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Pricing gender: stock market reactions to female board appointments

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Abstract

This thesis ¹ examines **how financial markets react to the appointment of women to corporate boards**. Using a short-horizon **event study** on **publicly listed firms**, we measure **abnormal returns** around announcement dates. We also investigate whether reactions vary with the **executive status** of the appointee and whether she is the **first woman** joining the board. We find a **negative and statistically significant** market reaction over **short event windows**, concentrated around the announcement date and **not persistent over longer horizons**. We do not find evidence of significant differences across appointment types.

¹ In preparing this thesis, large language models were used solely to enhance language clarity and correct spelling and grammatical errors. These tools were employed as part of the proofreading and editing process to improve readability and ensure linguistic accuracy. They were not used to generate original academic content, conduct data analysis, or formulate arguments or conclusions. All intellectual contributions, interpretations, and scholarly insights presented in this thesis result from the authors' work.

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Introduction

Over the past decade, **corporate governance** has moved to the **forefront of investors' attention**. Beyond traditional financial indicators, shareholders increasingly scrutinize how firms are monitored and how strategic decisions are shaped. This scrutiny has intensified as **business models have become more complex and intangible**, making **governance quality harder to infer from financial statements** alone. In this context, **boards of directors play a crucial role**: they appoint and oversee senior management, approve major strategic and financial choices, and serve as the primary internal mechanism through which shareholders exert influence. Yet a recurring challenge in the empirical governance literature is that cross-sectional links between board characteristics and firm outcomes are difficult to interpret. Indeed, **governance structures are endogenous and often adjust in response to firms' underlying prospects**. This has motivated a growing focus on discrete governance events, such as director appointments, where new public information arrives at an identifiable date and where **stock prices can reveal how investors update their beliefs** about oversight, strategy, and risk.

The question of **gender diversity on boards** has become one of the most visible and debated governance topics in both academic research and policy discussions. In recent years, the **appointment of women to boards has accelerated**, driven by a combination of forces: intensified investor scrutiny of governance practices, expansion of ESG-driven mandates, and introduction of gender-related regulatory constraints. These developments have made **female director appointments increasingly salient and, in most cases, highly publicized**. In a **semi-strong market efficiency** framework, appointment announcements may carry information that investors incorporate into prices immediately, leading to abnormal returns around the disclosure date. At the same time, the informational content of these announcements is not necessarily uniform. A female appointment can be interpreted as a meaningful change in oversight capacity and decision-making, but it **may also be perceived as a largely symbolic move**, particularly when representation is minimal or when the position offers limited influence.

While the literature on board gender diversity has expanded rapidly, **existing evidence remains mixed**. Studies linking gender diversity to firm performance, payout policy, or risk outcomes report inconclusive findings, which are commonly attributed to **challenges related to endogeneity and identification**. Firms that appoint women to their boards may differ systematically from those that do not, making **causal interpretation difficult**. Moreover, relatively few studies focus directly on how markets react at the time of a female director appointment, and even **fewer examine whether this reaction varies with the characteristics of the appointment itself**. As a result, it remains unclear how investors interpret female board appointments when they are announced. An open question is therefore **whether these appointments constitute value-relevant news for investors**. If a female director

appointment signals a substantive change in board influence, such as stronger oversight, different strategic priorities, or tighter constraints on management, stock prices should react at the announcement. If the appointment is instead perceived as largely symbolic, the market reaction should be limited. Importantly, the **market's interpretation of such appointments is likely to depend on context**. In particular, the role occupied by the director and the existing gender composition of the board may shape whether a female appointment is perceived as a meaningful governance change or as token representation.

Building on these considerations, this thesis addresses the following research question: **How does the stock market react to the appointment of a woman to the board of directors, and does this reaction depend on the type of position (executive versus non-executive) and on whether the board has reached a critical mass of female directors?** The objective is not only to assess whether female appointments are priced at the time of announcement, but also to understand the conditions under which market responses differ.

To address this question, the analysis adopts a **market-based approach** and relies on a standard **event-study framework** centered on the appointment announcement date. By examining abnormal stock returns in short windows around the disclosure, the **methodology captures investors' immediate price responses to new governance information**. The analysis **further explores heterogeneity** in market reactions by distinguishing between executive and non-executive appointments and by accounting for the board's existing gender composition.

This thesis **contributes to the existing literature** in three main ways. First, it **provides a market-based perspective** on board gender diversity by focusing on announcement-time price reactions rather than long-run accounting or stock performance measures. Second, it **explicitly examines heterogeneity in investor responses along two dimensions** that theory and prior evidence suggest are central: executive versus non-executive roles and the presence of a critical mass of women on the board. Finally, by linking announcement reactions to appointment characteristics and board composition, it **sheds light on how investors interpret gender diversity as governance-relevant information**.

I. Literature review

A. Stock market reactions to board appointments

Corporate boards play a central role in firm governance, as they are responsible for monitoring management and safeguarding shareholders' interests. Despite this theoretical importance, a substantial strand of the early **corporate governance literature expressed skepticism regarding the effectiveness of boards**, often finding weak or ambiguous relationships between board characteristics and firm value [1]. This led to the perception that **boards may sometimes serve a largely symbolic function**.

More recent research has revisited this question by **focusing on specific governance events**, such as the appointment or resignation of board members. Rather than examining correlations between board composition and firm performance, these studies use event study methodologies to analyze how financial markets react to the public disclosure of board changes. This approach allows researchers to **isolate the informational content of board appointments from other firm-level or external macroeconomic factors**. Yermack [2] provides a comprehensive survey of this literature and documents that **stock markets respond significantly** to changes in board membership. Abnormal returns observed around announcement dates are often economically meaningful, frequently amounting to **changes of 1% or more in firm value**. Importantly, these reactions are **not uniform**. Instead, they vary systematically with the **characteristics of the appointed** or departing director, including independence, professional expertise, experience, and workload.

Empirical evidence supports these findings. Rosenstein and Wyatt [3] show that the appointment of **independent outside directors is generally welcomed by investors**, while Shivdasani and Yermack [4] demonstrate that market reactions are **more negative when the CEO is heavily involved in the director selection process**. Overall, this literature suggests that investors are able to assess the quality of individual directors and incorporate this information rapidly into stock prices.

As a result, **analyzing stock market reactions to board appointments has become a standard empirical approach** in corporate finance to evaluate how governance decisions are perceived by investors. This framework is particularly well suited to studying the market's response to the appointment of female directors, as it captures investors' immediate expectations regarding the implications of such appointments.

B. Board gender diversity: empirical evidence and limitations

Within this broader governance framework, a growing body of research has examined the **effects of board gender diversity on firm outcomes**. Several theoretical perspectives suggest that female representation on boards **may enhance governance quality**. In particular, resource dependence theory argues that **more diverse boards benefit from a broader set of skills, experiences, and**

external networks, which can improve the quality of strategic decision-making and access to resources [5]. Agency theory further suggests that gender diversity may **strengthen board monitoring and reduce managerial opportunism**.

Empirical evidence supports this mechanism, showing that firms with **higher female board representation tend to adopt more shareholder-oriented financial policies**. For instance, Ye et al. [6] find that firms with more women on their boards pay higher dividends on average, consistent with improved financial discipline. Similarly, Qayyum [7] shows that gender-diverse boards, especially when a critical mass of women is reached, are associated with lower stock price crash risk, suggesting reduced information opacity and bad-news hoarding by managers. One potential mechanism explaining these effects can be attributed to **behavioral differences**, documented in the aforementioned literature. More precisely, the latter suggests that **female directors exhibit higher risk aversion and stronger monitoring incentives**. These traits may result in **more conservative decision-making** as well as limiting managers' opportunistic behavior and excessive risk-taking.

Empirical findings, however, remain mixed. While some studies document positive associations between board gender diversity and firm outcomes, others find weak or insignificant effects. Marquez-Cardenas et al. [8], studying listed firms in Latin America, report no significant relationship between board gender diversity and firm performance, which they attribute in part to the extremely low level of female representation and limited within-firm variation. Similarly, Loy and Rupertus [9] show that once **selection effects and endogeneity** are properly addressed using propensity score matching, board gender diversity has no significant impact on long-term stock returns.

While the literature on board gender diversity has expanded rapidly, the **evidence on investors' reactions to female director appointments remains inconclusive**. Studies linking gender diversity to long-run performance, payout policy, or risk outcomes report **mixed findings**, which most authors link to two main challenges. First, **endogeneity is pervasive**: firms that appoint women may differ systematically from counterparts that do not, in terms of governance quality and expected performance, making **causal interpretation difficult**. Second, **much of the evidence relies on annual panel data**, which can be poorly suited to capturing how markets interpret information contained in an individual appointment announcement. In particular, **long-term performance analyses may overlook investors' short-run belief changes** and may conflate the impact of a board change with concurrent firm developments. In response to these challenges, **several authors argue that examining stock market reactions at the time of appointment provides a complementary and informative perspective**. Event studies focus on investors' contemporaneous beliefs and expectations, allowing researchers to assess how the market interprets the appointment of female directors independently of long-term performance dynamics [2][10].

C. The role of executive status and critical mass

Recent research emphasizes that the **effects of board gender diversity are unlikely to be homogeneous** and may **depend critically on the context** in which female directors are appointed [5][9]. In particular, the literature highlights the importance of considering both the **role occupied** by female directors and the **overall gender composition** of the board when assessing their impact on firm outcomes.

First, the **executive status of female directors may shape market perceptions**. Female executive directors, due to their direct involvement in strategic and operational decision-making, **may signal a deeper organizational commitment to gender diversity** and managerial competence than non-executive appointments. Consistent with this view, Brahma et al. [11] demonstrate that individual attributes of female directors, including executive roles, age, and education, are associated with **stronger performance effects** following their appointment.

Second, the **critical mass theory** suggests that the presence of a single female director may result in **tokenism**, limiting her influence on board decisions and **reducing the likelihood of meaningful governance change**. By contrast, when **female representation reaches a certain threshold**, commonly defined as **three or more women**, the dynamics of board deliberations **may shift more substantively** [5]. Empirical evidence supports this argument. Using data on FTSE 100 firms, Brahma et al. [11] show that the positive effects of board gender diversity on firm performance emerge primarily when this critical mass is achieved.

Additional evidence further supports the importance of these distinctions. Ferrari et al. [10], studying the introduction of mandatory gender quotas in Italy, find **no negative stock market reactions to female board appointments**, even when firms are forced to comply with quota requirements. This suggests that investors **do not systematically penalize female appointments** and that market reactions depend on contextual and institutional factors rather than gender per se.

Finally, Qayyum [7] shows that **board gender diversity is associated with lower stock price crash risk**, particularly when a critical mass of women is present. The author argues that female directors **improve transparency and reduce managerial bad-news hoarding**, thereby influencing investors' perception of firm risk. Taken together, these studies suggest that analyzing female board appointments without accounting for executive status and critical mass may obscure important sources of heterogeneity in market reactions.

II. Hypothesis

Based on the literature reviewed above, this study examines **how stock markets react to the appointment of female directors, with particular attention to the role occupied by the appointed director and to the board's existing gender composition**. Prior research in corporate governance shows that changes in board composition **constitute salient governance events that convey new information to investors**. Event studies document that **stock prices respond to director appointments**, reflecting investors' updated expectations regarding oversight quality, strategic direction, and firm risk. Within this framework, **the appointment of a female director represents a potentially informative event** that may trigger a stock market reaction at the time of announcement.

Hypothesis 1 (H1): *The appointment of a female director is associated with a significant abnormal stock market reaction.*

From a theoretical standpoint, it is worth noting that the **direction of the market reaction remains uncertain** in the existing literature: both positive and negative effects have been documented. Investors may grant positive value to the perceived improved monitoring and governance following female appointments, whereas they may react negatively if they perceive the appointment as symbolic rather than driven by genuine governance considerations. Accordingly, we **do not impose a directional prediction** prior to our research.

Hypothesis 2 (H2): *Stock market reactions to the appointment of a female director differ between executive and non-executive appointments.*

Moreover, beyond the mere presence of a female director, the literature emphasizes that **individual director characteristics** play an important role in shaping market perceptions. In particular, executive directors are directly involved in strategic and operational decision-making, while non-executive directors primarily contribute through monitoring and advisory functions. As a result, the **informational content of a female director appointment** may differ depending on whether the appointed director holds an **executive or a non-executive position**.

Hypothesis 3 (H3): *Stock market reactions to the appointment of a female director differ depending on whether the board has reached a critical mass of female directors.*

In addition, theories of **tokenism and critical mass** suggest that the impact of female representation on board dynamics **depends on the number of women already serving on the board**. When female representation is limited, a new appointment may be perceived as largely symbolic, whereas **reaching a critical mass of female directors may signal a more substantive change** in board functioning and governance quality. Consequently, investors' reactions to female director appointments may vary with the board's existing gender composition.

Hypothesis 4 (H4): *The effect of a female director's executive status on stock market reactions is conditioned by the board's gender composition.*

These two dimensions, **executive status and critical mass, may interact**. The market impact of appointing a female executive director may depend on **whether women already have sufficient representation on the board to exert meaningful influence**. While executive positions are associated with greater involvement in strategic and operational decisions, **critical mass theory suggests that female directors are more likely to affect board dynamics when they are not isolated**. As a result, executive female appointments may be perceived as particularly informative when the board has already reached a critical mass of women, whereas their impact may be more limited when female representation remains very low.

III. Data: sample construction and variable definitions

A. Sample construction and event identification

The event sample is built from the **S&P Capital IQ Developments database**, which records public announcements released by listed companies. Consistent with the objective of the study, we focus on **U.S. listed firms** and restrict the period to **2010 to 2024**, while **excluding firms in the Financial and Utilities sectors**. The geographic restriction is implemented by selecting firms whose *Country/Region of Incorporation* is listed as United States in the Capital IQ database. The exclusion of Financials and Utilities follows **standard practice in empirical corporate finance**, as firms operating in heavily regulated industries may exhibit governance structures and market reactions that differ from those of other sectors.

Board appointment announcements are identified through the Key Developments Screening module of Capital IQ by selecting the category “Executive/Board Changes – Other”, which captures announcements related to changes in board composition. To isolate appointments rather than departures, we apply a text filter to both the *Headline* and *Situation* fields. **Announcements are retained when they contain appointment-related expressions** such as “appointed to the board”, “elected to the board”, “appointed as director”, “joins the board”, or “named to the board”. **Announcements containing departure terms are excluded**, such as “resign”, “retire”, “termination”, or “step down”.

This combined **inclusion and exclusion filtering strategy** allows us to isolate announcements corresponding specifically to the appointment of new directors. After applying the full set of restrictions (country, period, event category, sector exclusions, and the text filters), the initial dataset contains **3,523 board appointment announcements** for U.S. listed firms. For each announcement, we export the following information from Capital IQ: a unique event identifier (Key Development Excel ID), the announcement date (Key Development Date), the company name, the stock ticker, the company

identifier (Excel Company ID), the Headline, the detailed textual description (Situation), and the source of the announcement. These variables allow us to **uniquely identify each event**, extract the identity of the nominated director from the narrative announcement, **infer the director's gender**, and link the firm to market databases, in particular **CRSP**, in order to compute **abnormal stock returns around the announcement date**.

Capital IQ does not provide a consistently exploitable structured gender variable in the extracted event data. We therefore identify female appointments using a **text-based approach applied to the *Situation* field**. A binary indicator is created by detecting the prefixes “Ms.”, “Mrs.”, and “Miss”. Announcements containing at least one of these prefixes are classified as female appointments. This procedure identifies **661 announcements involving female nominees**, representing about 19% of all board appointment announcements. This proportion is **consistent with the steady increase in female representation on U.S. corporate boards** documented in the governance literature [12].

Our empirical design requires that **one observation corresponds to one woman appointed to the board**. Some announcements report the simultaneous appointment of multiple women. In these cases, the **announcement is duplicated so that each woman appears on a separate line**. In the raw female sample, 28 announcements contain multiple female nominees, and the separation step increases the number of female observations to nearly 700 individual nominations. Because duplication mechanically creates repeated rows with the same event identifier, firm identifier, event date, and announcement text, these repetitions do not represent data errors, but rather distinct appointments disclosed in a single announcement. **To avoid ambiguity when several women are appointed in the same announcement, we create an additional identifier based on the extracted nominee name (*female_name*)**, allowing us to uniquely track each individual appointment. To do so, we extract a nominee name from the *Situation* text **by isolating the token that follows “Ms.” or “Mrs.”**. In most cases, this yields a minimal but usable name string (for example, “Ms. Pepin”). When the automated extraction fails due to complex syntax or missing explicit prefixes, the nominee's name is completed manually.

Several additional checks are then implemented during the **cleaning process**. First, we verify that the **event date corresponds to the effective public disclosure date of the announcement**, rather than a later update timestamp. Secondly, we **clean tickers** by removing exchange prefixes (for example “NYSE:” or “NasdaqGS:”) and retaining the main U.S. ticker. Finally, we **ensure consistency** between the firm identifier, ticker, and event date across observations. After a first automated screening using Excel-based keyword searches and sorting rules, **all announcements are manually reviewed**. This step is required since narrative announcements generate false positives, such as re-elections, role changes without a new board appointment, nominations outside the Board of Directors, advisory board appointments, trustee roles, or cases where the nominee's gender is ambiguous. We therefore **remove**

all events that do not correspond strictly to the appointment of a new female to the Board of Directors. After this manual validation stage, the dataset contains **540 female board appointment observations**.

To ensure the **availability and comparability of daily stock returns in CRSP**, we further restrict the sample to **firms listed on major U.S. exchanges**, namely NYSE, NYSE American, and Nasdaq Global or Capital Markets. We **exclude OTC securities, private entities, associations, non-listed LLCs, and public or nonprofit organizations** because reliable daily return data is not consistently available for these entities. For firms that **were later delisted, we retain the observation only if the event occurs before the delisting date**, ensuring that stock returns remain observable around the announcement. Because, at the time of our analysis, the **CRSP return extraction ends on December 31, 2024**, the baseline event-study analysis is restricted to events with *event_date* on or before that date. This leaves 315 events in the main sample. Figure 1 presents the sample selection process, illustrating the successive filters applied to **the initial set of 3,523 announcements** to obtain the final sample of **315 events used in the baseline event study**.

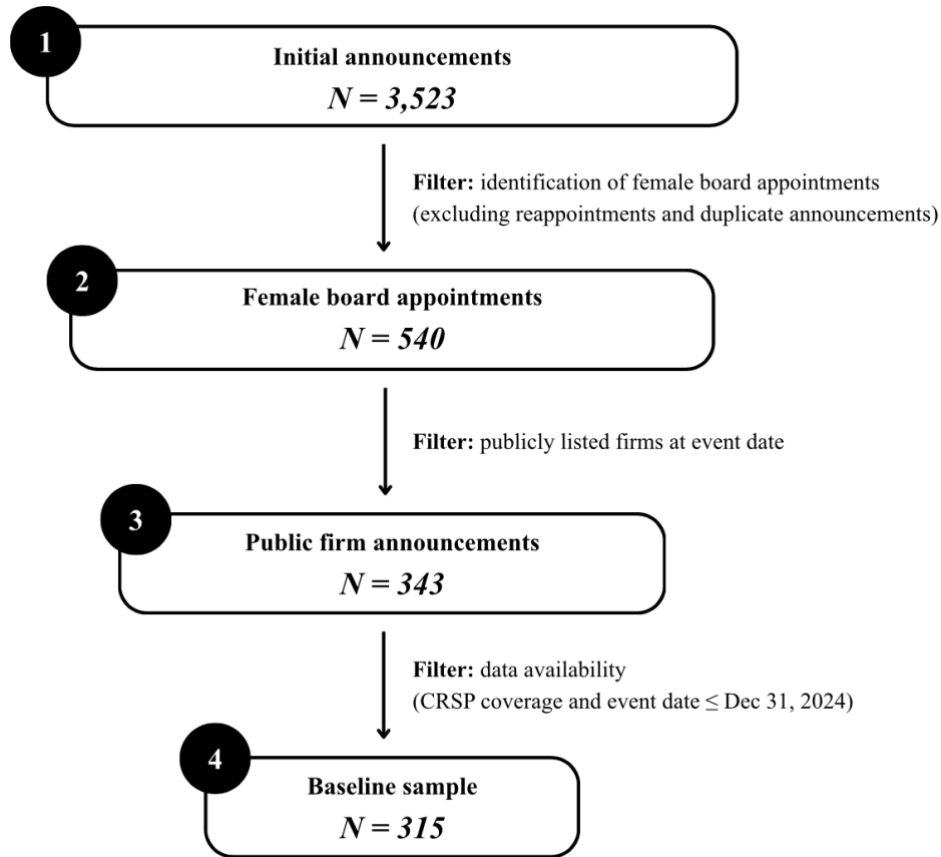


Figure 1. Sample selection process for the baseline event study

Sample sizes differ across analyses for mechanical reasons. Within the baseline sample, the number of usable observations varies with the event window, since CARs are computed only when the **full trading-day window is available**. In addition, some specifications rely on **smaller subsamples** because expected-return parameters or the FirstFemale variable cannot be constructed for all events.

B. Variable definitions

We group the variables into **four categories: event-level variables, market linkage variables, daily market variables, and factor variables**, followed by constructed event-study variables. The empirical dataset combines event-level information from Capital IQ with market data from CRSP and factor data from WRDS.

Event-level variables (Capital IQ):

- *event_id*: unique identifier of the *Key Developments* item (Key Development Excel ID).
- *event_date*: public disclosure date of the appointment as recorded in *Key Developments* (announcement date).
- *company_name*, *firm_id*, *headline*, *situation*, *source*: descriptive fields used for identification, cleaning, and gender inference.
- *ticker*: cleaned U.S. ticker used to connect events to CRSP returns after removing exchange prefixes and standardizing the string.
- *female_name*: nominee identifier extracted from the *Situation* text to distinguish individual women in multi-nomination announcements.

Market linkage variables (CRSP identifiers):

- *permno*: CRSP permanent security identifier used to track firms consistently through ticker changes and corporate events.
- *namedt* and *nameenddt*: start and end dates defining the validity window of a ticker for a given PERMNO in CRSP stock names.

Daily market variables (CRSP):

- *ret*: daily stock return.
- *prc*: daily stock price.

Factor variables (WRDS):

- *mktrf*: market excess return (market return minus risk-free rate).
- *rf*: risk-free rate.

Event-study variables (constructed):

- *event_time*: trading-day index relative to the event. Day 0 is defined as the first trading day whose date is on or after the announcement date.

- *AR*: abnormal return estimated from an expected-return model.
- *CAR*: cumulative abnormal return over a specified event window (for example $[-1, +1]$, $[-2, +2]$, $[-5, +5]$, $[-10, +10]$ in trading days).
- *AAR* and *CAAR*: average abnormal return and cumulative average abnormal return across events, used to summarize the market reaction around the announcement date.

The resulting dataset constitutes the basis for the event-study analysis examining stock market reactions to the announcement of female board appointments.

IV. Method: event study design and statistical testing

A. Event-study framework and abnormal return measurement

We use a **standard event-study design** centered on the date of a public announcement of a female board appointment. The aim is to **measure whether the disclosure is associated with abnormal price movements, even after isolating normal market co-movements**. The empirical analysis is conducted at the event level, so that **each appointment is treated as a separate observation**, including cases in which multiple appointments occur within the same firm at different points in time.

For each event, **day 0 is defined as the first trading day** whose date is on or after the announcement date. Event time is constructed in **trading days**, rather than calendar days, to avoid distortions due to weekends and holidays. This allows for the consistent construction of symmetric event windows such as $[-1, +1]$, $[-2, +2]$, $[-5, +5]$, and $[-10, +10]$ in trading time.

The expected-return benchmark is implemented using the **CAPM**, which is adopted as the main model after an initial mean-adjusted version. The CAPM is estimated in excess returns. Market factors are retrieved from WRDS *ff.factors_daily*, using *mktrf* (market excess return) and *rf* (risk-free rate). The expected-return model is estimated over the $[-120, -21]$ trading-day estimation window according to the following specification:

$$(1) \quad R_{it} - R_{ft} = \alpha_i + \beta_i(R_{mt} - R_{ft}) + \varepsilon_{it}$$

where R_{it} denotes the return of firm i on day t , R_{ft} the risk-free rate, R_{mt} the market return, and α_i , β_i , and ε_{it} the CAPM intercept, slope coefficient, and error term, respectively. The estimation window is chosen to avoid contamination from the event itself while retaining a sufficient number of observations to estimate expected-return parameters. For each event, the CAPM beta is estimated over an **estimation window of $[-120, -21]$ trading days relative to the event**. We imposed a minimum of **60 valid observations to compute beta**, which led to 215 estimated betas. **Abnormal returns (AR)** are then computed as the difference between the realized excess return and the CAPM-implied expected excess return. Formally, abnormal returns are defined as:

$$(2) \quad AR_{it} = (R_{it} - R_{ft}) - (\hat{\alpha}_i + \hat{\beta}_i(R_{mt} - R_{ft}))$$

Cumulative abnormal returns (CAR) are constructed by summing abnormal returns over a given event window. For event window $[\tau_1, \tau_2]$ in trading days, this is given by:

$$(3) \quad CAR_{i, [\tau_1, \tau_2]} = \sum_{t=\tau_1}^{\tau_2} AR_{it}$$

For each event window, the primary statistical test is a **standard t-test to compare the mean CAR to zero**. This directly evaluates whether the abnormal price reactions stemming from female board appointment announcements are statistically significant, in the period around disclosure. We also compute **AAR and CAAR around the event date** to track the evolution of abnormal returns before and after the announcement, and to **assess the duration of any market reaction over the event window**.

Beyond these general measures, we use **event-level CARs in cross-sectional regressions** to assess whether market reactions differ according to **the characteristics of the female appointment**. In our later specifications, we extend these regressions by adding firm-level control variables, to examine the systematic relation between appointment characteristics and the observed abnormal performance around the announcement date.

B. Data processing and event-time construction

To implement the event study, daily stock returns and factor data are retrieved programmatically from WRDS through **Python**. The extraction and cleaning procedures are implemented in Python in order **to ensure consistency and replicability**. A key practical issue is that **tickers are not stable identifiers over time**, due to ticker changes, corporate actions, mergers, or ticker reuse. Therefore, we rely on CRSP's permanent identifier **PERMNO**. From the cleaned event dataset, we obtain **295 unique tickers for 343 events**, highlighting that several events can occur for each individual firm.

We then construct a **correspondence table linking each ticker to its CRSP PERMNO**, thanks to the CRSP *stocknames* table. For each ticker, we retrieve the associated PERMNO together with its validity period, defined by *namedt* and *nameenddt*. The mapping step yields 295 tickers requested, 271 mapped tickers, and 981 mapping rows. This reflects the fact that **a given ticker may correspond to several PERMNOs over different periods**. Unmapped tickers may correspond to OTC securities, warrants, preferred shares, or very recent tickers that are not covered in the same way in CRSP.

Daily returns are extracted from CRSP *dsf* for the PERMNOs obtained in the mapping. Because the PERMNO list is large, the extraction is **executed in chunks to avoid overly long SQL queries**. For each PERMNO-day observation, we retrieve *permno*, *date*, *ret*, and *prc*, and we cover the period from January 1, 2010 to December 31, 2024. After concatenation and basic cleaning, the raw

extraction contains **799,577 observations**. This cleaning step includes type conversions and the removal of missing return observations. To avoid misidentification when a *ticker* maps to different PERMNOs across time, we merge the returns with the mapping table and **keep only observations that fall within the ticker validity window**, using *namedt* and *nameenddt*. This filtering step yields a clean daily panel of **669,752 observations** and materially reduces the risk of associating returns with an incorrect identifier. The event file is then merged with the daily return panel using the cleaned ticker, producing an event-day dataset in which each **event is matched to all trading days available for that ticker**. This merge produces **738,313 rows, consistent with approximately 2,500 trading days per ticker over the period and the 315 events included in the baseline sample**.

Event time is then constructed by defining a **trading-day index relative to the announcement date**. Day 0 corresponds to the first trading day on or after the announcement, and subsequent days are indexed accordingly. This alignment ensures that **abnormal returns are measured consistently across events**, even when announcements occur on non-trading days. To ensure comparability across events, **we impose complete event windows**. For example, the $[-10, +10]$ window requires exactly 21 trading-day observations. After this restriction, we retain **223 events with a complete $[-10, +10]$ window**. This standard approach avoids comparing cumulative abnormal returns computed over windows of different lengths.

V. Descriptive statistics: sample characteristics

A. Sample characteristics: executive versus non-executive appointments

The **executive classification is not directly available** in a sufficiently reliable structured format in our Capital IQ event extraction, as announcements are mostly text-based. We therefore construct the executive indicator **manually by systematically reading each announcement** and identifying explicit executive functions (e.g., CEO, CFO, President, Chief Officer titles, EVP/SVP/VP with operational responsibilities). When the status remains ambiguous, we validate the classification **using public sources such as corporate websites and professional profiles** (e.g., LinkedIn). This procedure is intended to minimize misclassification and to **ensure a consistent distinction** between executive and non-executive appointments.

Once the classification is established, we find that **240 nominations correspond to non-executive director roles, while 75 correspond to executive roles**, representing approximately 24% of all appointments. This imbalance is consistent with the broader governance literature, which documents that female directors are still predominantly appointed to supervisory rather than operational positions.

B. Subsample construction: FirstFemale proxy and sample breakdown

A second dimension discussed in the literature is **whether the market reaction depends on the board's pre-existing gender composition**. In our setting, constructing a rigorous board-composition variable at the event date would require a complete and time-consistent list of directors, their gender, and accurate mandate dates for each firm-event observation. However, the Capital IQ data used for the event sample **do not provide a sufficiently rich historical structure** to reconstruct board composition with confidence. A specialized dataset such as BoardEx would be more appropriate for that purpose. Given these constraints and the resulting risk of mismeasurement error, we **do not retain a dynamic board-composition threshold variable** (i.e. critical mass) in the event study.

Instead, we implement a more robust proxy: *FirstFemale*. This variable captures **whether the appointed woman is the first female director serving on the board at the time of the event**, thereby preserving the intuition of a stronger informational effect when female representation moves from zero to one. The variable is built through **manual verification on Refinitiv**, using lists of current and previous directors together with mandate periods. For each event, we check whether at least one woman was already serving on the board on the day prior to the announcement date. We assign *FirstFemale* = 1 only when no woman is active at that time. If a woman served in the past but is no longer on the board at the event date, the nomination is still classified as *FirstFemale* = 1.

For certain events, historical information is not publicly available or not sufficiently clear to identify *FirstFemale* with confidence. The variable is therefore left missing. In the final event sample, we obtain **56 observations labeled as *FirstFemale* = 1, 165 as *FirstFemale* = 0**, while 94 observations remain missing. These missing observations are excluded only from specifications involving *FirstFemale*. As a result, all analyses involving *FirstFemale* are conducted on a smaller subsample than the baseline event-study sample. We **do not impute missing values**, and we report them explicitly in order to preserve transparency.

Finally, we show how events are distributed across the four *Executive* $\times$ *FirstFemale* groups, after removing missing *FirstFemale* values: **125 non-executive and non-first-female appointments, 44 non-executive first-female appointments, 40 executive non-first-female appointments, and 12 executive first-female appointments**. This confirms that appointments for executive roles, especially when they also correspond to first-female appointments, represent smaller subsamples. This point is important when interpreting the subgroup comparisons reported in the following sections. The distribution of observations across *Executive* and *FirstFemale* categories is reported in Appendix Table 6, and confirms the relatively small size of some subgroups, particularly executive first-female appointments, which is important for the interpretation of the subsequent empirical results.

VI. Baseline market reaction to female board appointments

A. Baseline CAR evidence across event windows

Table 1 reports the **cumulative abnormal returns (CARs)** associated with female board appointment announcements under the **CAPM benchmark**. CARs are obtained by summing abnormal returns over the relevant event window, and statistical significance is assessed using a standard **t-test** of whether the mean CAR differs from zero.

Table 1. CAPM cumulative abnormal returns by event window

Event window	Mean CAR	<i>t</i> -statistic	<i>p</i> -value	N
[-1, +1]	-1.15%	-2.26	0.0246	236
[-2, +2]	-1.81%	-2.87	0.0045	231
[-5, +5]	-1.30%	-1.80	0.0730	224
[-10, +10]	-1.36%	-1.53	0.1270	223

The results indicate that **CARs are negative over short event windows and statistically significant** at conventional levels. Over $[-1, +1]$, the mean CAR is -1.15% , with a *t*-statistic of -2.26 and a *p*-value of 0.0246 ($N = 236$). Over $[-2, +2]$, the mean CAR reaches -1.81% , with a *t*-statistic of -2.87 and a *p*-value of 0.0045 ($N = 231$). These estimates indicate a **short-run negative market reaction following the announcement of a female board appointment. The magnitude and statistical significance of the effect decrease as the event window widens**. Over $[-5, +5]$, the mean CAR remains negative at -1.30% , but is only marginally significant at the 10% level (*p*-value = 0.0730 , $N = 224$). Over the longest window, $[-10, +10]$, the estimated CAR is -1.36% and is no longer statistically significant (*p*-value = 0.1270 , $N = 223$). Taken together, these results suggest that the **market reaction is concentrated around the announcement and does not translate into a clearly persistent cumulative effect over longer horizons**.

The number of observations varies across event windows because **longer windows require complete return histories over more trading days**. As a result, CARs over shorter windows can be estimated for more events. These differences in *N* therefore reflect complete-window requirements and data availability, rather than any change in the sample definition.

B. Day-0 abnormal return and timing of the market reaction

To isolate the immediate market response, we also examine the **abnormal return on day 0**. The mean abnormal return on day 0 is approximately $+0.07\%$, with a *t*-statistic of 0.37 and a *p*-value of 0.7124 ($N = 215$). This estimate is economically small and statistically insignificant. The smaller

sample size relative to the CAR analysis reflects the additional requirement that CAPM parameters must be estimated over the pre-event estimation window, with a sufficient number of valid observations.

This result is important because it shows that **the market reaction does not take the form of a sharp one-day price adjustment exactly on the announcement date**. Instead, when combined with the significant CARs observed over $[-1, +1]$ and $[-2, +2]$, it suggests that the price response is **distributed over several trading days around the announcement**. In other words, the negative reaction appears in short event windows, but not as an isolated effect on day 0 itself. In the context of our event-study, this is **consistent with female appointment information being incrementally translated into prices**. Rather than observing a single-day price jump, the impact occurs before and after the event day.

C. Graphical evidence: AAR and CAAR plots

The **graphical evidence is consistent** with the CAR estimates. Figure 2 plots the average abnormal return (AAR) around the event date together with 95% confidence intervals, while Figure 3 reports the cumulative average abnormal return (CAAR), also with 95% confidence intervals.

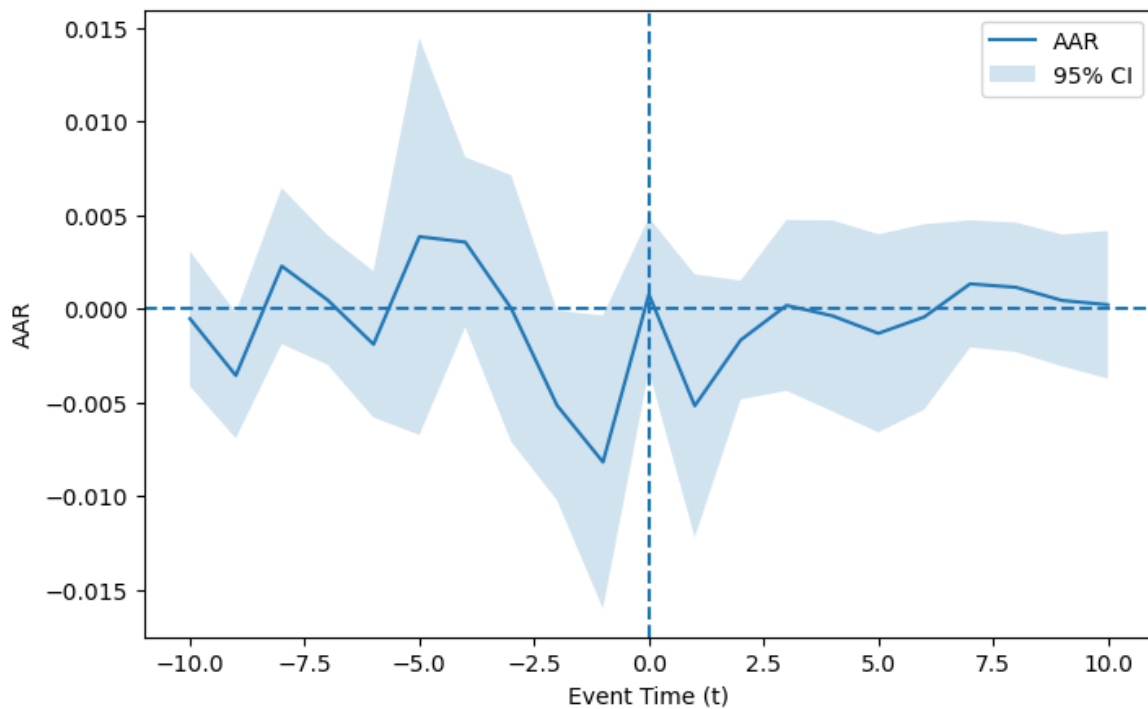


Figure 2. Average abnormal returns (AAR) with 95% confidence intervals

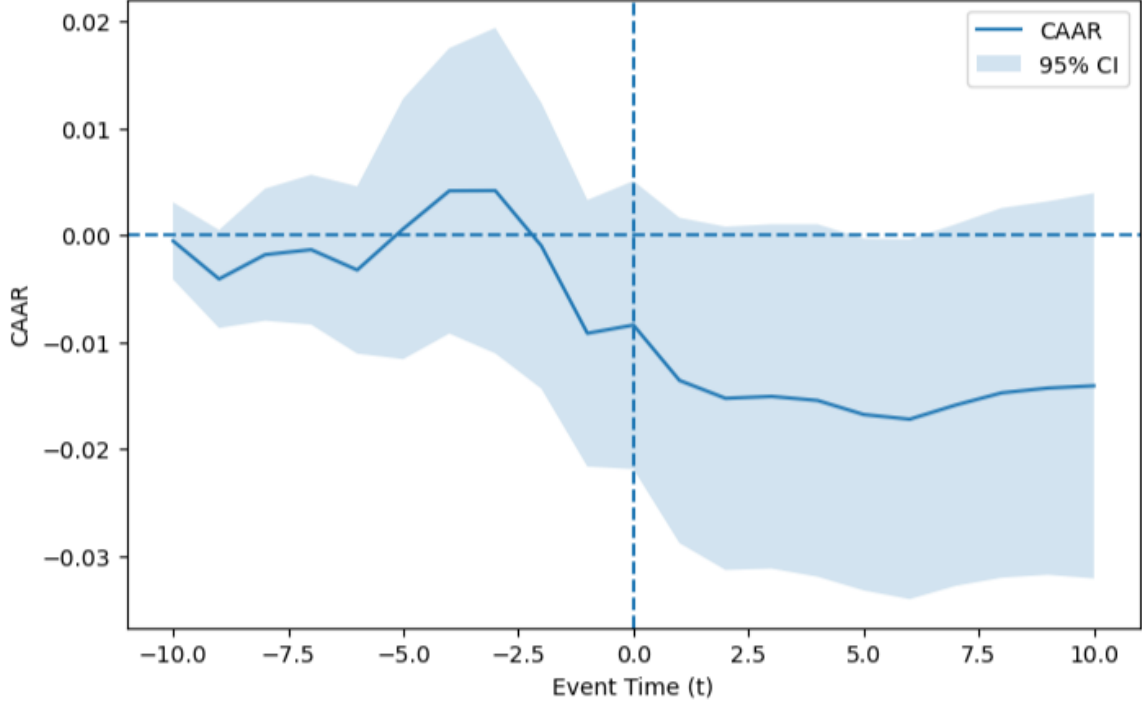


Figure 3. Cumulative average abnormal returns (CAAR) with 95% confidence intervals

The AAR plot shows that abnormal returns fluctuate around the event date rather than concentrating in a single large movement on day 0. The CAAR profile becomes negative around the announcement period and remains below zero over much of the post-event window, but without exhibiting a strong downward drift over the full horizon. The confidence bands confirm that the evidence is strongest around the announcement period and becomes less precise away from the event date. Overall, this visual pattern is consistent with the statistical results reported above: **the reaction is economically concentrated in the short run, while the evidence becomes weaker on wider windows.** In the next section, we examine whether these conclusions depend on the choice of the expected-return benchmark by conducting robust checks using an alternative asset-pricing model.

VII. Robustness checks: Fama–French three-factor model

A. Alternative expected-return benchmark

To assess whether the baseline results **depend on the CAPM specification**, we replicate the event-study analysis using the **Fama–French three-factor model** as an alternative expected-return benchmark. This provides a **standard robustness check** by controlling not only for market risk, but also for the size and value factors.

The expected return model is estimated over the **same estimation window** as in the baseline specification, namely $[-120, -21]$ trading days relative to the event. The corresponding abnormal returns are then used to compute cumulative abnormal returns over the same event windows as before: $[-1, +1]$, $[-2, +2]$, $[-5, +5]$, and $[-10, +10]$.

B. FF3 abnormal-return construction

Under the **Fama–French three-factor model**, **expected excess returns** are estimated according to the following specification:

$$(4) \quad R_{it} - R_{ft} = \alpha_i + \beta_i(R_{mt} - R_{ft}) + s_iSMB_t + h_iHML_t + \varepsilon_{it}$$

where R_{it} denotes the return of firm i on day t , R_{ft} the risk-free rate, R_{mt} the market return, SMB_t the size factor, HML_t the value factor, and α_i , β_i , s_i , h_i , and ε_{it} denote the firm-specific factor loadings and error term. **Abnormal returns** are then defined as the difference between realized excess returns and the expected excess returns implied by the estimated model:

$$(5) \quad AR_{it}^{FF3} = (R_{it} - R_{ft}) - \mathbb{E}[R_{it} - R_{ft}]$$

As in the baseline event study, **cumulative abnormal returns are computed over the relevant event windows, namely** $[-1,+1]$, $[-2,+2]$, $[-5,+5]$, and $[-10,+10]$ trading days. Since the only change concerns the expected-return benchmark, this specification provides a **clean robustness check** of the baseline results. Table 2 reports the corresponding FF3 CARs across the same event windows as in the baseline CAPM specification.

Table 2. CARs around announcements under the Fama–French three-factor model

Event window	Mean CAR	<i>t</i> -statistic	<i>p</i> -value	N
$[-1, +1]$	-1.22%	-2.25	0.0257	223
$[-2, +2]$	-1.56%	-2.58	0.0104	223
$[-5, +5]$	-0.67%	-0.84	0.4041	223
$[-10, +10]$	-0.58%	-0.58	0.5592	223

C. Robustness of the baseline results under FF3

The **FF3 results confirm the main conclusion obtained under the CAPM**. Over $[-1, +1]$, the mean CAR is -1.22% and statistically significant (p -value = 0.0257, $N = 223$). Over $[-2, +2]$, the mean CAR is -1.56% and remains significant (p -value = 0.0104, $N = 223$). By contrast, **the longer windows are not statistically significant**: the mean CAR is -0.67% over $[-5, +5]$ (p -value = 0.4041) and -0.58% over $[-10, +10]$ (p -value = 0.5592).

These findings **reinforce the baseline interpretation**. The negative market reaction to female board appointment announcements remains visible over short event windows under an alternative expected-return benchmark, but weakens and becomes statistically insignificant as the window widens. The FF3 results therefore suggest that **the baseline finding is not driven solely by the CAPM specification**.

VIII. Heterogeneity in market reactions to female board appointments

A. Executive versus non-executive director appointments

1) Motivation

A natural extension of the baseline analysis is to investigate **whether the market reaction differs according to the role attributed to the woman appointed to the board**. In particular, one may expect a different market response depending on whether the appointment concerns an **executive director**, who is directly involved in the firm's operations, or a **non-executive director**, whose role is primarily supervisory.

This distinction is relevant because the informational content of the appointment may differ depending on whether the nominee is perceived as joining the board in an operational capacity or as an independent monitoring figure.

2) Construction of the executive status variable

Since the event sample is extracted from Capital IQ, we **cannot rely on a standardized structured field directly identifying the executive status of the appointee**. In addition, most announcements are text-based, which limits the scope for a reliable automated classification. We therefore construct the *ExecutiveDirector* **indicator manually**. For each event, the announcement is read individually in order to **identify explicit executive cues, such as titles including CEO, CFO, President, Chief Officer, or operational EVP/SVP/VP functions**. When the information contained in the announcement is not sufficient to classify the nominee with confidence, the status is **cross-checked using external public sources**, including corporate websites and LinkedIn profiles.

The variable *ExecutiveDirector* is coded as 1 when the appointment involves an executive role within the firm, and 0 otherwise. Once constructed, this indicator is merged back to the event-level dataset using *event_id*, so that each appointment is classified as either executive or non-executive. The baseline event-study setup remains unchanged: expected returns are still estimated under the CAPM benchmark over the $[-120, -21]$ trading-day estimation window, and abnormal returns are computed in excess returns. Depending on the event window, the eligible sample includes approximately **57 executive events and 172 non-executive events**. This imbalance is worth noting, since the executive subsample is substantially smaller and therefore **reduces the statistical power of the subgroup comparisons**.

3) Empirical results

Table 3 reports the comparison of cumulative abnormal returns between executive and non-executive female board appointments under the CAPM specification:

Table 3. Market reaction by executive status of the female appointee (CAPM)

Event window	Mean CAR (Non-executive)	Mean CAR (Executive)	Difference	p-value
[-1, +1]	-1.38%	-0.55%	+0.83 pp	0.3947
[-2, +2]	-2.07%	-0.79%	+1.28 pp	0.2920
[-5, +5]	-0.71%	-2.43%	-1.71 pp	0.2641
[-10, +10]	-1.15%	-1.59%	-0.44 pp	0.8117

Notes: Differences are computed as Executive minus Non-Executive. p-values are based on Welch tests of differences in means.

Across all event windows, **CARs are negative in both groups**. Over $[-1, +1]$, the mean CAR is -1.38% for non-executive appointments and -0.55% for executive appointments. Over $[-2, +2]$, the corresponding values are -2.07% and -0.79% . The same general pattern is observed over $[-5, +5]$ and $[-10, +10]$. However, as shown in Table 3, **none of the differences between executive and non-executive appointments is statistically significant**.

Regression evidence confirms the absence of a differential effect. The coefficient on *ExecutiveDirector* is small and never statistically significant in cross-sectional regressions. This result **holds under both the CAPM and the Fama–French three-factor specifications**. The distributional overlap between executive and non-executive appointments is also consistent with this conclusion (see Appendix Figure 3).

Taken together, these findings indicate that the short-run negative market reaction documented in the baseline analysis **does not differ systematically depending on whether the female appointee holds an executive or a non-executive role**.

B. First female appointments

1) Motivation

A key question in the corporate governance literature is **whether the market reaction depends on the board's initial gender composition at the time of the appointment**. The informational content of a female nomination may differ depending on whether the board already includes female directors. When female representation is still absent or very limited, a new appointment may mark a visible change in board composition, but its effective influence may remain constrained. By contrast, once female representation is more established, an additional appointment may be less novel but may also be perceived as part of a broader and more substantive shift in board functioning.

Ideally, testing this hypothesis would **require reconstructing the full gender composition of each board at each event date**, using a complete and time-consistent panel of directors with gender identification and mandate periods. However, given the structure of the Capital IQ data used in this project, **this cannot be done reliably without substantial measurement error**. We therefore **do not implement a dynamic “critical mass” variable** and instead rely on a simpler and more **robust proxy capturing the transition from zero to at least one female director**.

2) Construction of the FirstFemale status variable

We define a **binary indicator**, *FirstFemale*, that captures **whether the appointed woman is the first female director on the board at the time of the announcement**. Specifically, *FirstFemale* equals 1 if no woman was actively serving on the board immediately before the nomination, and 0 otherwise. To construct this variable, we **manually review board composition** event by event using Refinitiv data, relying on lists of current and previous directors together with mandate start and end dates. The variable is set to 1 only when no active female director is identified immediately prior to the event.

A specific case is treated consistently with the timing rule: if a woman served on the board in the past but is no longer active at the event date, the appointment is still classified as *FirstFemale* = 1. The classification therefore **reflects the board’s effective composition at the time of the informational shock**. When information is missing or not sufficiently clear, *FirstFemale* is left missing. These observations are excluded only from specifications involving this variable, and no imputation is performed.

3) Empirical results

We first compare CARs between appointments classified as *FirstFemale* and those that are not. By regressing CAR on a *FirstFemale* dummy, we directly test whether the average market reaction differs between these two groups. Table 4 reports these results:

Table 4. Market reaction by FirstFemale status (CAPM)

Event window	Mean CAR (Non-FirstFemale)	Mean CAR (FirstFemale)	Difference	p-value
[-1, +1]	-0.69%	-0.90%	-0.21 pp	0.8084
[-2, +2]	-1.23%	-0.74%	+0.49 pp	0.6686
[-5, +5]	-0.36%	-0.91%	-0.55 pp	0.7125
[-10, +10]	-1.11%	-1.72%	-0.61 pp	0.1347

Notes: Differences are computed as FirstFemale minus Non-FirstFemale. p-values are based on Welch tests of differences in means.

Across all event windows, the **estimated differences remain statistically insignificant**. For instance, over $[-1, +1]$, the mean CAR is -0.69% for non-*FirstFemale* appointments and -0.90% for *FirstFemale* appointments, with a difference of -0.21 percentage points (p-value = 0.8084). Over $[-2, +2]$, the corresponding values are -1.23% and -0.74% (difference = $+0.49$ pp, p-value = 0.6686). Similar patterns are observed over longer windows, with **no statistically significant differences**.

This absence of significance is also **consistent with the visual evidence**. As shown in Appendix (Figure 5), the distributions of CARs for *FirstFemale* and non-*FirstFemale* appointments substantially overlap, and their medians remain close to zero. In other words, the **boxplots do not suggest a clearly distinct market reaction when the appointed woman is the first one on the board**.

Overall, these results indicate that the market impact of a female board appointment **does not differ materially depending on whether the appointment corresponds to the first woman** on the board or to an additional female director.

C. Joint effect of executive status and first-female appointments

1) Empirical specification

As a follow-up to the *FirstFemale* analysis, we investigate whether its effect **depends on the executive status of the appointed director**. More precisely, we test whether the market reaction associated with a first-female appointment differs when the nominee also holds an executive role.

Our initial intuition is that a “**first female**” appointment may convey stronger informational content when associated with an operational leadership position. Conversely, it may be perceived as less informative when limited to a supervisory, non-executive role. We therefore examine whether market reactions differ across these dimensions within an interaction framework.

To do so, we estimate the following cross-sectional regression model:

$$(6) \quad CAR_i = \alpha + \beta_1 Executive_i + \beta_2 FirstFemale_i + \beta_3 (Executive_i \times FirstFemale_i) + \varepsilon_i$$

where CAR_i is the cumulative abnormal return for event i . The coefficient β_2 captures the effect of *FirstFemale* among non-executive appointments, while β_3 measures whether this effect differs when the appointment is executive. Statistical inference is based on heteroskedasticity-robust (HC1) standard errors.

2) Empirical Results

Across all event windows, the **interaction term is not statistically significant**. This result holds under both the CAPM and Fama–French three-factor specifications. A key limitation of this

analysis stems from the **small size of some subsamples**. When splitting the data by executive status and *FirstFemale* and excluding missing observations, we obtain the following group sizes: Non-executive & Non-*FirstFemale* = 97, Non-executive & *FirstFemale* = 29, Executive & Non-*FirstFemale* = 34, and Executive & *FirstFemale* = 10. The executive-and-first-female group is therefore particularly small, which mechanically **reduces estimation precision and limits the ability to detect moderate effects**. In addition to these subgroup counts, the effective regression sample also depends on event-window completeness, which explains why the number of observations reported in Table 5 is lower than the number of events with non-missing *FirstFemale* classification. Although the [-10, +10] trading days window suggests a small visual variation, the estimates are not precise enough and the effect is not statistically significant.

As an **additional robustness check**, we recompute abnormal returns using the **Fama–French three-factor model** and re-estimate the interaction regression using the corresponding abnormal-return measure. For each event window, we estimate: $CAR_i = \alpha + \beta_1 Executive_i + \beta_2 FirstFemale_i + \beta_3 (Executive_i \times FirstFemale_i) + \varepsilon_i$. **The results remain unchanged**: the interaction coefficient is never statistically significant across all windows. Table 5 reports the estimated interaction coefficients across event windows under both the CAPM and Fama–French specifications.

Table 5. Interaction effect between executive status and FirstFemale status

Panel A. CAPM

Event window	Interaction coefficient	p-value	N
[-1, +1]	0.0044	0.7942	170
[-2, +2]	0.0152	0.5070	167
[-5, +5]	0.0378	0.2242	163
[-10, +10]	0.0144	0.7248	163

Panel B. Fama-French three factor model

Event window	Interaction coefficient	p-value	N
[-1, +1]	0.0091	0.5922	163
[-2, +2]	0.0161	0.4996	163
[-5, +5]	0.0348	0.2993	163
[-10, +10]	0.0054	0.9102	163

Notes: The interaction coefficient corresponds to the coefficient on *ExecutiveDirector* $\times$ *FirstFemale* in cross-sectional regressions of CARs. p-values are based on heteroskedasticity-robust standard errors (HC1).

3) Interpretation

Overall, the data **do not provide evidence of a statistically significant interaction between executive status and *FirstFemale***. In other words, the market does not appear to react differently to a first-female appointment when the nominee also holds an executive position.

This absence of significance should nevertheless **be interpreted with caution, given the limited statistical power associated with small subgroup sizes**. In particular, the very small number of executive *FirstFemale* observations reduces the precision of the estimates and may prevent the detection of economically meaningful differences.

Taken together, these findings suggest that **the absence of a *FirstFemale* effect does not conceal a more specific pattern linked to executive appointments**. The lack of interaction is consistent across specifications and robust to the choice of expected-return benchmark.

Conclusion and discussion

To conclude, this thesis explored **how the stock market reacts to the appointment of a woman to the board of directors, and whether this reaction varies depending on the nature of the appointment**. Our analysis is based on a standard short-horizon event study using public announcement dates as the event date. Our results indicate a **negative and statistically significant market reaction over short event windows**, especially over $[-1, +1]$ and $[-2, +2]$ trading days, while the day-0 abnormal return is not significant on its own and the effect does not persist over longer windows. The resulting price adjustment is therefore concentrated around the announcement date, and **we do not observe a lasting firm revaluation**. This pattern is consistent with a gradual adjustment over a few trading days rather than an instantaneous price jump. This suggests that **investors do not immediately incorporate the full informational content of such appointments** but rather adjust their expectations progressively over a short period.

Our paper makes **two main contributions** to the existing literature. First, it provides a **short-term market-based perspective** on a debate that has often relied on long-term performance measures or correlation-based analyses linking gender-diverse boards to firm outcomes. By focusing on stock returns around announcement dates, our event study **captures how investors update their beliefs following new governance information disclosures**. Second, we **extend the analysis by examining whether market reactions vary with the executive status of the appointed woman and the existing board composition at the time of nomination**. However, we do not find statistically significant evidence supporting distinct impacts for executive versus non-executive appointments or for first-time female nominations. The **interaction analysis does not reveal additional differential effects**, suggesting that investors do not systematically price female appointments differently based on these

dimensions. This absence of heterogeneity may indicate that **investors perceive female appointments as broadly similar governance signals, regardless of the specific role or board context.**

Nevertheless, our conclusions are subject to **limitations related to both our data and empirical design.** A key limitation concerns the measurement of board composition, as the dynamic critical mass measure could not be reliably implemented using the available “historical structure” data from Capital IQ. We therefore rely on the *FirstFemale* proxy, which better fits our data structure while still capturing the transition from zero to one woman on the board. In addition, several steps of the data construction rely on **manual procedures**, including the validation of female appointments and the reconstruction of executive status. While this improves data quality, it also constrains the scope of the heterogeneity analysis. Some subgroups, particularly executive first-time appointments, remain limited, reducing statistical power and our ability to detect more subtle effects.

Taken together, our findings suggest that **markets do react to female board appointments, but in a short-lived and not fully differentiated way.** These announcements appear to carry informational content **without leading to a clear or persistent revaluation of firms.** This nuance helps reconcile a literature in which the effects of board gender diversity remain mixed or difficult to isolate. A natural **extension** of this research would be to **leverage regulatory changes** affecting board composition, such as the **French Rixain law**, which introduces a **minimum threshold of 30% gender representation among senior executives and governing bodies starting in 2026.** Such reforms provide a quasi-experimental setting to compare market reactions before and after the introduction of binding constraints and to better assess whether the informational content of female board appointments changes when these become partly driven by regulation rather than firm-specific governance choices.

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APPENDIX

Table 6. Distribution of events by Executive status and FirstFemale classification

Executive status	FirstFemale = 0	FirstFemale = 1	Total
Non-Executive	125 (74.0%)	44 (26.0%)	169
Executive	40 (76.9%)	12 (23.1%)	52
Total	165 (74.7%)	56 (25.3%)	221

Notes: Percentages are computed within each executive status category. Observations with missing FirstFemale values are excluded.

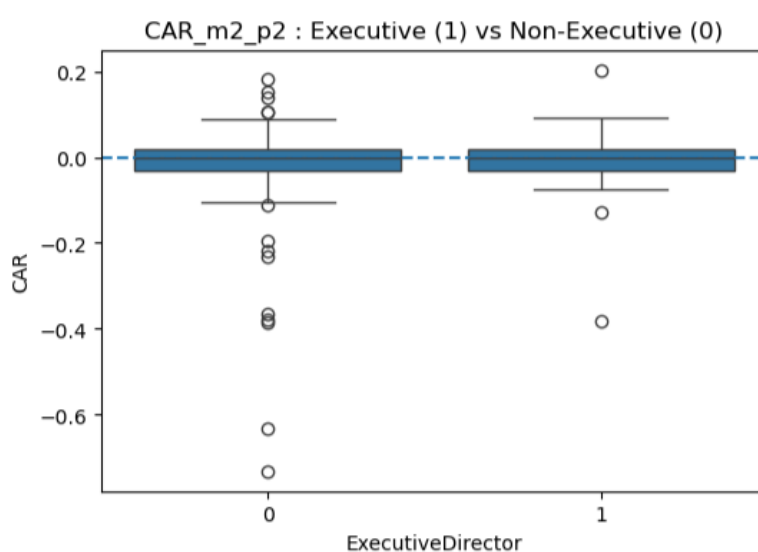


Figure 4. Distribution of CAPM CARs over [-2,+2] by executive status of the appointee

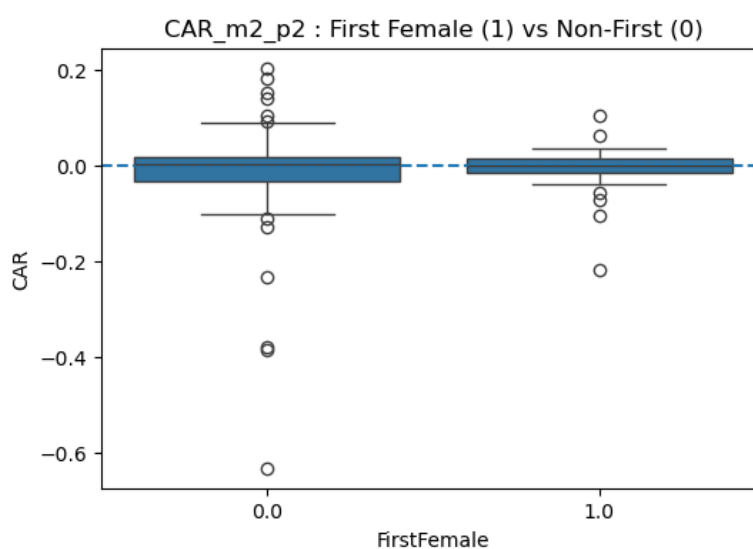


Figure 5. Distribution of CAPM CARs over [-2,+2] by FirstFemale status