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Executive gender and firm leverage decisions: The role of firm ownership and governance

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ABSTRACT

Female leadership in strategic decision-making has received considerable attention in the context of global gender inequality. To advance our understanding of the role of executive gender in corporate financing decisions, we examine whether family firms are less likely to use leverage than their non-family counterparts when they have a female leader (considering CEO and board chair as leadership positions). In addition, we examine whether board independence influences gender differences in the use of leverage in family firms. Drawing on the behavioral agency model (BAM) and socioemotional wealth (SEW) theory, we develop and empirically test our hypotheses using a large dataset of firms from 40 countries. Our results show that family ownership increases the reluctance of female-led firms to use leverage, but board independence mitigates this effect.

1. Introduction

Research has emphasized that corporate decision-making is shaped by how leaders interpret situations based on their values, behaviors, experiences, educational background, or personality traits (e.g., Zhu & Westphal, 2014; Daily et al., 2002). Gender has become a well-studied personal characteristic (e.g., Schopohl et al., 2021; Li & Al-Najjar, 2022; Pfefferman et al., 2022) as a result of increased attention to gender equality policies and regulations in developed countries. In addition, there has been a notable increase in the proportion of female managers in the European Union in recent years, as documented by Eurostat.[2] Specifically, the proportion of women in these roles was less than 30 % in 2002 and increased to 34 % by 2020. However, this upward trend still does not reflect the broader presence of female executives in the overall workforce. Globally, women hold only a modest 4.4 % of CEO positions, according to S&P 2023 Global data.[3] Given gender differences in behavioral traits, such as conservatism and overconfidence, a growing body of literature examines how firms' strategies and outcomes are shaped by the gender of their top executives and board directors (e.g., Schopohl et al., 2021; Bauweraerts et al., 2022; Marano et al., 2022).

We take a step forward in this research effort by examining the relationship between leader gender (based on CEO and board chair positions) and firm leverage. Leverage decisions, as indicated by a firm's reliance on debt financing, are widely considered to reflect the risk-taking propensities of top executives (in turn subject to gender biases). Research attention to family firms has significantly increased in recent years (Chrisman et al., 2024) and some studies suggest that in firms with this particular ownership type, leverage decisions are often driven by noneconomic goals (Munoz-Bullón et al., 2023). Drawing on the behavioral agency model (BAM), we theorize that firm-specific

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[2] https://ec.europa.eu/eurostat/web/products-eurostat-news/-/edn-20210305–2.

[3] https://www.spglobal.com/esg/insights/featured/special-editorial/the-path-to-gender-parity.

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characteristics related to firm ownership (family ownership) and corporate governance (board independence) play a key role in the behavior of female leaders and influence their leverage decisions. Family ownership is thought to promote a unique strategic vision within the firm as a result of the greater importance of tradition (De Massis et al., 2016; Capolupo et al., 2023) and the need to preserve SEW or "the non-financial aspects of the firm that meet the family's specific needs, such as identity, the ability to exercise influence, and the perpetuation of the family dynasty" (Gomez-Mejia et al., 2007, p. 106). All this, in turn, influences the reference point for business decisions (Berrone et al., 2012; Mazzelli et al., 2020; Debellis et al., 2021; Gomez-Mejia et al., 2023a, 2023b; Aguilera et al., 2024). Compared to non-family firms, the emotional attachment of family firms (Berrone et al., 2012; Davila et al., 2023; Aguilera et al., 2024) may make female leaders more cautious when making major decisions, such as the use of leverage. Our study advances this line of research by jointly considering the influence of female leadership and the contextual specificities of family firms, which are subject to the influence of SEW in strategic decision-making. The study of this female leader-family firm tandem is of particular interest as family firms increasingly consider and provide an enabling environment for female leadership (e.g., Eddleston & Sabil, 2019; Hernández-Linares et al., 2023; Maseda et al., 2023).

In addition, financing decisions may be of particular concern to independent directors, who may be more inclined than other types of directors to ensure an acceptable level of financial performance in order to maintain their reputations and to counterbalance excessive family-oriented goals. Board independence has been found to be a powerful monitoring mechanism for corporate decision-making (Khan et al., 2022; Bettinelli et al., 2023). Accordingly, we consider this board characteristic to examine how director independence influences the behavior of female leaders and their decisions in light of the stronger emotional attachment in family firms. Independent directors can provide a counterbalance and promote rational behavior in these firms because they are more likely to be free of emotional bias and more aware that reluctance to use external financing can lead to missed value-maximizing investment opportunities for all stakeholders.

In our hypotheses, we draw on the behavioral agency model (BAM) (Wiseman & Gomez–Mejia, 1998) and socioemotional wealth (SEW) insights (Berrone et al., 2012; Davila et al., 2023; Gomez-Mejia et al., 2007) to examine the relationship between female leadership and firm leverage. According to these perspectives, family owners are seen as balancing economic and noneconomic goals, and their decisions are driven by their willingness to preserve their affective endowment (Gomez-Mejia et al., 2007, 2014; Berrone et al., 2012). As a result, family firms are an ideal context to examine the role of leader gender (Wang et al., 2023) and its influence on firm financing decisions (Chua et al., 2011; Crespi & Martin-Oliver, 2015). The rationale is that family firms are perceived to be more trustworthy (Chua et al., 2011; Crespi & Martin-Oliver, 2015), which mitigates lender reluctance relative to non-family firms, allowing the demand side of debt financing to be isolated from the supply side. Moreover, our research responds to recent calls for a better understanding of the role of women in the specific setting of family firms (Martinez-Jimenez, 2009; Amore et al., 2014; Campopiano et al., 2017; Maseda et al., 2022), considering the importance of financing decisions in these firms (e.g., Koropp et al., 2013; Michiels & Molly, 2017; Minola et al., 2016; Molly et al., 2019; Poletti-Hughes & Martínez García, 2022; Munoz-Bullon et al., 2023).

In addition, we consider a potential boundary condition that could broaden our understanding of how family firms balance potential SEW losses against potential financial gains from the use of leverage (Berrone et al., 2012; Gomez-Mejia et al., 2007). Given the central role of corporate boards in a firm's financing policy (Molly et al., 2019; Comino-Jurado et al., 2021), we investigate whether board independence shapes the influence that family ownership and female leadership together have on the firm's leverage, taking into account the affective wealth-at-risk for family owners (Gomez-Mejia et al., 2007; Davila et al., 2023), which, according to BAM and SEW, discourages risk-taking (Gomez-Mejia et al., 2014). In doing so, we extend research on gender and leverage decision-making by integrating the key role of corporate governance, in particular board independence, which is perceived to ensure better governance and firm performance.

We empirically test our hypotheses on a large sample of 2,282 listed firms (16,479 firm-year observations) from 40 countries over the period 2007 to 2017. This large sample allows us to provide additional insights to previous studies, most of which have been conducted in a single-country context (e.g., Luo et al., 2018; Molly et al., 2019). Our evidence shows that higher family ownership increases female leaders' reluctance to rely on leverage. In contrast, board independence weakens this effect, thereby encouraging the use of leverage. From an empirical perspective, we add to the existing body of knowledge on the effect of female leadership on leverage (largely based on cross-sectional and single-country studies) by extending the empirical evidence to an international setting using panel data.

Our study makes two main contributions. First, it advances family business research. Building on the BAM and SEW approaches, we propose a novel theoretical understanding of how leader gender shapes financing decisions. In response to persistent calls for firms to break through the glass ceiling (Knippen et al., 2019), we extend current understanding of the role of female leadership in family firms (e.g., Amore et al., 2014; Campopiano et al., 2017; Bjuggren et al., 2018; Bettinelli et al., 2019; Bauweraerts et al., 2022; Gjergji et al., 2023) by exploring its underlying mechanisms, particularly in the context of leverage decisions. This is important because female leaders now play a much more visible role in strategic decision-making in family firms than they did just a few years ago (e.g., Eddleston & Sabil, 2019; Martinez-Jimenez, 2009).

Second, we contribute to corporate governance research by highlighting the relevance of independent board members from a new perspective (García-Meca & Santana-Martín, 2023; Maggi et al., 2023; Poletti-Hughes & Briano-Turrent, 2019). Specifically, we theorize board independence as a boundary condition that serves as a contingency factor shaping the relationship between female leaders and leverage in family firms. Board independence can mitigate the reluctance of female leaders to adopt more risky financing decisions in family firms, such as the use of leverage. By shedding light on the role of board independence on the leverage aversion of female-led family firms, our findings contribute theoretical insights on the diversity of corporate board structures across firms. Given the primary responsibility of boards to oversee and advise the top management team, greater board independence may increase the likelihood of using leverage to secure financial wealth in female-led family firms. To our knowledge, the impact of board independence on the relationship between female leadership and leverage in family firms remains unexplored.

2. Female leadership and leverage: Family ownership and board independence

To gain a deeper understanding of gender differences in strategic financing decisions, we examine whether family ownership affects the willingness of female leaders to rely on higher leverage in their firms. In addition, we argue that the presence of independent directors on the board may promote rational decision-making and thus counterbalance gender- and family-related behavioral biases in the use of leverage.

2.1. Female leadership and leverage: The moderating role of family ownership

Increasing attention has been paid to behavioral differences between female and male leaders (Gupta et al., 2020; Pfefferman et al., 2022). Gender role stereotypes suggest that women are characterized by communal traits (e.g., socially sensitive, empathetic, and relationship-oriented), while men are typically associated with agentic traits (e.g.,

aggression) (Eagly, 1987; Tang et al., 2021). Despite the importance of this body of research, the differential propensity to make strategic decisions based on the gender of the family firm's leader has not received sufficient attention. To advance this line of inquiry, we examine whether family ownership plays a role in such gender differences in leverage decisions. We hypothesize that SEW preservation may lead family ownership to shape the ex-ante reluctance of female leaders to use leverage.

SEW theory draws on the behavioral agency model (BAM) (Wiseman & Gomez-Mejia, 1998) and asserts that the stock of affective value embedded in the family firm constitutes a primary reference point in the decision-making of these firms (Gomez-Mejia et al., 2007; Davila et al., 2023). These two theoretical approaches posit that family firms balance noneconomic and financial goals, and that family owners prioritize their stock of affective endowment in their strategic decisions (e.g., Berrone et al., 2012; Davila et al., 2023; Gomez-Mejia et al., 2023b; Aguilera et al., 2024). As a result, family ownership leads to strategic decisions that are more focused on SEW preservation (Gomez-Mejia et al., 2007; Davila et al., 2023), thus encouraging firm leaders to support the noneconomic goals of family firm owners.

This tendency is likely to be more pronounced in female leaders for a number of reasons. On the one hand, empirical evidence suggests that female behavior tends to be oriented toward communal goals and fostering interpersonal relationships, coupled with an aptitude for conflict resolution (Eagly et al., 2003). As a result, female leaders often promote an emotional leadership style that ensures peace, harmony, and well-being (Martinez-Jimenez, 2009; Eddleston & Sabil, 2019). Thus, female leadership is expected to be consistent with the desire to manage multiple overlapping family business systems (the trade-off between economic and noneconomic goals) (Cruz et al., 2019). Family ownership accentuates the relative importance of noneconomic goals over financial goals for female leaders, in turn influencing gender differences in leverage decisions (Michiels & Molly, 2017; McConaughy et al., 2001; López-Delgado & Diéguez-Soto, 2020; Poletti-Hughe & Martínez Garcia, 2022).

On the other hand, female leaders are generally undervalued in their positions compared to their male counterparts in the same leadership role (Ryan & Haslam, 2007). In addition, female career trajectories tend to suffer from greater scrutiny and negative stereotypes (Eagly & Karau, 2002). All these issues lead female leaders to be less risk-taking than their male counterparts (Powell & Ansic, 1997; Croson & Gneezy, 2009). While this female risk aversion (Powell & Ansic, 1997; Croson & Gneezy, 2009; López-Delgado & Diéguez-Soto, 2020; Li & Al-Najjar, 2022) is important for all types of firms, it is likely to be more pronounced in family firms due to their greater willingness to limit risk exposure in order to preserve family-related goals, which creates a particular incentive to avoid reliance on external financing and use more internal financing. Since female leaders are perceived to be more reluctant to engage in riskier and more radical strategies in family firms (Baixauli-Soler et al., 2016; Faccio et al., 2016; Hernández et al., 2023), this may trigger greater avoidance of leverage due to the potential bankruptcy costs and financial distress associated with debt financing (Koropp et al., 2013; Michiels, & Molly, 2017). Similarly, the desire of family firm owners to preserve SEW (Berrone et al., 2012; Gomez-Mejia et al., 2007; Davila et al., 2023) will encourage female leaders in family firms to make conservative strategic decisions that move away from leverage, as debt financing involves paying out future cash flows, and high levels of debt could limit the firm's access to additional financial resources in the future (Gallo et al., 2004). As the proportion of family ownership increases, female leaders' concerns about relying on leverage will increase as family owners typically focus on the firm's nonfinancial utility (Berrone et al., 2012; Gomez-Mejia et al., 2007; Molly et al., 2019). Therefore, female leaders in family firms will be more reluctant to rely on leverage to maintain the family's affective needs, thereby showing a stronger preference for internal financing over leverage.

In terms of gender expectations, men are typically perceived as agentic, competitive, and emphasizing the pursuit of personal achievement (Eagly & Karau, 2002; Eagly et al., 2003; Hernández et al., 2023), while women are perceived as more diligent, better communicators, and more sensitive to the needs of others (Eagly et al., 2003; Pandey et al., 2020). In this regard, the desire of female leaders to attend to the interests of family stakeholders (Campopiano et al., 2019) and prioritize family-centered goals makes female-led family firms less likely to use debt financing, as leverage increases affective endowment risk exposure. Although female leaders do not necessarily downplay economic organizational goals, their greater emphasis on SEW as a reference point in family firms may lead them to sacrifice the use of debt. Accordingly, female leaders will be less willing to take on debt in family firms because doing so might deplete their SEW and jeopardize family control, as creditors might exert extensive influence over business operations (creditor monitoring) (Molly et al., 2019; Comino-Jurado et al., 2021). Moreover, their ability to dictate business policy might be limited by conditions imposed by lending banks (Gallo et al., 2004). Therefore:

***H1**. Family ownership has a negative moderating effect on the relationship between female leadership and leverage.*

2.2. Female leadership and leverage in family firms: The role of board independence

Simply examining family ownership, while important, does not allow understanding the noneconomic aspects that concurrently drive firm behavior (Gomez-Mejia et al., 2007; Berrone et al., 2012; Davila et al., 2023). Specifically, we argue that investigating the impact of female leadership on leverage in family firms requires further consideration of the role played by the firm's board of directors. Recognizing this role can provide a more nuanced understanding of financing decisions in female-led family firms by combining the BAM and SEW theoretical lenses. Although family ownership may exacerbate female leaders' reluctance to use leverage due to the greater salience of SEW goals in family firms, we argue that some corporate governance features, such as board independence, which are designed to enhance rational decision-making, are likely to mitigate the effect posited in H1.

Corporate boards play a critical role in protecting the interests of all stakeholders, beyond top management and family owners (Bettinelli et al., 2023). In addition, board responsibilities include providing guidance, knowledge, and advice to the CEO and top management team, as well as ensuring access to critical resources (Cirillo & Mussolini, 2019). These responsibilities are primarily attributed to independent board members, which raises an important research question: Does board independence influence the willingness of female leaders in family firms to use leverage? Board independence may lead to a shift in the decision-making behavior of female leaders in family firms, promoting the prioritization of financial utility, which mitigates the reluctance to use leverage. To prevent the negative effects of noneconomic family goals, boards should monitor these goals, including maintaining family harmony and intergenerational family employment. Thus, we posit that a higher proportion of independent directors could curb the reluctance of female leaders to use leverage in family firms, as these directors are likely to prioritize the firm's financial utility to ensure firm survival and thus their reputation for expertise for which they were appointed to the board (Goel et al., 2013). Board independence is a key internal governance mechanism that limits the influence and power of controlling shareholders (Fama & Jensen, 1983; Shleifer & Vishny, 1989).

From the BAM and SEW perspectives, family firm boards are influenced by how aversion to the loss of family-centered noneconomic utilities affects risk-taking (Gomez-Mejia et al., 2014). Indeed, "the presence of independent members on the board strengthens internal corporate governance mechanisms, especially in the context of family firms" (Poletti-Hughes & Briano-Turrent, 2019, p. 82). In family firms, the board is a key instrument for making financing decisions (e.g.,

González et al., 2013; Molly et al., 2019; Comino-Jurado et al., 2021), and board independence may lead to unique preferences in the goal pursuit behavior of female leaders. The appointment of independent directors takes place in a highly competitive labor market (Shaw et al., 2021, p. 1145). Due to the prioritization of talent and prestige in the hiring process, independent directors could help family firms access a network of professional knowledge (Poletti-Hughes & Briano-Turrent, 2019), placing more importance on firm survival, with the board likely to perceive leverage as a way to increase the firm's competitive advantage. Independent directors can provide useful advice to female leaders, who may modify their past behavior in the best interests of the firm. In particular, the reluctance to use leverage can be detrimental to firms in some cases, for example, when it limits the firm's ability to pursue value-maximizing investment projects. Independent directors will draw the attention of female leaders to leverage in order to better align their financing decisions with the investment opportunities. As a result, the presence of independent directors on the board is likely to mitigate the reluctance to use leverage in female-led family firms, which are expected to be less likely to promote leverage-oriented actions to preserve the firm's emotional ties even at the expense of financial wealth (Gomez-Mejia et al., 2007; Berrone et al., 2012).

Overall, greater board independence enhances firm monitoring (Chapple et al., 2012; Post & Bryon, 2015), and independent boards are more likely to exert greater pressure on female leaders to prioritize rational decision-making and avoid emotional biases, thereby curbing the reluctance of female-led family firms to use leverage to align the firm's financing strategy with the goal of creating financial wealth. Therefore, we expect greater board independence to counterbalance the leverage behavior of female leaders and bring it closer to that of their male counterparts. Independent directors on the board could make female leaders more aware of the need to not forgo debt financing in order to serve the interests of the firm's broader range of stakeholders, rather than exclusively serving the SEW goals of the owning family. Taken together, these arguments lead us to the following hypothesis:

H2*. Board independence mitigates the negative effect of family ownership in the relationship between female leadership and leverage.*

3. Methodology

3.1. Sample

Our data derive from two sources. First, we accessed the NRG Metrics Family Firms Dataset, which is compiled by a team of expert analysts who manually enter, review, and cross-check data together with senior analysts, and is subject to frequent random audits. NRG Metrics uses publicly available documents, such as annual reports, corporate governance reports, company presentations, SEC filings, and press releases. Customized software programs verify all levels of data entry in search of inconsistencies and errors using a combination of quality control measures (NRG documents). This dataset includes publicly traded (active and non-active) firms from Africa, America, Asia, and Europe, and has been used in previous studies of family firms (Miroshnychenko et al., 2021). Next, we collected firm-level financial and accounting data from Osiris, which is a comprehensive dataset of publicly listed companies worldwide provided by Bureau van Dijk Electronic Publishing. The data are collated by World'Vest Base and five regionally specialized providers, supplemented with data from additional sources to check reliability and validity (Bureau van Dijk, 2007). From the initial sample, we dropped firm-year observations with missing values for our variables. We also excluded financial firms due to the idiosyncrasies of this industry and its regulatory and supervisory framework. Thus, our final sample is an unbalanced panel of 2,282 publicly traded firms (16,479 firm-year observations) from 40 countries for the period 2007 to 2017. The sample provides sufficient cross-country variation in the capital structure of firms as well as time variation in financing conditions, as in previous studies (Rajan & Zingales, 1995; Saona et al., 2020). Our sample includes both family and non-family firms.

The use of an unbalanced panel is the best alternative to mitigate survivorship bias (Elton et al., 1996). Our dataset includes not only firms that were present throughout the sample period, but also firms that entered or exited the sample at any time for various reasons (e.g., merger, liquidation, inactivity, or going private). Covering both active and non-active firms avoids the problem of survivorship bias, since focusing only on firms that survived to the end of the study period would bias statistical inferences (Elton et al., 1996).

3.2. Variables

Dependent and independent variables. Our dependent variable is a firm's *leverage* measured as the ratio of liabilities and debt to total assets (Shikimi & Yamada, 2019; Cook et al.,2020). As for our independent variables, we operationalize female representation in leadership based on the CEO position. We constructed a dummy variable (*female CEO*) equal to 1 if the CEO is female, and 0 otherwise. Second, we measure *family ownership* as the ratio of the number of all classes of shares held by the family to total shares outstanding (e.g., Anderson & Reeb, 2004; Kotlar et al., 2018).[4] Third, board independence is measured as a percentage (*% board independence),* which is the ratio of independent directors to the total number of board members (Lu & Wang, 2018). Our final sample does not include firms with two-tier boards (Hülsbeck et al., 2019). We conducted several tests with alternative independent variables to check the robustness of our results.

Control variables. Following prior studies, we control for a number of firm characteristics known to affect leverage decisions (Flannery & Rangan, 2006; Croci et al., 2011; Crespí & Martín-Oliver, 2015; Daskalakis et al., 2017), namely size, profitability, long-term orientation, cash holdings, asset tangibility, and financial expenses. *Firm size* is measured as the natural logarithm of total assets. Larger firms have lower asset volatility and default risk, which facilitates access to financial markets and more favorable borrowing conditions. *Profitability* captures a firm's performance and is measured by return on assets (e.g., Miller et al., 2013). We approximate a firm's *long-term orientation* using the Kappes and Schmid (2013) index. Given our research focus, we constructed the index (*LTinvesting*) using two long-term indicators based on investment policy (R&D to sales, and depreciation to fixed assets). *Asset tangibility* is defined as the ratio of tangible assets to total assets. Tangible assets provide better collateral for loans and have a higher liquidation value than intangible assets, which is expected to have a positive impact on leverage. *Cash holdings* are approximated by the ratio of cash to total assets, which is expected to have a negative impact on leverage according to pecking order theory. *Financial expenses* are measured relative to total sales, and are positively associated with leverage. Finally, we include industry, year, and country dummies to account for time-invariant unobservable heterogeneity.[5] A summary of all the variables used in this study is provided in the Appendix. The control variables are winsorized at the 1st and the 99th percentiles of their distribution.

[4] The use of a continuous measure of family firms has two main advantages in our particular research setting. First, it allows us to overcome the problematic issue of heterogeneity across different institutional contexts in the threshold of family ownership used to categorize a firm as a family firm. Second, it helps overcome the simplistic dichotomy of family vs non-family firms, and favors a better assessment of heterogeneity across firms (Bettinelli et al., 2023).

[5] The inclusion of these fixed effects is particularly useful to account for credit supply-side differences. For instance, country fixed effects allow us to control for potential differences in banking systems across countries, which in turn may affect the availability of credit for lending. Similarly, industry fixed effects control for different asset compositions across industries, which may provide different collateral to lenders.

3.3. Estimation method

To test our hypotheses, the empirical specification is as follows:

$$Lev_{i,t} = \beta_0 + \beta_1(FemaleCEO_{i,t}) + \beta_2(FamilyOwnership_{i,t}) + \beta_3(BoardIndep_{i,t}) + \beta_4(FemaleCEO_{i,t}{*}FamilyOwnership_{i,t}) + \beta_5(FamilyOwnership_{i,t}{*}BoardIndep_{i,t}) + \beta_6(FemaleCEO_{i,t}{*}BoardIndep_{i,t}) + \beta_7(FemaleCEO_{i,t}{*}FamilyOwnership_{i,t}{*}BoardIndep_{i,t}) + \beta_8(Controls_{i,t}) + i_i + d_t + c_i + \varepsilon_{i,t}$$

where i refers to firms, t to years, *Female CEO*$_{i,t}$ indicates whether the CEO position is held by a woman, *Family Ownership*$_{i,t}$ captures the degree of family ownership, *Board Indep*$_{i,t}$ is a proxy for board independence, *Controls*$_{i,t}$ is a vector of control variables (*size*, *profitability, long-term orientation, cash holdings, asset tangibility,* and *financial expenses*), i_i stands for industry fixed effects (one-digit ICB codes), d_t for year fixed effects, c_i for country effects, and $\varepsilon_{i,t}$ is the error term. To test the moderating role of board independence in the relationship between female leadership and leverage in family firms, we include a three-way interaction term that allows us to disentangle whether the sensitivity of leverage to female leadership differs across different levels of board independence.

We apply Blundell and Bond's (1998) two-stage generalized method of moments (GMM) system estimator to control for potential endogeneity (i.e., correlation between the explanatory variables and the error term). This estimator has been widely used in capital structure (e.g., Daskalakis et al., 2017; Fuente & Velasco, 2020) and family business research (Cirillo et al., 2021; García-Meca & Santana-Martín, 2023) to address different sources of endogeneity, such as unobserved heterogeneity and simultaneity. For example, if the presence of female leaders in a firm leads to a reduction (increase) in the firm's leverage, more (less) indebted firms may then prefer to hire female (male) leaders. As a result, leverage would in turn determine whether women are appointed to leadership positions, leading to endogeneity concerns due to reverse causality.

GMM relies on the use of lags of the endogenous variables as instruments, which is considered to provide more efficient and consistent estimates than other econometric techniques (Arellano & Bond, 1991; Ullah et al., 2018). As in other studies, all explanatory variables are treated as endogenous, except for the industry, year, and country dummies, which are considered exogenous (Cirillo et al., 2021; García-Meca & Santana-Martín, 2023). We conducted several other tests. First, the Wald test supports the joint statistical significance of our variables. Second, the Arellano and Bond (1991) AR(2) statistic confirms the absence of second-order serial correlation in the first-difference residuals, and thus our estimates are consistent. The Hansen J-statistic assesses the exogeneity of the instruments (in all specifications, we do not reject the null hypothesis of instrument validity).

Table 1 presents the summary statistics of the variables used in the analyses (i.e., mean, standard deviation, minimum, median, and maximum). The average level of family ownership in our sample is about 7.5 %. If we apply the threshold of 20 % family ownership (Murro & Peruzzi, 2019), family firms account for 26.7 % of all firm-year observations. On average, total liabilities and debt account for 55.8 % of total assets. Firms with a female CEO account for 2.3 % of the sample, while 53 % of board members are independent.

Table 2 presents the correlation matrix. We find that family ownership is positively correlated with leverage, but without statistical significance. Notably, leverage is positively and significantly correlated with *firm size* and *financial expenses.* As the mean–variance inflation factor (VIF) of our estimates is at most 5.27, multicollinearity does not seem to be a serious problem in our empirical study.

4. Results

4.1. Main results

First, we adopt a split-sample approach similar to previous studies (e.g., Aouadi & Marsat, 2018; Fuente & Velasco, 2020) to estimate the two-way interaction effect of female leadership and family ownership in two subsamples with different levels of board independence (using a binary variable based on median board independence to separate the subsamples).[6] Specifically, Table 3 estimates the two-way interaction effect of *female CEO* and *family ownership* by subsample based on the sample median level of *% board independence*. These estimations allow us to assess whether the negative relationship between female-led family firms and leverage is attenuated in firms with more independent boards. Panel A shows that the interaction term *female CEO* × *family ownership* is negative in the subsample with less independent boards (β = -0.079, $p <$ 0.05), but becomes positive in the subsample of firms with more independent boards (β = 0.369, $p <$ 0.01). Thus, under higher board independence, the negative influence of family ownership on the relationship between female leadership and leverage is reversed, and family ownership therefore promotes higher leverage in female-led firms. These results support H2. In Panel B, we conducted further analyses by considering a dummy variable (*family firm*) to categorize firms into the family and non-family firm status, which equals 1 if a family owns more than 20 % of the firm's shares, and 0 otherwise. These results also suggest that family ownership discourages higher leverage only in those female-led firms with less independent boards. As observed in the last two columns, the presence of a female CEO in a family firm decreases firm leverage by 9.2 percentage points in firms with less independent boards, while this effect can be expected to be zero in firms with independent boards.

Table 4 presents the baseline results of the estimated relationship between female leadership (CEO), family ownership, and leverage, which allows us to test H1. We estimate three sets of regression models. Model 1 in Table 4 includes only the control variables and shows the expected signs. Larger firms and those with a more long-term orientation and higher financial expenses have more leverage, but the former two do not show statistical significance in any of the additional regressions. In contrast, more profitable and cash-rich firms have lower leverage ratios because accumulated reserves and liquidity are alternative source of funding that reduce the need for external financing.

Model 2 includes the variables representing women in the CEO position (*female CEO*) and *family ownership*. We obtained a statistically insignificant coefficient for *female CEO*. Family ownership is positively associated with leverage, but not statistically significant (β = 0.008; $p >$ 0.10). In Model 3, we add the two-way interaction between *female CEO*

[6] We first present these main analyses by subsample, as relying on binary measures of female leadership, family ownership, and board independence facilitates the interpretation of the empirical results. We thank an anonymous reviewer for this suggestion.

Table 1
Summary statistics.

Variable	N.	Mean	Std. dev.	Minimum	Median	Maximum
Leverage	16,479	0.558	0.193	0.083	0.564	1.134
Female CEO	16,479	0.023	0.149	0	0	1
Family Ownership	16,479	0.075	0.177	0	0	1
% Board Independence	16,479	0.533	0.275	0	0.540	1
Firm Size	16,479	15.323	2.701	9.157	15.005	22.173
Profitability	16,479	0.037	0.087	−0.409	0.040	0.284
Cash Holdings	16,479	0.105	0.096	0.001	0.078	0.556
LT Investing	16,479	0.493	0.241	0.100	0.500	1
Tangible Assets	16,479	0.804	0.194	0.227	0.867	0.999
Financial Expenses	16,479	0.016	0.021	0	0.011	0.139
Robustness variables						
Female Chair	16,479	0.030	0.170	0	0	1
Family Firm	16,479	0.267	0.443	0	0	1
Independent Chair	16,479	0.268	0.443	0	0	1

Table 2
Correlation matrix.

		(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Leverage	(1)	1.000									
Female CEO	(2)	0.012	1.000								
Family Ownership	(3)	0.003	0.047***	1.000							
% Board Independence	(4)	−0.091***	−0.006	−0.150***	1.000						
Firm Size	(5)	0.100***	−0.051***	−0.190***	−0.227***	1.000					
Profitability	(6)	−0.219***	0.015**	−0.006	0.041***	0.101***	1.000				
Cash Holdings	(7)	−0.225***	−0.011	0.004	0.067***	−0.119***	0.085***	1.000			
LT Investing	(8)	−0.013*	−0.010	−0.127***	0.034***	0.260***	0.056***	0.136***	1.000		
Tangible Assets	(9)	−0.004	−0.011	0.087***	−0.219***	0.173***	0.006	0.115***	0.260***	1.000	
Financial expenses	(10)	0.351***	0.016**	0.045***	−0.007	−0.143***	−0.371***	−0.127***	−0.140***	−0.028***	1.000

Notes: Industry, country, time dummies, and the alternative robustness definitions of family firm, female leadership, and board independence are not shown. ***, **, and * indicate statistical significance at the 1%, 5%, and 10% level, respectively.

Table 3
Split-sample analyses by board independence.

	Dependent variable: Leverage			
	PANEL A: Family Ownership		PANEL B: Family Firm	
	Above-median % *board independence* subsample	Below-median % *board independence* subsample	Above-median % *board independence* subsample	Below-median % *board independence* subsample
Female CEO	−0.073***(0.008)	−0.025***(0.009)	0.114***(0.028)	0.012 (0.012)
Family Ownership	−0.135**(0.053)	0.099***(0.022)		
Family Firm			−0.050 (0.037)	−0.023**(0.011)
Female CEO × Family Ownership	0.369***(0.084)	−0.079**(0.032)		
Female CEO × Family Firm			−0.129 (0.100)	−0.092***(0.017)
% Board Independence	−0.066*(0.020)	0.002(0.016)	−0.093*(0.054)	−0.023 (0.016)
∑			−0.015	−0.080***
Control variables	Yes	Yes	Yes	Yes
Year dummies	Yes	Yes	Yes	Yes
Industry dummies	Yes	Yes	Yes	Yes
Country dummies	Yes	Yes	Yes	Yes

Notes: This table reports the two-step GMM system estimates (standard errors in parentheses) by a subsample of below-median and above-median levels of % board independence. All the definitions of variables are provided in the data section. ***, **, and * denote statistical significance at the 1%, 5%, and 10% level, respectively. Control variables, year dummies, industry dummies, and country dummies are included in all regressions. The ∑ coefficient denotes the linear combined effect of female leadership plus its interaction effect with the family firm dummy.

and *family ownership*, which allows us to test H1. The coefficient of this interaction term is negative and statistically significant at the 1 % level (β = -0.166; $p < 0.01$). This empirical result suggests that a woman in the CEO position is associated with lower levels of leverage in firms with higher family ownership. Holding all other variables constant, a 10 % increase in family ownership is associated with a 0.77 % increase in leverage in firms with a male CEO, while if a woman holds the CEO position, the same increase results in a 0.89 % decrease in leverage (∑=0.077–0.166 = -0.089). Since the presence of a female CEO in firms with higher family ownership is negatively associated with leverage, our results support H1. To better interpret these results, we plotted the predicted marginal effects of *family ownership* on leverage for firms with

Table 4
Gender diversity effects: Main results.

	Dependent variable: Leverage					
	(1)	(2)	(3)	(4)	(5)	(6)
Constant	0.534***(0.077)	0.514***(0.071)	0.481***(0.062)	0.423***(0.061)	0.274***(0.049)	0.256***(0.072)
Female CEO		0.022	0.008	−0.001(0.025)	−0.073***	0.045
		(0.027)	(0.010)		(0.010)	(0.041)
Family Ownership		0.008	0.077***(0.019)	−0.007	0.006	0.252***(0.046)
		(0.052)		(0.021)	(0.026)	
Female CEO × Family Ownership			−0.166***		0.023	−0.994***
			(0.025)		(0.017)	(0.190)
% Board Independence				−0.059***	−0.044***	−0.003
				(0.019)	(0.012)	(0.024)
Family Ownership × % Board Independence					0.003	−0.366***
					(0.048)	(0.106)
Female CEO × % Board Independence					0.140***(0.023)	−0.030
						(0.059)
Female CEO × Family Ownership × % Board Independence						1.624***(0.300)
Control variables						
Firm Size	0.006	0.011***(0.004)	0.007**(0.003)	0.012***(0.003)	0.019***(0.002)	0.021***(0.004)
	(0.004)					
Profitability	−0.248***	−0.278***	−0.223***	−0.372***	−0.298***	−0.321***
	(0.088)	(0.097)	(0.057)	(0.070)	(0.025)	(0.059)
Cash Holdings	−0.402***	−0.350***	−0.374***	−0.419***	−0.372***	−0.175***
	(0.079)	(0.074)	(0.031)	(0.061)	(0.034)	(0.059)
LT Investing	0.025	−0.027	0.061***(0.023)	−0.017	0.038**(0.017)	0.004
	(0.040)	(0.039)		(0.031)		(0.023)
Tangible Assets	−0.044	−0.082*(0.045)	−0.027	0.071	0.050	0.015
	(0.053)		(0.042)	(0.044)	(0.032)	(0.046)
Financial Expenses	2.073***(0.319)	2.545***(0.374)	2.456***(0.135)	1.922***(0.246)	2.287***(0.129)	1.588***(0.240)
Year dummies	Yes	Yes	Yes	Yes	Yes	Yes
Industry dummies	Yes	Yes	Yes	Yes	Yes	Yes
Country dummies	Yes	Yes	Yes	Yes	Yes	Yes
N	16,479	16,479	16,479	16,479	16,479	16,479
Wald test	1.08e + 07***	8.54e + 07***	1.61e + 07***	1.45e + 07***	2.51e + 07***	7.09e + 08***
AR(1) statistic	−7.47***	−7.42***	−10.70***	−8.86***	−10.78***	−6.63***
AR(2) statistic	−1.48	−1.61	−1.55	−1.61	−1.56	−1.46
p-value AR(2) test	0.140	0.107	0.120	0.108	0.120	0.146
Hansen test	126.36	136.45	195.73	219.16	350.16	234.70
p-value Hansen test	0.202	0.145	0.124	0.113	0.286	0.620

Notes: This table reports the two-step GMM estimates (standard errors in parentheses). All the definitions of variables are provided in the data section. ***, **, and * denote statistical significance at the 1%, 5%, and 10% level, respectively. Control variables, year dummies, industry dummies, and country dummies are included in all regressions.

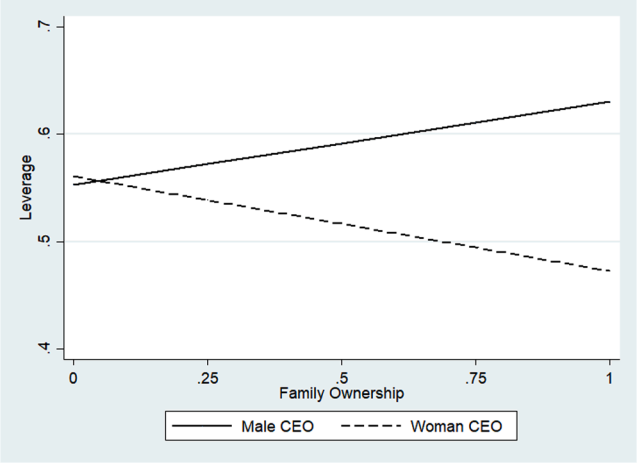

Fig. 1. Female leadership, family ownership, and leverage.

a male CEO and firms with a female CEO, holding the control variables constant at the mean level. Fig. 1 graphically illustrates the analysis. Family ownership has a negative effect on leverage in firms with a female CEO. The opposite is observed in firms with a male CEO.

Table 4 shows the results of the moderating effect of *% board independence* (Models 4–6), on the female leadership-leverage relationship. These models allow us to assess whether the negative relationship between female-led family firms and leverage is reversed for boards with higher levels of independence. Examining the interaction between *female CEO* with *family ownership* and *% board independence* (Model 6) reveals a positive coefficient that is statistically different from zero ($\beta = 1.624$; $p < 0.01$). Thus, consistent with H2, the negative effect of female leadership on the family ownership-leverage relationship is attenuated the more independent the board of directors is. *% Board independence* (considered individually) has a negative but statistically insignificant effect on leverage. Fig. 2 illustrates the predicted marginal effects of *family ownership* on leverage for firms with a male CEO and firms with a female CEO, separately by subsamples depending on *% board independence* (below the sample median and above the sample median of board independence). The control variables are held constant at the mean level. We observe that the negative impact of female leadership on the relationship between family ownership and leverage disappears and is reversed in the subsample with higher board independence.

4.2. Robustness tests

Next, we report the results of the additional analyses conducted to check the robustness of our results. Overall, our empirical results remain similar in the direction of the hypothesized effects. We re-estimated our

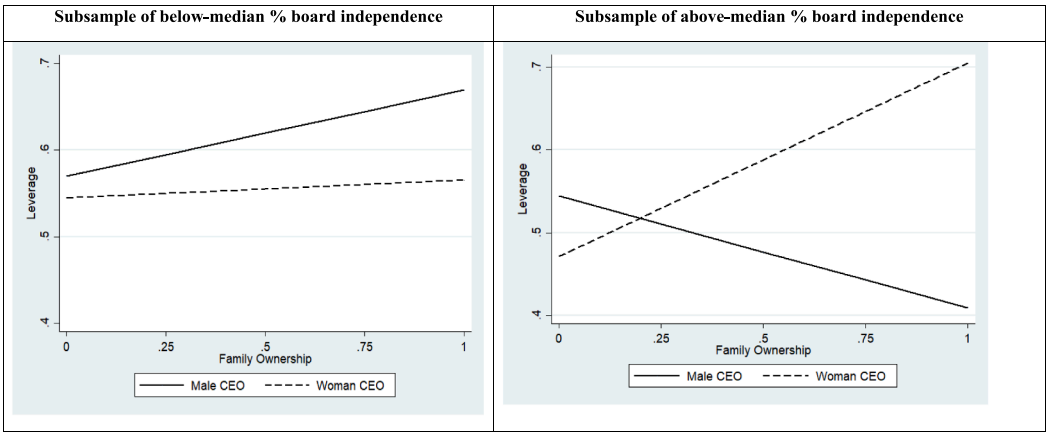

Fig. 2. The moderating effect of family ownership on the female leadership and leverage relationship (by subsample of above- and below-median board independence).

Table 5
Robustness tests: Alternative definitions.

	Dependent variable: Leverage
Female CEO	−0.019
	(0.016)
Family Firm	0.045
	(0.032)
Female CEO × Family Firm	**−0.049**
	(0.046)
% Board Independence	−0.021
	(0.030)
Family Firm × % Board Independence	−0.190***(0.073)
Female CEO × % Board Independence	0.162***(0.037)
Female CEO × Family Firm × % Board Independence	**0.010**
	(0.081)
Female Chair	−0.086***(0.024)
Family Ownership	−0.095
	(0.064)
Female Chair × Family Ownership	**−0.160**(0.078)**
% Board Independence	−0.061***(0.020)
Family Ownership × % Board Independence	0.053
	(0.107)
Female Chair × % Board Independence	0.076**(0.030)
Family Ownership × Female Chair × % Board Independence	**0.574***(0.128)**
Female CEO	−0.029**(0.012)
Family Ownership	0.041*(0.024)
Female CEO × Family Ownership	**−0.017(0.032)**
Independent Chair	−0.018
	(0.012)
Family Ownership × Independent Chair	−0.109(0.075)
Female CEO × Independent Chair	0.065***(0.013)
Female CEO × Family Ownership × Independent Chair	**0.444***(0.076)**
Control variables	Yes
Year, industry and country dummies	Yes

Notes: This table summarizes the two-step GMM estimates (standard errors in parentheses) as robustness analyses using alternative definitions of family ownership, female leadership, and board independence. ***, **, and * denote statistical significance at the 1%, 5%, and 10% level, respectively. Control variables, year dummies, industry dummies, and country dummies are included in all regressions.

models using an alternative definition of each of the explanatory variables (i.e., female leadership, family firm, and board independence). First, we replaced *family ownership* with a family dummy variable (*family firm*) based on the 20 % threshold of family ownership to identify family and non-family firm status. Model 1 in Table 5 provides a summary of the results, showing consistent signs of the coefficients for our hypotheses. The lower level of statistical significance could be explained by the more limited ability of this dichotomous variable to capture family ownership than the continuous *family ownership* variable on which we have relied so far. Second, we replicate our estimates using an alternative measure for female leadership that focuses on the board chair position, where *female chair* is equal to 1 if there is a female chair, and 0 otherwise. The results in Model 2 of Table 5 show that a female chair is associated with a lower level of leverage in firms with higher family ownership, as the two-way interaction of *family ownership* × *female chair* has a negative and statistically significant coefficient (β = -0.160, $p <$ 0.05). Thus, a 10 percentage point increase in family ownership is associated with a greater decrease in leverage (1.60 percentage point higher) in firms with a female chair compared to their male-led counterparts. This effect is completely reversed the higher the proportion of independent directors to total board members (β = 0.574, $p <$ 0.01). Finally, we proxy for board independence using a dummy variable (*independent chair*) that equals 1 if the board chair is neither the CEO nor holds another executive position. Table 5 (Model 3) summarizes these robustness results. The empirical evidence strongly confirms H2, namely boards with an independent chair mitigate the lower leverage of family firms with a female CEO.

5. Discussion and conclusion

Using a large sample of firms from 40 countries between 2007 and 2017, our empirical evidence supports a negative relationship between female leadership and leverage in family firms, but is positively moderated by board independence. These findings advance a reconciling view of leverage in female-led firms and address the need to "improve our understanding of the complexity of financial decisions and the determinants of capital structure choices in family firms" (Molly et al., 2019, p. 270). Indeed, a growing body of literature has investigated whether gender differences are associated with differences in firm capital structure (e.g., Adams & Funk, 2012; Faccio et al., 2016; Sila et al., 2016; Pandey et al., 2020), one of the most important corporate policies. Despite this high level of interest, prior studies provide mixed evidence. On the one hand, given women's higher risk aversion propensity, some studies document that female-led firms have lower leverage (e.g., Faccio et al., 2016). On the other hand, based on the glass ceiling view, other studies show that women who have "made it" to the C-suite are at least as risk-seeking as their male counterparts (e.g., Adams & Funk, 2012), finding no significant relationship between leadership gender and firm leverage (e.g., Sila et al., 2016). Our study

shows that the reality is more nuanced than previously thought, as risk aversion *per se* may not be a clear correlate of female leaders' approach to risk taking in corporate decision-making.

This has important implications for research on the influence of female leaders on family firms, as female CEOs and female board chairs are prominent leaders who advise and monitor top management teams. Previous studies have addressed the role of gender in family firms on various issues, such as succession (e.g., Nelson & Constantinidis, 2017), corporate social responsibility (e.g., Campopiano et al., 2019; Cruz et al., 2019; Maggi et al., 2023), or strategy disclosure (Gjergji et al., 2023). Our study contributes to this growing body of research by examining whether the influence of female leadership on firm leverage is affected by family ownership. Specifically, we argue that the relationship between gender differences and strategic decisions involving risk-taking is more complex, and importantly, inherently contextual.

While gender diversity in the family business context has been on the agenda of scholars for some time (e.g., Amore et al., 2014; Torchia et al., 2018; Campopiano et al., 2019; Hernández-Linares et al., 2023; Maseda et al., 2023), the literature is still seeking a thorough understanding of the relationship between female leadership and leverage (e.g., Croci et al., 2011; González et al., 2013; Molly et al., 2019; Baixauli-Soler et al., 2021). We advance this line of research by integrating the BAM and SEW theories commonly used in the family business literature (Hu & Hughes, 2020; Davila et al., 2023; Gomez-Mejia et al., 2023a). While family business owners seek to balance economic and noneconomic goals, their decisions are shaped by the desire to preserve noneconomic organizational goals (Berrone et al., 2012; Gomez-Mejia et al., 2017; Aguilera et al., 2024). Consequently, the family business setting is an ideal domain to study the impact of leader gender, particularly its influence on a firm's financing decisions. Therefore, by explicitly considering the influence of leader gender on the firm's strategic decisions, our study extends existing knowledge on financial decision-making in family firms (e.g., Koropp et al., 2013; Michiels & Molly, 2017; Minola et al., 2016). Female leaders, driven by a commitment to maintaining family ownership and control and guided by family-related goals, may lead these firms to rely less on debt than male-led family firms.

Our study also contributes to corporate governance research. While previous studies acknowledge the central role of the board of directors in organizations (Arzubiaga et al., 2018) as a governance mechanism to improve the quality of decision-making for all stakeholders (Corbetta & Salvato, 2004; Brunninge et al., 2007; Cirillo & Mussolino, 2019; Molly et al., 2019; Debellis et al., 2021), limited attention has been paid to examining the effect of board independence on the female leadership-leverage relationship in family firms. This represents a notable gap in the literature, as family ownership and board independence play a pivotal role in the effect of firm leader gender on firm leverage. Our results show that in family firms, female leaders use less leverage. However, this lower reliance on debt financing in female-led firms decreases when the firm has a more independent board of directors. Thus, our research highlights the interplay between female leadership (CEO and board chair) and board independence in shaping the corporate policies of family firms.

6. Implications

This study has important implications for academic research. It illustrates the potential of studying the role of leadership gender in firm leverage decisions, the financing decisions made by women in family firms (Eddleston & Sabil, 2019), and their implications for corporate policies. Although women are more visible in family firms today than they were a few years ago and appear to have an increasing influence on strategic decisions (Martinez-Jimenez, 2009; Eddleston & Sabil, 2019), the impact of women's participation in top-level positions on financing decisions remains underexplored. Moreover, a notable aspect of female leadership that is often appreciated by lenders is their higher propensity for corporate information transparency (Usman et al., 2019). This is enhanced by the presence of independent directors on the board, thereby contributing to improved corporate governance. The higher responsiveness of independent board members to the needs of multiple stakeholders (Benjamin et al., 2020) is essential for fostering smoother relationships with external parties, including lenders. Thus, female-led firms with independent boards may be perceived as more legitimate, and the presence of an independent board is a reputation-enhancing factor for family firms seeking to secure debt.

Our findings also have implications for practitioners. First, our analyses underscore the notion that the values, goals, and behaviors promoted by female leadership translate into lower debt levels in family firms. According to this line of reasoning, female-led family firms are more likely to satisfy family needs and thus avoid financing decisions that are detrimental to family control of the firm (Gallo et al., 2004). Given the need to develop skills and deploy resources to achieve better financial decision-making, practitioners can facilitate women's involvement in family firms and their career dynamics (Campopiano et al., 2017). The longer-term orientation of female leaders may allow firms to take advantage of further growth opportunities and favor the use of debt, especially when the board of directors is independent. In this regard, Cruz et al. (2019) highlight the importance of considering gender issues in explaining family business dynamics. Given that boards of directors have been found to ensure effective corporate governance (e.g., Bertoni et al., 2014), it is imperative for family firms to understand the interplay between female leadership and board independence with respect to financing decisions.

Second, the optimal level of board independence sparks intense debate among practitioners, highlighting its significant impact on firm dynamics. As Cruz et al., (2019,p. 285) note, "the presence of a controlling family, with preferences extending beyond pure economic outcomes (Gomez-Mejia et al., 2011), introduces additional complexity to board dynamics". Consequently, when female-led family firms increase board independence, managers may reap the benefits, such as heightened transparency, a leadership style that encourages participation, and improved interpersonal relationships with external stakeholders, including lenders and banks. This shift toward greater board independence not only reflects the evolving corporate governance landscape, but also suggests a strategic move toward fostering a more inclusive and effective decision-making environment in these firms.

Finally, our findings have important implications for policymakers seeking to increase the role of women in corporate governance. With mounting calls for policymakers and boards of directors to increase female representation in executive positions, our study draws attention to the complex dynamics between female leadership and leverage, particularly the overlooked aspect of ownership type. This underscores the importance of fully understanding and addressing the organizational decision-making context in which female leaders play their role and their interactions with other key decision-makers. Thus, strengthening the role of women leaders requires a holistic approach that considers the broader organizational landscape and its impact on effective decision-making.

7. Limitations and future research directions

Our study has limitations that provide interesting opportunities for further research. First, although we constructed a unique sample of firms from 40 countries, a more explicit analysis of certain institutional idiosyncrasies across countries would be a fruitful avenue for future research. In this sense, an institutional perspective could make an important contribution to the ongoing debate in the family business literature on the role of women in leadership positions.

Second, our study encourages more in-depth analyses of the characteristics of female leaders (such as whether they are part of the owning family or not, and their level of involvement in the business) to better understand the impact women have on financing decisions in family firms. Future studies could provide more granular data on the

categorization of female leaders by differentiating between family and non-family members. The literature suggests that non-family female leaders play a stronger monitoring role and better protect shareholder interests (Herdhayinta et al., 2021). Scholars could also draw on the psychological traits of the top management team in family firms (Sharma et al., 2020; Picone et al., 2021) to examine how the values, biases, heuristics, memories, and experiences of female leaders affect strategic decisions. Future studies could also consider other board or governance dimensions not examined in this study to provide further insight into additional factors that may influence corporate leaders' willingness to use leverage. For example, family custodianship, or the presence of trustees or a family council in the firm, is considered an important dimension of family governance (Scholes et al., 2021) with the potential to influence the strategic behavior of family firms.

Third, as with any empirical study, issues of sampling validity determine the generalizability and breadth of applicability of our findings. Although the multi-country nature of our sample of listed firms is conducive to studying corporate finance decisions, it limits the generalizability to other firms, such as small- and medium-sized privately owned family firms. In this context, additional approaches, such as difference-in-differences exploiting time-variations in executive gender, could further mitigate (but not circumvent) potential causality concerns. In addition, it would be particularly insightful to adopt a dynamic lens in future empirical analyses, tracking the appointment and succession of different leaders to obtain a more complete picture of the extent to which the imprint of each leader's predecessor persists. This may allow for a more accurate assessment of which leader plays a more prominent role in corporate policies currently observed in firms (whether the current leader or the previous one). In particular, the timing of CEO succession can be an important milestone for the firm and deserves special attention.

Finally, the debt maturity structure and other debt characteristics should also be considered in future research. Corporate financing decisions not only involve the firm's capital structure (i.e., leverage), but also the debt maturity structure (i.e., short-term vs long-term). Higher risk aversion may be associated with a more cautious commitment to long-term debt. These aspects could interact with the firm's ownership type (whereby family firms may be better equipped to adapt quickly to change due to more flexible short-term planning) as well as with the governance mechanisms (whereby more independent boards may substitute for the external control and frequent monitoring of managers imposed by short-term debt).

CRediT authorship contribution statement

Alfredo De Massis: Writing – review & editing, Writing – original draft, Investigation, Formal analysis, Conceptualization. **Fernando Muñoz-Bullón:** Writing – review & editing, Writing – original draft, Methodology, Formal analysis, Conceptualization. **Maria J. Sanchez-Bueno:** Writing – review & editing, Writing – original draft, Methodology, Formal analysis, Conceptualization. **Pilar Velasco:** Writing – review & editing, Writing – original draft, Methodology, Formal analysis, Conceptualization. **Silvio Vismara:** Writing – review & editing, Writing – original draft, Methodology, Formal analysis, Conceptualization.

Declaration of Competing Interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

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Appendix

Table A1
Definition of variables.

Variable	Definition
Dependent variable	
Leverage	Ratio of total liabilities and debt divided by total assets
Independent variables	
Female CEO	Equals 1 if the CEO is female, 0 otherwise
Family Ownership	Ratio of the number of all classes of shares held by the family to total shares outstanding. The numerator includes all shares held by family representatives (e.g., founder (CEO or Chair or Chair-CEO), descendants (CEO or Chair or Chair-CEO), family members, and family representatives)
% Board Independence	The proportion of independent directors over the total number of board members
Control variables	
Firm Size	Log of total assets
Profitability	Return on assets (ROA)
LT Investing	Long-term investing index based on two long-term investment policy indicators (R&D expenses and the ratio of depreciation to fixed assets)
Cash Holdings	Ratio of cash to total assets
Tangible Assets	Ratio of tangible assets to total assets
Financial Expenses	Interest burden proxied by the ratio of financial expenses to total sales
Robustness test variables	
Female Chair	Equals 1 if the chair of the board is female, 0 otherwise
Family Firm	Equals 1 if a family owns more than 20 % of shares, 0 otherwise
Independent Chair	Equals 1 if the chair is independent, 0 otherwise

References

Adams, R. B., & Funk, P. (2012). Beyond the glass ceiling: Does gender matter? *Management Science, 58*(2), 219–235. https://doi.org/10.1287/mnsc.1110.1452

Aguilera, R. V., De Massis, A., Fini, R., & Vismara, S. (2024). Organizational goals, outcomes, and the assessment of performance: Reconceptualizing success in management studies. *Journal of Management Studies, 61*(1), 1–36. https://doi.org/10.1111/joms.12994

Amore, M. D., Garofalo, O., & Minichilli, A. (2014). Gender interactions within the family firm. *Management Science, 60*(5), 1083–1097. https://doi.org/10.1287/mnsc.2013.1824

Anderson, R., & Reeb, D. (2004). Board composition: Balancing family influence in S&P 500 firms. *Administrative Science Quarterly, 49*(2), 209–237. https://doi.org/10.2307/4131472

Aouadi, A., & Marsat, S. (2018). Do ESG controversies matter for firm value? Evidence from international data. *Journal of Business Ethics, 151*, 1027–1047. https://doi.org/10.1007/s10551-016-3213-8

Arellano, M., & Bond, S. (1991). Some tests of specification for panel data: Monte Carlo evidence and an application to employment equations. *Review of Economic Studies, 58*(2), 277–297. https://doi.org/10.2307/2297968

Arzubiaga, U., Kotlar, J., De Massis, A., Maseda, A., & Iturralde, T. (2018). Entrepreneurial orientation and innovation in family SMEs: Unveiling the (actual) impact of the board of directors. *Journal of Business Venturing, 33*(4), 455–469. https://doi.org/10.1016/j.jbusvent.2018.03.002

Baixauli-Soler, J. S., Belda-Ruiz, M., & Sánchez-Marín, G. (2021). Socioemotional wealth and financial decisions in private family SMEs. *Journal of Business Research, 123*, 657–668. https://doi.org/10.1016/j.jbusres.2020.10.022

Bauweraerts, J., Rondi, E., Rovelli, P., De Massis, A., & Sciascia, S. (2022). Are family female directors catalysts of innovation in family small and medium enterprises? *Strategic Entrepreneurship Journal, 16*(2), 314–354. https://doi.org/10.1002/sej.1420

Benjamin, S., Mansi, M., & Pandey, R. (2020). Board gender composition, board independence and sustainable supply chain responsibility. *Accounting & Finance, 60*(4), 3305–3339. https://doi.org/10.1111/acfi.12532

Berrone, P., Cruz, C., & Gomez-Mejia, L. R. (2012). Socioemotional wealth in family firms: Theoretical dimensions, assessment approaches, and agenda for future research. *Family Business Review, 25*(3), 258–279. https://doi.org/10.1177/0894486511435355

Bertoni, F., Meoli, M., & Vismara, S. (2014). Board independence, ownership structure and the valuation of IPOs in continental Europe. *Corporate Governance: An International Review, 22*(2), 116–131. https://doi.org/10.1111/corg.12051

Bettinelli, C., Del Bosco, B., & Giachino, C. (2019). Women on boards in family firms: What we know and what we need to know. In E. Memili, & C. Dibrell (Eds.), *The Palgrave handbook of heterogeneity among family firms* (pp. 201–228). Macmillan: Palgrave.

Bettinelli, C., De Massis, A., Singal, M., & Davis, J. (2023). From family director pathos to board ethos: Managing multiple role identity struggles in the boardroom of family firms. *Journal of Management Studies (forthcoming)*. https://doi.org/10.1111/joms.12990

Bjuggren, P. O., Nordström, L., & Palmberg, J. (2018). Are female leaders more efficient in family firms than in non-family firms? *Corporate Governance: The international Journal of Business in Society, 18*(2), 185–205. https://doi.org/10.1108/CG-01-2017-0017

Blundell, R., & Bond, S. (1998). Initial conditions and moment restrictions in dynamic panel data models. *Journal of Econometrics, 87*(1), 115–143. https://doi.org/10.1016/S0304-4076(98)00009-8

Brunninge, O., Nordqvist, M., & Wiklund, J. (2007). Corporate governance and strategic change in SMEs: The effects of ownership, board composition and top management teams. *Small Business Economics, 29*, 295–308. https://doi.org/10.1007/s11187-006-9021-2

van Dijk, B. (2007). Osiris data guide. Retrieved from https://www.otago.ac.nz/library/pdf/OSIRISDataGuide.pdf.

Campopiano, G., De Massis, A., Rinaldi, F. R., & Sciascia, S. (2017). Women's involvement in family firms: Progress and challenges for future research. *Journal of Family Business Strategy, 8*(4), 200–212. https://doi.org/10.1016/j.jfbs.2017.09.001

Campopiano, G., Rinaldi, F. R., Sciascia, S., & De Massis, A. (2019). Family and non-family women on the board of directors: Effects on corporate citizenship behavior in family-controlled fashion firms. *Journal of Cleaner Production, 214*, 41–51. 10.1016/j.jclepro.2018.12.319.

Capolupo, P., Ardito, L., Messeni Petruzzelli, A., & De Massis, A. (2023). Opening up the black box of family entrepreneurship across generations: A systematic literature review. *International Small Business Journal, 41*(7), 734–773. https://doi.org/10.1177/02662426221127412

Chapple, L., Kent, P., & Routledge, J. (2012). Board gender diversity and going concern audit options. In *3rd Conference on Financial Markets and Corporate Governance*. https://doi.org/10.2139/ssrn.1979040

Chrisman, J. J., Fang, H. C., Vismara, S., & Wu, Z. (2024). New insights on economic theories of the family firm. *Small Business Economics, forthcoming.*. https://doi.org/10.1007/s11187-024-00875-6

Chua, J., Chrisman, J., Kellermanns, F., & Wu, Z. (2011). Family involvement and new venture debt financing. *Journal of Business Venturing, 26*(4), 472–488. https://doi.org/10.1016/j.jbusvent.2009.11.002

Cirillo, A., & Mussolini, D. (2019). Analysing the board of directors in family firms: An integrated framework for future research directions. In J. Gabrielsson, W. Khlif, & S. Yamak (Eds.), *Research handbook on boards of directors* (pp. 139–166). Edward Elgar.

Cirillo, A., Pennacchio, L., Carillo, M. R., & Romano, M. (2021). The antecedents of entrepreneurial risk-taking in private family firms: CEO seasons and contingency factors. *Small Business Economics, 56*, 1571–1590. https://doi.org/10.1007/s11187-019-00279-x

Comino-Jurado, M., Sánchez-Andújar, S., & Parrado-Martínez, P. (2021). Reassessing debt-financing decisions in family firms: Family involvement on the board of directors and generational stage. *Journal of Business Research, 135*, 426–435. https://doi.org/10.1016/j.jbusres.2021.06.060

Cook, J., Kowaleski, Z., Minnis, M., Sutherland, A., & Zehms, K. (2020). Auditors are known by the companies they keep. *Journal of Accounting and Economics, 70*(1), Article 101314. https://doi.org/10.1016/j.jacceco.2020.101314

Corbetta, G., & Salvato, C. (2004). The board of directors in family firms: One size fits all? *Family Business Review, 17*(2), 119–134. https://doi.org/10.1111/j.1741-6248.2004.00008.x

Crespí, R., & Martin-Oliver, A. (2015). Do firms have better access to external finance during crises? *Corporate Governance: An International Review, 23*(3), 249–265. https://doi.org/10.1111/corg.12100

Croci, E., Doukas, J. A., & Gonenc, H. (2011). Family control and financing decisions. *European Financial Management, 17*(5), 860–897. https://doi.org/10.1111/j.1468-036X.2011.00631.x

Croson, R., & Gneezy, U. (2009). Gender differences in preferences. *Journal of Economic Literature, 47*(2), 1–27. https://doi.org/10.1257/jel.47.2.448

Cruz, C., Justo, R., Larraza-Kintana, M., & Garcés-Galdeano, L. (2019). When do women make a better table? Examining the influence of women directors on family firm's corporate social performance. *Entrepreneurship Theory and Practice, 43*(2), 282–301. https://doi.org/10.1177/1042258718796080

Daily, C. M., McDougall, P. P., Covin, J. G., & Dalton, D. R. (2002). Governance and strategic leadership in entrepreneurial firms. *Journal of Management, 28*(3), 387–412. https://doi.org/10.1177/014920630202800307

Daskalakis, N., Balios, D., & Dalla, V. (2017). The behaviour of SMEs' capital structure determinants in different macroeconomic states. *Journal of Corporate Finance, 46*, 248–260. https://doi.org/10.1016/j.jcorpfin.2017.07.005

Davila, J., Duran, P., Gomez-Mejia, L., & Sanchez-Bueno, M. J. (2023). Socioemotional wealth and family firm performance: A meta-analytic integration. *Journal of Family Business Strategy, 14*(2), Article 100536. https://doi.org/10.1016/j.jfbs.2022.100536

Debellis, F., De Massis, A., Messeni Petruzzelli, A., Frattini, F., & Del Giudice, M. (2021). Strategic agility and international joint ventures: The willingness-ability paradox of family firms. *Journal of International Management, 27*(1), Article 100739. https://doi.org/10.1016/j.intman.2020.100739

De Massis, A., Frattini, F., Kotlar, J., Messeni Petruzzelli, A., & Wright, M. (2016). Innovation through tradition: Lessons from innovative family businesses and directors for future research. *Academy of Management Perspectives, 30*(1), 93–116. https://doi.org/10.5465/amp.2015.0017

Eagly, A. H. (1987). *Sex differences in social behavior: A social-role interpretation*. Hillsdale, NJ: Erlbaum.

Eagly, A. H., Johannesen-Schmidt, M. C., & van Engen, M. L. (2003). Transformational, transactional, and laissez-faire leadership styles: A meta-analysis comparing women and men. *Psychological Bulletin, 129*(4), 569–591. https://doi.org/10.1037/0033-2909.129.4.569

Eagly, A. H., & Karau, S. J. (2002). Role congruity theory of prejudice toward female leaders. *Psychological Review, 109*(3), 573–598. https://doi.org/10.1037/0033-295X.109.3.573

Eddleston, K. A., & Sabil, G. (2019). Women in family firms: Unsung heroes of business-owning families. In V. L. Crittende (Ed.), *Go-to-market strategies for women entrepreneurs. Creating and exploring success* (pp. 185–194). Emerald Publishing.

Elton, E. J., Gruber, M. J., & Blake, C. R. (1996). Survivorship bias and mutual fund performance. *Review of Financial Studies, 9*(4), 1097–1120. https://doi.org/10.1093/rfs/9.4.1097

Faccio, M., Marchica, M. T., & Mura, R. (2016). CEO gender, corporate risk-taking, and the efficiency of capital allocation. *Journal of Corporate Finance, 39*, 193–209. https://doi.org/10.1016/j.jcorpfin.2016.02.008

Fama, E. F., & Jensen, M. C. (1983). Separation of ownership and control. *The Journal of Law and Economics, 26*(2), 301–325. https://doi.org/10.1086/467037

Flannery, M., & Rangan, K. (2006). Partial adjustment toward target capital structures. *Journal of Financial Economics, 79*(3), 469–506. https://doi.org/10.1016/j.jfineco.2005.03.004

Fuente, G., & Velasco, P. (2020). Capital structure and corporate diversification: Is debt a panacea for the diversification discount? *Journal of Banking & Finance, 111*, Article 105728. https://doi.org/10.1016/j.jbankfin.2019.105728

Gallo, M. A., Tapies, J., & Cappuyns, K. (2004). Comparison of family and nonfamily business: Financial logic and personal preferences. *Family Business Review, 17*(4), 303–318. https://doi.org/10.1111/j.1741-6248.2004.00020.x

García-Meca, E., & Santana-Martín, D. J. (2023). Board gender diversity and performance in family firms: Exploring the faultline of family ties. *Review of Managerial Science, 17*, 1559–1596. https://doi.org/10.1007/s11846-022-00563-3

Gjergji, R., Vena, L., Campopiano, G., Sciascia, S., & Cortesi, A. (2023). Strategy disclosure and cost of capital: The key role of women directors for family firms. *Journal of Family Business Strategy, in press.*. https://doi.org/10.1016/j.jfbs.2023.100570

Goel, S., Voordeckers, W., van Gils, A., & van den Heuvel, J. (2013). CEO's empathy and salience of socioemotional wealth in family SMEs – The moderating role of external directors. *Entrepreneurship and Regional Development, 25*(3–4), 111–134. https://doi.org/10.1080/08985626.2012.710262

Gomez-Mejia, L. R., Campbell, J. T., Martin, G., Hoskisson, R. E., Makri, M., & Sirmon, D. G. (2014). Socioemotional wealth as a mixed gamble: Revisiting family

firm R&D investments with the behavioral agency model. *Entrepreneurship Theory and Practice, 38*(6), 1351–1374. https://doi.org/10.1111/etap.12083
Gomez-Mejia, L. R., Chirico, F., Martin, G., & Baù, M. (2023a). Best among the worst or worst among the best? Socioemotional wealth and risk-performance returns for family and non-family firms under financial distress. *Entrepreneurship Theory and Practice, 47*(4), 1031–1058. https://doi.org/10.1177/10422587211057420
Gomez-Mejia, L. R., Cruz, C., Berrone, P., & De Castro, J. (2011). The bind that ties: Socioemotional wealth preservation in family firms. *Academy of Management Annals, 5*(1), 653–707. https://doi.org/10.5465/19416520.2011.593320
Gomez-Mejia, L. R., Haynes, K. T., Núñez-Nickel, M., Jacobson, K. J. L., & Moyano-Fuentes, J. (2007). Socioemotional wealth and business risks in family-controlled firms: Evidence from Spanish olive oil mills. *Administrative Science Quarterly, 52*(1), 106–137. https://doi.org/10.2189/asqu.52.1.106
Gomez-Mejia, L. R., Sanchez-Bueno, M. J., Miroshnychenko, I., Wiseman, R. M., Muñoz-Bullón, F., & De Massis, A. (2023b). Family control, political risk and employment security: A cross-national study. *Journal of Management Studies (forthcoming)*. https://doi.org/10.1111/joms.12970
González, M., Guzmán, A., Pombo, C., & Trujillo, M. A. (2013). Family firms and debt: Risk aversion versus risk of losing control. *Journal of Business Research, 66*(11), 2308–2320. https://doi.org/10.1016/j.jbusres.2012.03.014
Gupta, V. K., Mortal, S. C., Silveri, S., Sun, M., & Turban, D. B. (2020). You're fired! Gender disparities in CEO dismissal. *Journal of Management, 46*(4), 560–582. https://doi.org/10.1177/0149206318810415
Herdhayinta, H., Lau, J., & Shen, C. (2021). Family female directors versus non-family female directors: Effects on firm value and dividends payouts in an extreme institutional environment. *British Journal of Management, 32*(4), 969–987. https://doi.org/10.1111/1467-8551.12530
Hernández-Linares, R., López-Fernández, M. C., Eddleston, K. A., & Kellermanns, F. (2023). Learning to be entrepreneurial: Do family firms gain more from female leadership than nonfamily firms? *Strategic Entrepreneurship Journal, 17*(4), 971–1001. https://doi.org/10.1002/sej.1482
Hu, Q., & Hughes, M. (2020). Radical innovation in family firms: A systematic analysis and research agenda. *International Journal of Entrepreneurial Behavior & Research, 26*(6), 1199–1234. https://doi.org/10.1108/IJEBR-11-2019-0658
Hülsbeck, M., Meoli, M., & Vismara, S. (2019). The board value protection function in young, mature and family firms. *British Journal of Management, 30*(2), 437–458. https://doi.org/10.1111/1467-8551.12322
Kappes, I., & Schmid, T. (2013). The effect of family governance on corporate time horizons. *Corporate Governance: An International Review, 21*(6), 547–566. https://doi.org/10.1111/corg.12040
Khan, H., Zahoor, N., Gerged, A. M., Tarba, S., & Makrides, A. (2022). The efficacy of market sensing and family-controlled board in the new product development performance of family firms in emerging market. *Journal of Business Research, 141*, 673–684. https://doi.org/10.1016/j.jbusres.2021.11.064
Knippen, J. M., Shen, W., & Zhu, Q. (2019). Limited progress? The effect of external pressure for board gender diversity on the increase of female directors. *Strategic Management Journal, 40*(7), 1123–1150. https://doi.org/10.1002/smj.3014
Koropp, C., Grichnik, D., & Kellermanns, F. (2013). Financial attitudes in family firms: The moderating role of family commitment. *Journal of Small Business Management, 51*(1), 114–137. https://doi.org/10.1177/0894486514522483
Kotlar, J., Signori, A., De Massis, A., & Vismara, S. (2018). Financial wealth, socioemotional wealth and IPO underpricing in family firms: A two-stage gamble model. *Academy of Management Journal, 61*(3), 1073–1099. https://doi.org/10.5465/amj.2016.0256
Li, Z., & Al-Najjar, B. (2022). Impact of board composition on pension de-risking strategies. *British Journal of Management, 33*(3), 1304–1322. https://doi.org/10.1111/1467-8551.12501
López-Delgado, P., & Diéguez-Soto, J. (2020). Indebtedness in family-managed firms: The moderating role of female directors on the board. *Review of Managerial Science, 14*(4), 727–762. https://doi.org/10.1007/s11846-018-0307-y
Lu, J., & Wang, W. (2018). Managerial conservatism, board independence and corporate innovation. *Journal of Corporate Finance, 48*, 1–16. https://doi.org/10.1016/j.jcorpfin.2017.10.016
Luo, J., Huang, Z., Li, X., & Lin, X. (2018). Are women CEOs valuable in terms of bank loan costs? Evidence from China. *Journal of Business Ethics, 153*, 337–355. https://doi.org/10.1007/s10551-016-3369-2
Maggi, B., Gjergji, R., Vena, L., Sciascia, S., & Cortesi, A. (2023). Family firm status and environmental disclosure: The moderating effect of board gender diversity. *Business Ethics, the Environment & Responsibility, 32*(4), 1334–1351. https://doi.org/10.1111/beer.12578
Marano, V., Sauerwald, S., & Van Essen, M. (2022). The influence of culture on the relationship between women directors and corporate social performance. *Journal of International Business Studies, 53*(7), 1315–1342. https://doi.org/10.1057/s41267-022-00503-z
Martinez-Jimenez, R. (2009). Research on women in family firms. Current status and future directions. *Family Business Review, 22*(1), 53–64. https://doi.org/10.1177/0894486508328813
Maseda, A., Iturralde, T., Aparicio, G., & Cooper, S. (2022). Mapping women's involvement in family firms: A review based on bibliographic coupling analysis. *International Journal of Management Reviews, 24*(2), 279–305. https://doi.org/10.1111/ijmr.12278
Maseda, A., Iturralde, T., Aparicio, G., & Cooper, S. Y. (2023). Building bridges between gender and family business literature to advance women's empowerment. *Gender in Management: An International Journal, 38*(8), 1029–1074. https://doi.org/10.1108/GM-02-2022-0056
Mazzelli, A., De Massis, A., Messeni Petruzzelli, A., Del Giudice, M., & Khan, Z. (2020). Behind ambidextrous search: The microfoundations of search in family and non-family firms. *Long Range Planning, 53*(6), Article 101882. https://doi.org/10.1016/j.lrp.2019.05.002
McConaughy, D. L., Matthews, C. H., & Fialko, A. S. (2001). Founding family controlled firms: Performance, risk, and value. *Journal of Small Business Management, 39*(1), 31–49. https://doi.org/10.1111/0447-2778.00004
Michiels, A., & Molly, V. (2017). Financing decisions in family businesses: A review and suggestions for developing the field. *Family Business Review, 30*(4), 369–399. https://doi.org/10.1177/0894486517736958
Miller, D., Minichilli, A., & Corbetta, G. (2013). Is family leadership always beneficial? *Strategic Management Journal, 34*(5), 553–571. https://doi.org/10.1002/smj.2024
Minola, T., Brumana, M., Campopiano, G., Garrett, R. P., & Cassia, L. (2016). Corporate venturing in family business: A developmental approach of the enterprising family. *Strategic Entrepreneurship Journal, 10*(4), 395–412. https://doi.org/10.1002/sej.1236
Miroshnychenko, I., De Massis, A., Miller, D., & Barontini, R. (2021). Family business growth around the world. *Entrepreneurship Theory and Practice, 45*(4), 682–708. https://doi.org/10.1177/1042258720913028
Molly, V., Uhlaner, L., De Massis, A., & Laveren, E. (2019). Family-centered goals, family board representation, and debt financing. *Small Business Economics, 53*, 269–286. https://doi.org/10.1007/s11187-018-0058-9
Muñoz-Bullón, F., Sanchez-Bueno, M. J., & Velasco, P. (2023). Exploring the link between family ownership and leverage: A mediating pathway through socioemotional wealth objectives. *Review of Managerial Science (forthcoming)*. https://doi.org/10.1007/s11846-023-00713-1
Murro, P., & Peruzzi, V. (2019). Family firms and access to credit. Is family ownership beneficial? *Journal of Banking & Finance, 101*, 173–187. https://doi.org/10.1016/j.jbankfin.2019.02.006
Nelson, T., & Constantinidis, C. (2017). Sex and gender in family business succession research: A review and forward agenda from a social construction perspective. *Family Business Review, 30*(3), 219–241. https://doi.org/10.1177/0894486517715390
Pandey, R., Biswas, P. K., Ali, M. J., & Mansi, M. (2020). Female directors on the board and cost of debt: Evidence from Australia. *Accounting & Finance, 60*(4), 4031–4060. https://doi.org/10.1111/acfi.12521
Pfefferman, T., Frenkel, M., & Gilad, S. (2022). On gendered justification: A framework for understanding men's and women's entrepreneurial resource-acquisition. *Journal of Management Studies, 59*(2), 249–283. https://doi.org/10.1111/joms.12691
Picone, P. M., De Massis, A., Tang, Y., & Piccolo, R. F. (2021). The psychological foundations of management in family firms: Values, biases, and heuristics. *Family Business Review, 34*(1), 12–32. https://doi.org/10.1177/0894486520985630
Poletti-Hughes, J., & Briano-Turrent, G. C. (2019). Gender diversity on the board of directors and corporate risk: A behavioural agency theory perspective. *International Review of Financial Analysis, 62*, 80–90. https://doi.org/10.1016/j.irfa.2019.02.004
Poletti-Hughes, J., & Martínez García, B. (2022). Leverage in family firms: The moderating role of female directors and board quality. *International Journal of Finance & Economics, 27*(1), 207–223. https://doi.org/10.1002/ijfe.2147
Post, C., & Byron, K. (2015). Women on boards and firm financial performance: A meta-analysis. *Academy of Management Journal, 58*(5), 1546–1571. https://doi.org/10.5465/amj.2013.0319
Powell, M., & Ansic, D. (1997). Gender differences in risk behaviour in financial decision making: An experimental analysis. *Journal of Economic Psychology, 18*(6), 605–628. https://doi.org/10.1016/S0167-4870(97)00026-3
Rajan, R., & Zingales, L. (1995). What do we know about capital structure? Some evidence from international data. *The Journal of Finance, 50*(5), 1421–1460. https://doi.org/10.1111/j.1540-6261.1995.tb05184.x
Ryan, M. K., & Haslam, S. A. (2007). The glass cliff: Exploring the dynamics surrounding the appointment of women to precarious leadership positions. *Academy of Management Review, 32*(2), 549–572. https://doi.org/10.5465/amr.2007.24351856
Saona, P., Vallelado, E., & San Martín, P. (2020). Debt, or not debt, that is the question: A Shakespearean question to a corporate decision. *Journal of Business Research, 115*, 378–392. https://doi.org/10.1016/j.jbusres.2019.09.061
Scholes, L., Hughes, M., Wright, M., De Massis, A., & Kotlar, J. (2021). Family management and family guardianship: Governance effects on family firm innovation strategy. *Journal of Family Business Strategy, 12*(4), Article 100389. https://doi.org/10.1016/j.jfbs.2020.100389
Schopohl, L., Urquhart, A., & Zhang, H. (2021). Female CFOs, leverage and the moderating role of board diversity and CEO power. *Journal of Corporate Finance, 71*, Article 101858. https://doi.org/10.1016/j.jcorpfin.2020.101858
Sharma, P., Chrisman, J. J., Chua, J. H., & Steier, L. (2020). Family firm behavior from a psychological perspective. *Entrepreneurship Theory and Practice, 44*(1), 3–19. https://doi.org/10.1177/1042258719879675
Shaw, T. S., He, L., & Cordeiro, J. (2021). Delayed and decoupled: Family firm compliance with board independence requirements. *British Journal of Management, 32*(4), 1141–1163. https://doi.org/10.1111/1467-8551.12509
Shikimi, M., & Yamada, K. (2019). Trade and financial channels as the transmission mechanism of the financial crisis. *International Review of Economics and Finance, 6*, 384. https://doi.org/10.1016/j.iref.2019.04.008
Shleifer, A., & Vishny, R. W. (1989). Management entrenchment: The case of manager-specific investments. *Journal of Financial Economics, 25*(1), 123–139. https://doi.org/10.1016/0304-405X(89)90099-8
Sila, V., Gonzalez, A., & Hagendorff, J. (2016). Women on board: Does boardroom gender diversity affect firm risk? *Journal of Corporate Finance, 36*, 26–53. https://doi.org/10.1016/j.jcorpfin.2015.10.003
Tang, S., Nadkarni, S., Wei, L., & Zhang, S. X. (2021). Balancing the yin and yang: TMT gender diversity, psychological safety, and firm ambidextrous strategic orientation

in Chinese high-tech SMEs. *Academy of Management Journal, 64*(5), 1578–1604. https://doi.org/10.5465/amj.2019.0378

Torchia, M., Calabrò, A., Gabaldon, P., & Kanadli, S. B. (2018). Women directors contribution to organizational innovation: A behavioral approach. *Scandinavian Journal of Management, 34*(2), 215–224. https://doi.org/10.1016/j.scaman.2018.02.001

Ullah, S., Akhtar, P., & Zaefarian, G. (2018). Dealing with endogeneity bias: The generalized method of moments (GMM) for panel data. *Industrial Marketing Management, 71*, 69–78. https://doi.org/10.1016/j.indmarman.2017.11.010

Usman, M., Farooq, M. U., Zhang, J., Makki, M. A. M., & Khan, M. K. (2019). Female directors and the cost of debt: Does gender diversity in the boardroom matter to lenders? *Managerial Auditing Journal, 34*(4), 374–392. https://doi.org/10.1108/MAJ-04-2018-1863

Wang, J. C., Zhao, Y., Sun, S. L., & Zhu, J. (2023). Female-friendly boards in family firms. *Journal of Business Research, 157*, Article 113552. https://doi.org/10.1016/j.jbusres.2022.113552

Wiseman, R. M., & Gomez-Mejia, L. R. (1998). A behavioral agency model of managerial risk taking. *Academy of Management Review, 23*(1), 133–153. https://doi.org/10.5465/amr.1998.192967

Zhu, D. H., & Westphal, J. D. (2014). How directors' prior experience with other demographically similar CEOs affects their appointments onto corporate boards and the consequences for CEO compensation. *Academy of Management Journal, 57*(3), 791–813. https://doi.org/10.5465/amj.2011.0590

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