for the two-step procedure using generated regressors as described in Murphy and Topel (1985). All regressions include year, firm, and union fixed effects.

We find continued support for the second implication of our hypothesis. Namely, the results show that the salary growth of contracts in NSW experienced a statistically significant decline relative to non-NSW contracts following the event, even after including the interaction between the residual of the firm value analysis with *NSW* and *Post-Event*. Similar to what we see in Table 5, the average (proximate) salary growth for NSW contracts after the event is around 0.4% (0.5%) lower than non-NSW contracts.

Consistent with our hypothesis, we find that the strength of this effect is statistically ( $p$ -value  $< 0.001$ ) larger for NSW firms with positive CAR reactions around the first event. Economically, a one standard deviation increase in the residual from the value regression for a firm in NSW (0.020) is associated with an additional 0.2% lower average salary growth and 0.3% lower proximate salary growth than non-NSW contracts post-event. Taken together with our previous results, this evidence supports the notion that the market reactions observed around the election were related to the contracting relationship with unions at those firms. This is consistent with our hypothesis that investors expected (and impounded into prices) the reduction in union political power to reduce the bargaining power of unions and

allow firms to negotiate more favorable contracts.

As discussed above, the inclusion of firm, year, and union fixed effects allows us to measure a within-firm effect. Results are robust to fully interacting all coefficients with *Post-Event*, including industry effects rather than firm fixed effects, controlling for state-level economic growth, interacting year and firm fixed effects, and estimating the regressions without fixed effects.

## 6 Robustness

We find support for our hypothesis in the preceding analysis of equity returns and wage contracting. Market participants view the law as significantly positive for unionized firms in NSW. This is consistent with the existing literature, which finds that unionization is negatively associated with firm value. Our results suggest that it is not merely the collective bargaining ability of unions, but also their political influence, that affects firm value. In addition, we find evidence consistent with the contracting implication of our hypothesis. The reduction of union political power weakened unions' ability to negotiate favorable contracts for their workers.

We now use a variety of data sources and tests to provide a body of evidence demonstrating the robustness of our findings. This provides further support that political power is an important determinant in the contracting relationship between unions and firms.

### 6.1 High Court ruling

As mentioned earlier, the High Court of Australia declared key sections of the Bill unconstitutional on December 18, 2013<sup>20</sup>. This decision would have unambiguous implications for

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<sup>20</sup>The first invalidated section counted against a party's campaign limit any political expenses by an affiliated labor union. The second section limited political donations to individuals and eliminated transfers of donation funds between companies and individuals.

our hypothesis only if it altered investor expectations of either (i) the likelihood of the Coalition passing alternate legislation and (ii) the effectiveness of any such legislation. However, it is not clear that the High Court accomplished either.

The Australian constitution does not contain an explicit right to free speech. High Court decisions have, historically, allowed laws to abridge any implicit right to political expression provided such limits achieve a “legitimate” purpose. In reaching its decision, the Court found that the Bill did not sufficiently target corruption. However, this ruling did not preclude the NSW Parliament from passing revised legislation. Prior to the Bill’s approval by the upper house, the NSW Parliament released a brief anticipating both the challenge to the Bill and the legal criteria used by the High Court. This brief stated that, even if the Bill were deemed not to achieve a “legitimate purpose” from a potential High Court challenge, a “modest variation” could be constitutional and implement the desired reforms (Griffith and Roth, 2012). Immediately following the High Court decision, both the Coalition and the Greens indicated a desire to quickly revisit the reforms in the Bill and pass constitutionally valid legislation (Bibby and Hasham, 2013; Kaye, 2013). Therefore, we believe the ruling did not change investor beliefs that legislation limiting political contributions and advocacy would ultimately be enacted in NSW.

A reasonable assumption is that the Election Funding, Expenditure and Disclosures Amendment Bill 2011 was the most restrictive legislation that could be passed by the NSW Parliament. If this is true, then any alternate legislation would be less restrictive and, therefore, increase union political power. However, if, as suggested by the NSW Parliament brief, only “modest” changes to the Bill are necessary to implement constitutionally valid reforms, then investors should expect a commensurately modest increase in union power.

In the context of our hypothesis and implications, if investors believed the High Court decision modestly increased union political power, then firm value should decrease. We

believe two days may have changed investor expectations that the Bill would be declared unconstitutional. Specifically, we consider the High Court hearing, which began on November 5, 2013, and the High Court decision released on December 18, 2013. We do not include the initiation of the challenge by the unions (April 8, 2013), which was expected.

The results are presented in Table 7. As predicted, we find a negative impact on firm value for unionized firms in NSW in three of the four specifications. The statistical impact of the ruling for unionized NSW firm is never statistically significant. Overall, we view these results as providing little insight into our hypothesis. As discussed above, the perceived difference in the effectiveness between the Bill and alternative legislation may be quite small. Any change in union political power would therefore be minimal. Thus, while we expect to observe negative returns for unionized NSW firms, the economic magnitude may be small and our tests may not have sufficient power to infer statistical significance. We feel we have chosen the most appropriate event days for the High Court decision. However, these days may not have captured a significant change in investor expectations. In addition to the event days selected, the legal case involved public submissions by several involved parties, as well as a number of procedural hearings. Therefore, we believe information diffused slowly into stock prices over the eight months of the legal proceedings. Hence, the economic and statistical power of these tests is quite limited, making it difficult to draw strong conclusions.

## **6.2 *Citizens United***

Because our analysis is centered on the reaction to a law banning union political contributions in New South Wales, Australia, we are potentially capturing relationships only present in Australia that do not have general applicability to the rest of the world. Organized labor plays a similar political role in the United States as it does in Australia. Therefore, we believe our results have global relevance. To ensure the relationship between union political power

and firm value is applicable globally, we use model (1) to test the abnormal returns of US firms around the Supreme Court ruling on *Citizens United v. Federal Election Commission*.

On January 21, 2010, the United States Supreme Court ruled that the portions of the Bipartisan Campaign Reform Act banning soft money donations were unconstitutional. This ruling effectively lifted the restriction on the ability of corporations and unions to spend on advertisements supporting a candidate or position. However, this ruling did not lift restrictions on direct political contributions to candidates. Much of the commentary has focused on the effect of this decision on corporate political contributions. Indeed, several papers have discussed or analyzed the effect of *Citizens United* on the value of contributing firms (for example Coates and John, 2012; Aggarwal, Meschke, and Wang, 2012).

There are several reasons why *Citizens United* may be important for unions as well as corporations. McGinty and Mullins (2012) report that corporate political contributions are roughly equal between both major parties. However, union contributions and member voting drives are much more targeted, overwhelmingly supporting Democratic Party candidates and related issues. This targeted focus stands to strengthen union political power as a result of *Citizens United* (McQuillen, 2012). *Citizens United* also affirmed free speech rights of unions, thereby alleviating restrictions on union picketing activities, strikes, boycotts, and deployment of members in communities to support specific candidates. Given that *Citizens United* increased the ability of unions to make political contributions, as well as increased other measures of political power, Garden (2011) argues that unions may benefit from *Citizens United* in their contracting relationship with firms. We predict that unionized firms will be in a weakened bargaining position relative to unions, and, as a result, will experience negative abnormal returns around this event date.

Table 8 presents the results of estimating a variant of model (1) on publicly traded firms within the United States (omitting the indicator for NSW, as well as its interaction

with unionization). We require that firms be actively traded and have non-missing control variables, as previously defined. Unionization is defined at the industry-level<sup>21</sup>. We find continued support for our hypothesis that union political power significantly influences firm value. The estimated coefficient on Union is negative and significant. Economically, the average unionized firm is associated with an abnormal return of -74 basis points around January 21, 2010. This result is robust to the inclusion of two-digit NAICS industry fixed effects, as well as clustering standard errors by industry. These results are consistent with our previous intuition that union political power is an important mechanism in the interaction between organized labor and firm value, both in Australia and in the United States. Similar to our primary analysis, we also perform a Sefcik-Thompson procedure with daily return data beginning six months prior to and ending six months after the *Citizens United* ruling. We find continued support for our union political power hypothesis after controlling for cross-sectional correlation. The estimated coefficient of unionization for the three-day window surrounding January 21, 2011 was significantly less than the coefficient for the surrounding 12 months.

While *Citizens United* allows us to test our hypothesis in the United States, the passage of the Election Funding, Expenditure and Disclosures Amendment Bill 2011 in NSW provides a better setting to test our hypothesis for the following two reasons: first, *Citizens United* was a removal of a constraint on soft money donations. The NSW Bill restricted all political donations in addition to limiting other political activities. This allows for a stronger analysis by testing the effect of union political power and not just a portion of union pecuniary contributions. Second, *Citizens United* affected the entire United States, while the NSW Bill only restricted political activities within a single Australian state. The NSW law allows an empirical comparison of unionized firms within industry and between states, helping reduce

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<sup>21</sup>Industry unionization variables were obtained following Hirsch and Macpherson (2003) from [www.unionstats.com](http://www.unionstats.com).

any concern that we are simply picking up industry, and not union, effects by using industry-level unionization data. Nevertheless, the *Citizens United* analysis provides further support for the international applicability of our hypothesis and previous findings.

### 6.3 Leverage

If we are capturing a reduction in union bargaining power due to a loss in political power, this reduction should not only influence firm value, but also how the firm interacts with unions. Matsa (2010) and Myers and Saretto (2011) find that unionized firms strategically adjust leverage to credibly reduce operating flexibility and weaken the bargaining power of their unionized workforce. Unionized firms may appear to have higher-than-optimal leverage because of the labor-firm bargaining relationship. Given these findings, a natural extension of our hypothesis is to examine the influence of union political power on the strategic use of leverage by firms. If firms adjust leverage to strengthen their bargaining positions relative to unions, and union political power increases union bargaining power, we predict that union political power is a determinant in firms' leverage decision. As a robustness check, we test whether a reduction in union political power causes firms to lower their leverage.

To perform this analysis we follow Matsa (2010) and estimate the following model in columns 1-3 of Table 9:

$$\begin{aligned}
 lev_{i,t} = & \beta_0 + \beta_1 NSW_i + \beta_2 Post-Event_t + \beta_3 Union_{i,t} + \beta_4 NSW_i \times Post-Event_t \\
 & + \beta_5 NSW_{i,j} \times Union_{i,t} + \beta_6 Post-Event_t \times Union_{i,t} \\
 & + \beta_7 NSW_{i,j} \times Post-Event_t \times Union_{i,t} + \beta_4 Controls_{i,t} + \epsilon_{i,j,t}
 \end{aligned}$$

We perform our analysis from fiscal years 2010-13 on a similar sample of firms described in Section 4.  $lev_{i,t}$  is defined as above as the book value of interest-bearing debt scaled by the book value of total assets<sup>22</sup>. *Post-Event* is an indicator variable equal to one if the firm's

fiscal year is after March 26, 2011, the first event date (fiscal years 2012 and 2013), and zero otherwise (fiscal years 2010 and 2011). *Union* and *NSW* are as previously defined. Following Matsa (2010), we include beginning-of-year controls common in the leverage literature. We include profit variability (the standard deviation of the annual change in earnings before depreciation and amortization over the prior 10 years, divided by lagged total assets), the proportion of fixed assets, the market-to-book ratio, size (the log of total sales), modified Altman’s *z*-score (MacKie-Mason, 1990), and return on assets. We also include year and industry fixed effects, as well as their interactions. Standard errors are clustered by industry and robust to clustering by firm.

To perform further analysis we estimate the following model in column 4 of Table 9:

$$\begin{aligned} \Delta lev_{i,t} = & \beta_0 + \beta_1 Union_{i,t} + \beta_2 NSW_i + \beta_3 Union_{i,t} \times NSW_i \\ & + \beta_4 Controls_{i,t} + \epsilon_{i,t} \end{aligned} \quad (6)$$

$\Delta lev_{i,t}$  is defined as the change in leverage (the book value of interest-bearing debt scaled by the book value of total assets) around the first event date (March 26, 2011). All other variables and controls are as defined above. We also include lagged changes in our controls and industry fixed effects as well.

Table 9 presents the results of this robustness check. As predicted above, the coefficient on the triple-interaction in column 3 between *NSW*, *Post-Event*, and *Union* is negative and significant. As predicted above, unionized firms in NSW significantly reduced their leverage relative to their unionized peers in other states following the election<sup>23</sup>. We find further support by analyzing the change in firm leverage in column 4. All else equal, the average unionized firm in NSW has 3.8% lower leverage following the election than its unionized peers

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<sup>22</sup>In unreported results, inferences remain unchanged when the dependent variable is scaled by the market value of equity rather than the book value of total assets.

in other states and non-unionized firms within NSW. We interpret this evidence as continued support that the political power of unions is an important mechanism in the relationship between organized labor and firm value and behavior.

#### 6.4 Parallel Trend Assumption in Contract Analysis

We perform analysis on the change in contracted salary growth prior to and following the NSW law using a difference-in-difference regression methodology. As such, a parallel trend assumption is implied in this analysis. Specifically, we require changes in the differences between NSW and non-NSW contracted salary growth to change as a result of the event and not some other time-varying factor. A potential criticism of our contract results is that it is possible that the relationship we see (NSW salary growth to be roughly equal prior to the event and significantly lower post-event) is a result of an unrelated reduction in salary growth over time due to differing economic conditions between NSW and the rest of the country. Alternatively, the passage of the law itself could be driven by a changing economic climate (see Bertrand and Mullainathan, 2003).

To ensure our results are not being driven by some historical decline in NSW salary growth or changing economic conditions, we explicitly perform analysis similar to Table 5 using contracts from the pre-event period of the sample (prior to March 26, 2011). We create several pseudo-events from 2007-10 to analyze whether we see a similar interacted effect between *NSW* and *Union*. As can be seen in Table 10, we find no evidence of declining NSW salary growth prior to our event. In fact, the difference between NSW and non-NSW salary growth is significantly higher in 2009 and 2010 relative to preceding years. This provides evidence against the above criticism; in fact, we find some support that the difference between NSW and non-NSW salary growth seemed to be increasing prior to

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<sup>23</sup>We include a column of uninteracted independent variables (column 1) and standard interacted variables (column 2) to ensure we are results are not being driven by multicollinearity. As demonstrated by the relative stability of the estimates, this does not seem to be a concern.

the actual event. In addition, our contract results are robust to controlling for state-level economic growth (using gross state product growth, as well as trailing three-year average state product growth) in unreported tests. This alleviates the concern that the law itself could have been enacted due to changing economic conditions.

## **6.5 Disentangling the Effects of the Bill from the Election**

A potential criticism of our analysis is that we are capturing an election effect rather than the measuring the direct effect of the Bill. For example, the party in power may represent a more important impact on the contracting relationship between firms and unions than the political power of unions. When the Liberal-National Coalition won the 2011 NSW election, investors could have discounted the bargaining power of unions with a less union-friendly government in power. Additionally, investors could be anticipating future laws not friendly to unions that are not directly related to the Bill. The second event date, while not representing an election, could be a signal that the ALP would have an even more difficult time returning to power without union contributions and advocacy. While this alternate explanation is still supportive of our hypothesis (the political power of unions is an important determinant in the contracting relationship), it does reduce the direct effect of the Bill.

We believe the above alternate explanation is unlikely since we find evidence of our effect within the United States as a result of a *Citizens United* ruling that did not coincide with a major election. To further disentangle our previously estimated effect from any election effect, we perform similar event analysis on abnormal returns as found in Table 3 around two other recent state elections in Australia. On November 27, 2010, the ALP narrowly lost its majority to the Liberal-National Coalition in both upper and lower houses of Victoria, Australia. Similarly, on March 25, 2012, the ALP lost its majority by a large margin to the Liberal-National Coalition in Queensland, Australia after two decades of control.

These two events allow us to test the effect of a similar election to NSW (the removal of a party friendly to labor unions) without any similar political contribution and advocacy legislation being campaigned for or proposed. As seen in Table 11, we do not see an effect in Victoria or Queensland around their elections similar to what we see found in NSW. In fact, the interaction between *State* and *Union* is consistently negative across both elections and marginally significant around the Queensland election when industry fixed effects are not included. We interpret these results as evidence that our estimated effect in Table 3 is due to limitations on union political power, which subsequently reduced their bargaining power. The removal of a party friendly to unions without the accompanying law seems to have little effect on the value of unionized firms.

## 6.6 Industry Level Unionization

Since we are using an industry level factor in our measure for unionization, alternative explanations for the results we find in our analysis may be driven by a differing industry composition or economic shocks inside and outside NSW. Indeed, the proportion of mining and materials companies is higher outside of NSW than inside NSW. However, we consider this unlikely for several reasons. As discussed previously, our results are robust to including industry fixed effects, as well as in unreported results fully interacting the NSW indicator with all control variables. In addition, in Table 5, we find evidence at the intra-firm contract level in support of our hypothesis. In untabulated results, all of our previous findings are also robust to defining industries at the four-digit rather than two-digit GICS level. Despite the discussion above, for completeness, we perform two robustness checks.

First, following Rosenbaum and Rubin (1983), we perform our analysis using a matched sample. We match each firm-event day observation from NSW with a non-NSW firm with replacement. We match by eight-digit GICS industry and total asset tercile on the same event

day. If a suitable non-NSW based firm is not found, we continue this matching process at the six-digit GICS, then four-digit GICS, and finally two-digit GICS industry classification<sup>24</sup>. In untabulated regressions, we find qualitatively and quantitatively similar results to those found in our previous analysis.

Second, we utilize labor intensity (measured as the ratio of employees to sales or as labor expenses to sales), a firm-level variable positively correlated with unionization, as a proxy for union political power. In untabulated tests, we find significant and qualitatively similar results using labor intensity instead of industry unionization<sup>25</sup>.

## 7 Conclusion

The interaction between Labor and Capital is a fundamental component of economic theory. Despite this importance, the majority of research has focused on firm value and policies in isolation from labor and collective bargaining. The contracting relationship between firms and organized labor is an important determinant of firm value and financial decision-making. Union bargaining power has been identified in theoretical labor models (Ashenfelter and Johnson, 1969; Grout, 1984) and applied in empirical labor and finance research (for example Blaylock, Edwards, and Stanfield, 2013; Chen, Kacperczyk, and Ortiz-Molina, 2011; Lee and Mas, 2012; Matsa, 2010; Klasa, Maxwell, and Ortiz-Molina, 2009) as a fundamental determinant of this relationship. Early labor economic research, such as Ashenfelter and Johnson (1969) and Calmfors, Driffill, Honkapohja, and Giavazzi (1988) identified collective bargaining capacity and political power as important factors driving union bargaining power relative to the firm. Despite this research, we still have a limited understanding of the determinants of this contracting relationship.

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<sup>24</sup>Several matches within the sample are duplicate firms. While this provides better matching, results are qualitatively similar if matching is performed without replacement.

<sup>25</sup>While the results are qualitatively similar and remain significant, the magnitude of the coefficient is reduced when we use labor intensity as our proxy for union political power.

The previous empirical literature has almost exclusively focused on union collective bargaining capacity, either directly through testing the effects of changes in “right-to-work” laws, or indirectly by assuming that the proportion of unionized workers is positively associated with union bargaining power. This focus is understandable, given the co-determined nature of unionization, the ability to collectively bargain, and union political power.

We make use of a recent law in NSW, Australia to disentangle these effects. The Election Funding, Expenditure and Disclosures Amendment Bill 2011 significantly reduced unions’ political power while leaving their ability to collectively bargain relatively untouched. This law provides a unique pseudo-natural experiment to empirically examine the effects of union political power on the contracting relationship between organized labor and the firm, relatively free of endogeneity concerns. We believe we are the first to directly examine the effect of union political power as a determinant of the contracting relationship between unions and firms.

We find evidence that union political power is negatively associated with firm value and direct evidence that union political power is positively associated with organized labor’s ability to negotiate more favorable contract terms. We also find evidence that these results are related: firms that experienced the largest increase in value also negotiated the most favorable contracts with unions. We present robust findings that are consistent with union political power being a mechanism by which unions can extract rents from equity holders, independent of unions’ ability to collectively bargain. We corroborate this finding in the United States around the Supreme Court’s ruling on *Citizens United v. Federal Election Commission* in January 2010, and with leverage changes in Australia.

Overall, our evidence suggests that the political activities (and access to government) of organized labor are important to the valuation and decision-making of firms. These results can be used to guide future research regarding union (or any other large, politically powerful

stakeholder) relationships with firms. Specifically, this study highlights opportunities for future research with regard to bargaining between labor and firms and its effect on firm value and policy. This study also highlights opportunities for further research concerning declining trends in union membership, but increasing trends in union political participation and power. The key role that unions play in the political, economic, and financial markets is an important consideration for future finance research.

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Table 1: Equity Sample Summary Statistics

Panel A presents summary statistics on 639 firm-event observations. The events are March 26, 2011, the date of the Liberal-National Coalition electoral victory, and February 16, 2012, the date the Election Funding, Expenditure and Disclosures Amendment Bill 2011 was passed by the New South Wales (NSW) Parliament. *Mean* and *SD* reports the means and standard deviations. *p1*, *p25*, *p75*, and *p99* show the 1<sup>st</sup>, 25<sup>th</sup>, 75<sup>th</sup>, and 99<sup>th</sup> percentile values, respectively. Panel B presents summary statistics comparing 226 firm-event observations with firms headquartered in NSW and 413 firm-events with firms headquartered outside NSW. It also reports the difference between the means of firms located in NSW and firms not located in NSW and the *p*-value of this difference. Differences marked with \*\*\*, \*\* and \* are significant at the 1%, 5%, and 10% level, respectively. Panel C presents the Pearson correlations of variables at the firm-event level. *CAR* is the cumulative abnormal equity return for the 3-day window surrounding each event date; *NSW* is an indicator variable equal to 1 if the firm is headquartered in New South Wales and 0 otherwise; *Union* is the industry-level unionization rate; *Size* is the natural log of 1 + the total book value of assets (in millions A\$); *MB* is the market value of equity divided by the book value of equity; *Leverage* is the book value of interest-bearing debt divided by the book value of total assets; and *Political* is the natural log of 1 + the total amount (in thousands of A\$) of political contributions made in NSW over the previous 4 years. All continuous variables are winsorized at the 1<sup>st</sup> and 99<sup>th</sup> percentile.

<b>Panel A: Summary Statistics</b>							
N = 639	Mean	SD	Distribution				
			p1	p25	Median	p75	p99
<i>CAR</i>	-0.007	0.043	-0.103	-0.026	-0.007	0.010	0.125
<i>NSW</i>	0.354	0.478	0.000	0.000	0.000	1.000	1.000
<i>Union</i>	0.159	0.092	0.019	0.094	0.170	0.213	0.423
<i>Size</i>	6.613	1.660	4.654	5.352	6.188	7.556	11.891
<i>MB</i>	4.653	30.236	0.003	0.873	1.652	3.380	18.927
<i>Leverage</i>	0.204	0.193	0.000	0.050	0.168	0.294	0.842
<i>Political</i>	0.861	2.833	0.000	0.000	0.000	0.000	11.680

<b>Panel B: Mean Comparison of NSW and non-NSW Headquartered Companies</b>						
	NSW (N=226)		Non-NSW (N=413)		Difference	<i>p</i> -Value
	Mean	SD	Mean	SD		
<i>CAR</i>	-0.005	0.043	-0.008	0.048	0.002	0.484
<i>Union</i>	0.154	0.092	0.161	0.085	-0.007	0.358
<i>Size</i>	6.984	1.660	6.410	1.587	0.574***	0.000
<i>MB</i>	3.823	30.236	5.108	35.627	-1.285	0.608
<i>Leverage</i>	0.245	0.193	0.182	0.170	0.062***	0.000
<i>Political</i>	1.694	2.833	0.405	1.958	1.289***	0.000

Table 1: Continued

<b>Panel C: Correlations</b>							
	1	2	3	4	5	6	7
1 <i>CAR</i>	1						
2 <i>NSW</i>	0.028	1					
3 <i>Union</i>	-0.064	-0.036	1				
4 <i>Size</i>	0.075	0.165	0.096	1			
5 <i>MB</i>	-0.033	-0.020	-0.039	-0.015	1		
6 <i>Leverage</i>	0.074	0.154	-0.064	0.204	0.172	1	
7 <i>Political</i>	0.016	0.218	0.050	0.371	-0.035	-0.013	1

Table 2: Contract Sample Summary Statistics

Panel A presents summary statistics on 1,286 labor contracts and their associated firms. *Mean* and *SD* reports the means and standard deviations. *p1*, *p25*, *p75*, and *p99* show the 1<sup>st</sup>, 25<sup>th</sup>, 75<sup>th</sup>, and 99<sup>th</sup> percentile values, respectively. Panel B presents summary statistics comparing 204 labor contracts negotiated in New South Wales (NSW) prior to (following) the event and 439 labor contracts negotiated outside of NSW prior to (following) the event. It also reports the difference between the means of variables for contracts negotiated in NSW and contracts negotiated outside NSW and the *p*-value of this difference. Differences marked with \*\*\*, \*\* and \* are significant at the 1%, 5%, and 10% level, respectively. Panel C present the Pearson correlations of the variables at the contract level. *Average Salary Growth* is the average contracted annual salary growth over the life of the labor contract; *Proximate Salary Growth* is the annual salary growth of the last (first) year of the contract for contracts agreed upon prior to (following) the event; *Contract Length* is the length (in years) of the labor contract; *NSW* is an indicator variable equal to 1 if the contract is negotiated in NSW and 0 otherwise; *Post-event* is an indicator variable equal to 1 if the contract was negotiated after March 26, 2011, the date of the Liberal-National Coalition electoral victory, and 0 otherwise; *NSW × Post-Event* is the interaction of *NSW* and *Post-event*; *Size* is the natural log of 1 + the total book value of the firm's assets (in millions A\$); *MB* is the firm's market value of equity divided by the book value of equity; *Leverage* is the firm's book value of interest-bearing debt divided by the book value of total assets; and *Cash* is the firm's cash and marketable securities divided by the book value of total assets. All continuous variables are winsorized at the 1<sup>st</sup> and 99<sup>th</sup> percentile.

Panel A: Summary Statistics			Distribution				
N = 1286	Mean	SD	p1	p25	Median	p75	p99
<i>Ave. Salary Growth</i>	3.901	0.827	2.000	3.333	4.000	4.500	6.000
<i>Prox. Salary Growth</i>	3.928	0.955	2.000	3.400	4.000	4.500	7.000
<i>Contract Length</i>	2.546	0.868	0.000	2.000	3.000	3.000	5.000
<i>NSW</i>	0.317	0.466	0.000	0.000	0.000	1.000	1.000
<i>Post-Event</i>	0.500	0.500	0.000	0.000	0.500	1.000	1.000
<i>NSW × Post-Event</i>	0.159	0.365	0.000	0.000	0.000	0.000	1.000
<i>Size</i>	7.876	1.511	4.284	6.768	8.127	8.823	10.653
<i>MB</i>	2.169	2.073	0.334	1.065	1.552	2.563	10.524
<i>Leverage</i>	0.240	0.131	0.000	0.159	0.227	0.300	0.624
<i>Cash</i>	0.059	0.065	0.000	0.020	0.040	0.078	0.322

Table 2: Continued

**Panel B: Mean Comparison of NSW and non-NSW Contracts Pre- and Post-Event**

Pre-Event	NSW (N=204)		Non-NSW (N=439)		Difference	<i>p</i> -Value
	Mean	SD	Mean	SD		
<i>Ave. Salary Growth</i>	3.893	0.826	3.950	0.831	-0.057	0.415
<i>Prox. Salary Growth</i>	3.940	1.020	3.890	0.864	0.050	0.517
<i>Contract Length</i>	2.544	0.838	2.508	1.002	0.036	0.655
<i>Size</i>	7.930	1.505	7.706	1.562	0.224*	0.088
<i>MB</i>	2.693	2.694	2.663	2.330	0.029	0.888
<i>Lev</i>	0.288	0.153	0.267	0.135	0.021*	0.074
<i>Cash</i>	0.051	0.053	0.059	0.080	-0.008	0.172

  

Post-Event	NSW (N=204)		Non-NSW (N=439)		Difference	<i>p</i> -Value
	Mean	SD	Mean	SD		
<i>Ave. Salary Growth</i>	3.549	0.756	4.021	0.812	-0.472***	0.000
<i>Prox. Salary Growth</i>	3.586	0.930	4.119	0.977	-0.534***	0.000
<i>Length</i>	2.539	0.815	2.588	0.756	-0.048	0.461
<i>Size</i>	8.103	1.427	7.915	1.485	0.188	0.131
<i>MB</i>	1.649	1.540	1.673	1.404	-0.024	0.844
<i>Lev</i>	0.220	0.104	0.202	0.115	0.018*	0.053
<i>Cash</i>	0.058	0.047	0.064	0.060	-0.007	0.172

**Panel C: Correlations**

	1	2	3	4	5	6	7	8	9
1 <i>Ave. Salary Growth</i>	1								
2 <i>Prox. Salary Growth</i>	0.887	1							
3 <i>Contract Length</i>	0.107	0.088	1						
4 <i>NSW</i>	-0.149	-0.118	-0.003	1					
5 <i>Post-Event</i>	-0.037	0.023	0.030	0.000	1				
6 <i>NSW × Post-Event</i>	-0.185	-0.156	-0.003	0.637	0.434	1			
7 <i>Size</i>	-0.116	-0.089	-0.039	0.063	0.066	0.065	1		
8 <i>MB</i>	0.051	0.031	0.125	0.001	-0.243	-0.109	-0.118	1	
9 <i>Leverage</i>	0.052	0.039	0.108	0.070	-0.250	-0.067	0.169	0.114	1
10 <i>Cash</i>	0.106	0.093	0.047	-0.053	0.047	-0.009	-0.188	0.264	-0.225

Table 3: Union Political Power and Firm Value

The table reports empirical results from ordinary least squares (OLS) and Sefcik-Thompson (1986) models examining the relationship between a change in union political power on key event dates and firm values. The dependent variable in the OLS models is Cumulative Abnormal Return (CAR) over the 3-day window surrounding each event day. The dependent variable in the Sefcik-Thompson models is daily return with coefficient estimates computed as per the procedure describe in Section 4. All other variables are as defined in Table 1. Columns 1-4 report estimated coefficients for March 26, 2011, the day of the Liberal-National Coalition electoral victory. Columns 5-8 report estimated coefficients for February 16, 2012, the day the Bill was passed by the NSW Parliament. OLS standard errors are robust to heteroskedasticity and within-industry correlation. Sefcik-Thompson standard errors are robust to hereoskedasticity and cross-sectional correlation between firms with shared event days. Industry fixed effects (FE) are defined at the 2-digit GICS level.  $p$ -values are reported in parentheses. Coefficients marked with \*\*\*, \*\* and \* are significant at the 1%, 5%, and 10% level, respectively.

	March 26, 2011				February 16, 2012			
	OLS		Sefcik-Thompson		OLS		Sefcik-Thompson	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
<i>NSW</i>	-0.016*** (0.005)	-0.011** (0.004)	-0.005 (0.262)	-0.011 (0.523)	-0.013** (0.004)	-0.013*** (0.003)	-0.007 (0.135)	-0.007 (0.132)
<i>Union</i>	-0.053** (0.020)	-0.021 (0.023)	-0.011 (0.301)	-0.020* (0.059)	-0.100* (0.047)	-0.054 (0.041)	-0.036*** (0.005)	-0.019*** (0.001)
<i>NSW</i> $\times$ <i>Union</i>	0.086*** (0.025)	0.050* (0.024)	0.024 (0.134)	0.036** (0.022)	0.105** (0.037)	0.068*** (0.020)	0.046*** (0.002)	0.034*** (0.005)
<i>Size</i>	0.003*** (0.001)	0.003*** ( $<0.001$ )	0.001 (0.969)	0.001 (0.934)	0.001 (0.001)	$<0.001$ (0.001)	$<0.001$ (0.445)	$<0.001$ (0.505)
<i>MB</i>	$-\mathbf{<0.001}^{***}$ ( $<0.001$ )	$-\mathbf{<0.001}^{***}$ ( $<0.001$ )	$-\mathbf{<0.001}$ (0.915)	$-\mathbf{<0.001}$ (0.937)	$<0.001$ ( $<0.001$ )	$<0.001$ ( $<0.001$ )	$-\mathbf{<0.001}$ (0.901)	$-\mathbf{<0.001}$ (0.889)
<i>Leverage</i>	-0.004 (0.005)	-0.005 (0.007)	-0.003 (0.302)	-0.003 (0.317)	0.025** (0.009)	0.010 (0.011)	0.008 (0.529)	0.002 (0.632)
<i>Constant</i>	-0.009 (0.007)	-0.016*** (0.005)	-0.023 (0.931)	-0.021 (0.909)	-0.009 (0.010)	-0.005 (0.012)	-0.020 (0.998)	-0.019 (0.980)
<i>Industry FE</i>	No	Yes	No	Yes	No	Yes	No	Yes
<i>Adjusted-R<sup>2</sup></i>	0.035	0.065			0.023	0.039		
<i>N</i>	328	328	249	249	311	311	249	249

Table 4: Union Political Power and Firm Value (Controlling for Political Contributions)

The table reports empirical results from ordinary least squares (OLS) and Sefcik-Thompson (1986) models examining the relationship between a change in union political power on key event dates and firm values. The dependent variable in the OLS models is Cumulative Abnormal Return (CAR) over the 3-day window surrounding each event day. The dependent variable in the Sefcik-Thompson models is daily return with coefficient estimates computed as per the procedure describe in Section 4. All other variables are as defined in Table 1. Columns 1-4 report estimated coefficients for March 26, 2011, the day of the Liberal-National Coalition electoral victory. Columns 5-8 report estimated coefficients for February 16, 2012, the day the Bill was passed by the NSW Parliament. OLS standard errors are robust to heteroskedasticity and within-industry correlation. Sefcik-Thompson standard errors are robust to hereoskedasticity and cross-sectional correlation between firms with shared event days. Industry fixed effects (FE) are defined at the 2-digit GICS level.  $p$ -values are reported in parentheses. Coefficients marked with \*\*\*, \*\* and \* are significant at the 1%, 5%, and 10% level, respectively.

	March 26, 2011				February 16, 2012			
	OLS		Sefcik-Thompson		OLS		Sefcik-Thompson	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
<i>NSW</i>	-0.016*** (0.009)	-0.011** (0.020)	-0.011 (0.523)	0.001 (0.105)	-0.013*** (0.006)	-0.013*** (0.001)	-0.019 (0.247)	<0.001 (0.778)
<i>Union</i>	-0.053** (0.029)	-0.021 (0.391)	-0.020* (0.059)	-0.011 (0.314)	-0.100* (0.067)	-0.054 (0.221)	-0.036*** (0.005)	-0.019*** (0.001)
<i>NSW</i> $\times$ <i>Union</i>	0.088*** (0.008)	0.051* (0.064)	0.036** (0.022)	0.024 (0.127)	0.106** (0.024)	0.067** (0.019)	0.046*** (0.002)	0.034*** (0.005)
<i>Size</i>	0.003*** (0.005)	0.003*** (<0.001)	0.001 (0.934)	0.001 (0.963)	0.001 (0.543)	-<0.001 (0.955)	0.001 (0.342)	<0.001 (0.429)
<i>MB</i>	-<0.001*** (<0.001)	-<0.001*** (<0.001)	-<0.001 (0.937)	-<0.001 (0.913)	<0.001 (0.426)	<0.001 (0.441)	-<0.001 (0.901)	-<0.001 (0.889)
<i>Leverage</i>	-0.005 (0.349)	-0.005 (0.505)	-0.003 (0.317)	-0.003 (0.312)	0.025** (0.024)	0.010 (0.386)	0.008 (0.568)	0.003 (0.655)
<i>Political</i>	-<0.001 (0.572)	-<0.001 (0.687)	-<0.001 (0.690)	-<0.001 (0.738)	-<0.001 (0.903)	<0.001 (0.884)	-<0.001 (0.437)	<0.001 (0.613)
<i>Constant</i>	-0.010 (0.227)	-0.017** (0.023)	-0.021 (0.909)	-0.023 (0.927)	-0.010 (0.364)	-0.004 (0.703)	-0.020 (0.991)	-0.019 (0.986)
<i>Industry FE</i>	No	Yes	No	Yes	No	Yes	No	Yes
<i>Adjusted-R<sup>2</sup></i>	0.032	0.063			0.020	0.036		
<i>N</i>	328	328	249	249	311	311	249	249

Table 5: Union Political Power and Contracted Salary Growth

The table reports empirical results from panel regressions examining how union political power affects contracts negotiated between firms and labor unions. The dependent variable in columns 1 and 2 is the average annual salary growth over the life of the contract. The dependent variable in columns 3 and 4 is the annual salary growth in the year proximate to March 26, 2011, the day of the Liberal-National Coalition electoral victory. For contracts agreed upon prior to (following) the event, the proximate salary growth is the salary growth in the last (first) year of the contract. All variables are as defined in Table 2. Standard errors are robust to heteroskedasticity and clustered to allow for both within-year and within-firm correlation. Firm FE are Union FE are fixed effects based on the firm and union(s) involved in each contract, respectively. Year FE are fixed effects based on the year in which the firm and union(s) agreed to the contract.  $p$ -values are reported in parentheses. Coefficients marked with \*\*\*, \*\* and \* are significant at the 1%, 5%, and 10% level, respectively.

	Average Salary Growth		Proximate Salary Growth	
	(1)	(2)	(3)	(4)
<i>NSW</i>	0.015 (0.880)	0.015 (0.886)	0.127 (0.195)	0.130 (0.179)
<i>Post-Event</i>	0.026 (0.817)	0.027 (0.807)	0.125 (0.287)	0.131 (0.271)
<i>NSW × Post-Event</i>	-0.402*** ( $<0.001$ )	-0.400*** ( $<0.001$ )	-0.573*** ( $<0.001$ )	-0.572*** ( $<0.001$ )
<i>Size</i>		0.137 (0.173)		0.095 (0.349)
<i>MB</i>		0.022 (0.328)		0.024 (0.361)
<i>Leverage</i>		-0.298 (0.408)		0.078 (0.841)
<i>Cash</i>		0.212 (0.802)		0.761 (0.322)
<i>Constant</i>	2.814*** ( $<0.001$ )	1.794** (0.011)	3.027*** ( $<0.001$ )	2.193*** (0.002)
<i>Firm FE</i>	Yes	Yes	Yes	Yes
<i>Union FE</i>	Yes	Yes	Yes	Yes
<i>Year FE</i>	Yes	Yes	Yes	Yes
<i>Adjusted-R<sup>2</sup></i>	0.360	0.360	0.252	0.251
<i>N</i>	1286	1286	1286	1286

Table 6: Union Political Power, Abnormal Changes in Firm Value, and Contracted Salary Growth

The table reports empirical results from panel regressions examining how union political power affects contracts negotiated between firms and labor unions and whether market participants anticipated contracting outcomes. The dependent variable in columns 1 and 2 is the average annual salary growth over the life of the contract. The dependent variable in columns 3 and 4 is the annual salary growth in the year proximate to March 26, 2011, the day of the Liberal-National Coalition electoral victory. For contracts agreed upon prior to (following) the event, the proximate salary growth is the salary growth in the last (first) year of the contract.  $\epsilon_{CAR}$  is the firm's abnormal cumulative average return (CAR) around March 26, 2011 from the model presented in column 2 of Table 3. All other variables are as defined in Table 2. Standard errors are robust to heteroskedasticity, clustered to allow for both within-year and within-firm correlation, and corrected for generated regressors in 2-step procedures per Murphy and Topel (1985). Firm FE are Union FE are fixed effects based on the firm and union(s) involved in each contract, respectively. Year FE are fixed effects based on the year in which the firm and union(s) agreed to the contract.  $p$ -values are reported in parentheses. Coefficients marked with \*\*\*, \*\* and \* are significant at the 1%, 5%, and 10% level, respectively.

	Average Salary Growth		Proximate Salary Growth	
	(1)	(2)	(3)	(4)
<i>NSW</i>	-0.020 (0.852)	-0.012 (0.909)	0.038 (0.741)	0.048 (0.668)
<i>Post-Event</i>	0.286 (0.167)	0.347* (0.075)	0.379** (0.030)	0.456*** (0.006)
<i>NSW</i> × <i>Post-Event</i>	-0.370*** (0.002)	-0.382*** ( $<0.001$ )	-0.514*** (0.001)	-0.530*** ( $<0.001$ )
<i>NSW</i> × $\epsilon_{CAR}$	-1.895 (0.619)	4.080 (0.327)	-3.252 (0.409)	4.290 (0.340)
<i>Post-Event</i> × $\epsilon_{CAR}$	4.140 (0.141)	7.187*** (0.010)	6.450* (0.091)	10.297*** (0.008)
<i>NSW</i> × <i>Post-Event</i> × $\epsilon_{CAR}$		-11.432*** (0.005)		-14.430** (0.012)

(Continued)

Table 6: Continued

	Average Salary Growth		Proximate Salary Growth	
	(1)	(2)	(3)	(4)
<i>Size</i>	0.109 (0.258)	0.092 (0.336)	0.032 (0.786)	0.010 (0.927)
<i>MB</i>	0.022 (0.417)	0.024 (0.368)	0.026 (0.349)	0.028 (0.289)
<i>Leverage</i>	-0.356 (0.489)	-0.329 (0.510)	0.117 (0.831)	0.151 (0.772)
<i>Cash</i>	0.710 (0.328)	0.372 (0.588)	1.047 (0.217)	0.620 (0.422)
<i>Constant</i>	-<0.001 (0.632)	-<0.001 (0.635)	<0.001 (0.812)	<0.001 (0.829)
<i>Firm FE</i>	Yes	Yes	Yes	Yes
<i>Union FE</i>	Yes	Yes	Yes	Yes
<i>Year FE</i>	Yes	Yes	Yes	Yes
<i>Adjusted-R<sup>2</sup></i>	0.376	0.380	0.290	0.295
<i>N</i>	946	946	946	946

Table 7: The High Court Decision and Firm Value

The table reports empirical results from ordinary least squares models examining how firm values reacted to key events dates for the High Court of Australia's decision on the Election Funding, Expenditure and Disclosures Amendment Bill 2011. The dependent variable in all columns is Cumulative Abnormal Return (CAR) over the 3-day window surrounding each event day. All other variables are as defined in Table 1. Columns 1 and 2 report estimated OLS coefficients for November 5, 2013, the day of the initial High Court hearing on the Bill. Columns 3 and 4 report estimated OLS coefficients for December 18, 2013, the day the High Court ruled the Bill unconstitutional. Standard errors are robust to heteroskedasticity and within-industry correlation. Industry fixed effects (FE) are defined at the 2-digit GICS level.  $p$ -values are reported in parentheses. Coefficients marked with \*\*\*, \*\* and \* are significant at the 1%, 5%, and 10% level, respectively.

	November 5, 2013		December 18, 2013	
	(1)	(2)	(3)	(4)
<i>NSW</i>	-0.009 (0.182)	-0.001 (0.821)	-0.002 (0.840)	-0.003 (0.684)
<i>Union</i>	-0.028 (0.198)	-0.005 (0.853)	-0.008 (0.778)	-0.010 (0.782)
<i>NSW</i> × <i>Union</i>	0.012 (0.650)	-0.018 (0.537)	-0.013 (0.788)	-0.003 (0.957)
<i>Size</i>	0.003*** (0.005)	0.004*** (0.002)	0.003*** (0.009)	0.004** (0.011)
<i>MB</i>	-0.001 (0.596)	-0.001 (0.692)	<0.001 (0.975)	<0.001 (0.898)
<i>Leverage</i>	-0.001 (0.939)	<0.001 (0.997)	0.016** (0.014)	0.010 (0.266)
<i>Constant</i>	-0.023** (0.016)	-0.042*** (<0.001)	-0.025** (0.015)	-0.038*** (0.002)
<i>Industry FE</i>	No	Yes	No	Yes
<i>Adjusted-R<sup>2</sup></i>	0.006	0.051	0.011	0.026
<i>N</i>	343	343	336	336

Table 8: Citizen's United v. Federal Election Commission and Firm Value

The table reports empirical results from ordinary least squares (OLS) and Sefcik-Thompson (1986) models examining how the U.S. Supreme Court's *Citizen's United* ruling on January 21, 2010 affected U.S. stock returns. The dependent variable in columns 1 and 2 is Cumulative Abnormal Return (CAR), defined over the 3 day trading window surrounding the decision. The dependent variable in the Sefcik-Thompson models is daily return with coefficient estimates computed as per the procedure described in Section 6. All variables are defined analogously to those in Table 1 and measured at the end of the last fiscal year prior to the ruling. OLS standard errors are robust to heteroskedasticity and within-industry correlation. Sefcik-Thompson standard errors are robust to heteroskedasticity and cross-sectional correlation between firms with shared event days. Industry fixed effects (FE) are defined at the 2-digit NAICS level.  $p$ -values are reported in parentheses. Coefficients marked with \*\*\*, \*\* and \* are significant at the 1%, 5%, and 10% level, respectively.

	OLS		Sefcik-Thompson	
	(1)	(2)	(3)	(4)
<i>Unionization</i>	-0.087* (0.094)	-0.079** (0.038)	-0.028*** (0.001)	-0.022* (0.050)
<i>Size</i>	-0.001 (0.542)	-0.003*** (<0.001)	0.001 (0.137)	<0.001 (0.522)
<i>MB</i>	-<0.001 (0.344)	-<0.001 (0.599)	-<0.001 (0.464)	-<0.001 (0.943)
<i>Leverage</i>	0.005 (0.655)	0.013** (0.045)	0.006 (0.105)	0.007** (0.028)
<i>Constant</i>	0.020*** (<0.001)	0.005 (0.726)	-0.001 (0.910)	-0.007 (0.312)
<i>Industry FE</i>	No	Yes	No	Yes
<i>Adjusted-R<sup>2</sup></i>	0.011	0.066		
<i>N</i>	4196	4196	258	258

Table 9: Union Political Power and Firm Leverage

The table reports empirical results from ordinary least squares models similar to Matsa (2010) examining the relationship between union political power and firm leverage. The dependent variable in columns 1-3 is leverage, defined as the book value of interest-bearing debt scaled by the book value of total assets. The dependent variable in column 4 is change in leverage, measured as the difference in leverage for fiscal year ends surrounding the Liberal-National Coalition victory on March 26, 2011. MB and Size are as defined in Table 1. Fixed assets, Altman Z-score, return on assets (ROA), and profit variability are defined in Section 6. Each specification includes fixed effects (FE) of the interaction between industry, defined at the 2-digit GICS level, and year.  $p$ -values are reported in parentheses. Coefficients marked with \*\*\*, \*\* and \* are significant at the 1%, 5%, and 10% level, respectively.

	Leverage			Change in Leverage
	(1)	(2)	(3)	(4)
<i>NSW</i>	-0.011 (0.620)	-0.059 (0.409)	-0.078 (0.289)	0.064** (0.025)
<i>Union</i>	0.063 (0.597)	-0.034 (0.740)	-0.082 (0.494)	-0.068 (0.317)
<i>Event</i>	0.036*** (0.009)	0.029 (0.148)	0.012 (0.604)	
<i>NSW</i> × <i>Union</i>		0.237 (0.455)	0.349 (0.317)	-0.365** (0.030)
<i>NSW</i> × <i>Event</i>		0.016 (0.175)	0.056** (0.025)	
<i>Union</i> × <i>Event</i>		-0.005 (0.951)	0.094 (0.363)	
<i>NSW</i> × <i>Union</i> × <i>Event</i>			-0.243** (0.050)	

(Continued)

Table 9: Continued

	Leverage			Change in Leverage
	(1)	(2)	(3)	(4)
<i>MB</i>	0.003 (0.478)	0.003 (0.521)	0.003 (0.512)	0.003 (0.296)
<i>Size</i>	0.007 (0.542)	0.007 (0.516)	0.007 (0.525)	0.006* (0.073)
<i>Fixed Assets %</i>	0.108** (0.022)	0.113** (0.039)	0.112** (0.039)	-0.030 (0.134)
<i>Z-score</i>	-0.034** (0.025)	-0.034** (0.023)	-0.034** (0.024)	-0.015* (0.059)
<i>ROA</i>	-0.002 (0.167)	-0.002 (0.170)	-0.002 (0.169)	0.001 (0.202)
<i>Profit variability</i>	-0.052 (0.254)	-0.053 (0.255)	-0.053 (0.252)	0.010 (0.782)
$\Delta$ <i>MB</i>				0.002 (0.697)
$\Delta$ <i>Size</i>				-0.002 (0.941)
$\Delta$ <i>Fixed Assets %</i>				0.259*** (0.004)
$\Delta$ <i>Z-score</i>				-0.044 (0.138)
$\Delta$ <i>ROA</i>				-0.001 (0.491)
<i>Constant</i>	0.052 (0.225)	0.070 (0.213)	0.079 (0.188)	-0.002 (0.959)
<i>Industry <math>\times</math> Year FE</i>	Yes	Yes	Yes	Yes
<i>Adjusted-R<sup>2</sup></i>	0.222	0.224	0.225	0.126
<i>N</i>	1361	1361	1361	347

Table 10: Pseudo-event Tests of Union Political Power and Contracted Salary Growth

The table reports empirical results from robustness tests examining differences between NSW firms and non-NSW firms around pseudo-events. The dependent variable in all columns is the average salary growth over the life of the contract based on pseudo-event years. For each year from 2007 through 2010, a pseudo-event is created in which a hypothetical law limited union political power. All contracts including and after the pseudo-event year are considered post-event. For example, a 2007 pseudo-event considers all contracts from 2007 through 2011 as post-event. All other variables are as defined in Table 2. Standard errors are robust to heteroskedasticity and clustered to allow for both within-year and within-firm correlation. Firm FE are Union FE are fixed effects based on the firm and union(s) involved in each contract, respectively. Year FE are fixed effects based on the year in which the firm and union(s) agreed to the contract.  $p$ -values are reported in parentheses. Coefficients marked with \*\*\*, \*\* and \* are significant at the 1%, 5%, and 10% level, respectively.

Pseudo-event year	2007		2008		2009		2010	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
<i>NSW</i>	-0.088 (0.732)	-0.145 (0.572)	-0.098 (0.476)	-0.101 (0.461)	-0.126 (0.124)	-0.137 (0.112)	-0.042 (0.706)	-0.058 (0.584)
<i>Post-Pseudo-Event</i>	0.810* (0.051)	0.871** (0.044)	0.793*** (0.002)	0.911*** (0.004)	0.702*** (0.001)	0.809*** (0.005)	0.804** (0.013)	0.907** (0.015)
<i>NSW</i> × <i>Post-Pseudo-Event</i>	0.104 (0.684)	0.157 (0.544)	0.137 (0.462)	0.127 (0.479)	0.327*** (0.001)	0.328*** ( $<0.001$ )	0.210 (0.163)	0.234* (0.097)
<i>Size</i>		0.065 (0.728)		0.060 (0.748)		0.064 (0.736)		0.057 (0.761)
<i>MB</i>		0.010 (0.762)		0.010 (0.776)		0.009 (0.793)		0.010 (0.775)
<i>Leverage</i>		-0.328 (0.578)		-0.271 (0.670)		-0.294 (0.646)		-0.290 (0.634)
<i>Cash</i>		-2.769 (0.172)		-2.652 (0.176)		-2.682 (0.144)		-2.799 (0.156)
<i>Constant</i>	2.639*** ( $<0.001$ )	2.260* (0.080)	2.652*** ( $<0.001$ )	2.243* (0.087)	2.695*** ( $<0.001$ )	2.271* (0.090)	2.606*** ( $<0.001$ )	2.237* (0.089)
<i>Year FE</i>	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
<i>Firm FE</i>	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
<i>Union FE</i>	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
<i>Adjusted-R<sup>2</sup></i>	0.278	0.28	0.278	0.28	0.285	0.287	0.279	0.282
<i>N</i>	643	643	643	643	643	643	643	643

Table 11: Coalition Victories and Firm Value when Political Contributions and Advocacy Legislation is Absent

The table reports empirical results from robustness tests examining the relationships between Liberal-National Coalition victories outside NSW and firm value. In these elections, the state Coalition had not proposed limits on political contributions and advocacy similar to those embodied in the NSW Election Funding, Expenditure and Disclosures Amendment Bill 2011. Columns 1-2 report estimated OLS coefficients for November 27, 2010, the day of the state election in Victoria. Columns 3-4 report estimated OLS coefficients for March 25, 2012, the day of the state election in Queensland. The dependent variable in all specifications is Cumulative Abnormal Return (CAR) over the 3-day window surrounding each election day. In Columns 1-2, *State* is an indicator variable equal to 1 if the firm is headquartered in Victoria and 0 otherwise. In Columns 3-4, *State* is an indicator variable equal to 1 if the firm is headquartered in Queensland and 0 otherwise. All other variables are as defined in Table 1. Industry fixed effects (FE) are defined at the 2-digit GICS level. Standard errors are robust to heteroskedasticity and within-industry correlation. *p*-values are reported in parentheses. Coefficients marked with \*\*\*, \*\* and \* are significant at the 1%, 5%, and 10% level, respectively.

	Victoria		Queensland	
	(1)	(2)	(3)	(4)
<i>State</i>	0.023 (0.568)	0.031 (0.525)	0.020 (0.135)	0.015 (0.257)
<i>Union</i>	0.247 (0.223)	0.294 (0.127)	0.001 (0.950)	0.012 (0.833)
<i>State</i> × <i>Union</i>	-0.182 (0.333)	-0.213 (0.286)	-0.142* (0.076)	-0.110 (0.202)
<i>Size</i>	-0.017* (0.083)	-0.021* (0.090)	<0.001 (0.990)	<0.001 (0.927)
<i>MB</i>	-0.006** (0.019)	-0.007* (0.061)	0.002** (0.049)	0.002** (0.049)
<i>Leverage</i>	0.139** (0.013)	0.077 (0.292)	-0.025 (0.426)	-0.026 (0.426)
<i>Constant</i>	-0.890*** (<0.001)	-0.902*** (<0.001)	-0.011 (0.564)	-0.019 (0.413)
<i>Industry FE</i>	No	Yes	No	Yes
<i>Adjusted-R<sup>2</sup></i>	0.041	0.066	-0.001	-0.022
<i>N</i>	229	229	231	231