

Building Resilience: How Board Gender Diversity and Top Executive Gender Affect Company Leverage

The study examines the association between board gender diversity, top executive gender and financial leverage as a source of financial flexibility to support building company resilience in anticipation of crises and downturns. The study is based on listed companies in the Nordics and Baltics.

Keywords: board, gender diversity, CEO, leverage, resilience.

Straipsnyje nagrinėjamas ryšys tarp valdybos lyčių įvairovės, aukščiausių vadovų lyties ir finansinio svorto kaip finansinio lankstumo šaltinio, padedančio stiprinti įmonių atsparumą numatomiems sukrėtimams ir nuosmukiams. Tyrimas pagrįstas Šiaurės ir Baltijos šalių biržose kotiruojamų įmonių duomenimis.

Raktiniai žodžiai: valdyba, lyčių įvairovė, vadovas, finansinis svortas, atsparumas.

Introduction

Economic cycles, financial crises, and, more recently, pandemics have maintained scholarly interest in the resilience of companies and their drivers. Studies addressed the concept of resilience from multiple perspectives. Management literature focused on individuals', teams and organisational resilience factors, while finance literature draw attention to recovery from a drop in performance of companies (Ilseven & Puranam, 2021). According to M. K. Linnenluecke (2017), resilience in general can be perceived as

the ability of firms to react to and recover from disturbances, while minimising the negative effects on business continuity. Conz E. Conz and G. Magnani (2020) suggested a dynamic approach to the resilience of firms. Previous research demonstrated the multifaceted approaches of firms to implement measures which build business resilience in advance of unexpected external crises. However, there is a lack of studies addressing the issues of how firms develop resilience to crises.

A broad stream of research addressed the issues of borrowing and leverage as sources of financial risk as well as

Valdonė DARŠKUVIENĖ – Doctor of social sciences, economics, professor at ISM University of Management and Economics, Lithuania. Address: Gedimino str. 7, Vilnius, Lithuania. Email: valdone.darskuviene@ism.lt

Roberta MILIŪNĖ – Citco Lietuva. Address: Gynėjų str. 16, Vilnius, Lithuania. Email: robeerta@gmail.com

Siuzana ŠČERBINA-DALIBAGIENĖ – Doctor of social sciences, economics, law, ISM University of Management and Economics, Lithuania. Address: Gedimino str. 7, Vilnius, Lithuania. Email: Siuzana.Scerbina-Dalibagiene@faculty.ism.lt

flexibility. Mainstream studies developed models suggesting a positive effect on firm performance (Frank & Goyal, 2009). On the other hand, lower leverage proved to drive financial flexibility, which mitigates investment inefficiency through reducing overinvestment, lower financial risks and support firm survival under crisis (Wu et al., 2024; Gamba and Triantis, 2008). The study by H. DeAngelo et al. (2003) also supported theories in which firms deleverage to restore ample financial flexibility.

An extensive number of studies linked corporate governance and firm financial policy. However, in spite of multiple research on the relationship between corporate governance, in general, board composition, in particular, and company performance (*see* Adams & Ferreira, 2009; Erhardt et al., 2003), the role of composition of the boards, diversity, gender involvement in anticipation of critical conditions and developing company resilience remains underexplored.

Our study investigates the association between board gender diversity, top executive gender and financial leverage as a source of financial flexibility to support building company resilience in anticipation of crises and downturns. We focus on listed companies of Nordics, with long-standing liberal governance practices and enactment of regulations promoting female participation on boards and in managerial positions, and the Baltics. Since the introduction of female quotas on boards in Norway in 2003, their representation has increased significantly (Randoy et al., 2006; Ahern & Dittmar, 2012; Eckbo et al., 2022). However, empirical studies on female representation and role in decision making, as well as

performance effects in the Nordic region and in broader contexts, have produced mixed results. Research outcomes are inconsistent, subject to specific economic environment, internal company factors, corporate culture, and social environment. The focus of our empirical analysis is the unique setting of the period between two crises – the financial crisis of 2007–2008 and the global pandemic of 2020, followed by subsequent crises, which have formed multiple challenges to business firms. This context calls to re-examine governance mechanisms and the female role in driving firm financial flexibility and resilience.

Following the above considerations, we raise **the following research question**: What is the influence of board gender diversity and top executive gender on company financial leverage, as a source of flexibility, driving firm resilience?

Object of the study. The board's gender diversity, top executive gender, and their association with company financial leverage.

The aim of the study is to examine the association between board diversity, top executive gender, and financial leverage as a source of flexibility, driving firm resilience, in listed companies of Nordic and Baltic countries.

The study is based on a data sample from 133 listed companies of Nordic and Baltic countries, sourced from the Bloomberg database, covering the period of 2012–2020. The empirical study suggests a positive effect of gender diversity on a company's financial leverage. The effect of the gender of top executives remains positive but insignificant.

Our study contributes to the body of research by applying the targeted

theoretical frameworks and examining key mechanisms of the effect of gender diversity and top executive gender on company financial decision-making, specifically, leverage. This study enriches the existing research about the phenomena, extending its geographical scope to the Nordic and Baltic states, investigating the specific roles of gender diversity and company leverage outcomes, driving firm resilience.

Background

The background focuses on a literature review which explores previous studies dedicated to the issue of how and in what way gender board diversity exerts influence on corporate leverage. Firm resilience to crisis in general is related to a firm's ability to build internal capabilities and accumulate resources to withstand the negative external and internal pressures. Based on M. K. Linnenluecke (2017), resilience in general can be perceived as the ability of firms to react to and recover from disturbances, while minimising the negative effects on business continuity. E. Conz and G. Magnani (2020) suggested a dynamic approach to the resilience of firms when systematising multiple studies on business resilience. Continuation of business is not only based on the resilience of firms to the negative external crisis and building on it to gain competitive advantages against industry peers, but also influences the developments within sectors and national economies in general. Studies following resource – based view linked firm resilience and survival to specific resources, e.g. the

firm's profitability and financial constraints (Bellone et al., 2008), which are significant when coping with recurring economic and financial shocks.

Multiple studies examined financial policy, borrowing, leverage and capital structure decisions, addressing financial risks, firm financial distress, bankruptcies, survival and resilience (Frank & Goyal, 2009; Rajan & Zingales, 1995; Parsons & Titman, 2009), with links to corporate governance as a more focused research stream. W. Wu et al. (2024) examined financial flexibility as one of the strategic choices at boardrooms, particularly important when dealing with post-crisis recoveries. Their study proved that financial flexibility mitigates investment inefficiency through reducing overinvestment, implying that financial markets are more sensitive to corporate financial policies. Scholars linked financial flexibility to the companies' financial policies, their ability to access financing at low cost. Multiple proxies to measure it were applied, including financial leverage and cash-holdings (DeAngelo and DeAngelo, 2007). Higher financial leverage is associated with tentative opportunistic investments, which leads to weaker performance, but also stronger management control. In the presence of financial constraints, the companies face the negative effects of external shocks. Hence, lower leverage is linked with higher flexibility, stronger borrowing power and investment potential. During periods of economic and financial crisis, stronger financial flexibility allowed the companies to cope with unexpected negative consequences (Gamba and Triantis, 2008). Thus, following economic cycles, financial leverage and flexibility

turn into a source of building companies' resilience in anticipation of downturns.

Scholars' increasing attention to corporate governance, in general, board composition, in particular, and its links to company performance, is based on several theoretical frameworks. Shareholders' theory addresses shareholder value maximisation, assuming the board acts as a mediator between principal and agent, performing the role of oversight. Stakeholders' theory focuses on the board representation of a broader set of interests, resolving the conflicts and aligning their objectives with the core shareholder goals. Empirical and conceptual studies focus on duly representation of shareholders and other stakeholders on company boards. Boards are considered the most critical component in improving corporate governance. Company board members are responsible for complex monitoring and advisory functions. Board composition, experience, and diversity are increasingly perceived as means for managing firm performance (Adams & Ferreira, 2009). Females are perceived to have more varied professional and life experience than men, and therefore often accept or propose more varied and riskier decisions to the board, thus contributing to a wider range of decision-making options and potentially higher returns for shareholders (Poletti-Hughes & Briano-Turrent, 2017). The size of the board, the length of the term of office, the gender distribution, and the independence of the board are key drivers in research in the field. In his study, R. Damiano (2025) considered board diversity as a resilience determinant for small and medium enterprises. G. W. Dowell et al.

(2011) argued the importance of corporate governance mechanisms for firms in financial distress. They suggested that financial crisis changes the relative costs and benefits of governance mechanisms, pointing out the more important role of independent and smaller boards, and the increasingly beneficial CEO power, allowing for a more rapid response to the crisis. G. Mattei et al. (2025) examined the financial structure of Italian SMEs, specifically, in the period of uncertainty or crisis, and suggested the effect of gender ownership on the preferences of financing sources. F. M. Cesaroni & A. Sentuti (2016) showed that firms were very cautious in accessing finance during the pandemic crisis, and female-led firms asked for bank loans more rarely than male-led ones. On the other hand, A. Ahmed & M. Atif (2020) suggested that firms with women on the board are not conservative in using debt financing.

A more recent stream of research focuses on the female role in top executive positions and financing decision-making. S. Datta et al. (2025) established a gender-based behavioural dimension to corporate leverage and debt maturity choice. They suggested that transitions from male-to-female executive(s) result in shortening of debt maturity over the post-transition period and thus have positive effect on financial risk. Conversely, K. Krystyniak & V. Staneva (2024) explored firms with female CFOs at or close to their optimal leverage and found that their capital structure is no different from that of firms with male CFOs. Drawing on upper echelons theory, M. K. Weck et al. (2022) examined the complex CEO gender and board interface, proposing that differences within

directors' cognition and experiences positively influence decision-making processes, with female directors showing less task engagement. Executive gender issues in family firms were studied by A. De Massis et al. (2024). They performed a broad study examining the association between executive gender and firm leverage decisions, suggesting that family ownership increases the reluctance of female-led firms to use leverage. To sum up, individual traits of board members as well as top executives, including gender, can have a significant impact on decision-making regarding the company's financing policy and leverage; however, the results of the studies remain inconclusive.

Mainstream corporate governance literature focuses on firm-level studies for specific countries, including the Nordics. Norway, Denmark, Sweden, and Finland are considered liberal countries that support and value equal human rights and are characterised by exceptional corporate governance characteristics and practices. These countries can serve as an example to other countries with their experience, encouraging greater participation of women and independent directors on company boards and seeking diverse benefits for companies. J. Garcia-Blandon et al. (2024) addressed the extraordinary trend of an increase in the number of women directors in Scandinavia and found scarce evidence that the appointment of female directors to the boardroom has a significant impact on a firm's solvency, specifically in Norway. Some studies examined board gender diversity effects in Norway (Randoy et al., 2006; Ahern & Dittmar, 2012; Eckbo et al., 2022) and the Baltics

(e.g., Voveris et al., 2023), however, with inconclusive results. Board diversity links specifically with company leverage in Nordic and Baltic countries remain relatively understudied.

Based on a review of previous studies on company resilience, financial flexibility, and leverage, we assume that in anticipation of a crisis and potential financial constraints, the companies introduce more rigid risk management and financing policies. Lower financial leverage allows companies to have larger financial flexibility (Wu et al., 2024). In addition, this might form a strong background for companies' resilience during unexpected external crises and during cash slack periods. Previous studies indicated that company boards are directly involved in setting and executing risk management policies, company board structure, and diversity, and risk attitudes are of major importance. Following the above reasoning, we propose that a larger share of women on boards, as well as female CEOs, promote more rigid financing policies, leading to lower leverage. We assume that stronger financial flexibility, driven by gender participation on boards and in the CEO role, suggests building company resilience in anticipation of economic downturns. We base our propositions on the stakeholder theory, assuming that women undertake the role of broader stakeholder representation on boards.

Subsequently, we build our arguments on extant research on managerial overconfidence, grounded in the upper echelon's theory. CEOs with overly optimistic attitudes towards investment result in overinvestments and sub-optimal decisions related to borrowing and leverage

(Banerjee et al., 2015). J. Chen et al. (2019) proved that female directors are linked with less aggressive investment policies, and improved financial performance. They also identified that firms with lower (not sufficient) female board representation suffer a greater drop in performance as a result of the 2007–2009 crisis than those with stronger female board representation. Following J. Chen et al. (2019), we anticipate that female CEO may mitigate over-optimism biases and lead to more rigid financing policies, and hence, lower leverage. Accordingly, we propose the following hypothesis:

H1: The larger share of women on the boards of Nordic and Baltic listed companies is associated with lower financial leverage.

H2: The top executive gender (female) of Nordic and Baltic listed companies is associated with lower financial leverage.

Further on, we test the hypothesis anticipating that stronger female representation on boards as well as in CEO positions can reinforce the impact of other board characteristics, such as independence, and has a positive effect on borrowing decisions and financial leverage, as a source of financial flexibility. Lower leverage, typically associated with lower financial risks, is especially relevant in building company resilience in anticipation of unexpected external shocks and market downturns.

Methodology

In order to examine the association between female representation in company boards and top management positions in the company, and the company's finan-

cial leverage, the study used a panel data set. The sample consisted of data from 133 companies listed on the Nasdaq Nordic market from Sweden, Finland, Denmark, Norway, Lithuania, Latvia, and Estonia. The data was collected from the Bloomberg database, Nasdaq OMX Nordic, and data provided on company websites, including financial reports and board composition information. The study covers the period from 2012 to 2020. The data sample includes a total of 133 boards from listed companies, forming a balanced data set. Over the period, the total number of board members in the sample increased steadily from 1066 to 1103, while the number of women on the boards of the companies increased at a larger pace – from 232 to 351, with variation among companies from different countries in Nordics and Baltics. Such a growth was led by Norway, after the introduction of mandatory gender quotas on boards, with a spillover effect on other neighbouring countries.

In this study, the dependent variable is financial leverage, defined as the ratio of total liabilities to the company's equity (Wu et al., 2024; DeMassis et al., 2024; Krystyniak & Staneva, 2025). Modern capital structure literature uses a number of different proxies for financial leverage. The ratio suggests the dependence of companies' operations on external and internal sources of financing. The higher the ratio, the greater the influence of external sources of financing, the stronger the potential risks and tentative negative effects under an unexpected economic crisis. Therefore, we assume that companies' conservative financial policies are linked to building their resilience in anticipation of adverse external events.

The independent variables to examine the effect of female representation in company boards and top positions on company financial leverage are the following:

1. The percentage of women on the board is measured as the ratio of the number of females on the board to the total number of members on the board of the company.

2. CEO Gender – is a dummy variable. If the CEO of the company is a female, it takes the value of 1; if the CEO is a male, it takes the value of 0.

Data on both variables were hand-collected from company websites and financial reports. We introduce several control variables, linked to the board structure and company performance. A list of variables, as well as their definitions, is provided in Table 1.

This research controls for a variety of board characteristics and company-level variables to increase the precision

of the estimates and minimise the risk of endogeneity bias/omitted variable bias. With regard to board-level control, this study controls for board independence and CEO duality, which are widely used in previous studies. Data on board independence was collected from open company information according to its representation of board members. CEO duality information was hand-collected, checking for the same names on the board list and for the CEO. We do not control for board size, as this is either a mandatory regulation or a widely accepted uniform practice within the examined set of listed companies in Nordic and Baltic countries. With regard to company-level controls, we employ company size and financial performance (specifically, return on equity) measures. We checked for a variety of financial performance metrics and followed mostly the ones employed in previous studies. Finally, we use year dummies to control

Table 1. Definition of variables

Variable	Mnemonic	Description
Leverage ratio	LevR	The ratio of total liabilities and equity is an indication of the financing policy and financial flexibility of the company.
Women representation	WBoard	Share of female members on the board of the company (%)
Gender of the CEO of the company	CEOgender	A dummy variable that takes a value of one when the CEO is female, and zero otherwise
Women in executive director positions	WDir	Share of female executive directors of the company (%)
Independence of the board	BIndep	Share of independent directors on the board of the company (%) Number of independent board members to total board size of the company
CEO chair of the board	CEODuality	A dummy variable that takes a value of one when the CEO of the company is also the chairman of the board, and zero otherwise
Firm performance	ROE	Return on equity, measured as the net income to equity ratio
Company size	Ln_TA	Company size is expressed as the logarithm of the book value of the company's assets

Source: compiled by the authors.

for year effects. Specific industry controls are not employed due to the high diversification of industries and the rather small sample size.

For testing the hypothesis, two empirical models were developed, based on K. Krystyniak & V. Staneva (2024) and A. De Massis et al. (2024). In order to test the H1 hypothesis and examine the effect of board gender diversity on company financial leverage, the following empirical equation was constructed:

$$\text{LevR}_{it} = \beta_0 + \beta_1 \text{WBoard}_{it} + \beta_2 \text{BIndep}_{it} + \beta_3 \text{CEODuality}_{it} + \beta_4 \text{WDir}_{it} + \beta_5 \text{ROE}_{it} + \beta_6 \ln_TA_{it} + \Theta t + \mu_i + \varepsilon_{it} \quad (1)$$

where: LevR_{it} – financial leverage, measured as total liabilities-to-equity ratio in company i in period t ; WBoard_{it} – women representation on boards, measured as the share of female on the board of company i in period t ; BIndep_{it} – board independence, measured as share of independent directors (%) on the board of company i in period t ; CEODuality_{it} – CEO as chair of the board in company i in period t , a dummy variable that takes a value of one when the CEO of the company is also the chairman of the board, and zero otherwise; WDir_{it} – proportion of female executive directors (%) in company i in period t ; ROE_{it} – return on equity in company i in period t ; \ln_TA_{it} – company size expressed as the logarithm of the book value of assets of company i in period t ; Θ_t – time-varying, uniform factor applied to all variables; μ_i – time-invariant country-specific factors; ε_{it} – random error; β_0 – constant invariant factor.

The second hypothesis aims to examine whether the gender of the CEO (specifically, female) of Nordic and Baltic

listed companies is associated with lower financial leverage. The hypothesis testing is performed based on the following regression model:

$$\text{LevR}_{it} = \beta_0 + \beta_1 \text{CEOGender}_{it} + \beta_2 \text{BIndep}_{it} + \beta_3 \text{CEODuality}_{it} + \beta_4 \text{WDir}_{it} + \beta_5 \text{ROE}_{it} + \beta_6 \ln_TA_{it} + \Theta t + \mu_i + \varepsilon_{it} \quad (2)$$

where: LevR_{it} – Liabilities-to-equity ratio in company i in period t ; CEOGender_{it} – gender of the CEO of company i in period t , as a dummy variable that takes a value of one when the CEO is female, and zero otherwise. We use the same set of board and firm-specific variables as those of model (1).

The reliability and validity of the data sources used in this study are vital for ensuring the robustness of the research findings. The selection of data sources was based on their relevance to the research objectives and their availability for the sample firms. It follows a 95% significance level. The joint significance of the different group means test was performed to test the fit of the fixed effects model. The test proved the fit of the model ($p = 1.00334e-069$). The Breusch-Pagan test for assessment of Pooled OLS versus the Random Effects model was performed. In our case, it was rejected ($p = 2.06934e-122$). The Hausman test showed that the fixed effects model is adequate ($p = 3.00051e-007$). Therefore, empirical analysis was performed employing a fixed effects model.

Results

In this section, we present the empirical research outcomes and discuss the implications of the results. The results of descriptive statistics are presented in Table 2.

Table 2. Descriptive statistics

Variable	Mean	Median	S.D.	Min	Max
LevR	62.8	49.8	75.3	0.000	1751
WBoard	0.271	0.270	0.134	0.000	0.750
CEOGender	0.0535	0.000	0.225	0.000	1.00
CEODuality	0.00752	0.000	0.0864	0.000	1.00
BIndep	62.2	62.5	22.3	0.000	100.
WDir	19.0	18.2	15.3	0.000	85.7
ROE	13.5	14.0	25.3	-242.	263.
ln_TA	7.57	7.85	1.68	1.46	11.0

The correlations of the selected variables are summarised in Table 3. Correlation analysis implies no multicollinearity.

Table 3 indicates that the share of women on the board (WBoard), the duality of the CEO (CEODuality) and the share of female executive directors

(WDir) correlate negatively with leverage. The gender of the CEO (CEOGender, female) and the proportion of independent directors on the board (BIndep) correlate positively with leverage. Profitability ratios, return on assets (ROA) and return on equity (ROE) correlate negatively with leverage.

Table 3. Correlation results

	LevR	WBoard	CEOGender	CEODuality	BIndep
LevR	1.0000	-0.0212	0.0106	-0.0031	0.0572
WBoard		1.0000	0.1263	-0.0981	0.1148
CEOGender			1.0000	-0.0207	0.0994
CEODuality				1.0000	0.0205
BIndep					1.0000
		WDir	ROA	ROE	ln_TA
LevR		-0.0095	-0.2204	-0.2789	0.1064
WBoard		0.2545	0.1231	0.1404	0.2679
CEOGender		0.3690	-0.0203	-0.0472	-0.0871
CEODuality		0.0045	-0.0262	-0.0285	0.0561
BIndep		0.1161	-0.0039	-0.0296	0.0718
WDir		1.0000	0.0525	0.0214	0.0711
ROA			1.0000	0.8935	0.0335
ROE				1.0000	0.1032
ln_TA					1.0000

In order to unleash the effect of gender diversity in Nordic and Baltic listed companies on financial leverage, when lower leverage implies building company resilience in anticipation of unexpected external crises and economic downturns, we empirically examined two hypotheses raised in the previous section. We estimated models (1) and (2) using panel data regression with fixed effects.

We tested the first hypothesis, that a larger share of women on boards of Nordic and Baltic listed companies is associated with lower financial leverage, and present our results in Table 4.

First, we observe that the total sample contained 1197 firm-year observations. The results show that the share of women on the board of directors produces a statistically significant negative effect. This confirms the hypothesis that female

gender diversity on boards reduces the financial leverage in listed companies in the Nordics and Baltics. The duality of the CEO and the proportion of female executive directors on the board of the company have statistically insignificant effects on leverage. Conversely, the proportion of independent board members exerts a modest positive yet statistically insignificant influence on leverage. The effect of return on equity is statistically significant. The results corroborate previous studies that the higher the return on equity of a company, the lower the need for external financing. The size of the company has a positive, statistically significant effect.

We examined the second hypothesis and summarised the results in Table 5. We tested whether CEO gender (specifically, female) in Nordic and Baltic listed

Table 4. The effect of the share of women on the board on company financial leverage

	Coefficient	Std. Error	t-ratio	p-value	
const	-186.609	43.5747	-4.283	<0.0001	***
WBoard	-58.7024	22.4566	-2.614	0.0091	***
CEODuality	2.54840	23.0263	0.1107	0.9119	
BIndep	0.445757	0.178646	2.495	0.0127	**
WDir	-0.0221105	0.201589	-0.1097	0.9127	
ROE	-0.701710	0.0840441	-8.349	<0.0001	***
ln_TA	33.0481	5.81335	5.685	<0.0001	***
Year_2013	1.80624	7.12733	0.2534	0.8000	
Year_2014	-5.75039	7.16187	-0.8029	0.4222	
Year_2015	-9.31195	7.23752	-1.287	0.1985	
Year_2016	-9.91723	7.42237	-1.336	0.1818	
Year_2017	-11.0376	7.51632	-1.468	0.1423	
Year_2018	-7.87155	7.68969	-1.024	0.3062	
Year_2019	3.01925	8.01953	0.3765	0.7066	
Year_2020	13.4807	8.18878	1.646	0.1000	

Note: Number of observations – 1197; cross-sectional units – 133, ***significant at the 5% level.

Table 5. The effect of CEO gender on company financial leverage

	Coefficient	Std. Error	t-ratio	p-value	
const	-195.989	43.5761	-4.498	<0.0001	***
CEOGender	0.735105	10.5581	0.06962	0.9445	
CEODuality	4.27484	23.0916	0.1851	0.8532	
BIndep	0.385918	0.177801	2.171	0.0302	**
WDir	-0.0316498	0.205223	-0.1542	0.8775	
ROE	-0.720666	0.0840885	-8.570	<0.0001	***
ln_TA	33.1385	5.83479	5.679	<0.0001	***
Year_2013	1.17261	7.14642	0.1641	0.8697	
Year_2014	-6.84696	7.17316	-0.9545	0.3400	
Year_2015	-11.5266	7.21336	-1.598	0.1104	
Year_2016	-13.8216	7.29884	-1.894	0.0585	*
Year_2017	-15.3374	7.36878	-2.081	0.0376	**
Year_2018	-12.5935	7.53591	-1.671	0.0950	*
Year_2019	-2.47070	7.78645	-0.3173	0.7511	
Year_2020	7.92605	7.97367	0.9940	0.3204	

Note: Number of observations – 1197; cross-sectional units – 133; ***significant at the 5% level.

companies is associated with lower financial leverage, assuming that lower leverage implies building company resilience in anticipation of unexpected external crises and economic downturns.

The results presented in Table 5 show that females in top executive positions have a positive, but statistically insignificant, effect on the financial leverage. Consequently, our findings do not support the hypothesis that companies with a female CEO are associated with lower leverage. The duality of the CEO and the proportion of independent board members both have a positive, albeit statistically insignificant, effect on leverage. The proportion of female executive directors in a company has a negative but statistically insignificant effect. The ROE variable is statistically significant, with a small negative effect. Company size has a statistically significant effect on leverage.

Our findings might be driven by the rather limited phenomenon of female CEOs (as indicated by descriptive statistics) among the listed companies in the Nordics and Baltics.

Discussion

Previous research concentrated to a large extent on board structure as a mechanism to improve board efficiency and drive company performance. A limited number of studies examined the role of the board of companies in building resilience in anticipation of the crisis periods (Ferrero-Ferrero et al., 2012; Cesaroni et al., 2020; Dowell et al., 2011). Multiple studies suggested a diverse approach to the concept of resilience – on individual, entrepreneurial, company, industry, and country level

(Ahmed et al., 2021; Baumöhl and Kočenda, 2022; Bughin, 2024). As conceptualised by M. K. Linnenluecke (2017), resilience, in general, can be perceived as the ability of firms to react to and recover from disturbances, while minimising the negative effects on business continuity. Recent studies on financial and economic crisis link resilience to company financial performance as proxied by financial leverage, risks and financial flexibility, financial distress.

Previous empirical studies with a focus on gender issues on boards of the companies in multiple contexts produced mixed results, which can be attributed to institutional and cultural contexts, specific economic drivers of decision making on the board level (Adams & Ferreira, 2009; Dowell et al., 2011; Randoy et al., 2006; Eckbo et al., 2022). On one hand, studies suggested that the stronger female representation on the board might have a positive effect on company performance, e.g. on the level of corporate debt, risk taking, and financial flexibility (García & Herrero, 2021; Garcia-Blandon et al., 2022; Poletti-Hughes & Briano-Turrent, 2019; Datta et al., 2021; Weck et al., 2022, and others). On the other hand, studies showed contradictory effects, suggesting female participation may not automatically translate into a unique contribution of female board members and directors (Weck et al., 2022). Chen et al. (2019) argued for the need for female board representation based on the arguments of mitigating managerial overconfidence, its negative effects on risks and performance, while Banerjee et al. (2015) focused on improving governance to address CEO overconfidence spillovers in general.

Scholars provided arguments that a higher proportion of women on the board strengthens the reputation of the companies and leads to lower information asymmetry, while the presence of independent board members increases bank confidence in the company. Our results suggest that, in general, female participation in the boardroom has a positive effect on performance as proxied by financial leverage. The effects might be region-specific, as Nordic corporate governance has a long-standing liberal governance reputation and support for gender diversity. Moreover, we link the effects to the company's financial flexibility and its role in adverse economic conditions. While an increase of leverage may be linked to the company's creditworthiness as assessed by lenders, high leverage might limit companies' financial flexibility in anticipation of a crisis and may lead to distress and extreme negative performance during crisis periods.

Conclusions

Over the last decades, there has been increasing attention on corporate governance in general, and on board composition and its links to company performance, specifically, grounded on several theoretical frameworks, including shareholder theory, stakeholder theory, and upper echelon theory. Empirical and conceptual studies focused on duly representation of shareholders and other stakeholders on company boards. However, studies examined to a limited extent the composition of boards and their role during the crisis events, especially in building company resilience and risk management in anticipation of a crisis.

Gender representation on corporate boards, as well as the role of female CEOs, gained increasing attention in studies, focusing on specific gender-linked features in driving company performance. Among multiple countries' board composition practices, Nordic countries have been advanced in regulatory focus on board structures encompassing gender diversity. However, previous studies on Nordic company experiences, linking board diversity and performance, produced mixed results. Few studies examined diversity-linked corporate governance practices of Baltic companies. In addition, limited research focused on female participation in boards and in CEO positions and links to company borrowing and leverage. The latter offers flexibility, which is driving resilience under critical conditions in anticipation of a crisis.

This study offers insights into the nexus between female representation on company boards and in CEO positions, and financial leverage. Previous literature pointed out that lower leverage is associated with stronger financial flexibility, which is especially relevant for building company resilience in anticipation of unexpected external crises and market downturns. Financial flexibility enables boards to manage risks under uncertainties and to benefit from emerging business development opportunities.

Using a comprehensive dataset from Nordic and Baltic countries on listed companies available from Bloomberg, covering the period from 2012 to 2020, as well as hand-collected data on board structure and female representation, we examined how female representation

on boards and in CEO positions is associated with company financial leverage. Our sample included data reflecting company financial policy changes in the aftermath of the global financial crisis of 2007-2008, and tentative financial flexibility build-up before the pandemic and subsequent economic crisis.

The empirical results show that female gender representation on boards of listed companies in the Nordics and Baltics contributes to lower financial leverage, thus suggesting stronger financial flexibility. This is in line with stakeholder theory propositions, suggesting that broader stakeholder representation, as is the case with female involvement on boards, drives better company risk management and stronger performance. Interestingly, the study points out that CEO duality has a strong positive association, while board independence has a positive, but weak association with financial leverage. The results of the study support the notion of managerial overconfidence, as suggested by the upper echelon's theory; however, it indicates that its effects can be mitigated by gender diversity policies.

The present study is limited to examining the effect of female gender diversity, while nationality, experience, educational background, age, and other diversity characteristics of board members are left out of the scope of the study. Finally, future research may adapt the conceptual framework to studies incorporating crisis effects and examining the effects of gender diversity in the boardroom on company resilience in a broader setting.

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Valdonė DARŠKUVIENĖ, Roberta MILIŪNĖ, Siuzana ŠČERBINA-DALIBAGIENĖ

ĮMONIŲ ATSPARUMO STIPRINIMAS: MOTERŲ VALDYBOSE IR VADOVO PAREIGOSE VAIDMENS SAŠAJA SU FINANSINIU SVERTU

S a n t r a u k a

Straipsnio tikslas – ištirti ryšį tarp valdybos lyčių įvairovės, aukščiausių vadovų lyties ir finansinio sverto kaip finansinio lankstumo šaltinio, padedančio stiprinti įmonių atsparumą numatomiems sukrėtimams ir nuosmukiams. Įmonių atsparumas krizėms susijęs su įmonių gebėjimu kurti vidinius pajėgumus ir kaupti išteklius, kad galėtų atlaikyti neigiamą išorinį ir vidinį spaudimą. Remiantis M. K. Linnenluecke (2017), atsparumas gali būti suvokiamas kaip įmonių gebėjimas reaguoti į sutrikimus ir atsigauti po jų, kartu mažinant neigiamą poveikį verslo tęstinumui. Atliktas tyrimas grindžiamas keliais teoriniais požiūriais, įskaitant akcininkų teoriją, suinteresuotų asmenų teoriją bei aukščiausio lygio vadovų teoriją.

Iki šiol moksliniai darbai, siejantys valdybos lyčių įvairovę, aukščiausių vadovų lytį ir veiklos rezultatus, įskaitant skolinimąsi ir svertą, pateikė nevienareikšmiškus rezultatus, tarp jų ir Šiaurės šalių, kurios yra pažengusios reguliavimo srityje, susijusioje su lyčių įvairovę apimančiomis valdybos struktūromis, atvejus. Empiriniai tyrimai, kuriuose daugiausia dėmesio buvo skiriama lyčių skirtumams įmonių valdybose įvairiuose kontekstuose, parodė valdysenos skirtumus, priskirtinus instituciniams, kultūriniais kontekstams, specifiniams ekonominiams veiksniams, lemiantiems sprendimų priėmimą valdybos lygmeniu (Adams & Ferreira, 2009; Dowell et al., 2011; Randoy et al., 2006; Eckbo et al., 2022). J. Chen ir kt. (2019) teigė, kad moterų

atstovavimas valdyboje yra būtinas, nes tai padeda sumažinti vadovų pernelyg didelį pasitikėjimą savimi ir jo neigiamą poveikį rizikai bei veiklos rezultatams. S. Banerjee ir kt. (2015) atkreipė dėmesį į valdysenos gerinimą, siekiant spręsti generalinio direktoriaus pernelyg didelio pasitikėjimo savimi problemą, grindžiamą aukščiausio lygio vadovų teorija. Moterų dalyvavimas valdyboje dažnai rodo, jog jos atstovauja platesniam suinteresuotų asmenų ratui, tad sudaro galimybes atsižvelgti į jų nuostatas priimant sprendimus valdybų lygmenyje. Įmonių finansinis svertas gali būti vertinamas kaip svarbus valdybų darbo indikatorius. Žemesnis finansinis svertas suteikia įmonėms didesnę finansinę lankstumą (Wu et al., 2024) bei gali sudaryti tvirtą pagrindą įmonių atsparumui neigiamų išorinių sukrėtimų ir pinigų trūkumo laikotarpiams.

Šiam empiriniam tyrimui panaudoti 133 kotiruojamų Šiaurės ir Baltijos šalių bendrovių duomenys 2012–2020 m. laikotarpiu, integruoti su viešai prieinama informacija apie valdybų sudėtį.

Rezultatai atskleidė teigiamą lyčių įvairovės poveikį įmonės finansiniam svertui Šiaurės ir Baltijos šalių kotiruojamose bendrovėse. Žemesnis finansinis svertas tipiškai atspindi griežtesnę rizikų valdymą, prisideda prie įmonių finansinio lankstumo krizės sąlygomis, sukuria prielaidas išvengti nemokumo situacijų. Tyrimas taip pat parodė teigiamą, nors ir silpną, moterų aukščiausio lygio vadovų poveikį pasirenkant žemesnę finansinę svertą ir taip prisidedant prie įmonių atsparumo stiprinimo.

Straipsnyje nagrinėti lyčių įvairovės aspektai, tačiau valdybos narių tautybė, patirtis, išsilavinimas, amžius ir kiti įvairovės požymiai į tyrimą neįtraukti. Ateityje tęsiant mokslinius tyrinėjimus šią konceptualią prieigą būtų galima pritaikyti nagrinėjant krizių poveikį valdybos narių sudėčiai bei įmonių atsparumui platesniame kontekste.

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