HOW DO FIRMS RESPOND TO GENDER QUOTAS? EVIDENCE FROM CALIFORNIA'S SENATE BILL 826

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Abstract

This study examines the impact of California's SB826, enacted in 2018 and requiring at least one female director on corporate boards by 2019, on financial performance and governance. The quota reduced the share of all-male boards by 24 percentage points without harming financial performance from 2018 to 2021. Governance measures remained stable. Firms responded with both tokenism and meaningful integration, with tokenism more common in larger boards and those in male-dominated industries. I find that SB826 reduced firms' reliance on existing networks, suggesting that network barriers may have previously prevented some qualified women from joining boards.

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1 Introduction

Even as the female fraction of MBA students in recent years hovers around 50%, women still rarely occupy top leadership roles (Figure I). Various explanations have been proposed for the so-called glass ceiling, including that women may have less relevant experience, be unwilling to take jobs with inflexible hours, lack access to informal networks, or be less inclined to accept high-risk positions (Goldin 2024). Gender quotas on the boardroom are often proposed as policy prescriptions to increase diversity, but it is unclear whether such mandates should worsen, improve, or have no effect on financial performance and corporate governance.

A commonly held view is that firms optimally choose the board of directors to maximize shareholder value (e.g. Ahern and Dittmar 2012). External factors that constrain the firm's ability to optimize, such as a government mandated gender quota, should then worsen outcome measures. One common concern is that quotas may compel firms to appoint less qualified candidates, thereby weakening governance and financial performance. A competing view highlights that quotas may improve firm outcomes by encouraging companies to search for candidates with distinctive skills and perspectives, which can improve the collective decision-making of the board (Kim and Starks 2016; Adams and Ferreira 2009; Malenko 2024). Women may be underrepresented not due to a lack of qualifications but because they are excluded from the professional networks that dominate board recruitment (Hallock 1997; Gormley et al. 2023). However, quota-appointed directors may also be token appointments, lacking the influence to shape the board of directors' collective decision making (Kanter 1977). This concern may be especially relevant if the quota-appointed director is the sole female on a large board. If women appointed after the introduction of gender quotas do not have influence, then such quotas may not have much effect on organizational outcomes beyond their direct effects of placing women onto boardrooms (i.e. Bertrand et al. 2019; Eckbo, Nygaard, and Thorburn 2022).

While prior research has typically focused on the effects of gender quotas on financial performance, evidence on the underlying corporate governance mechanisms is scarce. This paper leverages detailed U.S. data to investigate how gender quotas influence not only firm performance but also corporate governance outcomes such as committee assignments, director qualifications, recruitment networks, and board decision-making. Analyzing these governance dimensions is crucial for distinguishing among competing theories: whether quotas diminish board quality, create tokenism, or bring in out-of-network directors who strengthen oversight. Understanding these mechanisms is also vital for interpreting quotas' effects on firm performance and explaining why women remain underrepresented in corporate leadership.

To investigate these considerations, I study how firms responded to California's SB826, the

first gender-based quota for corporate boards in the United States.[1] Passed in late 2018, SB826 mandates that listed companies headquartered in California have at least one female director by the end of 2019, with additional requirements for larger boards by 2021. Companies failing to comply face annual fines ranging from $100,000 to $300,000. I examine corporate responses during the three years following enactment, until the law was ruled unconstitutional in 2022, addressing four questions: (1) Did SB826 increase female representation on boards? (2) What are its effects on financial performance and governance? (3) Did firms treat newly appointed women as full participants or tokens? (4) How do professional networks influence women's access to boards?

I link data from BoardEx, Compustat, and CRSP to analyze these questions. BoardEx provides annual information on the gender composition of corporate boards, committee assignments, board size, and the share of non-executive directors—key measures of corporate governance. It also includes director characteristics, work histories, and professional networks, which I use to assess the qualifications of new board members and study patterns of network-based recruitment. Compustat and CRSP provide data on firm performance, stock returns, and board-influenced outcomes such as mergers, dividend issuance, and delistings. By combining these sources, I analyze how SB826 affected board diversity, corporate governance practices, and firm performance.

To identify the causal effects of the quota, I compare outcomes of publicly listed companies headquartered in California to similar firms headquartered elsewhere. To focus on firms most likely affected by the regulation, I restrict the sample to companies with all-male boards in 2017, the year before the quota's introduction. These firms faced the greatest pressure to comply, as they had no female directors prior to SB826. I define California-based firms with all-male boards in 2017 as the treated ("quota-affected") group and firms with all-male boards outside California as the control group. I verify that the conditional independence assumption likely holds, as I find no evidence of pre-trends before the quota's adoption across a range of outcomes. To address potential California-specific trends unrelated to the quota, I also estimate a triple-difference specification that uses California-based firms with gender-diverse boards in 2017 as an additional within-state control.[2]

I find that SB826 significantly increased gender diversity on corporate boards without negatively affecting financial performance. The share of all-male boards declined by 24 percentage points and triple-difference estimates yield nearly identical results, suggesting these effects are not driven by California-specific shifts in attitudes toward women in leadership. Unlike responses to

[1] For a list of gender quotas implemented outside the United States, see Table 1 of Terjesen, Aguilera, and Lorenz (2015). For a comparison of gender quotas across Europe, see Table 1 of Mensi-Klarbach and Seierstad (2020).

[2] Although the quota may have discouraged gender-diverse boards from transitioning to all-male boards, such cases are rare. As a robustness check, I also consider difference-in-differences specifications that compare all listed California firms to all listed non-California firms. The estimated effects of the quota on board gender composition are smaller in this broader sample, consistent with changes occurring primarily among firms that had all-male boards prior to the quota, rather than those that were already gender-diverse.

gender quotas in some European contexts (e.g. Ahern and Dittmar 2012; Bertrand et al. 2019), there is no evidence that California firms engaged in evasive actions such as delisting or restructuring to avoid compliance.

An investment strategy of buying and holding a value-weighted portfolio of quota-affected companies from October 1st, 2018 (the first trading day after the legislation's signing) to December 31st, 2021 does not generate abnormal returns that are statistically different from zero. Difference-in-differences estimates suggest the legislation modestly improved operating performance, though statistical significance varies by outcome measure. SB826 increased Tobin's Q by 7 percent, Return on Assets by 5 percentage points, and Cash Flows by 5 percentage points, with all point estimates statistically significant at the 10 percent level. These effects are not driven by broader economic conditions in California, as triple-difference estimates produce similar results. Other measures, including Return on Equity, Market-to-Book, and an overall financial index, also show positive but statistically insignificant effects. Interpreted conservatively, my results imply that the quota did not worsen financial performance within three years and, if anything, improved it. This conclusion remains valid under various econometric specifications, splits of the sample, and financial outcomes considered. The minimal impact on financial performance aligns with limited changes in company policy, as I find no significant effects on delistings, mergers and acquisitions, dividend issuance, or changes in shares outstanding.

The minimal effects of SB826 on financial performance and company policy can be explained by a combination of tokenism and meaningful integration. The evidence points to several patterns consistent with tokenism. Many firms complied by expanding board size rather than replacing male directors, raising the rate of board expansion by 14 percentage points in 2019. This strategy allowed firms to meet regulatory requirements while preserving existing power structures. Quota-affected firms were also less likely to place women on audit committees, reducing the share on this key governance committee by 2 percentage points. Newly appointed women were overwhelmingly non-executive directors, who typically hold less influence over strategy (Adams, Hermalin, and Weisbach 2010), and the share of directors with prior board and executive leadership experience declined slightly.[3] Consistent with tokenism, I find that the negative effects on audit committee representation are particularly pronounced in male-dominated industries. Together, these patterns suggest that many firms complied in ways that limited the influence of newly appointed women.

At the same time, several facts indicate meaningful integration, especially among firms with smaller boards before the quota and with a broader pipeline of experienced female candidates. The quota had no effect on directors' educational or industry backgrounds, and did not reduce women's presence on other important committees, such as the compensation and nominating committees.

[3]Non-executive directors had a median annual salary of $107,000 as of 2020, which is comparable to the fines for non-compliance with SB826, ranging from $100,000 to $300,000 annually.

Firms largely complied with SB826 rather than avoiding the regulation through delisting, relocation, or fines, and newly appointed women rarely served on multiple boards, suggesting a deep candidate pool. Further, I find positive and statistically significant financial performance effects among smaller boards. Overall, the evidence suggests both tokenism and integration: tokenism appears more common in larger boards and male-dominated industries, while integration is more prevalent in smaller boards and firms with deeper pipelines of qualified women.

If the quota introduced qualified women onto some boards, a question arises: why were these women not already present in these roles? One reason could be the heavy reliance on personal networks and employment connections in board recruitment, which has historically favored individuals with established relationships to the board (e.g. Hallock 1997; Essen and Smith 2022; Gormley et al. 2023; Bertrand et al. 2019). Because men have traditionally dominated senior leadership, they are more likely to hold these connections, a dynamic that has been shown to disadvantage female candidates in related high-stakes environments like entrepreneurial finance (Ewens and Townsend 2020). Among domestic and listed firms between 2015 and 2020, 61 percent of incoming male directors had a prior employment connection to the board, compared to 39 percent of female directors. By requiring gender diversity, the quota created incentives for firms to search for candidates outside traditional networks. Consistent with the idea that SB826 shifted traditional recruitment patterns, I find that the quota reduced the share of directors with prior employment ties to the board by 3 percentage points. Overall, these results suggest that some qualified women may have been overlooked not for lack of qualifications, but because they were less likely to be part of existing networks.

This paper most directly contributes to the literature on how gender diversity mandates affect organizational outcomes. Existing research on SB826 focuses on stock price reactions in the days following the law's announcement, with mixed findings: some studies document negative announcement returns of 1–2% (e.g. Greene, Intintoli, and Kahle 2020; Hwang, Shivdasani, and Simintzi 2018), while others find non-negative or positive reactions (e.g. Allen and Wahid 2024). In contrast, I examine the medium-term effects of SB826, analyzing corporate responses over a longer horizon to capture impacts on corporate governance and firm performance that take time to materialize. This approach allows me to test competing hypothesis on how gender quotas should affect firms, distinguishing my work from prior research focused on short-run market reactions.

My methodology more closely aligns with studies evaluating the longer-run effects of gender diversity mandates in Europe, particularly Norway. Early research on Norway's 2003 quota, which required 40% female board representation, found substantial non-compliance, less experienced boards, and declines in firm value within five years (Ahern and Dittmar 2012). Later studies challenge these findings. Eckbo, Nygaard, and Thorburn (2022) find no significant valuation effects, and Bertrand et al. (2019) show that female directors appointed after the quota were more

qualified than earlier cohorts, though they also document evasion through corporate restructuring. Similar analyses have examined quotas in other European countries, such as Italy (Ferrari et al. 2022; Maida and Weber 2022). However, these results may not necessarily apply to the U.S. context, as California's SB826 initially required only one female director, in contrast to stricter mandates adopted in Europe. Moreover, U.S. corporate governance emphasizes shareholder primacy and flexible board structures, whereas many European markets operate under stakeholder-oriented frameworks and more centralized governance systems (Greene, Intintoli, and Kahle 2020; Jäger, Schoefer, and Heining 2021). Consistent with these differences, I find that California firms broadly complied with SB826 and did not experience negative effects on financial performance, in contrast to earlier evidence from Norway.

This paper contributes to understanding how gender diversity mandates like SB826 affect not only board diversity and financial outcomes but also corporate governance — providing insight into whether such mandates lead to tokenism. Much of the existing literature focuses on financial effects, but work by Hwang, Shivdasani, and Simintzi (2018) examines how California's quota shaped director skill sets and board responsibilities. They find that women appointed under the mandate are as skilled as male directors but possess a less similar set of skills and are given fewer responsibilities on the board.[4] My results complement and extend this work. I show that although newly appointed female directors have less prior board experience, they are similarly qualified in terms of prior industry experience and educational background. I also find that the quota reduced women's presence on audit committees but not on other key committees, such as compensation and nominating committees. This analysis reveals important variation: tokenism is more common in larger boards and male-dominated industries but less prevalent in smaller boards and firms with a broader pipeline of experienced female candidates.

I also study how SB826 affected the recruitment process, focusing on the role of professional networks in board appointments. Although networks are a central feature of board recruitment, they have received limited attention in the literature on gender diversity mandates. Prior research highlights the importance of connections in shaping access to corporate leadership roles. For example, Gormley et al. (2023) show that institutional investor pressure to increase board diversity led firms to identify candidates beyond managers' existing networks and to place less emphasis on executive experience.[5] I find similar results in the context of SB826: the quota brought in first-time female directors outside existing networks, shifting traditional patterns of board recruitment.

The remainder of this paper is structured as follows. Section 2 outlines the quota's require-

[4]Consistent with this view, Gertsberg, Mollerstrom, and Pagel (2021) find that female directors appointed under the quota receive comparable shareholder support to male directors appointed after the quota.

[5]See also Essen and Smith (2022), who find that in the corporate board context, connections are strongly correlated with becoming a first-time director. Michelman, Price, and Zimmerman (2022) and Cullen and Perez-Truglia (2023) discuss the importance of professional networks in shaping career outcomes outside the corporate board context.

ments, followed by a description of the data in Section 3. Section 4 examines firms' compliance with the legislation, while Section 5 analyzes its impact on financial performance and corporate governance. In Section 6, I explore how the quota changed boardroom characteristics and assess whether it resulted in tokenism or meaningful integration. Finally, Section 7 concludes.

2 Legal Context

California Governor Jerry Brown signed into law Senate Bill (SB) 826 on September 30, 2018, which requires publicly held corporations with a principal executive office in California to have at least one female director on the Board of Directors by December 31, 2019. By the end of 2021, companies with five directors are mandated to have at least two female directors, and companies with six or more directors are required to have at least three. I study how companies responded to the first stage of SB826, which is the first board gender quota in the United States.[6] I analyze financial performance and corporate governance responses to the gender quota from 2019 through 2021, covering the period before legal challenges invalidated the law.

The legislation applies to companies headquartered in California with shares listed on the New York Stock Exchange, NASDAQ, or NYSE American, but does not cover private companies or listed companies based outside California. Companies that fail to comply with the quota are subject to fines: each director seat required to be held by a female that is not filled for any portion of the calendar year counts as a violation. A fine of $100,000 is imposed for the first violation and $300,000 for each subsequent violation.[7] California-based firms affected by SB826 had several options to avoid fines. First, they could add a female board member by the end of 2019, either by replacing an existing male director or expanding the board. Second, firms could avoid the law's reach by going private or moving their headquarters out of California. While the state agency responsible for enforcement never issued fines, companies swiftly added female directors, as I document in Section 4.

The response to SB826 offers unique insight into how diversity mandates affect corporate boards in the U.S., where such policies had not previously been implemented. Although my study

[6] According to the California Secretary of State, "A female is an individual who self-identifies her gender as a woman, without regard to the individual's designated sex at birth." Publicly held companies have shares listed on the New York Stock Exchange, NASDAQ, or NYSE American. SB826 does cover companies listed on foreign exchanges with headquarters in California. I exclude these companies from my analysis, which focuses on domestic and listed companies. Between 2015 and 2021, no other U.S. state passed a corporate board gender quota that enforces fines on non-compliant companies. On May 13, 2022, Los Angeles Superior Court Judge Maureen Duffy-Lewis found that SB826 violates the equal protection clause of California's constitution, halting enforcement of the gender quota: https://corpgov.law.harvard.edu/2022/06/12/california-gender-board-diversity-law-is-held-unconstitutional/

[7] For example, a California-based listed company that has no female board members between January 1, 2019, and December 31, 2020, would owe $400,000. Failure to file timely board gender information with California's Secretary of State also incurs a $100,000 fine.

period overlaps with other diversity initiatives in the U.S., including NASDAQ's 2021 board diversity disclosure rule and pressure from institutional investors to increase board gender diversity (Gormley et al. 2023), SB826 was the only mandate that required companies to appoint female directors. It thus provides a rare opportunity to study the effects of a gender quota in the U.S., where legal, regulatory, and cultural environments differ sharply from European countries that have adopted similar quotas. The growing anti-DEI movement in 2025, including legal and political challenges to corporate diversity efforts, makes it especially important to understand how mandates like SB826 affect financial performance and corporate governance—one of the core contributions of this study.

3 Data Sources and Sample Description

I link data from BoardEx, Compustat, and CRSP to study how California's SB826 affected board composition, firm performance, and corporate governance.[8] To assess how firms complied with SB826, I use BoardEx, which provides annual data on board gender composition for approximately 4,000 domestic and publicly listed firms from 2010 to 2021 (Table I), covering nearly the universe of U.S. listed companies. These data allow me to construct compliance measures, including (i) the share of women on the board, (ii) an indicator for all-male boards, (iii) whether firms expanded board size to comply, and (iv) whether a male director was replaced to add a female director.[9] I focus on compliance over 2019–2021, the period before SB826 was struck down in 2022.

To examine the medium-run effects of SB826 on financial performance, I link BoardEx to Compustat and CRSP, which together cover over 90 percent of BoardEx firms annually (Table A1, Col 3). From Compustat, I construct standard measures of operating performance and firm values, including Tobin's Q, Return on Assets (ROA), and an index of financial outcomes. Tobin's Q is computed as the ratio of the firm's market value to book value of assets, where market value equals book assets plus market equity minus book equity. ROA is calculated as net income before extraordinary items divided by book assets. Observations with non-positive total or book assets are excluded. To address concerns about cherry-picking specific outcomes and the limitations of Tobin's Q as a proxy for firm value (Bartlett and Partnoy 2020), I also construct a composite z-score index of financial outcomes combining seven indicators: Return on Assets, Return on Equity, Log(Tobin's Q), Log(Market-to-Book), Cash Flows, Log(Employment), and Capital Intensity. To assess shareholder reactions to the quota, I use CRSP to calculate abnormal buy-and-hold returns

[8] I use the crosswalk provided by WRDS and employ a conservative approach that requires matched companies to have identical SEC identifiers (CIKs) and security-level identifiers (CUSIPs) across BoardEx, Compustat, and CRSP.

[9] The annual characteristics of the board are measured as of the company's annual report date. If there are multiple annual reports in a single calendar year, I select the last annual report. BoardEx does not impute gender. Instead, gender is based on self identification or pronouns used in official reports.

for quota-affected companies. Returns are computed from October 1, 2018 (the first trading day after SB826 was signed) through December 31, 2021. For firms with multiple securities, I select the one with the highest average daily trading volume between 2015 and 2022. Companies that delist without available delisting returns or with extended missing returns are excluded.

To study how SB826 affected corporate governance, I combine BoardEx and CRSP data. From BoardEx, I examine whether newly appointed female directors joined key committees, including the audit, compensation, and nominating committees, which are critical for monitoring management and shaping governance (Harris and Raviv 2008). I also analyze whether new directors were executive or non-executive members, a proxy for their influence on firm strategy and decision-making (Adams, Hermalin, and Weisbach 2010). To evaluate the qualifications of newly appointed directors, I gather data on age, education, and prior board and executive leadership experience at the time of onboarding. From CRSP, I analyze firm-level outcomes typically influenced by the board, including delistings, mergers and acquisitions (M&A), dividend issuance, share repurchases, and changes in shares outstanding. Firms are coded as delisted if none of their securities remain listed in the following year. M&A, dividends, and repurchases are coded as occurring if any security was involved in such transactions during the calendar year. I also examine whether firms avoided the quota by changing headquarter location. I obtain headquarter location from Compustat Snapshot, cross-verifying missing cases with WRDS SEC Analytics Suite and BoardEx's Company Profile files. These outcomes assess whether SB826 affected broader governance behavior.

Finally, to understand whether SB826 changed recruitment practices, I analyze connections between new directors and existing board members or senior management using BoardEx's employment connection dataset. For each incoming director, I observe whether they previously worked with any member of the incumbent board or C-suite (which includes the CEO, CFO, and other top executives). The dataset also identifies the type of connection—whether two individuals previously served together on a board, as senior executives at the same firm, or in other leadership roles. These data allow me to assess whether newly appointed female directors were hired from within existing networks or identified from outside these networks. I use these data to examine whether SB826 prompted companies to broaden recruitment beyond traditional channels, bringing in candidates who otherwise might have been excluded due to lack of connections.

After merging BoardEx, Compustat, and CRSP, I observe approximately 4,000 U.S.-based, publicly listed companies annually between 2015 and 2021, covering nearly the full universe of listed firms (Table I). California-based firms account for 16 to 20 percent of the sample each year. Importantly, in the three years prior to SB826's passage, 31 to 39 percent of California firms had all-male boards, with a combined market value of approximately $123 billion as of the first quarter of 2017. Thus, SB826 directly applied to a large and economically significant set of companies.

Although SB826 applies to all publicly listed firms headquartered in California, not all firms

were equally likely to be directly affected. Companies with at least one female director prior to the quota faced no immediate pressure to change board composition to comply with the 2019 requirement, though some may have needed to adjust to meet stricter 2021 thresholds depending on board size. In theory, the quota could deter already compliant firms from transitioning to all-male boards. However, Figure II shows that transitions from gender-diverse boards to all-male boards are rare.[10] Therefore, I define quota-affected firms (the "treated" group) as California-based companies with all-male boards in 2017, the year before the law passed. Analogously, I define the control group as companies with all-male boards in 2017 but headquartered outside California. In later sections, I implement a triple-difference specification that uses California firms with gender-diverse boards as an additional within-state control group. If SB826 affects those firms, triple-difference estimates will be smaller than difference-in-differences (DD) estimates, providing a test of robustness.

There are notable cross-sectional differences between the 204 treated firms and 943 control firms, as reported in Table II. In 2017, treated firms have smaller boards, are younger, and employ fewer workers than control firms. They also have higher Tobin's Q and are less likely to pay dividends, suggesting that California-based firms subject to the quota are more likely to be growth-oriented companies. Treated firms are more concentrated in manufacturing and less concentrated in finance and mining. Despite these firm-level differences, many boardroom characteristics are similar between treated and control firms. Directors in both groups have comparable ages and similar rates of prior connections to board members and C-suite executives. However, directors joining treated firms are somewhat more likely to hold MBAs and have prior board and C-suite experience, suggesting that newly appointed directors in treated firms are at least as experienced as those in control firms. Committee participation is also broadly similar, though treated firms have a slightly higher share of directors on nominating committees. These cross-sectional differences do not pose a concern for my identification strategy, which relies on the parallel trends assumption rather than identical baseline characteristics. In later sections, I provide evidence supporting parallel pre-trends across treated and control firms for key outcomes.

4 Compliance with SB826

Unlike evidence from other countries, I find no indication that firms systematically evaded California's SB826 quota through delisting or changing headquarters. For example, studies of Norway's 2003 gender quota document substantial evasion: only one-third of quota-affected companies ("ASA" companies in Norway) remained listed within five years of the quota's announcement

[10]This claim is further supported by Figure A1, showing that older firms are more likely to have gender-diverse boards than younger firms.

(Bertrand et al. 2019). By contrast, SB826 imposed relatively mild penalties compared to the threat of forced dissolution in Norway. California firms faced monetary fines that were comparable to the typical annual compensation of a non-executive director — around $100,000 per year, similar to SB826's $100,000 to $300,000 fines for non-compliance. Given these moderate penalties, adding a female director represented a far less costly adjustment than delisting or relocating. Consistent with this reasoning, the rates of delisting and headquarter relocation following SB826's passage were similar between treated and control firms, suggesting little evidence of evasion (Tables A2, A3).[11] These patterns indicate that California-based firms overwhelmingly chose compliance over costly evasive strategies.

Having established that evasion was minimal, I next examine how California firms adjusted board composition in response to SB826. Among California companies with all-male boards in 2017, fewer than a dozen remained all-male by 2021 — a sharp decline from 204 to just 12 companies (Figure II). However, Figure I shows that gender diversity was rising across the U.S. during this period, suggesting that part of the shift toward more gender-diverse boards may reflect broader national trends in attitudes about women in leadership rather than a direct causal effect of the quota. To address this concern, I compare California firms with all-male boards in 2017 (the "treated" group) to firms with all-male boards in 2017 but headquartered outside California (the "control" group). This difference-in-differences strategy allows me to identify the causal effect of SB826, under the assumption that treated and control firms would have followed similar trends absent the policy.

Formally, I estimate the parameters of the following event-study model using ordinary least squares:

$$Y_{fti} = \gamma_0 + \sum_{t \neq 2017} \beta^t \Big(1[Year = t] \times CA\ HQ_{2017} \Big) + \delta_f + \delta_{ti} + \varepsilon_{fti}, \tag{1}$$

where Y_{fti} is a board composition outcome for firm f in year t and industry i, δ_f are firm fixed effects, δ_{ti} are industry-by-year fixed effects, and γ_0 is a constant. All regressions use an unbalanced panel of firms from 2015 to 2021, with standard errors clustered at the firm level. Firm fixed effects account for time-invariant firm characteristics. Industry-by-year fixed effects control for shocks common to all firms within an industry in a given year, allowing for different time trends across industries. Accounting for industry-specific trends is important because treated and control firms differ in industry composition, and relying alone on year fixed effects would require the stronger assumption of common trends across industries – one that may not hold in this setting. For the parameter estimates to identify the causal effect of SB826, it is necessary that outcomes would

[11] For companies in the treatment and control group, annual rates of delisting after the quota are approximately 5%, while annual rates of headquarter relocation are approximately 2%.

have followed parallel trends between treated and control firms within industry, absent the law. If the parallel trends assumption holds, estimates of β^t for $t < 2019$ should be close to zero. In line with this assumption, I find that pre-treatment trends are flat and statistically indistinguishable from zero across a range of board composition outcomes, supporting the credibility of the identification strategy.

Table III presents the event-study estimates. SB826 significantly increased the representation of women on boards and reduced the prevalence of all-male boards. The male share of directors fell by 6 percentage points within a year of the law's passage, and the share of all-male boards fell by 30 percentage points. Importantly, these changes occurred primarily through board expansion rather than replacement of existing male directors: the probability that a firm expanded its board rose by 14 percentage points (relative to a baseline of 23 percent) in 2019, while the likelihood of dropping a male director did not significantly change. Board size increased by about 0.22 seats on average in 2019, consistent with firms meeting the quota by adding women rather than displacing men. This pattern of board expansion also differs from firm responses to gender quotas in Norway, where companies overwhelmingly complied by replacing incumbent male directors (Ahern and Dittmar 2012).[12]

To contextualize these effects, the 11 percentage point increase in female board share induced by SB826 between 2019 and 2021 is greater than the entire gain in female board representation among all listed companies between 2010 and 2017. Moreover, this effect is comparable in magnitude to the impact of a one standard deviation increase in "Big 3" institutional ownership — BlackRock, Vanguard, and State Street — as estimated by Gormley et al. (2023). Unlike market-driven pressures from large investors, SB826 compelled firms to diversify boards through direct regulation, demonstrating that regulatory mandates can generate shifts in board diversity comparable to major market forces. Together, these results provide strong evidence that California firms complied with SB826 by adding women to their boards, largely through expansion, and without resorting to evasive strategies like delisting or headquarter relocation. This pattern of compliance contrasts sharply with experiences in countries like Norway, where stricter penalties led many firms to avoid quotas through corporate restructuring.

4.1 Robustness Checks

Several factors may bias the estimated effects of SB826 on board gender composition. If SB826 created social pressure for firms outside California to appoint more women to their boards —

[12]Similarly, my findings contrast with Hwang, Shivdasani, and Simintzi (2018), who have documented a stronger reliance on board replacement rather than expansion in the California context. These differences may be attributed to sample selection, as the authors focus on Russell 3000 firms, whereas my analysis encompasses the broader set of all publicly traded companies.

for instance, by signaling an emerging national standard — then the event study coefficients may underestimate the law's true effect. Such spillovers would be consistent with the discussion in Von Meyerinck et al. (2018) that California often sets corporate governance trends that are later adopted elsewhere. Conversely, if SB826 coincided with broader shifts in attitudes about women in leadership specific to California, the estimates may overstate the quota's impact. Under this "social change" hypothesis (Donohue and Heckman 1991; McCrary 2007), California firms might have increased female board representation even without the mandate. I do not find evidence that either of these biases meaningfully affect the baseline estimates.

To address the concern that firms outside California may have increased board diversity in response to SB826 — biasing the estimated effect downward — I restrict the control group to firms headquartered in Democratic-leaning states. If spillovers occurred, they would likely be concentrated in these states, which share similar political and social attitudes. If so, using this control group should reduce the estimated effect of SB826, as firms headquartered in these states may have increased board gender diversity in response to California's quota. However, when I re-estimate the baseline specification with firms headquartered in Democratic states as the control group, the point estimates are larger, not smaller.[13] This finding suggests that spillover effects are unlikely to cause the baseline estimates to understate the true effect of SB826.

Next, to address the concern that broader social changes particular to California may explain the baseline results, I examine whether firms that already had gender-diverse boards prior to SB826 also increased female representation — as would be expected if shifts in attitudes or business culture were driving the baseline results. As a first test of this "social change" theory, I expand the treatment group to include all California-based firms and the control group to include all non-California-based firms. If shifting social norms rather than SB826 drove the increase in board diversity, this comparison should reveal similar gains among all California firms — regardless of whether they were directly affected by the quota. However, when I estimate this specification, the point estimate for 2019 falls by two-thirds — from a 30 percentage point reduction in all-male boards in the baseline estimate to just 9 percentage points, consistent with minimal changes among already gender-diverse firms (Table A4, Column 7).

To further assess whether shifts in attitudes unique to California drive the baseline estimates, I implement a triple-difference specification using the same full sample of listed California and non-California firms. If broader cultural shifts rather than the quota were driving the baseline results, the triple-difference estimate should be significantly smaller than the baseline estimates, as firms already in compliance would have experienced similar changes.[14] The specification is as follows:

[13]The reduction in all-male boards reaches 33 percentage points by 2020 when using only Democratic states as controls (Table A4, Col 2), compared to a 30 percentage point reduction in the baseline estimate. Democratic states are defined as those that voted for Clinton in the 2016 presidential election.

[14]This approach estimates the effect of SB826 by comparing changes in board gender diversity before and after the

$$Y_{fti} = \gamma_0 + \theta_f + \delta_{CA,t} + \psi_{AMB,t} + \beta\left(1[Year \geq 2019] \times CA\ AMB_{2017}\right) + \varepsilon_{fti} \quad (2)$$

where Y_{fti} measures board gender composition, θ_f are firm fixed effects, $\delta_{CA,t}$ are California-specific time effects, and $\psi_{AMB,t}$ are time effects for firms with all-male boards in 2017. The coefficient β captures the estimated effect of SB826 under this specification. The triple-difference estimate of the quota on board gender diversity is similar to the baseline result, suggesting that the observed effects in the baseline specification are driven by firm responses to the quota rather than by shifting attitudes about diversity particular to California (Table A4, Column 6).

5 Effects of the Quota on Financial Performance and Corporate Governance

Existing studies on SB826 primarily focus on short-run share price reactions, with conflicting results. Some studies document negative stock market responses of 1-2% following the quota's announcement (Greene, Intintoli, and Kahle 2020; Hwang, Shivdasani, and Simintzi 2018), while others find non-negative to positive effects, with point estimates up to approximately 1% (Allen and Wahid 2024). A key challenge in these studies is determining when the market anticipated SB826—whether during its introduction, Senate passage, or Governor Brown's signing. For instance, Allen and Wahid (2024) find negative abnormal returns when using the market model with the governor's signing as the event date, but positive abnormal returns when using the same model with Senate passage as the event date. Additionally, contemporaneous events occurring around these legislative milestones further complicate the interpretation of short-run event-study results.

While short-run event studies are the gold standard for identifying market reactions to new information (i.e. MacKinlay 1997), they face limitations when legislative anticipation effects and concurrent events confound causal inference. Furthermore, they do not capture longer-term adjustments as firms and investors respond to new governance structures. To assess the financial effects of SB826 over a longer horizon, I follow the approach used by Eckbo, Nygaard, and Thorburn (2022) to study the long-term performance effects of Norway's gender quota, estimating a five-factor asset pricing model to measure risk-adjusted returns. This methodology aligns with prior research on long-term share price reactions to governance-related shocks, such as those examined in Gompers, Ishii, and Metrick (2003). The following regression is estimated separately for four portfolios classified by headquarter location and board gender-diversity status as of 2017, the year

quota across four groups: California firms with all-male boards in 2017, non-California firms with all-male boards in 2017, California firms that were already gender-diverse in 2017, and non-California firms that were already gender-diverse in 2017.

prior to the quota's adoption:

$$r_{pt} = \alpha + \beta_{MKT} r_{wt} + \beta_{HML} HML_t + \beta_{SMB} SMB_t + \beta_{RMW} RMW_t + \beta_{CMA} CMA_t + \varepsilon_{pt}, \quad (3)$$
$$t = 10/1/2018, ..., 12/31/2021.$$

where r_{pt} is the daily stock return to the value-weighted portfolio in excess of the daily US Treasury bill, and r_{wt} is the daily return on the US market in excess of the daily US Treasury bill. SMB, HML, RMW, and CMA are daily US risk factors from Ken French's website. To avoid survivorship bias, portfolio returns include the returns for all companies, including for those that delist if applicable.

Estimates from the five-factor asset pricing model indicate that risk-adjusted abnormal returns (α) for all portfolios using data from the post-quota period through the end of 2021 are indistinguishable from zero (Table IV). Nevertheless, descriptively, treated firms outperformed the S&P 500 over the compliance period, while control firms underperformed the same benchmark (Figure III).[15] This outperformance appears to be driven by the composition of California firms, which tend to be smaller, high-growth companies that performed well during this period, rather than a causal effect of the quota. Table II supports this explanation, showing that treated firms are smaller, less profitable and likely to pay dividends, and exhibited financial traits typical of growth-oriented companies. These attributes are further reflected in the Fama-French factor loadings, where treated firms exhibit negative loadings on the size (SMB) and value (HML) factors, consistent with their classification as small, high-growth stocks that experienced strong returns over the sample period. Overall, this evidence suggests that the gender quota had a value-neutral effect over the medium run.

Since long-run share price reactions may capture investor responses to information unrelated to firm reactions to SB826, I also examine the impact of SB826 on annual accounting-based financial performance measures. I focus on Return on Assets (ROA) and Tobin's Q as outcome variables, commonly used metrics for operating performance and firm values respectively (Adams and Ferreira 2009; Ahern and Dittmar 2012). Additionally, I construct a composite index that aggregates information from multiple financial performance measures. The index is formed by standardizing all financial variables presented in Table V using z-scores and then taking an equally weighted average.[16] Aggregating multiple outcome variables within a given domain can improve statistical

[15] One dollar invested in a market-cap-weighted portfolio of treated firms in January 2018 would have grown to \$2.09 by December 2021, compared to \$1.41 for the control group. If an investor had purchased equally-weighted portfolios, the performance gap would be even more pronounced: a dollar invested in the treatment group would have grown to \$2.61, versus \$1.33 for the control group (Figure A2).

[16] The index includes Return on Assets, Return on Equity, Log(Q), Log(Market to Book), Cash Flows, Log(Employment), and Capital Intensity. The z-scores are calculated by subtracting the control group mean and

precision by lowering standard errors (Kling, Liebman, and Katz 2007; Hoynes, Schanzenbach, and Almond 2016).

In the baseline difference-in-differences specification, given by Equation 1 with all post-treatment periods pooled together, only the coefficient on ROA is positive and statistically significant. The point estimates on the other financial outcome variables are positive but not significant at conventional levels (Table V, Col 1). Following Adams and Ferreira (2009), I next control for firm size, using Log(Revenues) as a proxy. When firm size controls are included in the next column, I find stronger effects of quota: it raises the index of financial outcomes increases by slightly less than one-tenth of a standard deviation and ROA by 5 percentage points. This increase in ROA corresponds to an approximate 17% improvement relative to 2017 baseline levels. These results do not appear to be driven by positive economic conditions unique to California at the onset of the law.[17] The triple-difference specification which includes California firms with gender-diverse boards as an additional control group produces point estimates and standard errors similar to those obtained when controlling for firm size. This consistency reinforces the conclusion that SB826 had no adverse financial consequences and, if anything, contributed to modest improvements in accounting-based measures of financial performance.

Next, I examine measures of corporate governance to assess whether gender-diverse boards exhibit different governance practices and to explore whether such changes contribute to the modest financial improvements observed. I focus on board-influenced outcomes such as delistings, dividend issuance, M&A activity, and share repurchases, as well as assignments to monitoring-intensive committees. These committees include the audit, compensation, and nominating committees, where board members contribute to ensuring the integrity of financial statements, setting executive compensation, and recruiting directors (Adams, Hermalin, and Weisbach 2010). Across all specifications, I find no statistically significant effects of SB826 on board-influenced outcomes.[18] Similar conclusions hold for participation in monitoring-intensive committees, though I observe a precisely estimated negative effect of 2.4 percentage points on audit committee participation in the size-control and triple-difference specifications. The audit committee is regarded as one of the most important institutions within corporate boards since its members monitor financial reporting and disclosure (Ferris, Jagannathan, and Pritchard 2003), so this result indicates that quota-appointed directors were not immediately assigned the most important responsibilities on the board.

The effects of SB826 on financial performance and corporate governance exhibit hetereogene-

dividing by the control group standard deviation, ensuring that each variable has mean 0 and a standard deviation 1 within the control group.

[17] See Figure IV and Figure V for visual evidence indicating financial outcomes trended similarly for California and non-California from 2015 to 2021.

[18] When further restricting the sample to S&P 1500 firms available in ExecuComp to examine CEO turnover, I similarly find no significant effects. Results are available upon request.

ity by board size and industry characteristics. Examining responses among companies with smaller boards is interesting because each director, including those appointed after the quota, likely has more influence within these companies. Among firms with smaller boards (defined as those with fewer than 7 directors in 2017 – the median board size that year), the quota had notably positive effects. The difference-in-differences estimates show that ROA increased by 9 percentage points (Table V, Column 3), above from 4-6 percentage points when considering the quota's effects on all treated companies. Similarly, the composite financial outcome index improves to 0.13 standard deviations, relative to 0.06 - 0.09 in the previous analysis. If concerns about a limited supply of qualified female directors were well-founded, one might expect compliance to negatively affect performance in male-dominated industries (defined as industries with below-median female board share in 2017, the year prior to the quota). However, firms in male-dominated industries do not experience any changes in financial outcomes in response to the quota (Table V, Column 4). Interestingly, in male-dominated industries, there is a sizable decline in audit committee participation: the quota lowers the share of directors on this committee by 3.5 percentage points, relative to 2.4 percentage points using the full treated sample.[19] This finding suggests that firms in male-dominated industries may have been less willing to integrate newly appointed female directors into key oversight roles.

6 Effects of the Quota on Boardroom Characteristics

A key question arising from the implementation of the quota is how it influenced boardroom composition and the qualifications of newly appointed directors. Even though the quota did not have any adverse consequences on financial performance in the medium-run, one common concern about gender quotas is that they may force companies to hire less qualified candidates, potentially leading to directors with less relevant professional experience (Ahern and Dittmar 2012). On the other hand, proponents of quotas argue that there are many qualified women available for board positions, but they face structural barriers to representation in leadership. One commonly cited barrier is a lack of professional connections to existing leadership networks, often referred to as the "Old Boys' Club" (Essen and Smith 2022). To examine these hypotheses, I analyze how the quota shifted the characteristics of the boardroom, focusing on relevant educational qualifications, experience, and professional connections. While previous studies on gender quotas have examined measures such as age, education, and professional experience, to my knowledge, this study is the first to examine how quotas affect professional connections in the boardroom.

[19] At first glance, these coefficients may appear small in magnitude. But note the results indicate the share of the entire board on the audit committee declined by 3.5 percentage points. Zooming in at the characteristics of individual directors in Table VIII, I observe that incoming women to treated companies are 15 percentage points less likely to be on the audit committee than incumbent men in treated firms (54% vs 69%).

I begin by assessing the event-study effects of the quota on boardroom characteristics. I again estimate the parameters from Equation 1, using the characteristics of the entire boardroom at the firm and year level as the dependent variable. Examining the entire boardroom is important because, in theory, the quota could have changed the characteristics of the men on the boardroom, so this analysis captures those effects. There are also limitations to solely comparing the qualifications of incoming women in treated and control firms, as both sets of companies had no women on boards in the year prior to the quota by construction.

Table VI presents the event-study results. As in the first-stage analysis, treated and control firms follow similar trends before the quota, supporting the validity of the identification strategy. Within two years, SB826 reduced the share of the board with top-level experience, consistent with firm reactions to other corporate board gender quotas. Specifically, the quota lowered the share of the board with prior board and C-suite experience by three percentage points (Table VI, Cols 4-5). Additionally, I find a 3 p.p. reduction in the proportion of directors with a prior employment connection to the board, consistent with the idea that the quota introduced "outsiders" onto corporate boards. Alternative measures of connectivity to the incumbent board yield similar conclusions. To assess the impact of having at least one female director on boardroom characteristics (as opposed to the reduced form effects of the quota), I estimate two-stage least squares (2SLS) effects, which scale the reduced-form estimates by the first-stage effect.[20] The 2SLS estimates indicate that firms shifting to a gender-diverse board experience approximately three times the impact seen in the reduced-form results, consistent with a first-stage estimate of approximately 0.30. Interestingly, SB826 did not change the average age of the board or the share of directors with prior same-sector experience, in contrast to findings in other contexts (i.e. Ferrari et al. 2022). It also did not affect the share of the board with an MBA degree, a certification held by 35% of directors among all listed companies over the sample period. Overall, my results show that many of the female directors who joined after the quota had relevant industry and educational backgrounds, but had not previously held the very top leadership positions within companies.

These changes in boardroom characteristics generally align with differences in individual characteristics between male and female directors, measured at the time of onboarding. Across all US listed companies from 2015-2020, women directors have similar educational backgrounds to their male counterparts but are, on average, one year younger (Table VII). More pronounced disparities appear in prior board experience and ties to company leadership. The share of male directors with prior board experience is 83%, compared to 72% for female directors, a difference of 11 percent-

[20] The first and second stage equations are as follows:

$$1(GenderDiverseBoard_{fti}) = \gamma_0 + \sum_{t \neq 2017} \beta^t \Big(1[Year = t] \times CA\ HQ_{2017} \Big) + \delta_f + \delta_{ti} + \varepsilon_{fti},$$

$$Y_{fti} = \lambda_0 + \lambda_1 1(\widehat{GenderDiverseBoard}_{fti}) + \delta_f + \delta_{ti} + \nu_{fti}$$

age points. A gap of 21 percentage points exists for prior employment connections to a sitting member on the board, and a 22 percentage point difference for prior connections to the C-suite. In terms of role, 95% of female directors are appointed as non-executive directors, compared to 82% of male directors, suggesting that women directors tend to be less involved in the firm's day-to-day operations. One notable exception is same-sector experience: while incoming male directors are more likely to have same-sector experience across the entire sample (55% vs. 43% for women), the quota did not result in any decline in the overall share of the board with prior same-sector experience. Indeed, Table VIII shows that incoming female directors appointed after the quota had comparable rates of same-sector experience to retained male directors, reinforcing the finding that the quota appointed directors with relevant educational qualifications and industry experience, but not prior top-level leadership experience.

6.1 Discussion: Tokenism vs Meaningful Integration

Tokenism occurs when individuals from underrepresented groups are appointed in small numbers, often as symbolic gestures without real influence (Kanter 1977). The evidence is consistent with both tokenism and meaningful integration, with notable heterogeneity depending on board size and industry composition. Larger boards and firms in male-dominated industries exhibit stronger signs of tokenism, while smaller boards and firms in industries with deeper pipelines of female talent show greater signs of meaningful integration.

Several pieces of evidence suggest that some firms complied with SB826 in ways that limited the influence of newly appointed women. First, quota-appointed directors did not hold the most important responsibilities on corporate boards: SB826 reduced the share of the board on the audit committee and increased the share of non-executive directors by 2 and 1 percentage points respectively. Non-executive directors typically play an advisory role rather than directly influencing strategic decisions, reinforcing the idea that newly appointed women had limited formal authority. The negative effects on audit committee representation are particularly pronounced in male-dominated industries, where I observe a point estimate of -0.035. Incoming female directors who joined treated firms after the quota are 15 p.p. more likely than retained male directors to be non-executive directors and 15 p.p. less likely to be on the audit committee (Table VIII). Further, the share of firms that expanded their boards jumped by 14 percentage points in 2019, the year compliance was required. This strategy allowed firms to meet regulatory requirements without changing existing power structures.

Quota-appointed directors may have had less influence on corporate boards for several reasons. First, they have less top-level leadership experience, suggesting that firms may have been hesitant to assign them important responsibilities due to a perceived lack of skills. The quota lowered

the share of the board with prior board and C-suite experience by 3 p.p. (Table VI). Further, Table VIII shows that only 56% of incoming female directors to treated firms after the quota had prior board experience, compared to 80% of retained male directors.[21] Second, quota-appointed directors were less connected to incumbent leadership, which may have made firms hesitant to grant major responsibilities to outsiders who had not previously worked with existing leadership teams. The quota lowered the share of the board with prior ties to an existing director by 3 p.p (Table VI) and incoming female directors after the quota were 27 p.p. less likely to have a pre-existing connection than incumbent males at the start of their position (Table VIII). Finally, new directors — regardless of gender — are generally assigned fewer leadership roles, suggesting that firms prefer to gradually integrate new board members rather than immediately granting them key decision-making responsibilities. Table VIII provides support, showing that incoming *male directors* were also less likely than retained male directors to be assigned to the audit committee and serve on fewer total committees, both in treatment and control firms. However, incoming male directors are still more likely than incoming female directors to hold important responsibilities on the board, providing further support for the tokenism hypothesis.

At the same time, several findings support meaningful integration, especially among smaller boards. Women appointed after the quota were equally qualified in terms of educational qualifications and sector experience. Their presence on other key monitoring-intensive committees — such as the compensation and nominating committees — did not decline. Additionally, firms complied quickly rather than resisting through delisting, changing headquarter locations, or paying fines. Table VIII provides further evidence of a broad talent pool, as the same women were not repeatedly appointed across multiple treated firms: I observe that 210 female directors filled 214 vacancies, indicating that treated firms pulled from a diverse array of board candidates. This pattern of compliance is also a stark contrast to responses to the Norwegian gender quota, where a limited number of women filled multiple directorships after its quota (Seierstad and Opsahl 2011). Further, the number of female directors with top-level experience far exceeded the number of treated firms, reinforcing that firms had a large pool of qualified women to choose from (Table A5). The quota had no adverse financial consequences in the three years after its adoption and smaller boards experienced positive financial effects, suggesting that women were effectively integrated into governance roles in these companies. While the absence of prior employment connections to company leadership may have limited the initial influence of quota-appointed women, it also highlights a structural barrier that could have prevented some qualified women from previously serving on corporate boards.

[21] Similarly, only 62% of incoming female directors had prior C-suite experience, compared to 70% of retained male directors.

7 Conclusion

In this paper, I demonstrate that SB826 introduced gender diversity onto corporate boards without negatively affecting financial performance or corporate governance. The gains in gender diversity are substantial: within two years, the legislation increased women's representation on corporate boards by 8 percentage points—a magnitude equivalent to the total increase achieved from 2010 to 2017. Thus, the quota effectively created pathways for women to enter corporate leadership. The absence of adverse financial or governance-related consequences in the three years following the legislation's enactment appears attributable to a combination of tokenism and meaningful integration, the latter particularly evident among smaller boards and firms with a larger pipeline of experienced female candidates before the quota.

This finding raises an important question for theories of corporate governance: if gender-diverse boards could be appointed without negative consequences, why did firms not voluntarily do so prior to the mandate? A likely explanation is that board recruitment has traditionally operated within established professional networks, where the costs of identifying and vetting candidates are low. Expanding the search beyond these familiar circles requires new incentives, such as pressure from institutional investors (Gormley et al. 2023) or, as studied here, a legislative requirement. This paper's evidence is consistent with this view. By creating an incentive for firms to recruit beyond their traditional networks, SB826 resulted in the appointment of directors who were equally qualified in terms of education and industry background but were more likely to be serving on a corporate board for the first time.

These results may align with expectations to some readers. SB826 imposed a relatively modest requirement that each corporate board include at least one woman and firms were able to meet this threshold without experiencing noticeable disruptions over a three-year horizon. Nevertheless, the quota may generate externalities that could take several more years to realize. A promising avenue for future research would be to examine whether SB826 generated opportunities for women beyond those explicitly mandated by the law. Future work could investigate whether first-time female directors appointed under SB826 subsequently secure additional leadership roles, as may be expected from this paper's finding that companies typically recruit candidates with prior board experience and connections to corporate leadership. However, recent public backlash against diversity, equity, and inclusion initiatives in the U.S. could also introduce new obstacles, potentially limiting the extent to which the quota translates into sustained advancement for women in corporate leadership.

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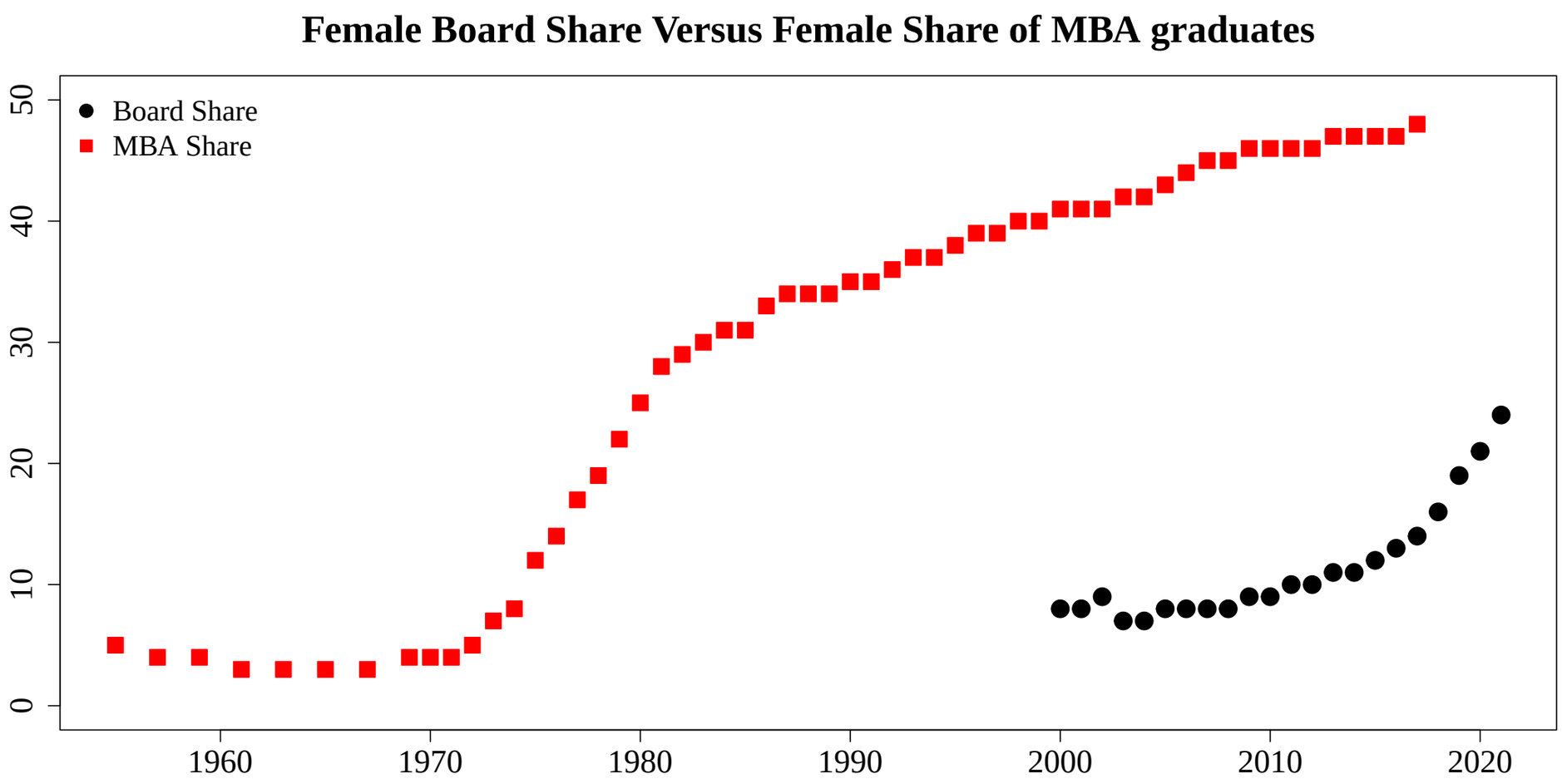
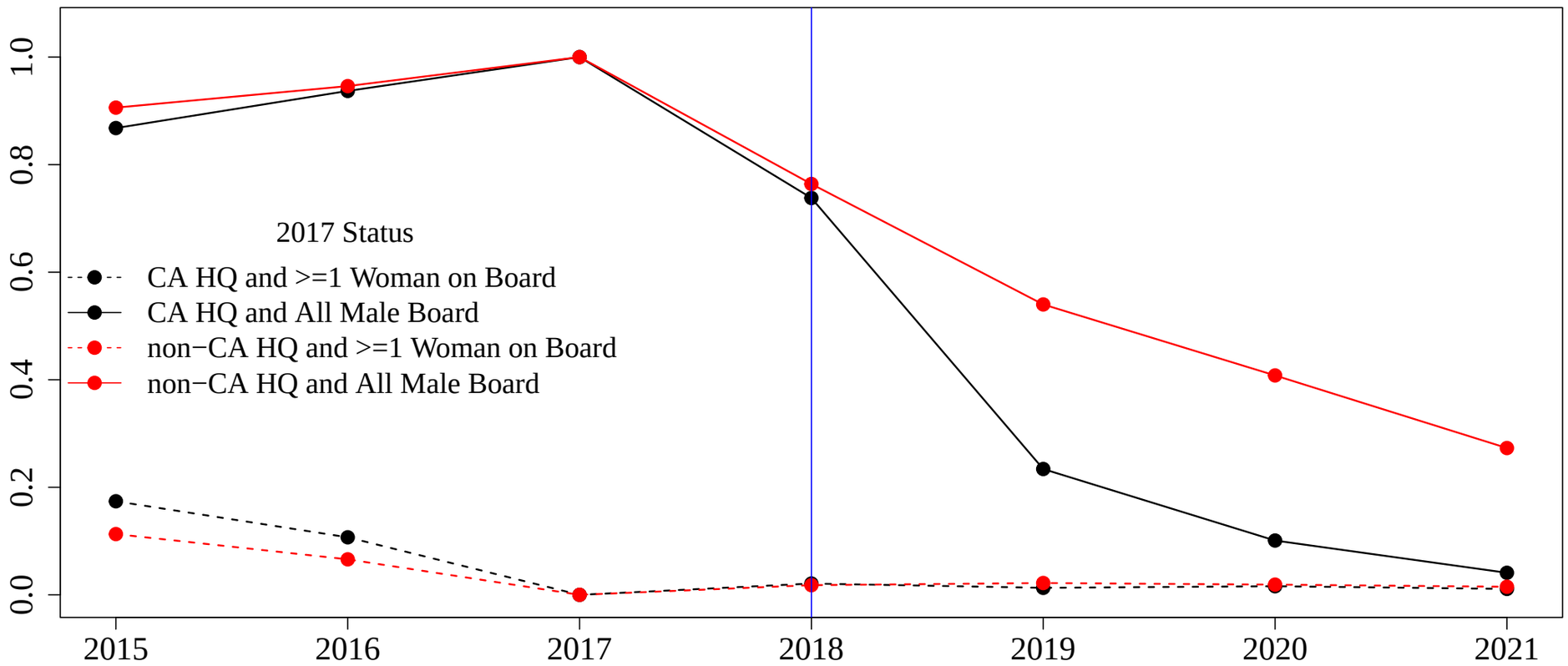
Figure I



Note: The female share of MBA graduates is taken from NCES Table 325.25, which tracks postsecondary institutions participating in Title IV federal financial aid programs. The annual female board share of domestic and listed companies is derived from BoardEx's Organizational Summary files.

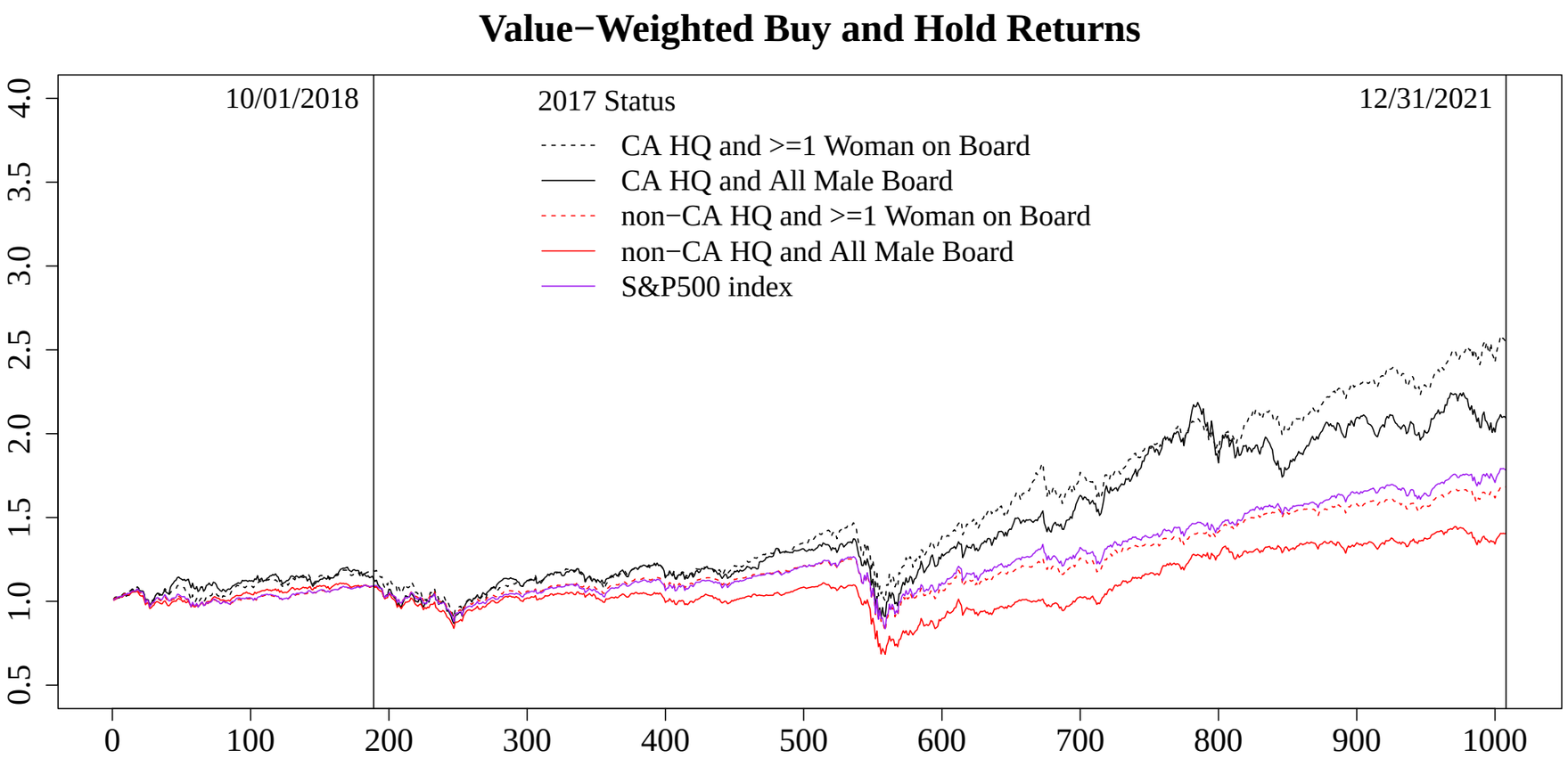
Figure II

Share of Companies with All Male Corporate Boards



Notes: CA SB 826, approved on 9/30/2018, mandated at least 1 woman be on the corporate board of any listed company with HQ in CA by 12/31/2019. Listed companies have shares listed on the NASDAQ, NYSE, or NYSE American. The sample tracks an unbalanced panel of firms that were domestic and listed in 2017, the year before SB 826 was signed.

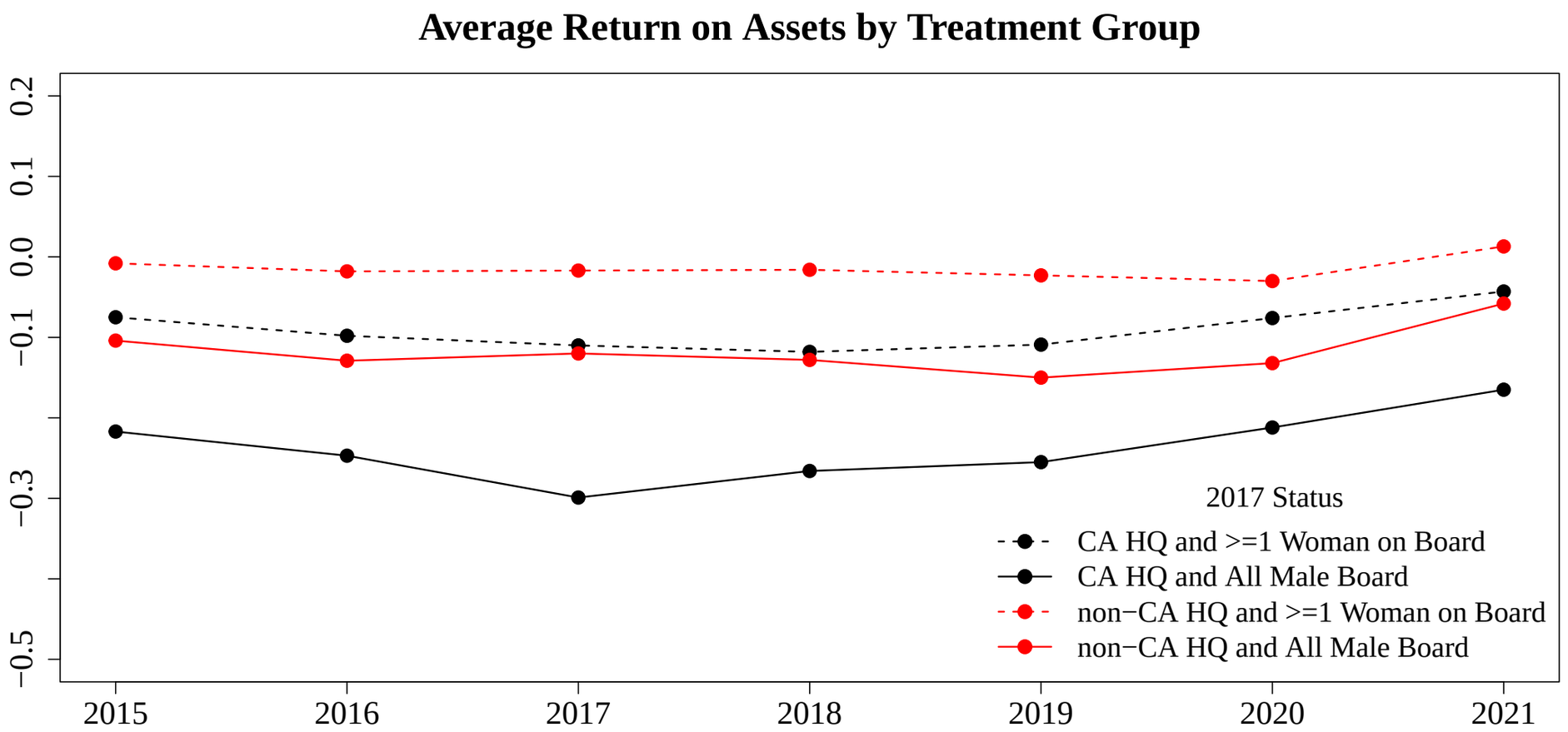
Figure III



X Axis: Trading Days Relative to Jan 1st, 2018

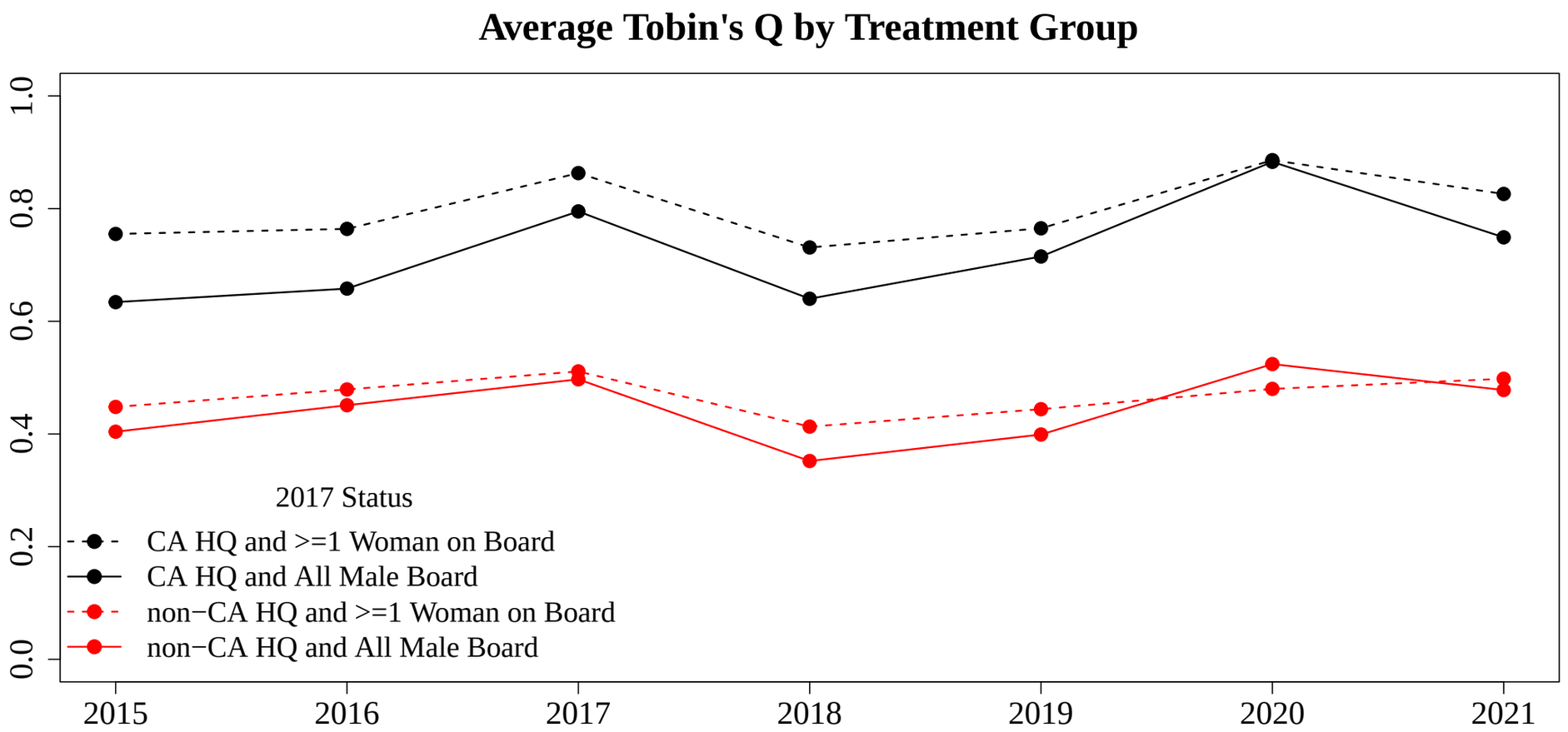
Note: The sample tracks an unbalanced panel of firms that were domestic and listed in 2017, the year before SB826 was signed. Firms that delist and have missing delisting returns, or do not delist and have missing returns, are dropped. Company specific buy−and−hold−returns are weighted by market value as of Jan 1st, 2018. Monday October 1st was the first trading day after the legislation's passage. Daily security returns are provided by CRSP. Among companies with multiple securities, I choose the security with the highest average trading volume between Jan 2nd, 2015 and March 31st, 2022.

Figure IV



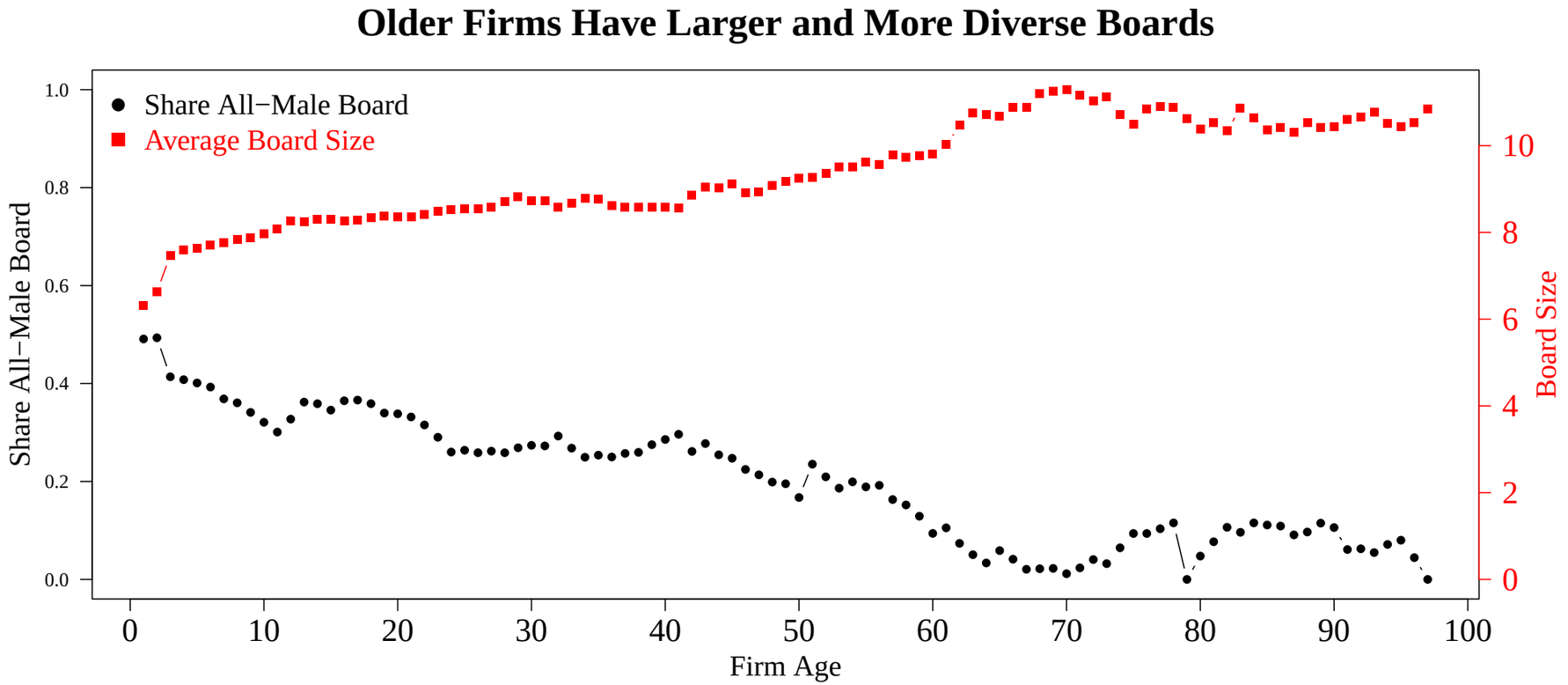
Notes: CA SB 826, approved on 9/30/2018, mandated at least 1 woman be on the corporate board of any listed company with HQ in CA by 12/31/2019. Listed companies have shares listed on the NASDAQ, NYSE, or NYSE American. The sample tracks an unbalanced panel of firms that were domestic and listed in 2017, the year before SB 826 was signed. Return on Assets is Net Income before Extraordinary Items and Discontinued Operations divided by Book Assets, and is winsorized at the 1st and 99th percentiles of the sample.

Figure V



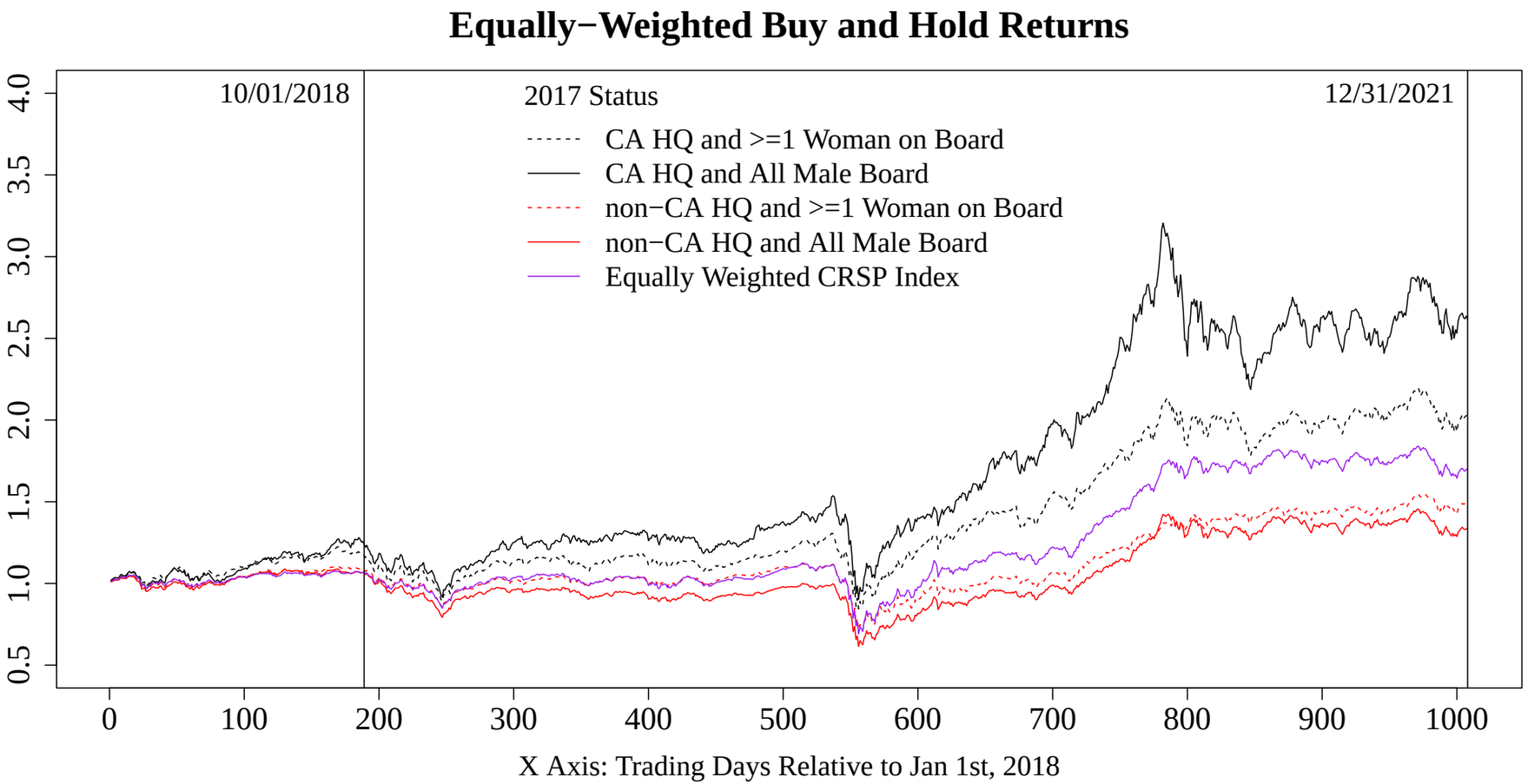
Notes: CA SB 826, approved on 9/30/2018, mandated at least 1 woman be on the corporate board of any listed company with HQ in CA by 12/31/2019. Listed companies have shares listed on the NASDAQ, NYSE, or NYSE American. The sample tracks an unbalanced panel of firms that were domestic and listed in 2017, the year before SB 826 was signed. Tobin's Q is the ratio of the firm's market value to its book value of assets, and is log transformed.

Figure A1



Note: The sample restricts to all domestic and listed companies observed between 2010 and 2021. The column variables are derived from Boardex's Organizational Summary files. I follow Loderer and Waelchli (2010) in constructing firm age. It is the earliest of the following: (a) the year in which the firm appears on CRSP; (b) the year in which the firm is included in COMPUSTAT; and (c) the year for which there is a link between CRSP and COMPUSTAT.

Figure A2



Note: The sample tracks an unbalanced panel of firms that were domestic and listed in 2017, the year before SB826 was signed. Firms that delist and have missing delisting returns, or do not delist and have missing returns, are dropped. Company specific buy−and−hold−returns are equally weighted. Monday October 1st was the first trading day after the legislation's passage. Daily security returns are provided by CRSP. Among companies with multiple securities, I choose the security with the highest average trading volume between Jan 2nd, 2015 and March 31st, 2022.

Table I: Sample Size

Year	N: All Firms	HQ in CA			HQ outside of CA		
		N	N: AMB	Pr(AMB)	N	N: AMB	Pr(AMB)
2015	4013	664	266	0.40	3349	1134	0.34
2016	3872	647	242	0.37	3225	1021	0.32
2017	3845	644	204	0.32	3201	942	0.29
2018	3817	658	166	0.25	3159	760	0.24
2019	3795	671	59	0.09	3124	582	0.19
2020	3861	702	24	0.03	3159	475	0.15
2021	3977	772	12	0.02	3205	314	0.10

Note:
The sample restricts to domestic and listed companies that report board gender and headquarter location. The annual gender composition of corporate boards is provided by BoardEx and reflects the board's composition as of the company's annual report date. Headquarter location is triangulated from Compustat Snapshot, BoardEx, and SEC filings. The universe of listed companies is derived from CRSP. "AMB" refers to companies with All-Male Boards. CA's SB826, approved on 9/30/2018, mandated at least 1 woman be on the corporate board of any listed with HQ in CA by 12/31/2019.

Table II: Firm Characteristics in 2017

	CA-HQ	Outside CA-HQ	Diff	P-Value	N: CA-HQ	N: Outside CA-HQ
Boardroom Characteristics						
Board Size	6.38	6.75	-0.37	0.00	204	943
Dual CEO/Chairman Role	0.38	0.37	0.00	0.93	204	943
Director Age	61.00	61.64	-0.64	0.15	204	942
MBA Degree	0.39	0.34	0.05	0.01	204	941
Prior Board Experience	0.81	0.77	0.04	0.03	204	942
Prior C-Suite Experience	0.69	0.61	0.08	0.00	204	942
Prior Same Sector Experience	0.51	0.44	0.07	0.01	204	942
Prior Conx w/Board	0.57	0.54	0.03	0.23	204	941
Prior Board Conx w/Board	0.41	0.38	0.03	0.27	204	941
Prior Conx w/ C-Suite	0.49	0.43	0.05	0.03	204	940
Prior Same Gender Conx w/Board	0.56	0.54	0.03	0.22	204	941
Non-Executive Director	0.78	0.80	-0.02	0.04	204	943
Firm Characteristics						
Age	16.07	19.21	-3.14	0.00	202	942
Employees (k)	0.79	1.99	-1.19	0.00	193	875
Return on Assets	-0.30	-0.12	-0.18	0.00	194	895
Log(Tobin's Q)	0.82	0.55	0.28	0.00	188	870
Log(Market Value)	5.37	5.54	-0.16	0.23	189	874
Company Policies						
1(Delist)	0.02	0.01	0.01	0.23	204	943
1(Merger or Reorg)	0.00	0.00	0.00	0.90	204	943
1(Dividend)	0.14	0.36	-0.22	0.00	204	943
1(Incr in Shares Outstanding $\geq$ 5 percent)	0.04	0.04	-0.01	0.73	204	943
1(Decr in Shares Outstanding $\geq$ 5 percent)	0.06	0.07	-0.01	0.74	204	943
Committee Composition						
Avg Committee Load	2.90	2.72	0.17	0.02	203	939
Audit Share	0.73	0.73	0.00	0.79	203	939
Compensation Share	0.69	0.66	0.03	0.06	203	939
Nominating Share	0.63	0.58	0.06	0.01	203	939
Other Share	0.03	0.05	-0.02	0.00	203	939

Table II: Firm Characteristics in 2017 *(continued)*

	CA-HQ	Outside CA-HQ	Diff	P-Value	N: CA-HQ	N: Outside CA-HQ
Industry Composition						
Agriculture, Forestry and Fishing	0.00	0.00	0.00	0.59	204	943
Construction	0.00	0.01	-0.01	0.34	204	943
Finance, Insurance and Real Estate	0.08	0.18	-0.10	0.00	204	943
Manufacturing	0.34	0.26	0.08	0.02	204	943
Mining	0.01	0.09	-0.08	0.00	204	943
Non-Classified	0.34	0.23	0.12	0.00	204	943
Retail Trade	0.01	0.03	-0.02	0.06	204	943
Services	0.16	0.12	0.04	0.14	204	943
Transportation, Communications, Electric, Gas and Sanitary service	0.02	0.06	-0.04	0.01	204	943
Wholesale Trade	0.02	0.03	-0.01	0.53	204	943

Note:
The sample restricts to firm-year observations in 2017 and selects companies that were domestic, listed, and had an all-male board. Sample sizes differ across rows due to missing values. Raw means and p-values from a two sided t-test reported. Boardroom characteristics are derived from BoardEx and represent mean values in 2017. Financial variables are derived from Compustat's annual fundamental files, and are either log transformed or winsorized at the 1st and 99th percentiles. The percentiles are calculated relative to all domestic and listed companies observed in the 2017. Tobin's q is the ratio of the firm's market value to its book value of assets. Market value is book assets plus book equity minus market value of equity. ROA is net income before extraordinary items and discontinued operations divided by book assets. All company policy variables are derived from CRSP's events files. A company delists if none of the company's securities are listed the subsequent year. All other company policies indicate if the event occured for some security during the calendar year, and are derived from CRSP's Events files. Committee membership is derived from Boardex's Committee files. The first row represents the average (over all companies) of the mean committee load within a company. The remaining rows in the section represent the average (over all companies) share of directors that serve on a given committee. Industries are categorized into 11 divisions using the 4 digit SIC code, following OSHA's crosswalk. SIC codes are derived from CRSP's Names files.

Table III: Effects of the Gender Quota on Board Composition

Dependent Variables:	Male Share of Board	1(All-Male Board)	Board Size	1(Expand Board)	1(Male Dropped)
Model:	(1)	(2)	(3)	(4)	(5)
Variables					
$CA_{2017} \times$ Year = 2015	-0.007	-0.043	0.114	-0.036	0.046
	(0.005)	(0.029)	(0.108)	(0.050)	(0.056)
$CA_{2017} \times$ Year = 2016	-0.0007	-0.005	0.050	-0.043	-0.009
	(0.003)	(0.021)	(0.084)	(0.045)	(0.053)
$CA_{2017} \times$ Year = 2018	-0.006	-0.028	0.060	0.037	0.025
	(0.006)	(0.036)	(0.087)	(0.055)	(0.055)
$CA_{2017} \times$ Year = 2019	-0.056***	-0.300***	0.223**	0.135***	-0.004
	(0.008)	(0.038)	(0.112)	(0.052)	(0.056)
$CA_{2017} \times$ Year = 2020	-0.078***	-0.298***	0.172	-0.024	0.055
	(0.008)	(0.032)	(0.124)	(0.051)	(0.060)
$CA_{2017} \times$ Year = 2021	-0.106***	-0.239***	0.311**	0.064	-0.018
	(0.010)	(0.025)	(0.135)	(0.054)	(0.060)
Fixed-effects					
Firm	Yes	Yes	Yes	Yes	Yes
Year-SIC	Yes	Yes	Yes	Yes	Yes
Fit statistics					
Observations	6,910	6,910	6,910	6,670	6,670
Dependent variable mean	0.945	0.692	6.90	0.228	0.414
Number of Firms	1,146	1,146	1,146	1,139	1,139

Clustered (Firm) standard-errors in parentheses
*Signif. Codes: ***: 0.01, **: 0.05, *: 0.1*

The sample restricts to an unbalanced panel of firms that were domestic, listed, and had all-male boards in 2017. The time period covered is 2015 - 2021, with reported effects relative to the 2017 baseline. Standard errors are clustered at the firm level. Treated firms have CA headquarters and all-male boards as of 2017. The 'Expand Board' indicator equals one if board size increases relative to the prior year. 'Male Dropped' equals 1 if some male director present in the previous year is not present in the current year. Outcome variables related to board composition are derived from BoardEx's organizational summary files, which provides the director roster as of the company's annual report date. Industries are categorized into 11 divisions using the 4 digit SIC code, following OSHA's crosswalk. SIC codes are derived from CRSP's Names files. Sample sizes vary due to missing values of the outcome variable. CA SB 826, approved on 9/30/2018, mandated at least 1 woman be on the corporate board of any listed with HQ in CA by 12/31/2019.

Table IV: Medium-Run Abnormal Performance of Portfolios Classified by Female Representation and Headquarter Status

Model:	CA AMB (1)	CA Gender Diverse Board (2)	non-CA AMB (3)	non-CA Gender Diverse Board (4)
Variables				
α	0.0235	0.0155	0.0164	0.0065
	(0.0176)	(0.0102)	(0.0188)	(0.0071)
β_{MKT}	1.053***	1.111***	1.023***	0.9583***
	(0.0129)	(0.0075)	(0.0138)	(0.0052)
β_{HML}	-0.2498***	-0.1356***	0.4407***	0.3122***
	(0.0226)	(0.0131)	(0.0242)	(0.0091)
β_{SMB}	0.7170***	-0.0053	0.5752***	0.0406***
	(0.0260)	(0.0150)	(0.0278)	(0.0105)
β_{RMW}	-0.2999***	0.1227***	-0.1482***	0.0634***
	(0.0378)	(0.0219)	(0.0404)	(0.0152)
β_{CMA}	-0.2006***	-0.0735**	-0.2623***	-0.0578***
	(0.0499)	(0.0289)	(0.0534)	(0.0201)
Fit statistics				
Observations	820	820	820	820
Dependent variable mean	0.0897	0.1019	0.0702	0.0696
R^2	0.9249	0.9684	0.9214	0.9820

IID standard-errors in parentheses
*Signif. Codes: ***: 0.01, **: 0.05, *: 0.1*

The table reports daily abnormal stock returns for portfolios classified by female representation and headquarter status, both measured as of 2017. The sample period is from October 1st, 2018 (first trading day after the legislation's passage) through December 31st, 2021 (end of the compliance period). The abnormal stock return is estimated using the following five-factor return generating process:

$$r_{pt} = \alpha + \beta_{MKT} r_{wt} + \beta_{HML} HML_t + \beta_{SMB} SMB_t + \beta_{RMW} RMW_t + \beta_{CMA} CMA_t + \epsilon_{pt}, t = 10/1/2018, ..., 12/31/2021,$$

where r_{pt} is the daily stock return to the value-weighted portfolio in excess of the daily US Treasury bill. r_{wt} is the daily return on the US market in excess of the daily US Treasury bill. SMB, HML, RMW, and CMA are daily US risk factors from Ken French's website. To avoid survivorship bias, portfolio returns include the returns for all companies (including delisting returns where applicable) that delist during the sample period.

Table V: Effects of the Gender Quota on Financial Performance and Corporate Governance

	Baseline	Size Control	Small Brd	Male Industry	Triple Diff
Financial Outcomes					
Index of Financial Outcomes	0.063 (0.039)	0.083 (0.036)	0.131 (0.050)	0.046 (0.051)	0.087 (0.046)
ROA	0.046 (0.022)	0.040 (0.021)	0.090 (0.034)	0.040 (0.028)	0.055 (0.022)
ROE	0.072 (0.074)	0.067 (0.073)	0.139 (0.112)	0.083 (0.097)	0.083 (0.073)
Log(Q)	0.071 (0.041)	0.070 (0.041)	0.086 (0.063)	0.074 (0.051)	0.065 (0.041)
Log(Market to Book)	0.099 (0.065)	0.097 (0.065)	0.147 (0.087)	0.118 (0.083)	0.102 (0.066)
Cash Flow	0.045 (0.022)	0.040 (0.021)	0.090 (0.035)	0.038 (0.028)	0.054 (0.022)
Committee Composition					
Audit Share	-0.019 (0.012)	-0.024 (0.012)	-0.026 (0.018)	-0.035 (0.015)	-0.024 (0.012)
Compensation Share	-0.001 (0.012)	-0.002 (0.012)	0.002 (0.018)	-0.013 (0.014)	-0.004 (0.012)
Nominating Share	-0.007 (0.014)	-0.009 (0.014)	-0.033 (0.021)	-0.010 (0.017)	-0.007 (0.014)
Other Share	-0.008 (0.006)	-0.008 (0.006)	-0.002 (0.006)	0.000 (0.006)	-0.006 (0.005)
Avg. Committee Load	-0.062 (0.054)	-0.085 (0.052)	-0.068 (0.083)	-0.028 (0.070)	-0.071 (0.055)
Company Policy					
1(Delist)	0.001 (0.002)	-0.001 (0.001)	-0.003 (0.002)	-0.002 (0.001)	0.001 (0.014)
1(Merger or Reorg)	-0.001 (0.001)	-0.000 (0.000)	-0.000 (0.000)	-0.001 (0.001)	0.003 (0.010)
1(Dividend Issued)	0.011 (0.016)	0.005 (0.016)	0.011 (0.021)	0.011 (0.017)	0.017 (0.015)
1(Shares Outstanding Dcr by $\geq 5\%$)	0.029 (0.016)	0.029 (0.017)	0.022 (0.023)	0.025 (0.021)	0.020 (0.014)
1(Shares Outstanding Inr by $\geq 5\%$)	0.007 (0.018)	0.003 (0.018)	0.003 (0.026)	0.000 (0.023)	-0.004 (0.016)

Note:
The sample restricts to an unbalanced panel of firms that were domestic, listed, and had all-male boards in 2017. The time period covered is 2015 - 2021. The table presents the coefficients and standard errors from the difference-in-differences model, unless otherwise specified. Standard errors are clustered at the firm level. Treated firms have CA headquarters and all-male boards as of 2017. Financial variables are derived from Compustat's annual fundamental files, are reported in millions, and are either log transformed or winsorized at the 1st and 99th percentiles. The percentiles are calculated relative to all domestic and listed companies observed in the annual distribution. The index of financial outcomes averages the z-score across all financial outcomes, following Kling, Liebman, and Katz (2007). For each financial outcome, the z-score subtracts the mean of the control group, then divides by the standard deviation of the control group. Industries are categorized into 11 divisions using the 4 digit SIC code, following OSHA's crosswalk. SIC codes are derived from CRSP's Names files. Company policy variables are derived from the CRSP Events files. Column 2 adds a control for firm size, which is proxied by Log(Revenues). Column 3 subsets to companies that had fewer than 7 directors (the median board size) in 2017. Column 4 subsets to firms in industries with below-average female board representation. Industry classification and averages are calculated using the 2017 cross-section. Column 5 makes no additional restrictions. CA SB 826, approved on 9/30/2018, mandated at least 1 woman be on the corporate board of any listed with HQ in CA by 12/31/2019. See data appendix for variable definitions.

Table VI: Effects of the Gender Quota on Boardroom Characteristics

	Demographics			Experience			Connections				
Dependent Variables:	Age	Male	MBA	Brd Exp	C-Suite Exp	Sector Exp	Brd Conx	Brd-Brd Conx	C-Suite Conx	Same Gender Brd Conx	Non-Exec Dir.
Model:	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
Variables											
$CA_{2017} \times$ Year = 2015	0.231	-0.007	-0.005	0.013	-0.002	0.007	0.004	0.013	-0.004	0.001	0.013*
	(0.285)	(0.005)	(0.012)	(0.010)	(0.011)	(0.012)	(0.013)	(0.013)	(0.013)	(0.013)	(0.007)
$CA_{2017} \times$ Year = 2016	-0.039	-0.0007	0.003	0.006	0.003	0.005	-0.006	-0.004	-0.007	-0.005	0.003
	(0.196)	(0.003)	(0.009)	(0.006)	(0.008)	(0.008)	(0.009)	(0.009)	(0.009)	(0.009)	(0.006)
$CA_{2017} \times$ Year = 2018	0.035	-0.007	-0.011	-0.004	-0.006	0.016*	-0.015	-0.002	-0.014	-0.022*	0.010*
	(0.179)	(0.006)	(0.009)	(0.008)	(0.009)	(0.009)	(0.012)	(0.010)	(0.010)	(0.011)	(0.006)
$CA_{2017} \times$ Year = 2019	-0.175	-0.056***	-0.015	-0.025**	-0.023*	0.003	-0.028*	-0.024*	-0.023	-0.049***	0.013*
	(0.249)	(0.008)	(0.012)	(0.012)	(0.012)	(0.012)	(0.014)	(0.013)	(0.014)	(0.013)	(0.007)
$CA_{2017} \times$ Year = 2020	-0.111	-0.078***	-0.022	-0.033**	-0.029**	0.010	-0.026	-0.033**	-0.014	-0.053***	0.006
	(0.309)	(0.008)	(0.013)	(0.014)	(0.014)	(0.015)	(0.016)	(0.016)	(0.017)	(0.015)	(0.008)
2SLS											
$1(\widehat{GenderDiverseBoard})$	-0.610	-0.224***	-0.056	-0.111***	-0.089**	-6.81×10^{-5}	-0.078*	-0.102**	-0.045	-0.156***	0.015
	(0.855)	(0.015)	(0.039)	(0.041)	(0.041)	(0.041)	(0.046)	(0.044)	(0.046)	(0.041)	(0.020)
Fixed-effects											
Firm	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year-SIC	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Fit statistics											
F-test (1st stage)	238.8	241.1	207.8	237.2	237.2	237.2	231.1	231.1	216.0	231.1	241.1
Observations	40,969	41,567	37,161	41,029	41,029	41,029	39,978	39,978	38,801	39,978	41,567
Dependent variable mean	61.9	0.956	0.354	0.759	0.618	0.454	0.529	0.354	0.429	0.512	0.808
Number of Firms	1,146	1,146	1,145	1,146	1,146	1,146	1,145	1,145	1,145	1,145	1,146

Clustered (Firm) standard-errors in parentheses
*Signif. Codes: ***: 0.01, **: 0.05, *: 0.1*

The sample restricts to all directors within firms that were domestic, listed, and had all-male boards as of 2017. The time period covered is 2015 - 2020, with reported effects relative to the 2017 baseline. Standard errors clustered at the firm level. Treated firms have CA headquarters and all-male boards as of 2017. Two directors have a prior connection if they overlapped at a previous company. Regression is weighted by the inverse of annual board size. Director-level characteristics measured upon year of onboarding. Sectoral classification used to code sectoral experience is provided by BoardEx; see Table A5 for the full list of sectors. Experience and connections gained through work spells in non-listed companies are counted. Industry variable used in the fixed effects are derived from 4 digit SIC codes provided by CRSP. Sample sizes vary due to missing values of director characteristics.

Table VII: Characteristics of Incoming Directors by Gender

	Male	Female	Difference	P Value
Age & Education				
Age	57.03	56.07	0.96	0.00
MBA Degree	0.38	0.38	0.00	0.83
Ivy League Degree	0.27	0.27	0.00	0.91
Law Degree	0.10	0.12	-0.02	0.00
Experience				
Prior Board Experience	0.83	0.72	0.11	0.00
Prior C-Suite Experience	0.70	0.67	0.03	0.00
Prior Same Sector Experience	0.55	0.43	0.12	0.00
Connections				
Prior Connection to Incumbent Board	0.61	0.39	0.21	0.00
Prior Board Connection with Incumbent Board	0.41	0.19	0.22	0.00
Prior Connections to the C-Suite	0.50	0.28	0.22	0.00
Prior Same Gender Connection to Incumbent Board	0.59	0.14	0.45	0.00
Non-Executive Director	0.82	0.95	-0.13	0.00
Sample Size				
Number of Positions	20412	6492		
Number of Directors	16434	4896		
Number of Companies	4516	3581		

Note:
The sample restricts to all incoming directors within domestic and listed companies. The time period considered is 2015 - 2020. Raw means and p-values from a two sided t-test reported. Observable characteristics of incoming directors at the time the boardship begins are derived from BoardEx. Age and education derived from director profile files, experience via employment history files, and connections through the network files. Two directors have a prior connection if they overlapped at a previous company. Sectoral classification following the FTSE International standard is provided by BoardEx; see Table A5 for the full list of sectors. Experience and connections gained through work spells in non-listed companies are counted.

Table VIII: Characteristics of Incoming, Exiting, and Retained Directors by Treatment Status

	California HQ				Non-California HQ			
	Entering F	Entering M	Exiting M	Retained M	Entering F	Entering M	Exiting M	Retained M
Age & Education								
Age	56.79	56.33	62.12	60.83	55.93	56.25	62.78	61.54
MBA Degree	0.33	0.33	0.39	0.39	0.33	0.35	0.34	0.35
Experience								
Prior Board Experience	0.56	0.69	0.82	0.80	0.57	0.68	0.77	0.78
Prior C-Suite Experience	0.62	0.64	0.67	0.70	0.62	0.64	0.58	0.62
Prior Same Sector Experience	0.48	0.58	0.54	0.52	0.42	0.52	0.47	0.44
Connections								
Prior Conx w/Board	0.31	0.37	0.56	0.58	0.29	0.48	0.57	0.55
Prior Board Conx w/Board	0.08	0.13	0.40	0.41	0.09	0.20	0.38	0.38
Prior Conx w/ C-Suite	0.19	0.29	0.47	0.50	0.17	0.33	0.44	0.44
Prior Same Gender Conx w/Board	0.03	0.35	0.55	0.57	0.03	0.46	0.56	0.54
Non-Executive Director	0.93	0.80	0.84	0.78	0.95	0.80	0.83	0.80
Committee Composition								
Number of Committees	1.87	2.44	2.81	2.82	1.90	2.19	2.61	2.68
Audit Committee	0.54	0.62	0.63	0.69	0.57	0.63	0.65	0.68
Compensation Committee	0.51	0.60	0.66	0.64	0.46	0.53	0.62	0.62
Nominating Committee	0.54	0.54	0.62	0.60	0.50	0.43	0.54	0.56
Other Committee	0.04	0.03	0.04	0.04	0.06	0.08	0.07	0.07
Sample Size								
Number of Positions	214	224	402	941	566	1076	1660	4856
Number of Directors	210	222	391	919	549	1058	1614	4592
Number of Companies	147	105	150	198	443	502	646	918

Note:
The sample considers firms that were domestic, listed, and had all-male boards as of 2017. Entering (Exiting) directors join (leave) sometime between 2018 - 2020. Retained directors remain with the company between 2017 - 2020. These variables are derived from BoardEx's organizational summary files, which provides the complete director roster as of the annual report date. Two directors have a prior connection if they overlapped at a previous company. Director-level characteristics measured upon year of onboarding. Sectoral classification used to code sectoral experience is provided by BoardEx; see Table A5 for the full list of sectors. Directors may hold multiple positions. Some directors have missing characteristics.

Table A1: Share of BoardEx Companies Matched with the Following:

(1)	(2)	(3)	(4)	(5)	(6)	(7)
Year	BoardEx N	CRSP/ Compustat	Annual Financials	Listing Exchange	Geographic Identifiers	All of (2-6)
2015	4188	0.967	0.950	0.962	0.960	0.941
2016	4030	0.969	0.953	0.965	0.963	0.944
2017	4000	0.970	0.956	0.966	0.963	0.947
2018	3980	0.967	0.955	0.963	0.960	0.948
2019	3971	0.960	0.952	0.956	0.958	0.948
2020	4149	0.933	0.926	0.929	0.933	0.921
2021	4546	0.874	0.866	0.874	0.874	0.866

Note:
Note: Column (2) restricts to BoardEx's 'Quoted' and US based companies that report annual board gender ratios. BoardEx-CRSP-Compustat crosswalk provided by WRDS. Annual Financials derived from the Compustat Annual Fundamental files. Listing exchange pulled from CRSP Names file. Geographic identifiers include both the state of the company's principal executive offices and the country of incorporation. These values are taken from Compustat Snapshot. If missing, geographic identifiers taken from the WRDS SEC Analytics Suite (item regstatehdq). If still missing and the year is past 2019, the value is taken from Boardex's header level information provided in the Company Profile files.

Table A2: Non-Compliance, Evasion, and Attrition

Firm Status	Year	N: AMB	N: Diverse	N	Change in N	N: Delist	N: Change HQ
Treated	2015	151	23	174	NA	0	2
Treated	2016	179	12	191	17	0	5
Treated	2017	204	0	204	13	4	2
Treated	2018	135	48	183	-21	8	3
Treated	2019	40	131	171	-12	14	4
Treated	2020	16	143	159	-12	12	3
Treated	2021	6	140	146	-13	10	4
Control	2015	722	75	797	NA	0	19
Control	2016	804	46	850	53	0	16
Control	2017	942	0	942	92	7	30
Control	2018	654	202	856	-86	42	23
Control	2019	431	367	798	-58	77	18
Control	2020	300	436	736	-62	46	25
Control	2021	186	495	681	-55	39	11

Note:
Treated firms have CA headquarters and are listed as of 2017, while control firms are listed and headquartered in another US state as of 2017. Cols 3-6 are derived from BoardEx's organizational summary files, which indicates a company's annual gender ratio. Companies may fail to appear in BoardEx if the company goes private, ceases to exist, or if BoardEx doesn't collect the company's gender composition as of the annual report date. Col 7 is derived from CRSP's Delisting file; a company is defined to delist if none of the company's securities are listed the subsequent year. The last column uses headquarter location data triangulated from Compustat Snapshot, BoardEx, and SEC filings.

Table A3: Differential Attrition?
Annual Board Gender Reporting Rates

Year	California HQ	Outside CA HQ	Diff	P-Val	N: California HQ	N: Outside CA HQ
2015	0.85	0.85	0.01	0.80	174	797
2016	0.94	0.90	0.03	0.09	191	850
2017	1.00	1.00	0.00	1.00	204	942
2018	0.90	0.91	-0.01	0.62	183	856
2019	0.84	0.85	-0.01	0.75	171	798
2020	0.78	0.78	0.00	0.95	159	736
2021	0.72	0.72	-0.01	0.84	146	681

Note:
The sample restricts to companies that i) had all-male boards in 2017 and ii) were listed and domestic in 2017. Raw means and p-values from a two sided t-test reported. Annual board gender composition is provided by Boardex's Organizational Summary files. Attrition may occur if the company goes private, ceases to exist, or if BoardEx doesn't collect the company's gender composition as of the annual report date.

Table A4: Effects of the Gender Quota on Board Composition: Robustness Checks

Dependent Variables:	1(All-Male Board)							1(Expand Board)						
	Size Control	Dem. Subsample	AMB 2015-2017	Small Brd	Male Industry	Triple Diff	CA Treated	Size Control	Dem. Subsample	AMB 2015-2017	Small Brd	Male Industry	Triple Diff	CA Treated
Model:	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
Variables														
Treated × Year = 2015	-0.022	-0.040	0.0009	-0.030	-0.045	-0.107***	0.017	0.007	-0.054	0.004	0.036	-0.063	-0.041	-0.005
	(0.029)	(0.031)	(0.002)	(0.042)	(0.036)	(0.035)	(0.018)	(0.053)	(0.054)	(0.055)	(0.061)	(0.066)	(0.061)	(0.030)
Treated × Year = 2016	-0.005	-0.004	0.002	0.022	-0.007	-0.055**	0.021	-0.017	-0.063	-0.080*	-0.102**	-0.082	-0.034	-0.026
	(0.021)	(0.022)	(0.002)	(0.029)	(0.026)	(0.025)	(0.014)	(0.047)	(0.049)	(0.047)	(0.047)	(0.058)	(0.058)	(0.029)
Treated × Year = 2018	-0.042	-0.049	-0.008	-0.055	-0.024	-0.032	-0.009	0.051	0.039	0.046	0.040	0.030	0.054	-0.007
	(0.039)	(0.039)	(0.041)	(0.049)	(0.044)	(0.037)	(0.013)	(0.056)	(0.058)	(0.063)	(0.069)	(0.069)	(0.065)	(0.030)
Treated × Year = 2019	-0.281***	-0.331***	-0.303***	-0.364***	-0.322***	-0.301***	-0.094***	0.160***	0.102*	0.151***	0.197***	0.142**	0.079	0.073**
	(0.041)	(0.043)	(0.045)	(0.056)	(0.047)	(0.038)	(0.020)	(0.055)	(0.056)	(0.058)	(0.063)	(0.066)	(0.062)	(0.029)
Treated × Year = 2020	-0.299***	-0.334***	-0.329***	-0.389***	-0.283***	-0.306***	-0.088***	0.040	-0.031	-0.037	-0.028	-0.066	0.006	-0.021
	(0.033)	(0.037)	(0.034)	(0.048)	(0.039)	(0.032)	(0.021)	(0.054)	(0.054)	(0.058)	(0.066)	(0.063)	(0.061)	(0.029)
Treated × Year = 2021	-0.236***	-0.223***	-0.210***	-0.308***	-0.240***	-0.239***	-0.068***	0.109**	0.032	0.068	-0.027	0.083	-0.026	0.077**
	(0.027)	(0.031)	(0.030)	(0.040)	(0.029)	(0.025)	(0.021)	(0.054)	(0.059)	(0.060)	(0.068)	(0.069)	(0.065)	(0.031)
Log(Revenues)	-0.031***							0.004						
	(0.010)							(0.010)						
Fixed-effects														
Firm	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year-SIC	Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes		Yes
1(CA HQ)-Year						Yes							Yes	
1(AMB)-Year						Yes							Yes	
Fit statistics														
Observations	6,233	4,013	5,426	3,237	4,094	24,038	24,016	6,056	3,865	5,366	3,116	3,899	23,464	23,448
Dependent variable mean	0.690	0.683	0.729	0.725	0.689	0.226	0.226	0.227	0.234	0.217	0.203	0.235	0.257	0.257
Number of Firms	1,096	685	866	536	692	3,845	3,845	1,090	675	866	532	686	3,830	3,830

Clustered (Firm) standard-errors in parentheses
*Signif. Codes: ***: 0.01, **: 0.05, *: 0.1*

The sample considers an unbalanced panel of domestic and listed firms observed between 2015 - 2021, with reported effects relative to the 2017 baseline. Standard errors are clustered at the firm level. Treated firms are defined to have CA headquarters and all-male boards as of 2017. Column 1 subsets to companies that had all-male boards in 2017. Log(Revenues) is used as a proxy for firm size. Col 2 further subsets to firms headquartered in Democratic states – states that voted for Hillary Clinton in the 2016 presidential election. Col 3 only considers companies that had all-male boards from 2015-2017. Col 4 subsets to companies that had fewer than 7 directors (the median board size) in 2017. Col 5 subsets to firms in industries with below-average female board representation. Industry classification and averages calculated using the 2017 cross-section. Col 6 makes no additional restrictions. Col 7 makes no additional restrictions, and redefines treated firms to have CA headquarters as of 2017. The 'Expand Board' indicator equals one if board size increases relative to the prior year. Cols 8-14 make the analogous sample restrictions. All outcome variables are derived from BoardEx's organizational summary files, which provides the director roster as of the company's annual report date. Industries are categorized into 11 divisions using the 4 digit SIC code, following OSHA's crosswalk. SIC codes are derived from CRSP's Names files. CA SB 826, approved on 9/30/2018, mandated at least 1 woman be on the corporate board of any listed with HQ in CA by 12/31/2019.

Table A5: Pipeline: Number of Women with Top-Level Experience in 2017

Sector	Any Position	Board Position	C-Suite Position	N: Treated Firms
Pharmaceuticals and Biotechnology	746	310	182	47
Software and Computer Services	710	243	117	22
Health	360	206	75	20
Information Technology Hardware	248	87	45	20
Electronic and Electrical Equipment	360	226	46	14
Real Estate	351	251	47	9
Business Services	364	186	58	8
Telecommunication Services	212	76	31	8
Banks	1043	649	138	6
Engineering and Machinery	243	140	42	5
Food Producers and Processors	205	127	31	5
Media and Entertainment	171	85	33	5
Renewable Energy	46	32	6	5
Speciality and Other Finance	472	213	76	4
Beverages	71	24	18	3
Clothing and Personal Products	191	108	30	3
General Retailers	421	219	93	3
Containers and Packaging	40	28	5	2
Insurance	323	157	71	2
Automobiles and Parts	127	65	20	1
Blank Check / Shell Companies	2	1	0	1
Construction and Building Materials	134	101	13	1
Education	36	21	7	1
Electricity	64	23	11	1
Household Products	123	80	17	1
Investment Companies	110	89	9	1
Leisure and Hotels	375	205	76	1
Leisure Goods	46	30	6	1
Oil and Gas	238	146	32	1
Private Equity	41	12	4	1
Steel and Other Metals	56	40	8	1
Utilities - Other	274	168	46	1

Note:
The sample restricts to women working in domestic and listed companies as of 2017, the year prior to the passage of SB826. Since BoardEx tracks the employment histories of board members, the women considered have sat on a board sometime between 1950 and 2020 (the years of BoardEx coverage). The variables are derived from Boardex's employment history files, which tracks the work histories of board members. Sector classification following FTSE is provided by BoardEx. The data is sorted on the industries that contain the most number of treated firms – the firms that are listed and have CA headquarters as of 2017.