The consequences to directors of deploying poison pills[*]

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Abstract: We examine the labor market consequences for directors who adopt poison pills. Directors who become associated with pill adoption experience significant decreases in vote margins and increases in termination rates across all their directorships. They also experience a decrease in the likelihood of new board appointments. Firms have positive abnormal stock price reactions when pill-associated directors die or depart their boards, compared to zero abnormal returns for other directors. Further tests indicate that these adverse consequences accrue primarily to directors involved in the adoption of pills at seasoned firms and not at young firms. We conclude that directors who become associated with poison pill adoption suffer a decrease in the value of their services, and that the director labor market thus plays an important role in firms' governance.

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1. Introduction

How consequential is a firm's adoption of a poison pill for the firm's directors? This question addresses concerns about both poison pills and the director labor market. The entrenchment view holds that poison pills work primarily to entrench managers at shareholders' expense. If directors face what Fama (1980) calls "ex post settling up" for their actions, the entrenchment view implies that directors who adopt pills will experience shareholder backlash and negative career consequences.[1] The shareholders' interest view holds that pills serve primarily to improve the firm's operations or increase expected takeover premiums, implying that directors who adopt pills are valuable to shareholders and should enjoy career benefits.[2] A third view is that the explicit adoption of a poison pill has little impact, either because the actual adoption of a pill is not meaningful or because the director labor market does not react strongly to directors' actions.[3] This view implies that directors who adopt pills should experience neither negative nor positive career consequences.

This paper examines the consequences to directors who serve on boards that adopt poison pills, and therefore sheds light on whether investors view pills as having negative, positive, or inconsequential effects on the firms that adopt them. Data on how individual directors vote are not publicly available, so we focus on the career consequences to first-time pill adopters. These are directors who serve on boards that adopt poison pills, but who previously had never served on a pill-adopting board. Our results consistently indicate that first-time pill adopters suffer negative career consequences. They have lower voting support in subsequent board elections at both the pill-adopting firm and in their other directorships. They are more likely to leave the boards on which they currently serve, and are less likely to be appointed as new directors at other firms. Also, when pill-associated directors leave any board on which they serve, e.g., via death or

[1] See Malatesta and Walkling (1988), Ryngaert (1988), Ryngaert and Netter (1988), Ryngaert and Netter (1990).
[2] See Grossman and Hart (1980), DeAngelo and Rice (1983), Comment and Schwert (1995), Danielson and Karpoff (2006), and Cremers, Guernsey, Litov, and Sepe (2019).
[3] See Margotta, McWilliams and McWilliams (1990), Datta and Iskandar-Datta (1996), Coates (2000), Klauser (2013), Catan and Kahan (2016), and Catan (2018).

retirement, the average stock price reaction is positive, compared to a zero stock price reaction for departures of directors who are not associated with poison pill adoptions.

We conduct several tests to distinguish between selection and treatment effects in the relation between pill adoption and directors' negative career consequences. Our main results are from panel data tests that include director, industry, and year fixed effects as well as a broad set of controls from the prior literature, thus decreasing the likelihood that the results reflect selection effects attributable to the individual director, the director's firm, or the firm's industry. The results are stronger for pill adoptions following good firm performance, indicating that the subsequent negative impacts on adopting directors' careers are not due to poor firm performance.

We also construct tests using two distinct types of instrumental variables that capture arbitrary variation in poison pill adoption. The first instrument relies on evidence of strong peer affects among directors on interlocked boards (e.g., Davis 1991; Davis and Greve 1997) and reflects the number of a first-time pill-adopting director's fellow directors who serve on boards of other non-industry firms that adopt pills. The second instrument is based on a director's exposure – through her fellow directors – to legal developments regarding poison pills, including important court decisions and state laws that affect pills' legal status. Both instruments meet the relevance criterion for strong instruments, with Cragg-Donald Wald F-statistics above 50. As described in Section 5.2, both plausibly meet the exclusion restriction as well. The results of these instrumental variable tests further indicate that the relation between pill adoption and directors' adverse career consequences is causal. That is, first-time pill adopting directors lose votes, lose directorships, and find fewer new directorships, all because of their association with the adoption of a poison pill.

Next, we examine an alternative measure of a director's labor-market value based on the stock price reaction to news that a director leaves a firm's board, or dies. Like previous researchers (e.g. Fich and Shivdasani (2007)), we find that the unconditional average abnormal stock price reaction to a director's departure is positive. We show, however, that this positive stock price reaction is largely attributable to pill-tainted directors, i.e., directors who served on boards that adopted poison pills. We also find that the

average share price reaction to a director's death is positive, similar to results reported by Hayes and Schaefer (1990), Salas (2010) and Fracassi and Tate (2012)). Once again, however, the positive share price reaction appears only in the subset of deceased directors who were associated with a previous adoption of a poison pill. The deaths of directors who were not associated with poison pill adoptions are associated with a zero average stock price reaction. These results help explain prior findings regarding directors' departures and deaths, and provide further support for the inference that directors who are associated with the adoption of a poison pill are valued less by shareholders compared to other directors.

We then examine whether a director's career consequences depend on the age of the firm adopting the poison pill or the age of the firms in which first-time adopting directors serve. Johnson et al. (2019) argue that the value impact of takeover defenses follows a life cycle and is, in general, positive for young firms and negative for more seasoned firms. We therefore repeat our tests after partitioning the sample into pill adoptions at young vs. old firms. The adverse consequences we find – lower vote margins, higher termination rates, and fewer new directorships – concentrate among the subset of first-time adopting directors who oversee the adoption of poison pills at seasoned firms. This finding is consistent with previous findings that investors generally view takeover defenses as having negative impacts on the values of older firms, but not necessarily for young firms.[4]

Finally, we examine several extensions of our analysis, and find the following: (i) Directors experience negative career consequences after the first time they are associated with the adoption of a poison pill. The incremental impact of a director's second and third involvement with pill adoption, however, is monotonically decreasing and statistically insignificant. (ii) The negative career consequences do not concentrate only among pills that are adopted to resist specific takeover bids, but occur after the adoption of clear day pills as well. (iii) Directors who serve at firms that are covered by ISS do not suffer more negative career consequences compared to directors at firms not covered by ISS. (iv) The career consequences are not significantly different for long-duration poison pills compared to short-duration pills,

[4] See Cen et al. (2016), Cremers et al. (2016), Cremers et al. (2019), and Johnson et al. (2015, 2019).

and (v) are not significantly related to the prior presence of a classified board or dual class share structure at the pill-adopting firm. Also, (vi) the share price reaction when the pill is adopted is negatively related to first-time adopters' likelihood of being appointed to new boards, but not significantly related to first-time adopters' vote margins or turnover likelihood.

Together, our results reject the argument that explicit poison pills are inconsequential because all firms have latent pills (e.g., Klausner 2013; Catan and Kahan 2016). To the contrary, the actual adoption of a poison pill, particularly at a seasoned firm, imposes a meaningful career cost on the adopting directors by lowering their values in the director labor market. This finding, in turn, implies that investors view the actual deployment of a poison pill as an important characteristic of a firm's corporate governance that is different from the mere option to deploy a pill.

Our findings also contribute to two additional areas of the corporate governance literature. First, by examining the impact of pill adoption on directors, we shed light on the debate over whether poison pills affect firm value, and in which direction. Our results are consistent with the lifecycle view that poison pills tend to decrease value at seasoned firms, although not at young firms. Second, our tests help to broaden understanding of the forces that influence directors' vote margins, termination, appointments, and contributions to firm value. Our results demonstrate that the labor market for directors imposes reputational penalties on directors who do not act in what is perceived by shareholders as acting in the best interests of the firm, as proposed by Fama (1980). In addition, we show that vote margins matter, even for directors who garner majority votes, as they are related to a director's job tenure and value in the director labor market. This latter finding is consistent with the evidence reported by Aggarwal et al. (2019).

This paper is organized as follows. Section 2 describes our data, and Section 3 reports on the impact of pill adoption on a director's vote margins, termination rates, and appointments to new boards. Section 4 reports on tests that account for the endogeneous nature of pill adoption and director labor market consequences. Section 4 also shows that the adverse labor market consequences occur primarily for directors that adopt pills at seasoned firms, consistent with prior evidence that takeover defenses have more

negative impacts on firm value at older firms compared to young firms. Section 5 reports on several extensions of our analysis and robustness tests, and Section 6 concludes.

2. Data

Our data consist of a panel of 111,950 director firm-years from 2003–2015, including indications of whether and when a director sits on a board that adopts a poison pill. We use these data to conduct director-level difference-in-difference tests comparing an outcome (e.g., vote margin, turnover) in the period before to the period after a director is first involved in a board's adoption of a poison pill. We refer to pill-adopting directors who previously had never served on a board that adopted a pill as "first-time adopters." Our main tests include director fixed effects, so our control group consists of all other directors who never previously served on a board that adopted a poison pill. We focus on three outcomes that provide insight into changes in the director's value in the director labor market: vote margin at existing directorships, turnover from existing directorships, and new directorships. In subsequent tests we also examine changes in the outcome variable within each of three subsets of a director's board positions: the board position at the firm that adopts the pill, other firms' boards on which the director serves at the time the pill is adopted, and all firms for which the director joins the board after the pill was adopted.

Our sample of firms that have or acquire poison pills is drawn from the Securities Data Company (SDC) Poison Pills database, and our sample of directors is drawn from the BoardEx Employment database. We exclude finance firms and utilities, as well as firms headquartered outside of the United States. We use the BoardEx Employment data to backfill directors' careers and identify directors who sat on boards that adopted poison pills back to the introduction of the pill in 1982. We merge the BoardEx Employment data with COMPUSTAT and CRSP data using firms' CUSIP identifiers. We then employ a fuzzy match on director name, and manually check the results, to merge company vote results for all director elections from

2003-2015 from the Institutional Shareholder Service (ISS) Voting Analytics database. This merge yields a sample of 111,950 director-firm-year observations over the 2003–2015 period.[5]

Table 1 reports the year-by-year number of observations during the sample period. In 2003, the sample includes 5,051 unique directors at 1,448 unique firms, and 5,789 unique firm-director observations. Over all years in the 2003-2015 sample period, the 111,950 firm-director observations include 18,600 unique directors at 3,441 unique firms. Table 1 also reports on firms' adoptions of poison pills. A total of 711 pills were adopted before 2003, with 470 new pills adopted during our sample period from 2003–2015. For example, 34 firms adopted poison pills in 2003, increasing to 64 pill adoptions in 2009 and declining to 22 pill adoptions in 2015.

Panel A of Table 2 reports summary statistics for several key director characteristics. Of the 18,600 unique directors in the sample, 34% served on the board of at least one firm that adopted a poison pill.[6] Across all director-years in the sample, the average board consists of 9.3 directors, 11.5% of whom are the firm's CEOs and 11.9% of whom are the board's chair. The average director is 60.8 years old and serves on 1.7 boards, and has served for an average of 7.8 years on each board.

Table 2 also reports descriptive statistics for our three main outcome variables. The sample average vote margin across all director-years is 67%, indicating that the average director is elected with 67 percentage points more yes votes than no (or withheld) votes. The unconditional likelihood that a director will turn over or exit an existing board position is 2.1% each year, and the unconditional likelihood that an existing director will be appointed to a new board in the next year is 5.1%.

Panel B of Table 2 reports on the characteristics of the firms on whose boards these directors serve. Averaging over all 21,363 firm-years in the sample, the average firm age is 23.3 years and the average log

[5] Because not all directors are elected each year, e.g. those sitting on a classified board, restricting our main sample to only observations with Voting Analytics data requires us to discard turnover and new directorship data for years in which a given director is not up for election. Internet Appendix Table IA.1 repeats the director turnover and new directorship tests on the 18,600 unique directors from the main sample, but relaxes the requirement that each observation has Voting Analytics coverage. Table IA.1 illustrates that the results are not sensitive to this filter.

[6] This includes directors who first became involved with a poison pill before 2003 and thus, by construction, are always in the "treated x post" group in our empirical models. Any influence of such long-time pill adopters is picked up in models with director fixed effects.

of market cap is 14.1 ($1.2 billion). The current year's ROA is 10.5% and annual raw stock return is 16.7%, and institutional investors own an average of 69.5% of these firms' outstanding shares of stock.

3. Empirical results

3.1. Director vote outcomes

We begin by examining the vote outcomes for directors at annual shareholder meetings. Cai et al. (2009) report that management-nominated directors rarely fail to receive a majority vote. Nonetheless, a director's vote margin indicates the strength of shareholders' support for that director, and a decrease in a director's vote margin signals shareholder dissatisfaction with the director's performance. Aggarwal et al. (2019) find that, even in uncontested director elections, dissenting votes have substantial negative impacts on directors' careers, increasing the likelihood the director will leave the board or be moved to less influential positions and decreasing the director's future opportunities in the director labor market.

We define the vote margin as the percentage of votes for a director minus the percentage against, minus the percentage abstaining, minus broker non-votes and votes withheld. Although we draw inferences from multivariate tests that control for other influences on a director's vote margin, the results are illustrated in univariate comparisons. Figure 1 reports the vote margins for directors who sit on boards that adopt poison pills for the seven-year period centered on the year of pill adoption. Again, we include only first-time pill adopters, i.e., directors who have not previously served on boards that adopted pills. The average vote margin for these directors is 75% in year t = –3 relative to the pill adoption year, declining to 59% in the election immediately after the firm adopts a poison pill, and rebounding somewhat to 65% three years later.

Table 3 reports on multivariate difference-in-difference tests that reveal a similar pattern as in Figure 1. In these tests, *Adopting director* is set equal to one for all first-time adopting directors, and *Post* equals one for the year in which that director is first involved in the adoption of a poison pill, and for all subsequent years. All models include year fixed effects, so *Post* is not included separately. Again, this treats all other directors in the database who have not adopted a pill as the control group. Model 1 reports

that first-time adopters experience a 2.3 percentage point decrease in vote margins in elections at all firms at which they served when the pill was adopted, an estimate that is statistically significant at the 1% level. Model 2 includes controls for director and firm characteristics that may affect vote margins. The controls for director characteristics include indicator variables for whether the director is the company's CEO or Board Chair, the director's tenure on the board, the director's total number of directorships, and an estimate of the director's time to retirement. Controls for firm characteristics include the natural log of book assets, the natural log of market capitalization, ROA, lagged ROA, the previous 12 months' stock return, lagged stock return, institutional ownership, firm age, and board size.[7]

As reported in Model 2, the vote margin is significantly related to several of these control variables. The vote margin is positively related to *Time until retirement*, *Log of market capitalization*, *ROA*, *Lagged ROA*, *Lagged annual stock return*, and *Institutional ownership*. It is negatively related to *Board size*, *Board tenure*, *Firm age*, and *Annual stock return*. The overall picture that emerges is that directors tend to enjoy higher vote margins when both they and the firm are relatively young, and when the firm has high operating profits and is owned by institutions.

Our key coefficient of interest, however, is for the interaction of *Adopting director x Post*. This result shows that, controlling for other firm and director characteristics, first-time pill adopters experience an average decrease in vote margin of 2.5 percentage points in the years after they adopt a poison pill. The coefficient on *Adopting director* of -0.025 indicates that, in addition, adopting directors experience lower vote margins throughout their director careers.

The results in Model 2 may be influenced by unobservable time invariant director characteristics, such as ability. To investigate such a possibility, Model 3 of Table 3 reports coefficients from a test that includes both our set of control variables and director fixed effects. Here, the coefficient for *Adopting director x Post* of -0.057 indicates that adopting directors experience not only lower vote margins after they

[7] These control variables include those used by Cai et al. (2009) and Aggrawal et al. (2019).

adopt a pill, but that their post-adoption vote margins are 5.7 percentage points lower than the vote margins they enjoyed before their first pill adoption.

Model 4 substitutes for the *Adopting director x Post* variable with annual dummy variables for the years around the adopting directors' first pill adoptions. The largest impacts are in Years 0, +1, and +2, i.e., the elections immediately following the initial adoption of the poison pill. On average, first-time adopters experience a decrease in vote margins of 7.9 percentage points in their elections immediately following the pill adoption relative to other years, and a decrease of 8.6 percentage points in the following year. Altogether, these results show that directors involved in the adoption of a poison pill experience significant decreases in the percentage of votes they receive in subsequent board elections in all of the firms in which they serve as directors at the time they became associated with a pill adoption.

3.2. Director turnover

In this section we examine whether poison pill adoption is associated with an increased likelihood that directors lose their board seats. Figure 2 presents univariate comparisons that illustrate our overall findings on this matter. In the years before pill adoption, the director turnover rate is well under 1% per year – lower than the average base turnover rate among all directors in our sample of 2.1%. After their first-time adoption of a pill, however, these directors' turnover rate (at all firms in which they served as directors when they adopted a pill) increases to 3.6% in the year of adoption, and to an average of 2.3% in the following three years.

Table 4 reports multivariate OLS tests of director turnover that reveal a similar pattern. Table 4 reports results from linear probability models, but probit tests yield similar results (see the Internet Appendix Table IA.2). In Table 4 Model 1, the coefficient of -0.020 for *Adopting director* indicates that, on average, first-time adopting directors have lower overall turnover rates than other directors in the years before their first-time adoption of a poison pill. In the years after they are involved in the adoption of a poison pill, however, these directors' turnover rate increases significantly, as the coefficient on *Adopting director x post* equals 0.022 and is significant at the 1% level.

The results in Model 2 show that director turnover is significantly related to several of the controls for director and firm characteristics. Turnover is relatively high for directors who are also the company's CEO and/or board chair, and is positively related to *Board size*, *Time until retirement*, *Number of directorships*, and lagged ROA Turnover is negatively related to *Firm age*, *Log of market capitalization*, and *ROA*. These results are similar to Aggarwal et al (2019), who find that turnover is negatively related to director age, firm size, and ROA. As in Model 1, however, directors' turnover rate increases in the period after their first-time involvement in the adoption of a poison pill, as the coefficient on *Adopting director x post* equals 0.021 and is significant at the 1% level. In Model 3, which includes director fixed effects, the coefficient on *Adopting director x post* is 0.016 and is also statistically significant. This indicates that first-time pill adopters experience an increase in their average turnover rate by 1.6 percentage points – a large increase over the sample-wide base turnover rate of 2.1%. Model 4 reports that the increase in first-time adopters' turnover rates occurs primarily in the year they adopt a poison pill, as the coefficient for Year 0 is 0.031 and is significant at the 1% level.

3.3. New director appointments

In this section we examine a third measure of director consequences, the rate at which first-time pill adopting directors are appointed to new boards. Once again, Figure 3 illustrates the overall pattern. First-time pill adopters average 11.8% new directorships per year during the three years before pill adoption, but only 3.3% new directorships per year in the three years after pill adoption.

This univariate pattern is evident also in the multivariate tests reported in Table 5. In Model 1, there is a negative and significant coefficient for *Adopting director x post* of -0.085, implying an 8.5 percentage point decline in the likelihood of a new directorship after a director adopts a pill. In Model 2 we include control variables for the director and for the firms on which a director serves. The likelihood of a new board appointment is relatively high for CEO directors, directors with more directorships, directors at older firms, and directors serving at firms with strong operating and stock price performance. The likelihood of a new board appointment is negatively related to whether the director serves as board chair,

and also to the firm's *Board size*, the director's *Time until retirement* and *Board tenure*, and *Log of book assets*. These results are consistent with the findings in a sample of 779 directors by Coles and Hoi (2003), who find the likelihood that a director will be appointed to a new board is negatively related to the director's age but positively related to the number of boards on which the director currently serves and the performance of the firms at which the director serves. For our investigation, the key variable of interest is *Adopting director x Post*. In Model 2 the coefficient on this variable is -0.047 and is statistically significant at the 1% level.

In Model 3, which includes director fixed effects, the coefficient for *Adopting director x Post* is -0.063, also significant at the 1% level. This indicates that, compared to her pre-pill experience, a director's likelihood of being appointed to a new board decreases by 6.3 percentage points after becoming associated with a poison pill adoption. In Model 4, the coefficients on the yearly dummy variables indicate that the negative impact on new directorships concentrates in the three years after the poison pill is adopted.

The results in Table 5 are consistent with either a decrease in the demand for first-time adopters' director services, or a decrease in first-time adopters' supply of labor to the director labor market. Either a demand or supply channel, however, indicates that the adopting director has adverse labor market consequences. If a supply channel is at work, it would imply that first-time adopters have experiences around the board's adoption of a poison pill that increase their cost of supplying director services. For example, perhaps the personal experience is unpleasant and encourages some of these directors to voluntarily withdraw from the director labor market. Nonetheless, we interpret subsequent tests reported in Section 5 as indicating that a main channel is a decrease in demand for first-time adopters' services, because departing directors who are associated with poison pills have lower market values than directors who are not associated with pill adoptions.

3.4. Vote outcomes and turnover at the pill-adopting and other firms

Tables 3 and 4 examine changes in first-time pill adopters' vote margins and turnover rates across all firms in which they currently hold board positions. In this section, we examine changes in vote margins

and turnover rates within each of three subsets of a director's board positions: the board of the firm that adopts the poison pill, other firms' boards on which the director serves at the time of her first pill adoption, and boards of firms to which the director is appointed after her first pill adoption.

Columns 1-3 of Table 6 report the results of tests for vote margin that include our control variables for director and firm characteristics, plus director fixed effects. In Model 1 we examine changes in first-time adopters' vote margins just at the firms adopting the poison pills. The coefficient for *Adopting director x Post* is -0.097 and significant at the 1% level, indicating an average decrease of 9.7 percentage points in the first-time adopter's vote margin.

Model 2 reports on changes in first-time adopters' vote margins at other boards on which they serve when the pill is adopted. The coefficient for *Adopting director x Post* indicates that these directors' vote margins decrease by an average of 4.1 percentage points. The F-statistic for the difference between the coefficients in Models 1 and 2 is 13.86. Thus, while first-time adopting directors experience significant decreases in vote margins at both the firm that adopts the poison pill and at her other directorships, the impact is significantly larger at the pill-adopting firm.

Model 3 reports on the impact on the director's vote margin at boards to which she is appointment after her first-time pill adoption. Here, the coefficient is positive but statistically insignificant. This indicates that first-time pill adopters do not experience low vote margins in any new board positions they subsequently acquire. We infer that directors experience a decrease in vote support among their existing board positions when investors learn of the directors' association with a poison pill. A director's pill association, however, is known before any new board appointment and, conditional on being selected for a new board, does not erode vote support at the new board. Again, the Table 5 results indicate that first-time adopters are subsequently appointed to fewer boards – compared both to other directors and to their own pre-pill experience. But for the new board positions they do acquire, their association with poison pills does not lead to a decrease in vote support.

Models 4-6 report on results for director turnover. The coefficient for *Adopting director x Post* of 0.023 in Model 4 indicates that the turnover rate for first-time adopters at the pill-adopting firm is 2.3

percentage points higher after pill adoption than before, controlling for other director and firm characteristics. By comparison, the coefficient for *Adopting director x Post* in Model 5 indicates that first-time adopters' turnover rate at other boards on which they serve increases by 1.2 percentage points. In this case, the F-statistic for the difference between the coefficients in Models 4 and 5 is only 1.55. These results indicate that first-time adopters more likely to lose all existing board positions, and the impact of the pill is not significantly larger at the pill-adopting firm.

Model 6 reports that, among board positions acquired after their first pill adoption, first-time adopters' turnover rates *decline* significantly. Combined with the Model 3 result, this result indicates that, conditional on being appointed to a new board, these directors do not experience lower vote support or an increase in turnover likelihood. We infer that, for these new board appointments, the director's association with a poison pill is already known. Presumably, the director offers a portfolio of director services that make her an attractive candidate for the new board position, despite – or possibly because of – her previous experience with a pill. Thus, any new board appointments incorporate knowledge of the director's association with poison pills. The decrease in vote support and increased turnover likelihood occur only at boards for which the director's association with pill adoption is new information. This information, on net, leads to adverse career consequences in the director labor market.

4. Poison pill adoption and endogeneity

The evidence summarized in Tables 3-6 show a correlation between a director's initial involvement in the implementation of a poison pill and three types of career consequences. These directors experience lower vote margins and higher turnover rates – at both the pill-adopting firm and the director's other board seats – and lower rates of new directorships at other firms. These results hold with a broad set of controls, including year and director fixed effects, which decrease the likelihood that they reflect the influence of omitted variables. In this section, we further explore whether these directors' negative labor market consequences are caused by their involvement in the implementation of a poison pill, or whether the correlation reflects selection effects.

4.1. "Sunny day" versus "rainy day" adoption

The most salient story regarding endogeneity is a simple omitted variables problem. Firms are more likely to adopt a poison pill following periods of poor performance (Malatesta and Walkling 1988; Catan 2018). Also, directors are more likely to suffer career consequences when they sit on boards of firms that perform poorly (Kaplan and Reishus 1990; Gilson 1990; Yermack 2004). It is possible that poor firm performance drives both pill adoptions and directors' subsequent negative labor market consequences.

To examine this possibility, we separate the sample into firms that adopt poison pills after good performance ("sunny day" pills) and firms that adopt pills after poor performance ("rainy day" pills). If performance drives both pill adoption and director labor market effects, our findings regarding labor market consequences will concentrate among rainy day pills and should not occur after sunny day pills.

Table 7 reports on multivariate difference-in-difference tests of this prediction. We use three measures of firm performance: stock returns over the two years before the pill was adopted, return on assets (ROA) in the two years before pill adoption, and Tobin's Q averaged over the two years before pill adoption. Sunny day pills are those adopted following a two-year period in which firm performance exceeds the within-sample median performance, while rainy day pills are those that are adopted following below-median firm performance.

Models 1 through 3 in Table 7 show that directors who adopt pills after periods of either good or bad performance have statistically significant declines in their vote margins. When performance is measured using stock returns (Model 1), the difference in effect on vote margins for sunny day pills and rainy day pills is statistically insignificant. When using ROA (Model 2) or Tobin's Q (Model 3) to measure performance, the impact on vote margin is significantly larger for sunny day pills than rainy day pills. This result is inconsistent with the view that the results on vote margins reflect poor firm performance. Rather, the impact on pill-adopting directors' vote margins appears to occur because of the director's involvement with the decision for the firm to adopt a poison pill.

Columns 4–6 show that the likelihood of losing a directorship is similar following rainy day and sunny day pills. Using ROA to measure performance, the turnover rate is significantly higher following sunny day pills compared to rainy day pills. But the turnover rates are not significantly different for rainy day and sunny day pills using the other measures of firm performance. This result is inconsistent with the notion that the results are driven by poor firm performance. Similarly, columns 7 – 9 indicate that directors who oversee the adoption of a poison pill are less likely to be appointed to a new board, but there is no significant difference between whether the pill was adopted following good or poor performance. Overall, these results indicate that the connection between pill adoption and a director's subsequent adverse labor market consequences are not driven by the adopting firm's poor performance.

4.2. Instrumental variable tests

To further examine whether directors' adverse labor market consequences are caused by their adoption of a poison pill, we conduct tests using two distinct types of instrumental variables that control for the endogenous nature of pill adoption. Our first instrumental variable is based on peer influences that affect directors who serve on multiple boards simultaneously, creating interlocked boards. Many papers document that boards linked by a common director tend adopt similar corporate policies. For example, Bizjack, Lemmon, and Whitby (2009) show interlocked boards have a similar willingness to backdate executive options; Stuart and Yim (2010) find that boards sharing a director are each more likely to be targeted by private equity companies; and Fich and White (2003) and Devos, Prevost, and Puthenpurackal (2009) report that interlocked boards tend to share governance features.[8]

Most importantly for our tests, Davis (1991) and Davis and Greve (1997) report that a firm is significantly more likely to adopt a poison pill if its board has a director who serves on a different board that adopts a pill. This finding implies that board interlocks are pathway by which boards are influenced to adopt a pill that does not directly reflect the firm's underlying operating or takeover environment.

[8] See Burt, Hrdlicka, and Harford (2018), footnote 2, for a summary of the literature that establishes peer influences based on board interlocks.

Accordingly, we use the number of pills adopted by interlocked boards in a given year in a different industry to instrument for the likelihood the directors at the board of interest become first-time pill adopters. Figure 4 depicts the mechanics of this instrument. Because Firms A and C are interlocked through Director B, Director E is more likely to become a first-time adopter at Firm C, via Director B's adoption of a poison pill at Firm A within the preceding year.

The exclusion requirement dictates that the presence of a board member at two firms where one adopts a pill should have no impact on the other firm's board members except through the increased likelihood of pill adoption. Our main analyses in Tables 3-6 already include director and year fixed effects, which control for time- or director-specific effects on the likelihood of pill adoption. To further bolster the reliability of our instrumental variable, we consider only the pills adopted by interlocked boards of firms that operate in different industries than the subject firm (using 3-digit SICs). That is, we exclude within-industry board links in constructing the instrumental variable. Figure 4 shows how Director F is excluded even though Firms A and D are interlocked via Director C. It is also important to recall that our tests focus on the labor market consequences to directors who previously have not served on a board that adopts a poison pill. This means that we automatically exclude from treatment the directors who adopted the pill on another board. Instead, we examine the consequences to directors who have never previously served on a board that adopts a poison pill, and who serve on boards that are influenced to adopt a pill because of an interlock with a board of a firm in a different industry that recently adopted a pill. It is impossible to test the exclusion restriction directly, but we have been unable to construct plausible scenarios by which this instrument has an effect on the labor market consequences to first-time adopting board members in non-industry interlocked firms, except through the increased likelihood that the firm adopts a poison pill (because of the peer influence from the interlocked firms).

Table 8 reports the results from tests using this instrumental variable based on interlocking boards. Panel A reports results without director fixed effects and Panel B includes director fixed effects. Column 1 reports the first stage regression using data from director-years through the year in which a first-time adopter's firm adopts a poison pill, which is used to examine impacts on vote margin and director turnover.

The number of fellow directors who serve on boards of (non-industry) firms at the times they adopted poison pills is a strong predictor of the likelihood of serving on a firm that adopts a pill. The coefficient on *Number of linked board pill adoptions* is positive and significant at the 1% level, and the Cragg-Donald Wald F-statistic is 81.08, far larger than the Stock and Yogo (2005) critical value to reject weak instrumental variables.

Columns 2 and 3 report the second stage results for vote margin and director turnover. The coefficient for *Adopting director x post* is -0.302 and significant at the 1% level in the vote margin regression, consistent with the previous results. The coefficient for *Adopting director x post* in the turnover regression, however, is not statistically significant. The results are similar when we include director fixed effects, as reported in Panel B. The insignificant coefficient for director turnover represents the weakest result we have found in our tests. In general, the results regarding vote margins, future directorships, and share value impacts of departing directors are robust to various model specifications. In some specifications such as Table 8, however, the director turnover results become insignificant.

Columns 4 and 5 report the first and second stage results for the instrumental variable tests examining first-time adopters' new directorships.[9] The results are consistent with those in Table 5, showing that first-time adopters are less likely to be appointed to new board positions after they become associated with poison pill adoptions.

The coefficient estimates for vote margin and new directorships are larger in the 2SLS tests than in the results reported in Tables 3 and 5, respectively. For example, the 2SLS estimate of the impact of pill adoption on a director's vote margin is -0.259 in column 5 of Panel B, compared to -0.057 in the OLS results in Table 3. At first glance, this difference raises concerns about a blow-up problem from weak instruments in 2SLS regression (e.g., see Atanasov and Black, 2016). A weak instrument, however, is not a problem in our application, as the Cragg-Donald Wald F-statistic in the first-stage regression in Panel A,

[9] As mentioned previously, tests examining a director's new appointments use all of the director's board appointments, in contrast to vote margin and turnover which use only current boards the director sits on, not future appointments. Because of this difference in samples, the new appointment 2SLS tests require a separate first stage regression.

column (4) is 225.15. We interpret the higher coefficient estimate as a result of the relatively high sensitivity of a director's vote margin to arbitrary variation in the director's involvement in poison pill adoption that arises because of peer effects through interlocked boards. That is, the 2SLS results indicate that the influence of pill adoption on a director's vote margin and new directorships is causal and not the result of selection effects.

Our second instrument is based on a director's exposure to legal developments regarding poison pills. Following the advent of the pill in 1982, there were many challenges to its legality. Starting with the *Unocal*[10] and *Moran*[11] court decisions and continuing into the 1990s, different prominent courts variously struck down and affirmed the use of poison pills. Many states also passed explicit poison pill endorsement statutes, many times after court decisions affecting pills' legal status (Karpoff and Wittry, 2018). Pill-related court cases and state statutes typically were covered by press outlets. But, as noted by Karpoff and Malatesta (1989), press coverage of such developments was typically concentrated in local and regional newspapers.

Such location-specific yet time-varying publicity about the legal status of poison pills motivates our second instrumental variable. We create an indicator instrument that equals one for directors who sit on a board of a firm that is incorporated in a state that experiences an innovation related to the legal status of poison pills, whether through an important court decision or a state poison pill endorsement statute. Appendix Table 2 lists the states that experienced such innovations and the years in which they occurred. The instrument is coded 1 for all director-years after the director is exposed to this information shock. The intuition of this instrument is that directors who are exposed to pill-related information shocks are subsequently more likely to adopt pills because the shock increases a pill's salience to these directors. To avoid picking up a direct effect between the conditions that affect local legal developments and local firms' pill adoption, we exclude any pill adoption among firms that incorporated in the state in which the legal innovation occurs. That is, we focus on directors with at least two directorships where the director is exposed to a legal development regarding pill use in one state (State A) to instrument for his or her

[10] Unocal Corp. v. Mesa Petroleum Co., 493 A.2d 946, 955 (Del. 1985)
[11] Moran v. Household Int'l, Inc., 500 A.2d 1346, 1354, 1357 (Del. 1985)

likelihood of adopting a poison pill at a firm located in a *different* state (State B) that has yet to have a similar legal development. Figure 5 depicts the intuition behind this instrument. In Figure 5, Directors E and F are more likely to become first-time adopters in Connecticut and Massachusetts, respectively, because of Director B's and Director C's exposure to legal shocks in Ohio.

This last restriction makes it extremely unlikely that the exclusion criterion is violated. A given director's career prospects on another board in a completely different state should be uncorrelated with this past information shock regarding the poison pill. However, a drawback of using this instrument is that most pill-related court decisions and state statutes occurred in the 1980s and 1990s. To get enough variation in the instrument at the director level, we must expand our dataset back to the 1980s. This precludes us from examining vote margins because the Voting Analytics data begin in 2003. We also have to use the back-filled BoardEx data, so the director turnover and new directorship measures reflect some survivorship bias among the directors in our sample.

Table 9 reports the results of tests using this legal development instrumental variable. Again, Panel A reports results without director fixed effects and Panel B reports results with director fixed effects. Columns 1 and 3 report the first stage regressions for the turnover and new directorships outcomes, and columns 2 and 4 report the corresponding second stage regressions. The legal innovation instrument is strongly related to the adoption of a poison pill, as the Cragg-Donald Wald statistics in the first-stage regressions are all over 100. In the second-stage regression for director turnover, the coefficient for *Adopting director x post* is 0.198 and significant at the 5% level. In the second-stage regression for new directorships, the coefficient for *Adopting director x post* is -0.586 and significant at the 1% level.[12] These results are consistent with a causal interpretation, that the adverse effects on first-time adopters' director careers are caused by their association with poison pill adoptions.

[12] The Online Appendix reports tests in which we restrict the sample to legal developments outside of the state of Delaware, which is the location of many important court decisions regarding poison pills. The results are similar to those in Table 9.

4.3. Departing directors and director deaths

In this section we examine an alternative measure of a director's value for a firm, the share price reaction to the announcement of the director's departure from the board.[13] As Fich and Shivdasani (2007) point out, the share price reaction reflects investors' perceptions of an individual director's value to the firm compared to the director's expected replacement. If association with pill adoption lowers a director's value, the director's departure should correspond to a higher share price reaction than when a non-pill-associated director leaves a board.

To test this prediction, we compile departure announcements from the BoardEx Board and Director Announcement database from 2003-2017. This database identifies a total of 12,426 director departures, including 167 announcements of a director's death. Panel A of Table 10 reports that shareholders react positively, on average, to the news that a director is departing the board, as the average abnormal return for the (-1, +1) window is 0.31% and for the (-5, +5) window is 0.57%. This result is similar to previous findings about directors' departures reported by Fich and Shivdasani (2007).

The results in Panel B of Table 10, however, show that the positive share price reaction to a director's departure concentrates primarily among directors who previously oversaw the adoption of a poison pill. The mean abnormal return for directors associated with poison pill adoptions is 0.96% (p-value less than .001), compared to 0.31% (p-value = 0.11) for directors not associated with pill adoption. The difference in mean stock price reactions is statistically significant at the 5% level.

To the extent that a director's association with a poison pill conveys negative information about the director's contribution to firm value, we hypothesize that the effect will dissipate over time. This is because directors offer a broad menu of potential contributions to firm value. For directors who stay in the director labor market, their past association with pill adoption is likely to become less important over time, as their other attributes play an increasing role in determining their values to firms. To investigate this

[13] We find similar results with the announcement of a director joining a new board; however, the director-board matching process makes it more likely that this sample suffers from selection bias. These results are available upon request.

hypothesis, we partition the sample into director departures within three years of adopting a poison pill, or more than three years. The mean stock price reaction is larger for directors who depart their boards within three years of adopting a pill than for directors departing more than three years after pill adoption (1.28% compared to 0.90%). This difference is not statistically significantly in this univariate comparison, but it is significant in the multivariate tests in Panel C.

Panel C of Table 10 reports on the effect of prior pill adoption on the stock price reaction to news of a director's departure in multivariate tests that include controls for firm and director characteristics (as in Tables 3-9) and firm and year fixed effects. Both three-day (-1, +1) and 11-day (-5, +5) cumulative abnormal returns are higher for departing directors who are associated with pill adoption than for directors not associated with pill adoption. The effect is large and statistically significant for director departures within three years of a poison pill adoption. Again, these departures are from all boards on which the director serves, not only the firm that adopted the poison pill. These results imply that directors' values to their firms are discounted by their association with poison pills, particularly if the pill was adopted recently.

Panel D of Table 10 reports on the share price reaction to departures caused by a director's death. Previous research reports mixed results about the share value impact of a director's death. Nguyen and Neilsen (2010), for example, find that the average stock price reaction to the death of an independent director is negative, while Hayes and Schaefer (1999), Salas (2010), and Francassi and Tate (2012) find positive reactions for CEOs, top executives, and connected directors, respectively. In our sample, there is a positive but statistically insignificant average abnormal return for the short-window period surrounding a director's death (0.54%). Partitioning the sample by a director's association with pill adoption, however, reveals a pattern: The average share price reaction is positive for directors who are associated with pill adoptions (2.05%) and negative for other directors. The difference in average share price reaction is significant at the 10% level.

Overall, the results in Table 10 provide further support for the inference that directors who are associated with the adoption of a poison pill experience a decrease in the market value of their director services. This implies that pill adoption is not costless for directors. To the contrary, directors who are

associated with poison pill adoptions suffer decreases in the values of their services in the director labor market.

4.4. Firm lifecycle effects on first-time adopting directors

A growing literature indicates that the impact of takeover defenses on firm value depend on firm-specific characteristics (e.g., see Amihud, Schmid, and Solomon, 2019). Johnson, Karpoff, and Yi (2019) show that firm age serves as a good proxy for such characteristics. In particular, the use of a takeover defense tends to be associated with increases in firm value at young firms and decreases in value at older firms. If the impacts of poison pills follow such a lifecycle pattern, we should expect the consequences on adopting directors to reflect this pattern. If the adoption of a poison pill is associated with value decreases particularly at older firms, the adverse consequences for directors should be associated with pill adoptions primarily at older firms.

Panel A of Table 11 reports on tests of this hypothesis using the age of the firm adopting the pill.[14] Columns 1 and 2 report on tests for changes in vote margin, with and without other control variables, respectively, and including year, industry, and director fixed effects. The decrease in vote margins occurs primarily following pill adoptions at older firms, as the coefficient on the interaction term *Adopting director x post x adopting firm age (10+)* is -0.035 and significant at the 1% level in Column 2. There is even slight evidence that the impact on directors' vote margins is positive when the pill is adopted only 1-2 years after the firm's IPO.

The results in columns 3 and 4 show a similar pattern for director turnover. Here, the turnover rate is significantly lower when the first-time adopting director's firm is only 1-2 years from its IPO. The results for new directorships in columns 5 and 6 are mixed. The point estimates are higher for *Adopting director x post x adopting firm age (1-2)* than for the interaction terms for pill adoption at older firms. But the

[14] *Adopting firm age* is defined as the age of the adopting firm for a director's first poison pill and 0 for all directors who never adopt a poison pill. This allows us to maintain a control group of directors who are not associated with pill adoption.

coefficients are statistically significant for *Adopting director x post x adopting firm age (3-9)* and *Adopting director x post x adopting firm age (10+).* The coefficients for the three age-related interaction terms are not significantly different from each other, and we infer that the age of the adopting firm is not significantly related to the number of first-time adopting directors' new director appointments.

Panel A of Table 11 reflects tests that are based on the notion that a director's value in the director labor market is affected by whether she is associated with poison pills that add value (i.e., at young firms) or decrease value (i.e., at older firms). The underlying idea is that a director's consequences in the director labor market reflect the market's assessment of whether the director tends to act in shareholders' interests. An alternative view, however, is that a director who becomes associated with pill adoption signals that she is simply more likely to adopt poison pills. The lifecycle hypothesis implies that a pill-adopting director will be relatively valuable to young firms and costly for older firms.

Panel B of Table 11 examines this alternative implication of the lifecycle hypothesis. Here, we construct interaction terms that pick up the impact on the outcome variable (e.g., vote margin) at young, middle-aged, or older firms regardless of the age of the firm where the pill was adopted. This helps us to understand if shareholders at younger firms are less averse to directors with a reputation for adopting pills compared to shareholders at older firms. The coefficient on *Adopting director x post x firm age (1-2)* in column 2 is 0.061 and significant at the 5% level. This result implies that first-time adopting directors experience an increase in voting margins at the young firms at which they serve as directors. That is, these directors' association with pill adoption increases their vote margins at young firms. Similarly, first-time adopters' turnover rates decline among their directorships at young firms, as indicated by the results in columns 3 and 4. And the results in columns 5 and 6 indicate that first-time adopters are significantly less likely to be appointed to the boards of middle aged and older firms. These results display a clear pattern: Although first-time poison pill adopting directors suffer adverse career consequences overall, they have lower values particularly in the market for directors at older firms. Their association with poison pills, in contrast, is not viewed as being as costly in the market for directors at young firms.

5. Additional tests and extensions

5.1. Do the negative director consequences reflect active bid resistance?

Poison pills sometimes are adopted in anticipation of, or in the middle of, a takeover attempt. It therefore is possible that adopting directors' negative career consequences arise from resisting takeover attempts, not the pill per se. To examine this conjecture, we re-estimate the tests in Tables 3–5 with a dummy and interaction terms for clear day poison pills. These are pills that are adopted even in the absence of any takeover threat. If the negative career consequences arise from resisting specific takeover bids rather than from the pill itself, they should not arise after the adoption of clear-day pills. We find, however, that the effects of pill adoption on vote turnover, turnover, and new directorships are equally strong with clear-day pills as they are with pills adopted to deter specific takeover bids. This result indicates that the career consequences are for adopting poison pills, not for a director's opposition to any specific takeover bid. These results are tabulated in the Internet Appendix Table IA.4.

5.2. Institutional Shareholder Services, Inc. coverage

Since 2004, Institutional Shareholder Services, Inc. (ISS) has recommended that investors vote against directors who approve a poison pill with duration longer than one year. So ISS recommendations could be a channel by which first-time pill adopters experience negative career consequences. To test this conjecture, we repeat the tests in Tables 3–5, but controlling for whether the firm receives coverage by ISS and the interaction between adopting director x post and ISS coverage. Contrary to the ISS conjecture, however, we do not find that the negative career consequences concentrate among firms for which ISS makes recommendations. To the contrary, directors at firms that are not covered by ISS experience a significantly larger decline in vote margin than directors at firms with ISS coverage. These results indicate that pill adopting directors experience lower vote margins, higher turnover, and fewer appointments to new boards even in the absence of explicit ISS recommendations. These results are tabulated in the Internet Appendix Table IA.5.

5.3. Does pill duration matter?

It also is plausible that the severity of a first-time adopting director's career consequences depend on characteristics of the adopted pill. Again, ISS recommends voting against directors voting to adopt a poison pill duration longer than one year, but does not in general make recommendations regarding pills with a shorter duration (Catan, 2018). We therefore examine the impact of long-duration (longer than one year) pills vs. short-duration pills. As reported in Internet Appendix Table IA.6 long-duration pills are associated with a greater decrease in vote margin, a greater increase in director turnover, and a decreased likelihood of new directorships, than short-duration pills. However, none of these differences are statistically significant. We infer that all pills, not just long-duration pills, impose negative career consequences on first-time adopting directors.

5.4. Do the negative director consequences depend on the firm's other defenses?

Previous research indicates that different antitakeover provisions work as both substitutes and complements in the provision of a firm's takeover defense.[15] For example, the takeover protection afforded by a poison pill could be redundant with that provided by a classified board, or could be strengthened by the prior presence of a classified board. It therefore is plausible that the consequences to a first-time adopting director could be amplified, or mitigated, by the prior presence of a classified board. Consistent with this conjecture, we find that the negative career consequences reported in Tables 3–5 are indeed more negative when the firm already has a classified board. But the incremental effect of a classified board is statistically significant, and only at the 10% level, only for the vote margin results. These results are tabulated in the Internet Appendix Table IA.7.

We also examined the impact of a dual class share structure on a director's negative career consequences of adopting a poison pill. Dual class structures typically offer extremely strong protection from unsolicited takeover attempts, so the incremental impact of a poison pill would appear to be small.

[15] E.g., Karpoff and Malatesta (1989) find that firm-level defenses and state antitakeover laws work as substitutes, and Catan and Kahan argue that classified boards and poison pills serve as complements.

Only 21 firms in our sample have dual class share structures. However, we find no significant difference in the director consequences from adopting poison pills for these 21 firms compared to firms without dual class share structures.

5.5. Are the career consequences more severe for repeat pill adopters?

Our tests focus on the consequences to directors after the first time they serve on a board that adopts a poison pill. But might the career consequences be larger for directors involved in more than one pill adoption? Internet Appendix Table IA.8 summarizes the results of tests that examine this question. As reported throughout this paper, a director's first association with pill adoption is associated with a subsequent decrease in vote margins, increase in turnover likelihood, and decrease in new director positions. The marginal effects of a director's second and third association with a pill adoption, in contrast, are smaller, monotonically declining, and generally not statistically significant. This result implies that the most important impact on a director's career comes from the director's initial association with a poison pill. Investors and the director labor market function as if directors are grouped into "pill-adopting" and "non-pill adopting" directors, with the latter group generally having higher value in the director labor market.

5.6. Are director consequences related to the pills' share price impacts?

Another conjecture is that the severity of a director's negative career consequences could be higher for pills that are relatively costly to shareholders. Consistent with this conjecture, we find that the likelihood that a first-time adopting director will be appointed to a new board is negatively related to the stock price reaction when the pill is adopted. Vote margins and turnover rates, however, are not significantly related to the share price reaction upon pill adoption. These results are reported in Internet Appendix Table IA.9.

6. Conclusions

This paper examines the consequences for directors who serve on boards that adopt poison pills. A board member's first-time involvement in the adoption of a poison pill is associated with significantly

adverse career consequences. In a multivariate model with director fixed effects, the average first-time adopter experiences a decrease in vote margin of 5.7 percentage points at all boards on which she serves. This represents an 8.5% decrease from the overall sample average vote margin of 67%. First-time adopters' likelihood of leaving one of their existing boards in each subsequent year increases by 1.6 percentage points, a 76% increase in exit likelihood over the sample-wide average exit likelihood of 2.1%. Directors' likelihood of being appointed to a new board in an average year after their first involvement with pill adoption decreases by 6.3 percentage points, which swamps the 5.1% base probability of a new director appointment in a given year.

Our director-level panel data framework helps to isolate treatment effects that are unique to the director and not driven by omitted firm or director characteristics. This is particularly the case when we include controls for specific director characteristics such as age and status as CEO or board chair, and when we include director, year, and industry fixed effects. These specifications greatly reduce the possibility that our results reflect selection effects associated with unobservable time-varying influences on pill adoption and director outcomes due to the individual director, the director's firm, or the firm's industry. To ensure that our results are not driven by poor firm performance, we partition the sample of first-time pill adoptions into those adopted following periods of good performance ("sunny day" pills) and those adopted following periods of poor performance ("rainy day" pills). We find that the directors' adverse labor market results are, if anything, stronger following "sunny day" pills, a result that is inconsistent with the notion that both pills and the adverse labor market consequences are driven by poor firm performance.

We also conduct tests using two distinct types of instrumental variables that control for the endogenous nature of pill adoption. Our first instrumental variable is based on peer influences that affect directors who serve on multiple boards simultaneously, and our second instrument is based on a director's colleagues' exposures to legal developments regarding poison pills. The results of these instrumental variable tests are consistent with our main tests. Following a director's first-time involvement in the adoption of poison pill, the director experiences a decrease in vote margins, an increase in the likelihood of

losing board seats, and a decreased likelihood of acquiring new board seats compared to other directors that have not adopted pills, and compared to the subject director's experience before adopting a poison pill.

We also examine an alternative measure of a director's labor-market value based on the stock price reaction to news that a director leaves a firm's board, or dies. Like previous researchers (e.g. Fich and Shivdasani (2007)), we find that the unconditional average abnormal stock price reaction to a director's departure is positive. However, the positive share price reaction appears only in the subset of directors who were associated with a previous adoption of a poison pill. In contrast, when directors who were not associated with poison pill adoptions leave the firm, there is no significant stock price reaction. These results suggest that directors who are associated with the adoption of a poison pill are less valued by shareholders compared to other directors.

Recent research shows that the impact of takeover defenses – of which poison pills are one example – is, in general, positive for young firms and negative for more seasoned firms. To examine possible life cycle effects, we repeat our tests after partitioning our sample into pill adoptions at young vs. old firms. All of the adverse consequences we document – lower vote margins, higher termination rates, and fewer new directorships – appear among the subset of first-time adopting directors who oversee the adoption of poison pills at seasoned firms. There is no evidence that directors who oversee the adoption of pills at young firms suffer negative career consequences. These results are consistent with prior findings that the impacts of takeover defenses on firms are related to firm age and are negative primarily among seasoned firms.

Overall, our results strongly indicate that poison pill adoption is not costless for directors of seasoned firms. To the contrary, directors who become associated with the adoption of a poison pill suffer adverse consequences in the director labor market and are judged by investors to be less valuable as board members. Our tests therefore reject the view that the explicit adoption of a poison pill is inconsequential. Even though most firms now have implicit legal rights to adopt pills at any time, it matters whether or not a firm actually exercises those rights.

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Appendix Table 1: Variable definitions

This table reports the definitions of the variables used in our empirical tests. The sample consists of 18,600 unique directors and 3,441 unique firms in the BoardEx Director Employment database over the period of 2003-2015.

Variable	Data source	Definition
Director-specific variables		
Vote margin	ISS Voting Analytics data	Director's percentage of votes "for" in an uncontested election minus the percentage of votes "against", percent "abstaining", percent "broker non-vote", and percent "withheld".
Director turnover	BoardEx Director Employment data	An indicator variable taking the value of one if the director leaves a board
New directorships	BoardEx Director Employment data	An indicator variable taking the value of one if the director joins a new board
Board member age (years)	BoardEx Director Employment data	Ages as provided in BoardEx data.
Board tenure (years)	BoardEx Director Employment data	Number of years since the director was originally appointed to the board.
CEO (indicator)	BoardEx Director Employment data	An indicator variable taking the value of one if the director is also CEO of the firm.
Chairman (indicator)	BoardEx Director Employment data	An indicator variable taking a value of one if the director is also chairman of the board.
Time until retirement	BoardEx Director Employment data	Time in years from current director age until director reaches the age of 65.
Total number of directorships	BoardEx Director Employment data	The total number of directorships as reported in the BoardEx data.
Firm-specific variables		
Annual stock return (%)	CRSP	The calendar year stock return for the firm in the prior calendar year.
Board size	BoardEx Director Employment data	The board size as reported in the BoardEx data.
Firm age (years)	COMPUSTAT	The number of years the firm has had a non-zero figure for total assets (at) since the current year.
Institutional ownership (%)	Thomas Reuters Institutional (13f) Holdings data	
Log of book assets	COMPUSTAT	Book value of assets (at) in the prior fiscal year.
Log of market capitalization	COMPUSTAT	Current shares outstanding (csho) in COMPUSTAT times the fiscal year closing price (prcc_f) in the prior fiscal year.
ROA (%)	COMPUSTAT	Net income in the prior year divided by total assets in the prior year.
Classified board (indicator)	ISS Governance and Governance Legacy	An indicator variable taking the value of one if the firm has a classified board

Appendix Table 2: State by state legal developments

This table reports the year of passage for poison pill state statutes and year of important poison pill court decisions for the legal development exposure instrumental variable used in Table 8. The dates of the state statutes are from Karpoff and Wittry (2018) and the court cases are from Catan and Kahan (2016).

State	Year	Statute or court case citation
CO	1986	Spinner Corp. v. Princeville Dev. Corp., Civ. No. 86-0701, 1986 BL 11, at *1 (D. Haw. Oct. 31, 1986)
	1989	HB 1235
CT	2003	SB 951
DE	1985	Moran v. Household Int'l, Inc., 500 A.2d 1346, 1354, 1357 (Del. 1985)
	1985	Unocal Corp. v. Mesa Petroleum Co., 493 A.2d 946, 955 (Del. 1985)
FL	1989	SB 851
GA	1988	W. Point-Pepperell, Inc. v. Farley Inc., 711 F. Supp. 1088, 1094-95 (N.D. Ga. 1988)
	1988	HB 1272
HI	1988	HB 2961
ID	1988	SB 1448
IL	1989	HB 165
IN	1986	Dynamics Corp. of Am. v. CTS Corp., 637 F. Supp. 406, 407-09 (N.D. Ill.)
	1986	HB 1257
IA	1989	SB 502
KY	1988	HB 460
ME	1990	Ga.-Pac. Corp. v. Great N. Nekoosa Corp., 728 F. Supp. 807, 809-12 (D. Me. 1990)
	2002	HB 640
MD	1989	Realty Acquisition Corp. v. Prop. Tr. of Am., Civ. No. JH-89-2503, 1989 WL 214477, at *2 (D. Md. Oct. 27,1989)
	1999	SB 169
MA	1989	CH 242
MI	1986	Harvard Indus., Inc. v. Tyson, No. 86-CV-74639-DT, 1986 WL 36295, at *1 (E.D. Mich. Nov. 25, 1986)
	2001	SB 206
MN	1986	Gelco Corp. v. Coniston Partners, 652 F. Supp. 829, 847-48 (D. Minn. 1986)
	1995	HB 399
MS	2005	HB 371
MO	1999	HB 1667
NV	1989	AB 659
NJ	1985	Asarco Inc. v. Court, 611 F. Supp. 468, 477-80 (D.N.J. 1985)
	1989	CH 107
NY	1988	Bank of N.Y. Co. v. Irving Bank Corp., 536 N.Y.S.2d 923, 925-26 (N.Y. Sup. Ct. 1988)
	1988	CH 743
NC	1989	SB 280
OH	1986	HB 902
OR	1989	SB 300
PA	1988	SB 2031
RI	1990	SB 90
SC	1988	SB 451
SD	1990	HB 1289
TN	1989	SB 2042
TX	1989	A. Copeland Enters. v. Guste, 706 F. Supp. 1283, 1289-92 (W.D. Tex. 1989)
	2003	HB 1156
UT	1989	SB 100
VT	2008	HB 888
VA	1989	Topper Acquisition Corp. v. Emhart Corp., Civ. A. No. 89-00110-R, 1989 WL 513034, at *7-8 (E.D. Va. Mar. 23, 1989)
	1990	HB 462
WA	1998	HB 2387
WI	1986	R.D. Smith & Co. v. Preway Inc., 644 F. Supp. 868, 874-75 (W.D. Wis. 1986)
	1987	SB 1
WY	2009	SB 72

Table 1: Data by year

This table reports the number of observations of unique directors, firms, and new poison pills each year. The sample consists of 18,600 unique directors in the BoardEx Director Employment database over the period of 2003-2015. We use Securities Data Company (SDC) Poison Pills database to identify firms that adopt a poison pill in any given year.

Year	Unique firms	Unique directors	Firm-director obs.	New pills adopted	New first-time adopting directors
Pre-2003	-	-	-	711	6,705
2003	1,448	5,051	5,789	34	116
2004	1,326	5,100	5,808	19	60
2005	1,563	6,003	6,846	34	109
2006	1,700	6,771	7,752	50	183
2007	1,592	6,599	7,534	34	96
2008	1,696	7,169	8,257	58	186
2009	1,807	7,614	8,800	64	191
2010	1,801	7,798	9,000	28	92
2011	1,941	8,395	9,699	35	120
2012	2,131	9,272	10,691	38	126
2013	2,051	9,086	10,523	33	95
2014	2,084	9,295	10,793	21	70
2015	2,119	8,871	10,458	22	57
Total (2003-2015)	3,441	18,600	111,950	470	1,501

Table 2: Summary statistics

The sample consists of 18,600 unique directors in the BoardEx Director Employment database over the period of 2003-2015. Variables are defined in Appendix Table 1. Panel A reports director and board characteristics and Panel B reports firm characteristics. We use Securities Data Company (SDC) Poison Pills database to identify all directors that sit on a board that adopts a poison pill. Data on votes in uncontested director elections is reported in Institutional Shareholder Services (ISS) Voting Analytics database. Firm characteristic variables are constructed using Compustat Fundamentals Annual database.

	Obs.	Mean	SD	Min	P25	P50	P75	Max
Panel A: Director/Board characteristics								
Adopted poison pill	18,600	0.34	0.47	0.0	0.0	0.0	1.0	1.0
Vote margin	111,950	0.671	0.247	0.0	0.572	0.744	0.844	1.0
Director turnover	111,950	0.021	0.143	0.0	0.0	0.0	0.0	1.0
New directorships	111,950	0.051	0.220	0.0	0.0	0.0	0.0	1.0
Director reputation measures								
CEO (indicator)	111,950	0.115	0.320	0.0	0.0	0.0	0.0	1.0
Chairman (indicator)	111,950	0.119	0.323	0.0	0.0	0.0	0.0	1.0
Board size	111,950	9.3	2.6	1.0	7.0	9.0	11.0	27.0
Other director characteristics								
Board member age (years)	111,950	60.8	9.0	27.0	55.0	61.0	67.0	96
Board tenure (years)	111,950	7.8	7.1	0.0	3.0	6.0	11.0	65.0
Total number of directorships	111,950	1.7	1.0	1.0	1.0	1.0	2.0	11.0
Panel B: Firm characteristics								
Firm age (years)	21,363	23.3	19.7	1	9	17	32	90
Log of book assets	21,363	7.2	1.9	0.1	5.9	7.1	8.5	13.6
Log of market capitalization	21,363	14.1	1.7	7.2	12.9	14.1	15.4	17.0
ROA (%)	21,363	10.5	16.2	-110.6	7.6	12.4	17.6	40.6
Annual stock return (%)	21,363	16.7	52.3	-85.9	-13.8	10.3	36.8	263.1
Institutional ownership (%)	21,363	69.5	23.3	0.4	57.5	74.4	86.7	100.0

Table 3: Director Election Voting Results

This table reports the results of difference-in-difference linear regression models analyzing director outcomes around the adoption of a director's first poison pill. The sample consists of 18,600 unique directors in the BoardEx Director Employment database over the period of 2003-2015. The independent variable of interest is the interaction of two indicator variables: *adopting director*, which equals 1 if a director sits on a board that adopts a poison pill at any point in his or her career, and *post*, which equals 1 for all years following the adoption of a director's first poison pill. *Post* cannot be included in the models due to collinearity with year fixed effects. The treated group includes only a director's appointments on the pill adopting firm itself and other current appointments at the time of adoption, but not future appointments started after the adoption of the pill. The dependent variable (vote margin) is a continuous variable equal to a director's percentage of votes "for" in an uncontested election minus the percentage of votes "against", percent "abstaining", percent "broker non-vote", and percent "withheld". Data on votes in uncontested director elections is reported in Institutional Shareholder Services (ISS) Voting Analytics database. We use Securities Data Company (SDC) Poison Pills database to identify all directors that sit on a board that adopts a poison pill. Director control variables are constructed using BoardEx Director Employment database and firm control variables are constructed using Compustat Fundamentals Annual database. Industry fixed effects are constructed using 3-digit SIC codes. Robust standard errors, clustered at the director level, are reported in parentheses, and ***, **, and * denote significance of the parameter estimates at the 0.01, 0.05, and 0.10 level, respectively.

Dependent variable =	Vote margin			
	(1)	(2)	(3)	(4)
Adopting director x post	-0.023***	-0.025***	-0.057***	
	(0.005)	(0.004)	(0.006)	
Adopting director	-0.013***	-0.025***		
	(0.004)	(0.004)		
Time from pill adoption				
Adopting director x year -1				-0.010
				(0.010)
Adopting director x year 0				-0.079***
				(0.012)
Adopting director x year +1				-0.086***
				(0.010)
Adopting director x year +2				-0.015*
				(0.008)
Adopting director x year +3				-0.008
				(0.006)
Director control variables				
CEO (indicator)		0.000	0.000	0.000
		(0.000)	(0.001)	(0.001)
Chairman (indicator)		-0.002	-0.002	-0.003*
		(0.001)	(0.002)	(0.002)
Board size		-0.000**	0.000	0.000
		(0.000)	(0.000)	(0.000)
Time until retirement		0.013***	0.007	0.007
		(0.003)	(0.006)	(0.006)
Board tenure (years)		-0.009**	-0.004	-0.005
		(0.004)	(0.005)	(0.005)
Number of directorships		-0.001	-0.001**	-0.001**
		(0.001)	(0.001)	(0.001)
Firm control variables				
Firm age (years)		-0.092***	-0.120***	-0.124***
		(0.007)	(0.011)	(0.011)
Log of book assets		-0.001	-0.009***	-0.009***
		(0.002)	(0.002)	(0.002)
Log of market cap.		0.031***	0.043***	0.043***
		(0.002)	(0.002)	(0.002)
ROA		0.080***	0.025**	0.024**
		(0.010)	(0.010)	(0.010)
Lagged ROA		0.100***	0.028***	0.026**
		(0.010)	(0.011)	(0.011)

Annual stock return		-0.008***	-0.016***	-0.016***
		(0.002)	(0.002)	(0.002)
Lagged annual stock return		0.005***	0.006***	0.006***
		(0.002)	(0.002)	(0.002)
Institutional ownership		0.175***	0.071***	0.073***
		(0.007)	(0.008)	(0.008)
Year FE	Yes	Yes	Yes	Yes
Industry FE	Yes	Yes	Yes	Yes
Director FE	No	No	Yes	Yes
Observations	96,712	96,712	96,712	96,712
R-squared	0.249	0.352	0.648	0.648

Table 4: Director turnover likelihood

This table reports the results of difference-in-difference linear regression models analyzing director outcomes around the adoption of a director's first poison pill. The sample consists of 18,600 unique directors in the BoardEx Director Employment database over the period of 2003-2015. The independent variable of interest is the interaction of two indicator variables: *adopting director*, which equals 1 if a director sits on a board that adopts a poison pill at any point in his or her career, and *post*, which equals 1 for all years following the adoption of a director's first poison pill. *Post* cannot be included in the models due to collinearity with year fixed effects. The treated group includes only a director's appointments on the pill adopting firm itself and other current appointments at the time of adoption, but not future appointments started after the adoption of the pill. The dependent variable (director turnover) is an indicator variables set equal to one in a year in which a director leaves a board. Data used to construct this measure are taken from the BoardEx Director Employment database. We use Securities Data Company (SDC) Poison Pills database to identify all directors that sit on a board that adopts a poison pill. Director control variables are constructed using BoardEx Director Employment database and firm control variables are constructed using Compustat Fundamentals Annual database. Industry fixed effects are constructed using 3-digit SIC codes. Robust standard errors, clustered at the director level, are reported in parentheses, and ***, **, and * denote significance of the parameter estimates at the 0.01, 0.05, and 0.10 level, respectively.

Dependent variable =	Director turnover			
	(1)	(2)	(3)	(4)
Adopting director x post	0.022***	0.021***	0.016***	
	(0.001)	(0.001)	(0.003)	
Adopting director	-0.020***	-0.021***		
	(0.001)	(0.001)		
Time from pill adoption				
Adopting director x year -1				-0.001
				(0.007)
Adopting director x year 0				0.031***
				(0.009)
Adopting director x year +1				0.001
				(0.006)
Adopting director x year +2				0.009
				(0.006)
Adopting director x year +3				0.004
				(0.005)
Director control variables				
CEO (indicator)		0.000***	-0.000	-0.000
		(0.000)	(0.001)	(0.001)
Chairman (indicator)		0.004***	0.013***	0.013***
		(0.001)	(0.001)	(0.001)
Board size		0.000***	0.003***	0.003***
		(0.000)	(0.000)	(0.000)
Time until retirement		0.010***	0.004	0.004
		(0.002)	(0.007)	(0.007)
Board tenure (years)		0.001	-0.002	-0.002
		(0.002)	(0.003)	(0.003)
Number of directorships		0.006***	0.009***	0.009***
		(0.000)	(0.001)	(0.001)
Firm control variables				
Firm age (years)		-0.010***	-0.009	-0.008
		(0.003)	(0.009)	(0.009)
Log of book assets		-0.000	-0.003**	-0.003**
		(0.001)	(0.002)	(0.002)
Log of market cap.		-0.007***	-0.011***	-0.011***
		(0.001)	(0.002)	(0.002)
ROA		-0.027***	-0.023***	-0.022***
		(0.007)	(0.008)	(0.008)
Lagged ROA		0.016***	0.008	0.008
		(0.006)	(0.007)	(0.007)
Annual stock return		0.000	0.002*	0.002*

		(0.001)	(0.001)	(0.001)
Lagged annual stock return		-0.002*	-0.000	-0.000
		(0.001)	(0.001)	(0.001)
Institutional ownership		0.003	0.019***	0.018***
		(0.003)	(0.006)	(0.006)
Year FE	Yes	Yes	Yes	Yes
Industry FE	Yes	Yes	Yes	Yes
Director FE	No	No	Yes	Yes
Observations	96,712	96,712	96,712	96,712
R-squared	0.007	0.016	0.269	0.269

Table 5: The likelihood of new directorships

This table reports the results of difference-in-difference linear regression models analyzing director outcomes around the adoption of a director's first poison pill. The sample consists of 18,600 unique directors in the BoardEx Director Employment database over the period of 2003-2015. The independent variable of interest is the interaction of two indicator variables: *adopting director*, which equals 1 if a director sits on a board that adopts a poison pill at any point in his or her career, and *post*, which equals 1 for all years following the adoption of a director's first poison pill. *Post* cannot be included in the models due to collinearity with year fixed effects. The treated group includes all of a directors appointments. The dependent variable (new directorships) is an indicator variables set equal to one in a year in which a director joins a board. Data used to construct this measure are taken from the BoardEx Director Employment database. We use Securities Data Company (SDC) Poison Pills database to identify all directors that sit on a board that adopts a poison pill. Director control variables are constructed using BoardEx Director Employment database and firm control variables are constructed using Compustat Fundamentals Annual database. Industry fixed effects are constructed using 3-digit SIC codes. Robust standard errors, clustered at the director level, are reported in parentheses, and ***, **, and * denote significance of the parameter estimates at the 0.01, 0.05, and 0.10 level, respectively.

Dependent variable =	New directorships			
	(1)	(2)	(3)	(4)
Adopting director x post	-0.085***	-0.047***	-0.063***	
	(0.005)	(0.004)	(0.006)	
Adopting director	0.048***	0.036***		
	(0.005)	(0.004)		
Time from pill adoption				
Adopting director x year -1				0.018**
				(0.009)
Adopting director x year 0				-0.011
				(0.007)
Adopting director x year +1				-0.058***
				(0.005)
Adopting director x year +2				-0.040***
				(0.005)
Adopting director x year +3				-0.043***
				(0.004)
Director control variables				
CEO (indicator)		0.001***	-0.002	-0.001
		(0.000)	(0.001)	(0.001)
Chairman (indicator)		-0.002**	-0.001	-0.001
		(0.001)	(0.002)	(0.002)
Board size		-0.007***	-0.012***	-0.012***
		(0.000)	(0.000)	(0.000)
Time until retirement		-0.010***	-0.051***	-0.051***
		(0.002)	(0.007)	(0.007)
Board tenure (years)		-0.004**	-0.012***	-0.013***
		(0.002)	(0.004)	(0.004)
Number of directorships		0.011***	0.019***	0.018***
		(0.000)	(0.001)	(0.001)
Firm control variables				
Firm age (years)		0.029***	0.021**	0.020**
		(0.004)	(0.009)	(0.009)
Log of book assets		-0.011***	-0.015***	-0.014***
		(0.001)	(0.002)	(0.002)
Log of market cap.		-0.001	0.001	0.001
		(0.001)	(0.002)	(0.002)
ROA		0.028***	0.018**	0.018**
		(0.007)	(0.009)	(0.009)
Lagged ROA		-0.009	-0.010	-0.012
		(0.008)	(0.009)	(0.009)
Annual stock return		0.003**	0.003*	0.003*
		(0.002)	(0.002)	(0.002)

Lagged annual stock return		0.001	0.001	0.001
		(0.001)	(0.002)	(0.002)
Institutional ownership		0.004	-0.005	-0.004
		(0.003)	(0.006)	(0.006)
Year FE	Yes	Yes	Yes	Yes
Industry FE	Yes	Yes	Yes	Yes
Director FE	No	No	Yes	Yes
Observations	111,950	111,950	111,950	111,950
R-squared	0.018	0.084	0.280	0.280

Table 6: Director outcome results by appointment

This table reports the results of difference-in-difference linear regression models analyzing director outcomes around the adoption of a director's first poison pill by splitting a director's appointments into three categories: (a) the pill adopting firm itself, (b) other current appointments at the time of adoption, and (c) all future appointments. The sample consists of 18,600 unique directors in the BoardEx Director Employment database over the period of 2003-2015. The independent variable of interest is the interaction of two indicator variables: *adopting director*, which equals 1 if a director sits on a board that adopts a poison pill at any point in his or her career, and *post*, which equals 1 for all years following the adoption of a director's first poison pill. *Post* cannot be included in the models due to collinearity with year fixed effects. Vote margin is a continuous variable equal to a director's percentage of votes "for" in an uncontested election minus the percentage of votes "against", percent "abstaining", percent "broker non-vote", and percent "withheld". Data on votes in uncontested director elections is reported in Institutional Shareholder Services (ISS) Voting Analytics database. Director turnover is an indicator variables set equal to one in a year in which a director leaves a board. Data used to construct this measure are taken from the BoardEx Director Employment database. We use Securities Data Company (SDC) Poison Pills database to identify all directors that sit on a board that adopts a poison pill. Director control variables are constructed using BoardEx Director Employment database and firm control variables are constructed using Compustat Fundamentals Annual database. Industry fixed effects are constructed using 3-digit SIC codes. Robust standard errors, clustered at the director level, are reported in parentheses, and ***, **, and * denote significance of the parameter estimates at the 0.01, 0.05, and 0.10 level, respectively.

Dependent variable =	Vote margin			Director turnover		
	(1)	(2)	(3)	(4)	(5)	(6)
Treated sample =	Pill adopting firm	Other current appointments	Future directorships	Pill adopting firm	Other current appointments	Future directorships
Adopting director x post	-0.097*** (a)	-0.041*** (b)	0.029	0.023*** (c)	0.012*** (d)	-0.151***
	(0.012)	(0.006)	(0.028)	(0.008)	(0.004)	(0.041)
Director control variables						
CEO (indicator)	0.000	0.000	-0.000	-0.001	-0.001	-0.001
	(0.001)	(0.001)	(0.001)	(0.002)	(0.002)	(0.002)
Chairman (indicator)	-0.000	-0.004**	-0.003	0.013***	0.014***	0.013***
	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)
Board size	0.001	0.000	0.000	0.003***	0.003***	0.003***
	(0.001)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Time until retirement	0.004	0.007	0.006	0.004	0.005	0.009
	(0.007)	(0.007)	(0.007)	(0.007)	(0.007)	(0.008)
Board tenure (years)	-0.006	-0.003	-0.012**	-0.002	-0.001	-0.003
	(0.006)	(0.005)	(0.005)	(0.004)	(0.004)	(0.004)
Number of directorships	-0.001	-0.001	-0.001	0.009***	0.008***	0.008***
	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
Firm control variables						
Firm age (years)	-0.138***	-0.132***	-0.126***	-0.019*	-0.008	-0.010
	(0.013)	(0.011)	(0.011)	(0.011)	(0.009)	(0.009)
Log of book assets	-0.009***	-0.011***	-0.012***	-0.003	-0.003	-0.001
	(0.003)	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)
Log of market cap.	0.043***	0.042***	0.042***	-0.012***	-0.011***	-0.014***
	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)
ROA	0.028***	0.028***	0.032***	-0.026***	-0.028***	-0.027***
	(0.010)	(0.011)	(0.010)	(0.008)	(0.008)	(0.008)
Lagged ROA	0.024**	0.036***	0.032***	0.005	0.004	0.005
	(0.011)	(0.012)	(0.011)	(0.008)	(0.008)	(0.008)
Annual stock return	-0.014***	-0.017***	-0.015***	0.003*	0.002	0.003**
	(0.002)	(0.002)	(0.002)	(0.001)	(0.002)	(0.002)
Lagged annual stock return	0.007***	0.005***	0.007***	0.001	0.000	0.001
	(0.002)	(0.002)	(0.002)	(0.001)	(0.001)	(0.001)
Institutional ownership	0.065***	0.071***	0.078***	0.019***	0.021***	0.024***
	(0.009)	(0.009)	(0.008)	(0.007)	(0.007)	(0.006)
F-stat of difference (a) – (b)		13.86				
(p-value)		(0.00)				

F-stat of difference (c) – (d) (p-value)				1.55 (0.21)		
Year FE	Yes	Yes	Yes	Yes	Yes	Yes
Industry FE	Yes	Yes	Yes	Yes	Yes	Yes
Director FE	Yes	Yes	Yes	Yes	Yes	Yes
Observations	79,904	83,130	80,992	79,904	83,130	80,992
R-squared	0.672	0.663	0.669	0.282	0.270	0.270

Table 7. Director outcomes for "sunny day" versus "rainy day" pills

This table reports the results of difference-in-difference linear regression models analyzing director outcomes around the adoption of a director's first poison pill when the firm is experiencing above median value and performance conditions in the two years preceding the adoption ("sunny day") versus a director's first poison pill when the firm is experiencing below median value and performance conditions in the two years preceding the adoption ("rainy day"). The sample consists of 18,600 unique directors BoardEx Director Employment database over the period of 2003-2015. The independent variable of interest is the interaction of two indicator variables: *adopting director*, which equals 1 if a director sits on a board that adopts a poison pill at any point in his or her career, and *post*, which equals 1 for all years after the adoption of a director's first poison pill. *Post* cannot be included in the models due to collinearity with year fixed effects. The treated group for the vote margin and turnover dependent variables includes only a director's appointments on the pill adopting firm itself and other current appointments at the time of adoption, but not future appointments started after the adoption of the pill. Vote margin is a continuous variable equal to a director's percentage of votes "for" in uncontested elections minus the percentage of votes "against", percent "abstaining", percent "broker non-vote", and percent "withheld". Data on votes in uncontested director elections is reported in Institutional Shareholder Services (ISS) Voting Analytics database. New directorships and director turnover are indicator variables set equal to one in a year in which a director receives a new appointment to a board and a year in which the director leaves a board, respectively. Data used to construct these measures are taken from the BoardEx Director Employment database. We use Securities Data Company (SDC) Poison Pills database to identify all directors that sit on a board that adopts a poison pill. Each model includes all of the director and firm control variables used in our main regressions in Tables 3 through 6. Director control variables are constructed using BoardEx Director Employment database and firm control variables are constructed using Compustat Fundamentals Annual database. Additional terms from the triple interaction are included in the model, but are not reported for brevity. Industry fixed effects are constructed using 3-digit SIC codes. Robust standard errors are clustered at the director level. *p*-Values are reported in parentheses, and ***, **, and * denote significance of the parameter estimates at the 0.01, 0.05, and 0.10 level, respectively.

Dependent variable =	Vote margin			Turnover			New directorships		
Performance or value measure =	(1) Stock return	(2) ROA	(3) Tobin's Q	(4) Stock return	(5) ROA	(6) Tobin's Q	(7) Stock return	(8) ROA	(9) Tobin's Q
Adopting director x post (sunny)	-0.069***	-0.086***	-0.110***	0.013	0.032***	0.020	-0.065***	-0.052***	-0.064***
	(0.017)	(0.016)	(0.017)	(0.011)	(0.011)	(0.012)	(0.013)	(0.010)	(0.014)
Adopting director x post (rainy)	-0.056***	-0.053***	-0.053***	0.016***	0.015***	0.016***	-0.062***	-0.064***	-0.063***
	(0.006)	(0.006)	(0.006)	(0.003)	(0.004)	(0.003)	(0.006)	(0.006)	(0.006)
Test of difference (sunny - rainy) F-stat	0.54	4.13**	10.45***	0.09	2.45	0.10	0.03	1.44	0.01
(p-value)	(0.46)	(0.04)	(0.00)	(0.76)	(0.12)	(0.75)	(0.87)	(0.23)	(0.92)
Control variables	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Industry FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Director FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	96,712	96,712	96,712	96,712	96,712	96,712	111,950	111,950	111,950
R-squared	0.648	0.648	0.648	0.269	0.269	0.269	0.280	0.280	0.280

Table 8: Linked boards 2SLS results describing director outcomes

This table reports the results of two stage least squares linear regression models utilizes an instrumental variable based on the number of pill adoptions by interlocked boards (boards linked to a firm via a common shared director) in a given year. The sample period is 2003-2015. Panel A displays results without director fixed effects while includes director fixed effects. The independent variable of interest is the interaction of two indicator variables: *adopting director*, which equals 1 if a director sits on a board that adopts a poison pill at any point in his or her career, and *post*, which equals 1 for all years following the adoption of a director's first poison pill. The treated group for the vote margin and turnover dependent variables includes only a director's appointments on the pill adopting firm itself and other current appointments at the time of adoption, but not future appointments started after the adoption of the pill. *Post* cannot be included in the models due to collinearity with year fixed effects. The treated group for the vote margin and turnover dependent variables includes only a director's appointments on the pill adopting firm itself and other current appointments at the time of adoption, but not future appointments started after the adoption of the pill. Vote margin is a continuous variable equal to a director's percentage of votes "for" in uncontested elections minus the percentage of votes "against", percent "abstaining", percent "broker non-vote", and percent "withheld". Data on votes in uncontested director elections is reported in Institutional Shareholder Services (ISS) Voting Analytics database. New directorships and director turnover are indicator variables set equal to one in a year in which a director receives a new appointment to a board and a year in which the director leaves a board, respectively. We use Securities Data Company (SDC) Poison Pills database to identify all firms that adopt a poison pill. Each model includes all of the director and firm control variables used in our main regressions in Tables 3 through 6. Director control variables are constructed using BoardEx Director Employment database and firm control variables are constructed using Compustat Fundamentals Annual database. Industry fixed effects are constructed using 3-digit SIC codes. Robust standard errors, clustered at the director level, are reported in parentheses, and ***, **, and * denote significance of the parameter estimates at the 0.01, 0.05, and 0.10 level, respectively.

	1st stage	2nd stage	2nd stage	1st stage	2nd stage
	(1)	(2)	(3) Director	(4)	(5) New
Dependent variable =	Adopt pill	Vote margin	turnover	Adopt pill	directorships
			Panel A: No director fixed effects		
Instrumental Variables					
Number of linked board pill adoptions	0.029***			0.022***	
	(0.004)			(0.003)	
Variables of Interest					
Adopting director x post		-0.302***	0.066		-0.354**
		(0.113)	(0.083)		(0.155)
Cragg-Donald Wald F-stat	81.08			50.98	
Controls	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes	Yes
Industry FE	Yes	Yes	Yes	Yes	Yes
Director FE	No	No	No	No	No
Observations	87,607	87,607	87,607	102,208	102,208
			Panel B: Director fixed effects		
Instrumental Variables					
Number of linked board pill adoptions	0.038***			0.032***	
	(0.004)			(0.003)	
Variables of Interest					
Adopting director x post		-0.259***	0.034		-0.265**
		(0.77)	(0.066)		(0.108)
Cragg-Donald Wald F-stat	225.15			198.62	
Controls	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes	Yes
Industry FE	Yes	Yes	Yes	Yes	Yes
Director FE	Yes	Yes	Yes	Yes	Yes
Observations	86,576	86,576	86,576	101,513	101,513

Table 9: Legal development exposure 2SLS results describing director outcomes

This table reports the results of two stage least squares linear regression models utilizing an instrumental variable based on a director's experience of sitting on a board incorporated in a state in which a significant court case regarding a poison pill was decided, or a state that passed a poison pill statute. The sample period is 1980-2015. Panel A displays results without director fixed effects while includes director fixed effects. The independent variable of interest is the interaction of two indicator variables: *adopting director*, which equals 1 if a director sits on a board that adopts a poison pill at any point in his or her career, and *post*, which equals 1 for all years following the adoption of a director's first poison pill. The treated group for the vote margin and turnover dependent variables includes only a director's appointments on the pill adopting firm itself and other current appointments at the time of adoption, but not future appointments started after the adoption of the pill. *Post* cannot be included in the models due to collinearity with year fixed effects. The treated group for the vote margin and turnover dependent variables includes only a director's appointments on the pill adopting firm itself and other current appointments at the time of adoption, but not future appointments started after the adoption of the pill. Vote margin is a continuous variable equal to a director's percentage of votes "for" in uncontested elections minus the percentage of votes "against", percent "abstaining", percent "broker non-vote", and percent "withheld". Data on votes in uncontested director elections is reported in Institutional Shareholder Services (ISS) Voting Analytics database. New directorships and director turnover are indicator variables set equal to one in a year in which a director receives a new appointment to a board and a year in which the director leaves a board, respectively. We use Securities Data Company (SDC) Poison Pills database to identify all firms that adopt a poison pill. Each model includes all of the director and firm control variables used in our main regressions in Tables 3 through 6. Director control variables are constructed using BoardEx Director Employment database and firm control variables are constructed using Compustat Fundamentals Annual database. Industry fixed effects are constructed using 3-digit SIC codes. Robust standard errors, clustered at the director level, are reported in parentheses, and ***, **, and * denote significance of the parameter estimates at the 0.01, 0.05, and 0.10 level, respectively.

	1st stage	2nd stage	1st stage	2nd stage
	(1)	(3) Director	(4)	(5) New
Dependent variable =	Adopt pill	turnover	Adopt pill	directorships
	Panel A: No director fixed effects			
Instrumental Variables				
Pill legal development exposure	0.082***		0.135***	
	(0.027)		(0.023)	
Variables of Interest				
Adopting director x post		0.198**		-0.586***
		(0.098)		(0.122)
Cragg-Donald Wald F-stat	101.51		380.30	
Controls	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes
Industry FE	Yes	Yes	Yes	Yes
Director FE	No	No	No	No
Observations	46,275	46,275	49,799	49,799
	Panel B: Director fixed effects			
Instrumental Variables				
Pill legal development exposure	0.172***		0.162***	
	(0.035)		(0.032)	
Variables of Interest				
Adopting director x post		0.116*		-0.431***
		(0.064)		(0.160)
Cragg-Donald Wald F-stat	212.08		241.05	
Controls	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes
Industry FE	Yes	Yes	Yes	Yes
Director FE	Yes	Yes	Yes	Yes
Observations	45,455	45,455	48,937	48,937

Table 10: Cumulative abnormal returns (CARs) around the announcement that a director is departing the board.
This table reports mean and median values of the impacts on a firm's share values when it is announced that a board member is departing. The full sample consists of 12,426 announcements of directors leaving boards reported in the BoardEx Announcements database from 2003 through 2017. We use Securities Data Company (SDC) Poison Pills database to identify all directors who had previously held an appointment on a board that adopted a poison pill. Panel A reports the results from the baseline event study. Panel B analyzes the differential share value impact for departing directors that have previously adopted a poison pill. Panel C analyzes the differential share value impact for departing directors that have previously adopted a poison pill multivariate regressions, and tests to see if the result is stronger for more recent first time adopters. Panel D repeats the analysis in Panel B for only the announcement of the death of a board member. Cumulative abnormal returns are calculated using a market model regression with parameters estimated from day -250 through day -50. In Panel C, models (3), (4), (7) and (8) include all of the director and firm control variables used in our main regressions in Tables 3 through 6. Director control variables are constructed using BoardEx Director Employment database and firm control variables are constructed using Compustat Fundamentals Annual database. Robust standard error are clustered at the firm level in Panel D. *p*-Values are reported in parentheses, and ***, **, and * denote significance of the parameter estimates at the 0.01, 0.05, and 0.10 level, respectively.

Panel A: Abnormal returns in event window around announcement of departing director (N = 12,426)

Event window	Mean	Median	t-Test	Mann-Whitney U-statistic
-1	0.07%	0.00%	1.84*	0.00
			(0.07)	(1.00)
0	0.18%	0.00%	2.09**	0.00
			(0.04)	(1.00)
+1	0.06%	0.00%	1.48	0.00
			(0.14)	(1.00)
-1 to 1	0.31%	0.07%	2.94***	1.95*
			(0.00)	(0.05)
-5 to 5	0.57%	0.38%	3.80***	5.59***
			(0.00)	(0.00)

Panel B: Abnormal returns for departing directors by the prior adoption of a poison pill (N = 12,426)

	Director departure announcement date CAR (-5,5)		
Prior pill adoption status for departing director	N	Mean	Median
No prior pill adoption (a)	7,543	0.31%	0.08%
Prior pill adoption (b)	4,888	0.96%	0.79%
Test of difference (b-a) t-statistic (mean) and Mann-Whitney U-statistic (median)		2.17**	4.53***
(p-value)		(0.03)	(0.00)
Prior pill in last 3 years (c)	733	1.28%	0.52%
Prior pill greater than 3 years ago (d)	4,155	0.90%	0.81%
Test of difference (b-a) t-statistic (mean) and Mann-Whitney U-statistic (median)		0.61	-0.81
(p-value)		(0.54)	(0.42)

Panel C: Multivariate regressions

	CAR (-1,1)				CAR (-5,5)			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Prior pill adoption	0.005*		0.004		0.007*		0.004	
	(0.003)		(0.003)		(0.004)		(0.003)	
Prior pill in last 3 years (a)		0.014**		0.013**		0.018**		0.015**
		(0.006)		(0.006)		(0.007)		(0.008)
Prior pill greater than 3 years ago (b)		0.004		0.002		0.006		0.003
		(0.003)		(0.003)		(0.004)		(0.004)
Controls	No	No	Yes	Yes	No	No	No	Yes
Year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Firm FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Test of difference (a-b) F-stat		3.22*		3.60*		2.65		2.63
(p-value)		(0.07)		(0.06)		(0.10)		(0.10)
Observations	11,526	11,526	11,330	11,330	11,526	11,526	11,330	11,330
R-squared	0.378	0.378	0.387	0.388	0.370	0.370	0.387	0.389

Panel D: Abnormal returns for the death of directors (N = 167)

	Director death announcement date CAR (-5,5)		
Prior pill adoption status for departing director	N	Mean	Median
All (p-value)	167	0.54% (0.47)	-0.59% (0.33)
No prior pill adoption (a)	95	-0.60%	-1.35%
Prior pill adoption (b)	72	2.05%	0.56%
Test of difference (b-a) t-statistic (mean) and Mann-Whitney U-statistic (median)		1.75*	1.96*
(p-value)		(0.08)	(0.05)

Table 11. Director outcomes and the lifecycle of takeover defenses

This table reports the results of difference-in-difference linear regression models analyzing director outcomes around the adoption of a firm's first poison and tests for the importance of a firm's lifecycle. The sample period is 2003-2015. The independent variable of interest is the interaction of two indicator variables: *adopting director*, which equals 1 if a director sits on a board that adopts a poison pill at any point in his or her career, and *post*, which equals 1 for all years following the adoption of a director's first poison pill. The treated group for the vote margin and turnover dependent variables includes only a director's appointments on the pill adopting firm itself and other current appointments at the time of adoption, but not future appointments started after the adoption of the pill. *Post* cannot be included in the models due to collinearity with year fixed effects. Vote margin is a continuous variable equal to a director's percentage of votes "for" in uncontested elections minus the percentage of votes "against", percent "abstaining", percent "broker non-vote", and percent "withheld". Data on votes in uncontested director elections is reported in Institutional Shareholder Services (ISS) Voting Analytics database. New directorships and director turnover are indicator variables set equal to one in a year in which a director receives a new appointment to a board and a year in which the director leaves a board, respectively. We use Securities Data Company (SDC) Poison Pills database to identify all firms that adopt a poison pill. Each model includes all of the director and firm control variables used in our main regressions in Tables 3 through 6. Director control variables are constructed using BoardEx Director Employment database and firm control variables are constructed using Compustat Fundamentals Annual database. Industry fixed effects are constructed using 3-digit SIC codes. In panel A, the additional cross terms from the triple interactions are not included in the models due to collinearity with director fixed effects, while in Panel B, the additional cross terms are included in the models but are not reported for brevity. Robust standard errors, clustered at the director level, are reported in parentheses, and ***, **, and * denote significance of the parameter estimates at the 0.01, 0.05, and 0.10 level, respectively.

Dependent variable =	Vote margin	Vote margin	Turnover	Turnover	New directorships	New directorships
	(1)	(2)	(3)	(4)	(5)	(6)
			Panel A: By age of adopting firm			
Adopting director x post	-0.056***	-0.052***	0.015***	0.013***	-0.072***	-0.073***
	(0.006)	(0.006)	(0.004)	(0.004)	(0.008)	(0.007)
Lifecycle considerations						
Adopting director x post x	0.050	0.070*	-0.027***	-0.035***	0.074*	0.056
Adopting firm age (1-2)	(0.035)	(0.036)	(0.004)	(0.006)	(0.040)	(0.039)
Adopting director x post x	0.012	0.007	0.019*	0.016	0.040**	0.039**
Adopting firm age (3-9)	(0.019)	(0.019)	(0.011)	(0.011)	(0.018)	(0.018)
Adopting director x post x	-0.041**	-0.035**	0.018*	0.013	0.042***	0.039***
Adopting firm age (10+)	(0.017)	(0.016)	(0.010)	(0.010)	(0.016)	(0.015)
Other control variables	No	Yes	No	Yes	No	Yes
Year FE	Yes	Yes	Yes	Yes	Yes	Yes
Industry FE	Yes	Yes	Yes	Yes	Yes	Yes
Director FE	Yes	Yes	Yes	Yes	Yes	Yes
Observations	96,712	96,712	96,712	96,712	111,950	111,950
R-squared	0.635	0.648	0.259	0.269	0.242	0.280
			Panel B: By age of outcome firm			
Adopting director x post	-0.086***	-0.078***	0.037***	0.029***	-0.013	-0.040**
	(0.018)	(0.017)	(0.011)	(0.011)	(0.016)	(0.016)
Lifecycle considerations						
Adopting director x post x	0.064**	0.061**	-0.028**	-0.025*	0.005	-0.013
firm age (1-2)	(0.026)	(0.025)	(0.013)	(0.013)	(0.024)	(0.023)
Adopting director x post x	0.042**	0.035**	-0.018*	-0.013	-0.038**	-0.032**
firm age (3-9)	(0.017)	(0.016)	(0.010)	(0.010)	(0.016)	(0.015)
Adopting director x post x	-0.018*	-0.015	-0.000	0.000	-0.031***	-0.003
firm age (10+)	(0.010)	(0.010)	(0.006)	(0.006)	(0.011)	(0.011)
Other control variables	No	Yes	No	Yes	No	Yes
Year FE	Yes	Yes	Yes	Yes	Yes	Yes
Industry FE	Yes	Yes	Yes	Yes	Yes	Yes
Director FE	Yes	Yes	Yes	Yes	Yes	Yes
Observations	96,712	96,712	96,712	96,712	111,950	111,950
R-squared	0.636	0.649	0.260	0.269	0.243	0.281

Figure 1: Average vote margin among pill deploying directors

This figure displays the raw average vote margin for directors around the adoption of a director's first poison pill. The sample consists of 6,324 unique pill-adopting directors in the BoardEx Director Employment database over the period of 2003-2015. Vote margin is a continuous variable equal to a director's percentage of votes "for" in an uncontested election minus the percentage of votes "against", percent "abstaining", percent "broker non-vote", and percent "withheld". Data on votes in uncontested director elections is reported in Institutional Shareholder Services (ISS) Voting Analytics database. We use Securities Data Company (SDC) Poison Pills database to identify all directors that sit on a board that adopts a poison pill.

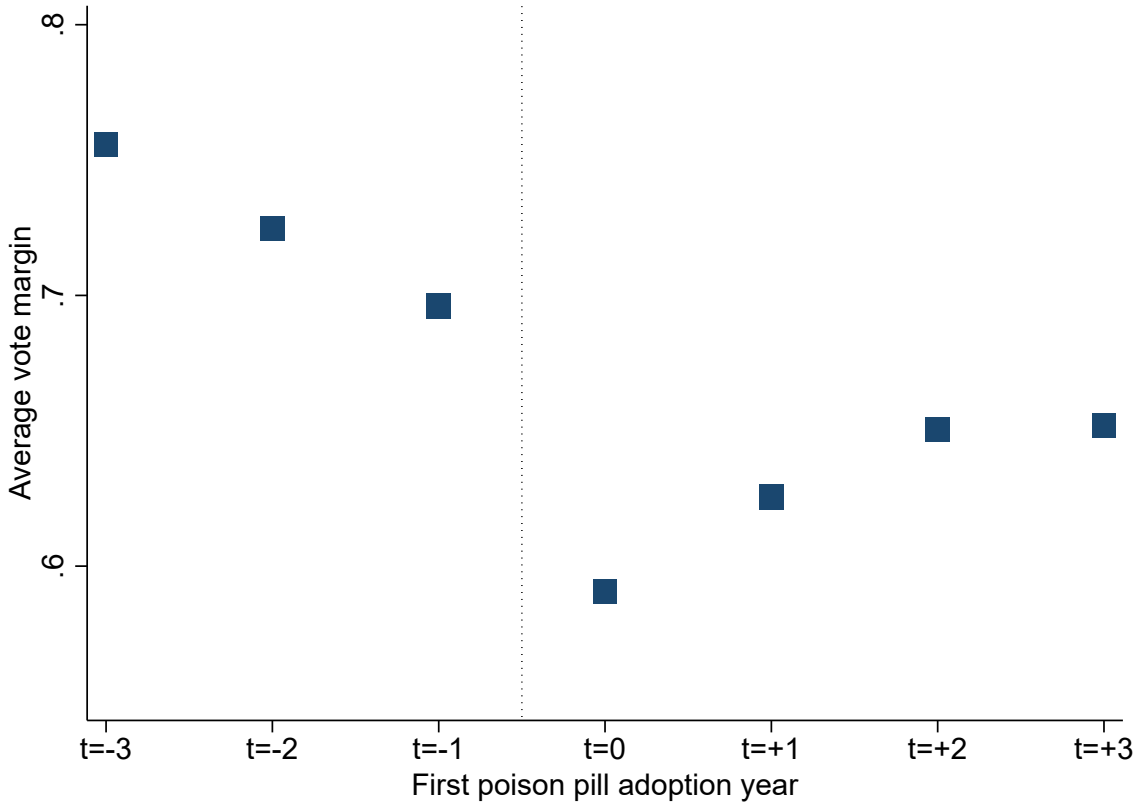


Figure 2: Average director turnover among pill deploying directors

This figure displays the raw average turnover for directors around the adoption of a director's first poison pill. The sample consists of 6,324 unique pill-adopting directors in the BoardEx Director Employment database over the period of 2003-2015. Director turnover is an indicator variables set equal to one in a year in which a director leaves a board. Data used to construct this measure are taken from the BoardEx Director Employment database. We use Securities Data Company (SDC) Poison Pills database to identify all directors that sit on a board that adopts a poison pill.

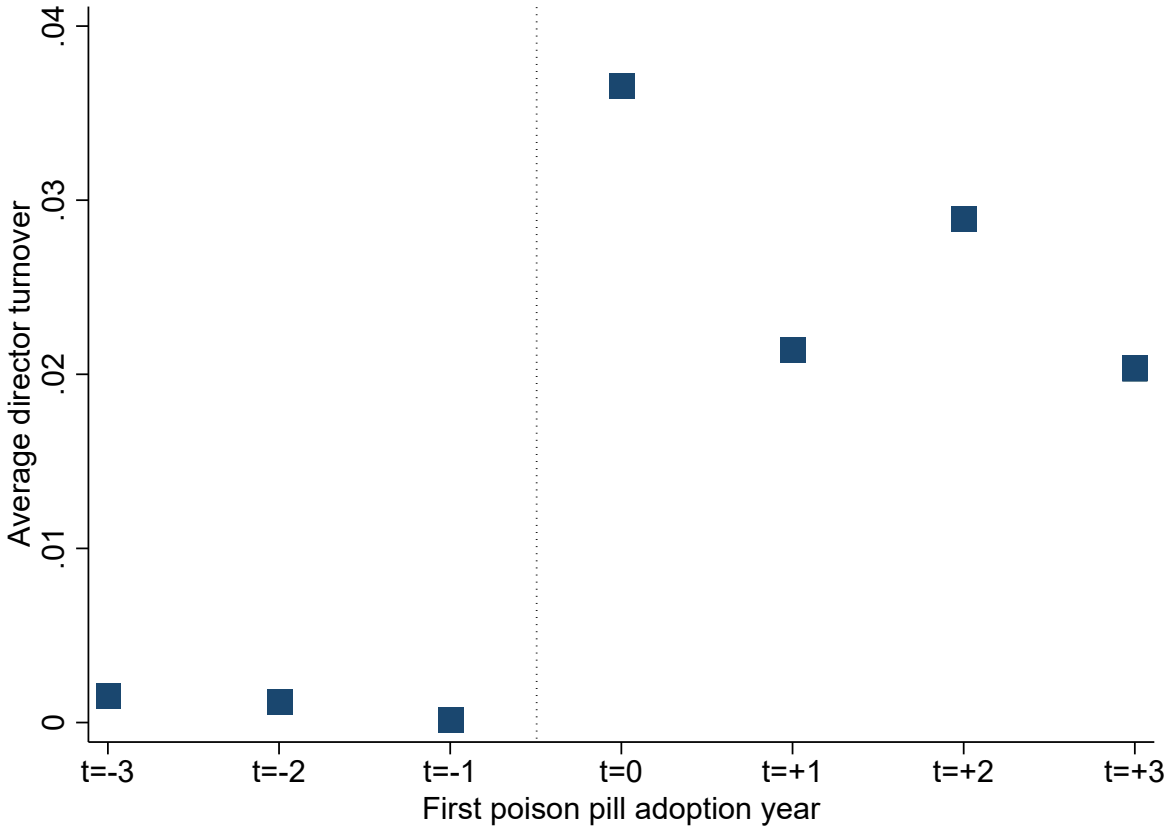


Figure 3: New directorships among pill deploying directors

This figure displays the raw average new directorships for directors around the adoption of a director's first poison pill. The sample consists of 6,324 unique pill-adopting directors in the BoardEx Director Employment database over the period of 2003-2015.New directorships is an indicator variables set equal to one in a year in which a director joins a board. Data used to construct this measure are taken from the BoardEx Director Employment database. We use Securities Data Company (SDC) Poison Pills database to identify all directors that sit on a board that adopts a poison pill.

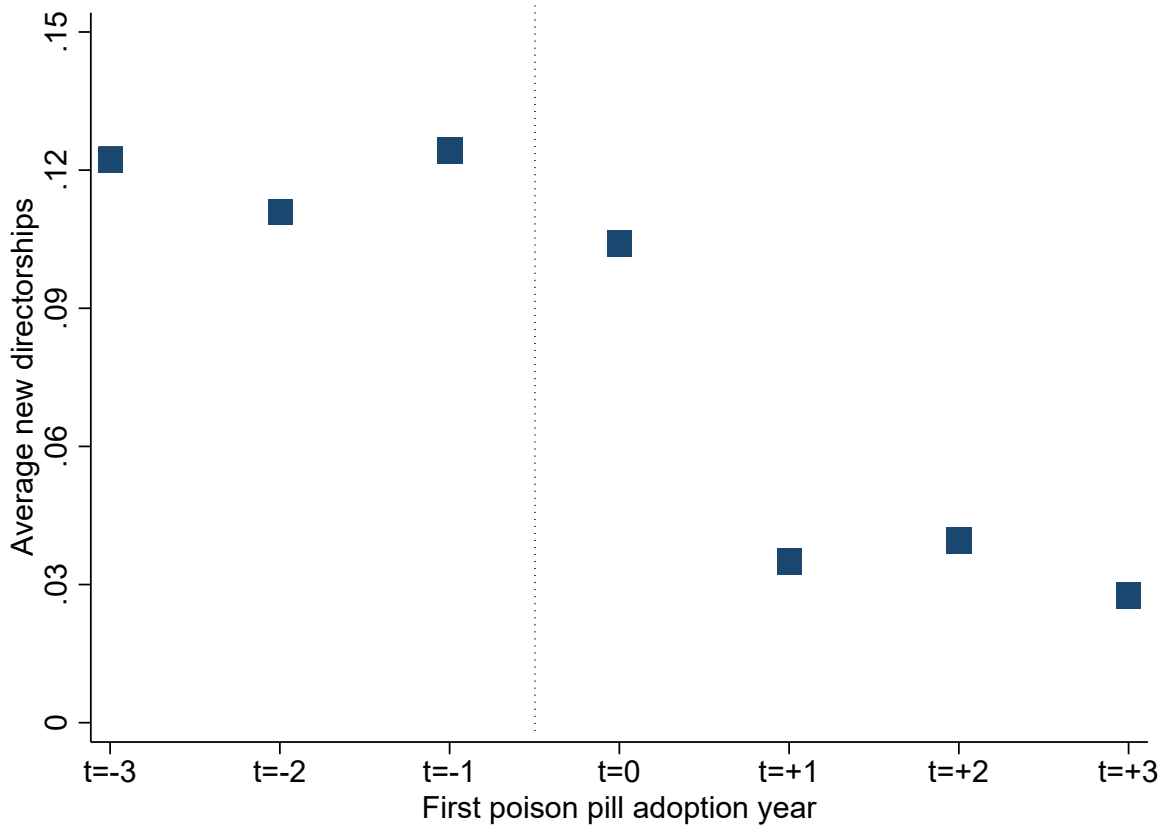


Figure 4: Illustration of the first instrumental variable based on linked-board director peer effects

The board interlock between Firms A and C, via Director B, increases the likelihood that Firm C adopts a poison pill and Director E becomes a first-time pill adopter. Firms B and D also share a board interlock, but if they are in the same industry, we do not include the potentially treated Director C, because common industry effects could violate the exclusion restriction.

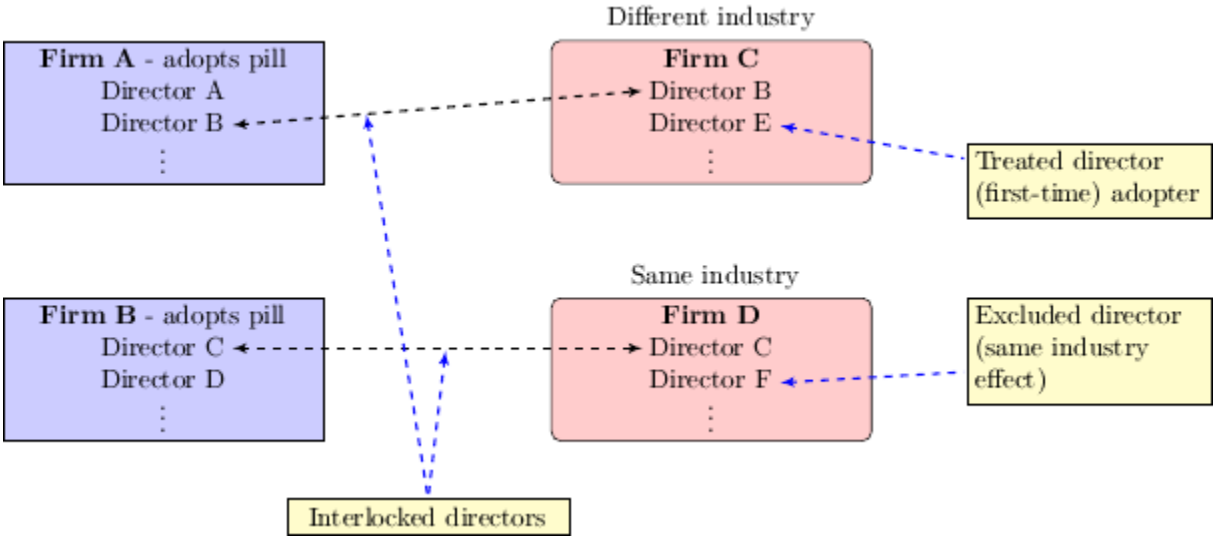
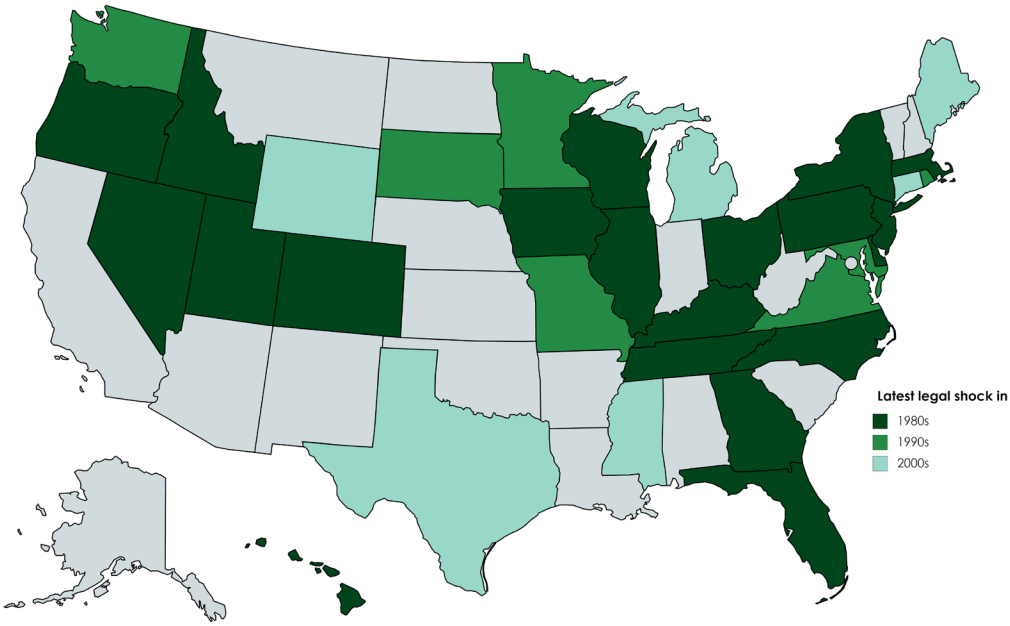


Figure 5: Illustration of the second instrumental variable based on staggered exposures to legal developments affecting poison pills

Panel A illustrates the staggered process by which firms incorporated in different states were exposed to court decisions and state poison pill laws that provided legal sanction for the use of poison pills. The specific court decisions and state poison pill laws are listed in Appendix Table 2. Panel B illustrates how we use these staggered exposures to create instruments, using Ohio's adoption of a poison pill law in 1986. Directors B and C have multiple board seats in different industries through time. For example, Director C sits on Goodyear's board from 1981 through 1998 and on Stanley Works' board from 1980 through 1996. The connection between Goodyear Tire and Stanley Works., via Director B, increases the likelihood that Stanley Works will adopt a poison pill and Director E will become a first-time adopter during the years 1986-1996 (prior to Connecticut passing a poison pill statute in 2003). Likewise, the connection between Proctor & Gamble and Teradyne, via Director C, increases the likelihood that Director F will become a first-time adopter.

Panel A



Panel B