



Gender and firms' risk-taking behavior in Vietnam

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Abstract

This paper examines the impact of gender on corporate risk-taking behavior in an emerging market setting. Utilizing a panel dataset of 3,208 firm-year observations from 401 Vietnamese publicly listed firms over the 2015-2022 period, we assess the relationship between gender characteristics in leadership, specifically CEO gender and the proportion of female board members, and financial risk-taking, proxied by leverage ratios. The results indicate that firms led by male CEOs tend to adopt riskier capital structures, while boards with greater female representation demonstrate more conservative financial behavior. These findings underscore the significance of gender diversity in influencing risk preferences within corporate decision-making processes.

Keywords: Gender, CEO, risk-taking behavior, Vietnam.

JEL classification: M14, M41, G34.

1. Introduction

Corporate decision-making is increasingly viewed through the lens of behavioral finance, which posits that individual attributes of top executives can significantly shape firm strategies and outcomes. Among these attributes, gender has emerged as a critical yet understudied dimension, especially in emerging markets. Executive gender not only reflects personal values and leadership styles but also influences preferences toward risk, capital allocation, and long-term planning.

Risk-taking behavior, such as leveraging financial capital, directly impacts firm solvency, profitability, and growth. Thus, understanding the behavioral drivers behind such decisions is vital. The CEO's gender, given the central role the CEO plays in setting the financial direction, has drawn attention in recent years. However, less emphasis has been placed on board-level gender diversity, which may exert significant influence through corporate governance mechanisms, oversight, and strategic input.

In developed markets, extensive research has explored whether gender-based behavioral differences affect financial choices, often suggesting that female executives tend to be more risk-averse than their male counterparts, particularly in decisions involving debt or volatile investments. Yet, evidence from emerging economies remains scarce, and institutional differences may alter these behavioral dynamics. In Vietnam, gender norms, ownership concentration, and governance structures present a unique setting for examining how executive and board gender diversity influence risk-taking behavior.

This study aims to fill this gap by analyzing the relationship between gender and corporate financial risk-taking behavior in Vietnam, using financial leverage as a proxy. Unlike prior studies that focus solely on CEO gender, this paper considers both CEO gender and the proportion of female board members, thereby providing a more comprehensive understanding of the effects of gender at multiple levels of corporate leadership. The remainder of this paper is structured as follows: Section 2 discusses the theoretical and empirical background; Section 3 outlines the data and methodology; Section 4 presents the empirical findings; and Section 5 concludes with implications and future directions.

2. Literature review

The intersection of gender and corporate behavior has become an important topic in finance and management research, particularly in the context of risk-taking. Theoretical frameworks and empirical studies suggest that gender differences manifest in decision-making processes, influencing how organizations pursue strategic and financial goals.

From a theoretical standpoint, Agency Theory (Jensen and Meckling, 1976) posits that executives may deviate from shareholder interests to protect personal outcomes, potentially leading to risk aversion when managerial wealth or job security is at stake. Gender differences may intensify these dynamics, as female executives, due to either socialization or heightened scrutiny, tend to prioritize caution and long-term security over aggressive expansion. CEO Power Theory (Finkelstein, 1992) also suggests that more powerful CEOs may avoid risky external scrutiny by minimizing debt usage. The Pecking Order Theory (Myers and Majluf, 1984) supports the idea that risk-averse leaders prefer internal financing, which aligns with the typical preference of female executives for conservative financial practices.

Behavioral research reinforces these theoretical insights. Jianakoplos and Bernasek (1998) were among the first to show that women tend to be more risk-averse in financial contexts. This gender-based risk aversion has since been documented in numerous corporate finance studies. For example, Huang and Kisgen (2013) found that male executives were more likely to undertake value-decreasing acquisitions, driven by overconfidence. Conversely, female CFOs and CEOs were found to exercise greater restraint, resulting in higher earnings quality and more stable leverage levels (Barua *et al.*, 2010; Krishnan and Parsons, 2008).

The Upper Echelons Theory (Hambrick and Mason, 1984) provides an overarching framework, arguing that firm strategies reflect the values and characteristics of top executives. Gender, as a demographic attribute, is thus expected to systematically influence financial strategies. Empirical research by Faccio *et al.* (2016) affirms this, showing that female-led firms tend to be more enduring and operate with lower risk and leverage.

In addition to CEO-level traits, board gender diversity has received attention for its role in enhancing oversight, broadening perspectives, and moderating risky executive behavior. Female board members are often perceived as more diligent and ethical, resulting in better monitoring and lower risk exposure (Adams and Ferreira, 2009). Their presence may counterbalance overconfident tendencies of male executives, especially in cultures where male dominance in business is the norm.

In Vietnam, despite the persistence of cultural and institutional barriers to gender equality, the growing participation of women in corporate leadership positions presents a timely opportunity to examine how gender diversity influences risk-related decisions. Recent studies (e.g., Nguyen *et al.*, 2021) suggest that both CEO gender and board composition affect financial outcomes; however, comprehensive, long-horizon panel evidence remains limited.

This research builds upon and extends the existing literature by offering empirical evidence from Vietnam on how both executive and board-level gender characteristics jointly influence firms' risk-taking behavior. It aims to answer whether and how gender diversity translates into measurable differences in financial strategies within the context of an emerging market economy.

3. Research methodology

The research model is as follows:

$$\text{FRISK-TAKING}_{it} = \beta_0 + \beta_1 \text{GENDER}_{it} + \beta_2 \text{CONTROLS}_{it} + \varepsilon_{it}$$

where FRISK-TAKING_{it} denotes the risk-taking of firm i at time t ; GENDER_{it} denotes the gender of the CEO and board members of firm i at time t ; CONTROLS_{it} denotes the control variables of firm i at time t ; ε_{it} is the error term.

We measure firm risk-taking based on financial leverage (LEV) and debt ratio (DEBTRA). GENDER is measured by the gender of the CEO (CEOGEN) and the number of female board members (FBM). We use firm size (FSIZE), number of board members (BSIZE), duality board members (BMD), CEO on the Board (CEOBM), CEO duality (CEODUA), and CEO age (CEOAGE) as control variables. Table 1 summarizes the variable measurements.

TABLE 1: Variable measurement

Variable	Code	Measurement
Financial leverage	LEV	Liabilities / Equity
Debt ratio	DEBTRA	Liabilities / Total assets
Firm size	FSIZE	Natural logarithm of total assets
Number of board members	BSIZE	Number of board members
Duality board members	BMD	Number of board members holding executive roles
CEO in board	CEOBM	1 if CEO is a board member; 0 otherwise
CEO duality	CEODUA	1 if CEO is a chairman; 0 otherwise
CEO age	CEOAGE	Age of CEO
CEO gender	CEOGEN	1 if male, 0 if female
Female board members	FBM	Number of female board members

This research utilizes panel data from 2015 to 2022, focusing on non-financial firms listed on the Ho Chi Minh City Stock Exchange (HOSE). The final sample includes 3,208 observations (401 firms over eight years), after excluding companies operating in the financial and utility sectors due to their unique regulatory environments and distinct capital structures. Financial and accounting data were obtained from the FiinPro database, a widely used data source for Vietnamese listed firms. Information related to CEO gender and board composition was manually collected from annual reports, corporate disclosures, and official company websites to ensure accuracy and completeness.

The sample comprises observations from firms across various industries, including consumer goods, industrials, utilities, materials, consumer services, pharmaceuticals, healthcare, and IT. Table 2 presents descriptive statistics, offering an overview of average values for each variable in the research dataset.

TABLE 2: **Descriptive statistics**

Variable	No of obs	Mean	Standard deviation	Min	Max
LEV	3,208	1.635	0.89	0.0026	3.927
DEBTRAT	3,208	0.473	0.22	0.002	0.686
FSIZE	3,208	27.194	1.551	23.33	32.814
BSIZE	3,208	5.42	1,25	3	11
BMD	3,208	1.74	0.99	0	7
CEOBM	3,208	0.869	0.336	0	1
CEODUAL	3,208	0.14	0.35	0	1
CEOAGE	3,208	49.58	8.57	25	80
GEN	3,208	0.92	0.26	0	1
FBM	3,208	0.80	0.96	0	5

Source: Author's calculations.

Table 3 presents the Pearson correlation coefficients among the key variables used in the regression models, providing preliminary insights into the direction and strength of bivariate relationships. As shown in this table, the correlation coefficients between pairs of independent variables are relatively low.

TABLE 3: Correlation matrix

	LEV	DEBTRA	FSIZE	BSIZE	BMD	CEOBM	CEODUA	CEOAGE	GEN	FBM
LEV	1,0000									
DEBTRA	0.98	1,0000								
FSIZE	-0.039	-0.038	1,0000							
BSIZE	-0.024	-0.032	-0.034	1,0000						
BMD	0.108	0.101	0.009	0.298	1,0000					
CEOBM	0.042	0.042	-0.001	0.027	0.263	1,0000				
CEODUA	-0.0005	0.007	0.007	0.012	0.273	0.027	1,0000			
CEOAGE	-0.086	-0.096	-0.001	0.108	0.213	0.095	0.151	1,0000		
GEN	0.071	0.0712	0.009	-0.028	-0.037	0.079	-0.048	-0.024	1,0000	
FBM	-0.125	-0.128	0.022	0.221	0.056	-0.092	0.010	0.022	-0.318	1,0000

Source: Author's calculations.

4. Results and discussion

To examine the influence of CEO gender and female board members on firm financial leverage, Pooled OLS, Fixed Effects Model, and Random Effects Model are employed. However, due to the problems of heteroskedasticity and autocorrelation issues, this research applies the FGLS (Feasible Generalized Least Squares) model to address these limitations. The regression results are shown in the table below.

TABLE 4: Regression results

Variable	(1.1)	(1.2)	(1.3)	(2.1)	(2.2)	(2.3)
	DEBTRA	DEBTRA	DEBTRA	LEV	LEV	LEV
SIZE	-37.97*** [-2.96]	476.2*** [-3.70]	-39.22*** [-3.06]	-38.42*** [-2.95]	-49.70*** [-3.71]	-39.78*** [-3.06]
BM	-30.262*** [-3.82]	-49.63*** [-5.65]	-29.87*** [-3.84]	-26.22*** [-3.27]	-45.22*** [-5.11]	-26.26*** [-3.36]
BMD	171.68*** [12.91]	164.04*** [12.08]	170.05*** [12.70]	173.11*** [12.96]	163.9*** [12.03]	171.6*** [12.76]
CEOBM	13.31 [0.33]	44.60 [1.09]	24.04 [0.60]	8.83 [0.22]	39.15 [0.96]	17.47 [0.44]
CEODUA	-81.40** [-2.36]	-83.56** [-2.34]	-87.14** [-2.53]	-72.98** [-2.11]	-72.81** [0.042]	-77.49** [-2.24]
CEOAGE	-16.34*** [-11.02]	-17.44*** [-11.44]	-16.20*** [-10.81]	-15.32*** [-10.30]	-16.14*** [-10.55]	-15.15*** [-10.07]

Variable	(1.1)	(1.2)	(1.3)	(2.1)	(2.2)	(2.3)
	DEBTRA	DEBTRA	DEBTRA	LEV	LEV	LEV
CEOGEN	204.67*** [4.40]	361.75*** [8.03]		198.68*** [4.26]	356.7*** [7.91]	
FBM	-157.2*** [-13.60]		-167.67*** [-14.82]	-156.42*** [-13.35]		-166.7*** [-14.63]
Cons	2933.9*** [21.26]	2917.76*** [20.49]	3131.1*** [23.61]	2888.6*** [20.81]	2860.5*** [19.98]	3082.8*** [23.09]
Wald chi2	598.32	365.72	574.91	563.29	342.70	544.04
Prob > chi2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

Note: t statistics in square bracket; ** p<0.01, *** p<0.001.

Source: Author's calculations.

Table 4 presents the regression results examining the relationship between gender-related leadership characteristics and corporate risk-taking behavior, measured using two proxies: the debt ratio (DEBTRA) and financial leverage (LEV). The analysis employs six model specifications to test robustness, all of which are estimated using Feasible Generalized Least Squares (FGLS) to account for heteroskedasticity and autocorrelation.

The coefficient on CEO gender (CEOGEN) is positive and statistically significant at the 1% level across all models where it is included, indicating that firms led by male CEOs are associated with significantly higher levels of financial leverage and debt ratios. This result is consistent with the theoretical expectation that male executives, on average, exhibit greater risk tolerance or overconfidence in corporate decision-making, resulting in more aggressive capital structures. These findings support previous empirical evidence in the literature (e.g., Faccio *et al.*, 2016; Huang and Kisgen, 2013) and reinforce the behavioral finance perspective embedded in the Upper Echelons Theory.

In contrast, the variable female board members (FBM) is negatively and significantly associated with both risk-taking proxies. The coefficients are consistently significant at the 0.1% level, suggesting that an increase in the number of female directors on the board is associated with more conservative financing behavior, characterized by lower reliance on debt. This aligns with research indicating that women generally exhibit greater risk aversion

(Jianakoplos and Bernasek, 1998), and it highlights the role of board gender diversity in mitigating excessive financial risk-taking.

The findings for CEO duality (CEODUA) also reveal a negative and significant effect on financial leverage, implying that when the CEO concurrently serves as the chairperson of the board, firms tend to maintain more conservative capital structures. This may reflect more cautious decision-making due to increased responsibility and accountability associated with dual roles.

Regarding CEO age (CEOAGE), the coefficients are uniformly negative and significant across all model specifications. This result suggests that older CEOs tend to adopt more risk-averse financial policies, potentially due to accumulated experience or a desire to preserve legacy and organizational stability.

The results for board-related control variables are mixed. Board size (BM) exhibits a negative and significant association with financial leverage, indicating that larger boards may be more effective in monitoring managerial behavior and constraining risk exposure. Conversely, board member duality (BMD), which refers to the presence of executives also serving as board members, shows a strong and positive relationship with both risk measures, suggesting that greater executive influence within the boardroom may encourage more risk-prone financing strategies.

The variable "CEO as board member" (CEOBM) is positive but not statistically significant in any of the models, indicating that CEO board membership alone may not have a strong independent effect on leverage decisions when other factors are controlled for.

In summary, the regression findings provide robust empirical evidence that gender-related characteristics at both the CEO and board levels significantly influence corporate financial risk-taking. Specifically, male leadership and limited female board representation are associated with more aggressive capital structures, while female leadership traits promote more conservative financial behavior. These results highlight the importance of gender diversity in promoting financial prudence and enhancing governance quality, particularly in emerging markets such as Vietnam.

5. Conclusion

This research examines how the gender of CEOs and the proportion of female board members influence firms' financial leverage decisions, serving as a proxy for risk tolerance.

The findings provide compelling evidence that gender has a significant impact on corporate financial behavior. Firms led by male CEOs tend to adopt more aggressive capital structures, reflected in higher leverage ratios, suggesting a greater inclination toward financial risk-taking. In contrast, companies with higher female board representation tend to employ more conservative financial strategies, supporting the assertion that gender diversity contributes to cautious and disciplined decision-making.

These results reinforce theoretical predictions from the Upper Echelons Theory and behavioral finance literature, which emphasize the role of executive characteristics in shaping strategic outcomes. Moreover, the study highlights the importance of board structure and demographics, including CEO age, CEO duality, and board composition, in influencing corporate risk preferences.

By focusing on an emerging market context, this research extends the existing literature in several meaningful ways. First, it incorporates both CEO gender and board-level gender diversity into the analysis, providing a holistic view of the impact of gender on corporate risk-taking. Second, it contributes new empirical insights from Vietnam, a country with distinctive institutional dynamics and evolving corporate governance practices. These findings have practical implications for policymakers and shareholders seeking to enhance governance quality and financial discipline by increasing gender diversity in leadership.

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