GENDER DIVERSITY: ARE WOMEN AT THE STRATEGIC LEVEL LESS RISK-TAKING THAN MEN?

Juliana Osmani *, Sanie Doda **

* *Corresponding author,* Business Faculty, Aleksandër Moisiu University, Durrës, Albania
Contact details: Business Faculty, Aleksandër Moisiu University, Miqësia Street 2001, Spitallë, Durrës, Albania
** Business Faculty, Aleksandër Moisiu University, Durrës, Albania

OPEN ACCESS

How to cite this paper: Osmani, J., & Doda, S. (2025). Gender diversity: Are women at the strategic level less risk-taking than men? [Special issue]. *Risk Governance & Control: Financial Markets & Institutions, 15*(1), 226–236. https://doi.org/10.22495/rgcv15i1sip8

ISSN Online: 2077-4303
ISSN Print: 2077-429X

Received: 31.07.2024
Revised: 05.11.2024; 06.03.2025
Accepted: 14.03.2025

JEL Classification: D91, G41, L10, M10
DOI: 10.22495/rgcv15i1sip8

Abstract

Gender diversity and its impact on firm performance has received extensive attention in the last decade, but still its effects are not well known. The aim of this study is to investigate the relationship between gender diversity and risk-taking. By focusing on the specific case of Albanian small and medium enterprises (SMEs), the study investigates the attitude towards risk of chief executive officers (CEOs), chief operating officers (COOs), and chief financial officers (CFOs), trying to contribute a new understanding of gender diversity and risk behavior. A sample of 247 top managers, 80 men, and 167 women, was analyzed and a quantitative approach, based on different statistical tests, was adopted to verify the effect of gender diversity. The results suggest that there are no differences between male and female top managers, thus not confirming an association between gender diversity and risk-taking. The study upgrades the evidence arising from the existing literature by providing new elements to support a deeper understanding of the effects of top managers' characteristics on risk-taking and firm performance. By analyzing the multifaceted nature of gender diversity this study offers important implications for scholars, companies, and policymakers, aiming to enhance the knowledge base in the fields of strategic decision-making and firm performance.

Keywords: Gender Diversity, Top Manager, Strategic Decision-Making, Risk-Taking, Firm Performance

Authors' individual contribution: Conceptualization — J.O. and S.D.; Methodology — J.O. and S.D.; Software — J.O. and S.D.; Validation — J.O. and S.D.; Investigation — J.O. and S.D.; Resources — J.O. and S.D.; Writing — J.O. and S.D.; Supervision — J.O.

Declaration of conflicting interests: The Authors declare that there is no conflict of interest.

1. INTRODUCTION

Over the past decades, the participation of women in the workplace has increased significantly. Also, women's representation in top-level management has increased, but there is evidence that the percentage of board seats held by women is not still so high. Some investigation shows a clear trend of improvement in gender representation on the board of directors and insider positions for firms in the insurance industry, but they did not find significant advancement in the percentage of women in C-suite positions.As a result is difficult for them to establish network connections which help with early promotions and raises.

Demographic changes in the workplace have been an incentive for concrete actions taken by the European Commission (EC), like the 2020–2025 European Union (EU) gender equality strategy that seeks to foster gender-based decision-making within companies at all levels and Directive EU 2022/2381 which seeks to give women qualified for top jobs a real chance to get them (EC, 2022).

Everyone is unique in their individual characteristics, background, and experiences, in the way they perceive others and things. Diversity

refers to those characteristics that make people different from one another, and its types are many, based on both stable and changeable characteristics. Hellerstedt et al. (2024) offer plausible reasons why diversity is overestimated compared to equity and inclusion in both research and practice. The authors explain how the focus on diversity, instead of mitigating bias and inequality, has the opposite effect. One of the most studied types of diversity in recent years, in different contexts, is gender diversity. Gender identity is a core feature of human experience, yet our understanding of gender identity is shifting with broader societal changes in recognizing and understanding gender diversity (Rubin et al., 2020).

Differences in decision-making between females and males are largely investigated and most of them focus on risk-taking. Also, empirical evidence on the effects of gender diversity in risk-taking in strategic decision-making is large, but it should be emphasized that the results they provide are mixed, not allowing a clear picture of gender differences in risk behavior.

According to Mohsni et al. (2021), board gender diversity is negatively related to risk and positively related to performance. Teodosio et al. (2021), in a literature review on gender diversity and corporate risk-taking, concluded that women decrease firms' litigation risk, failure risk, and operational risk while they have no significant effect on insolvency risk, but women have contingent effects on financial risk, manipulation risk, total risk, idiosyncratic risk, and systematic risk. Female chief executive officers (CEOs) are less risk-taking, but when female executives use the same strategic orientation as their male counterparts, organizational performance is higher than that of male executives (Arun & Özmutlu, 2023).

Although substantial and growing literature focuses on gender diversity and risk-taking, the relationship between them is not yet clear and is not understood whether the determinants of risk-taking are affected by gender. Most studies focus on identifying the risk attitudes of male and female top managers and how gender diversity impacts firms' performance. Only a few of them attempt to provide concrete explanations for gender differences in risk behavior and there is a gap referring to the individual characteristics impact. There is evidence that top management characteristics are essential for decision outcomes (Hambrick & Mason, 1984).

The multifaceted objectives of this research extend beyond a mere exploration of the relationship between gender — and the risk behavior of top managers. The study aims also to find explanations for the results obtained. Firstly, the research aims to understand the attitudes of Albanian strategic managers towards risk. Secondly, the study aims to investigate the gender impact on risk-taking for strategic decisions when is a fact that in Albania, women are less preferred for strategic or executive positions compared to men. A plausible reason for this could be just a risk attitude. Thirdly, by elaborating a theoretical framework, this study tries to identify variables and elements and discover possible relationships between them, so as to be able to define some general reflections about risk-taking, offering important insights on the dynamics of strategic decision-making, competitive advantages, and organizational performance.

The structure of this paper is as follows. Section 2 reviews the relevant literature. Section 3 analyzes the methodology that has been used to conduct empirical research on the gender impact on risk-taking for strategic decisions. Section 4 presents the results obtained from the investigated companies. Section 5 provides the discussion and Section 6 outlines the conclusion.

2. LITERATURE REVIEW

Decision-making is the core activity of the management process, while strategic decision-making is a key tool to drive business growth. When referring to decision-making behavior, two basic models are known. According to the classical model, managers act and make decisions under certain conditions, while according to the behavioral model, the manager acts under risky and uncertain conditions. There is evidence that the normative approach (classical model), compared to the descriptive approach (behavioral model), is not suitable for strategic decisions. The external environment is increasingly characterized by dynamism and turbulence, and certainty is a condition that rarely occurs, especially for strategic decision-making (Deep, 2023). As a result, top managers make decisions about new situations that are non-programmed, unstructured, and complex. Thus, risk and uncertainty are an integral part of strategic management theory and empirics.

A risky decision refers to the choice of an option with the highest outcome variability, which is typically associated with a higher potential reward as compared to a less risky option (Arrfelt et al., 2018). Risk-taking is a behavior that aims to achieve economic benefits and defines a firm's competitiveness in a specific industry. Factors influencing risk-taking can be summarized in risk perception and assessment, risk attitudes, and contextual factors, which are influenced by the decision maker's demographic characteristics such as age, gender, experiences, education, etc. (Pavliček et al., 2021). The current investigation focuses on gender diversity and its effects on risk-taking.

It should be noted that empirical data on gender diversity are large, but the results they provide are mixed. Researchers acknowledge that the potential benefits of gender diversity are significant and, therefore, it is a variable that should be further studied in order to shed light on the impact of gender diversity on organizational performance (Fine et al., 2020). According to EmadEldeen et al. (2021), there is a positive relationship between gender diversity and firm performance. So, the companies that increase the number of females on the board of directors, will have a better performance. Sicoli et al. (2020) have concluded that gender diversity impacts positively corporate performance and productivity and Ranaldo et al. (2023) found a significant relationship between board diversity and financial performance. According to Morrone et al. (2022), board diversity does not impact firm results, either positively or negatively, but can improve firm reputation and enhance intellectual capital. Basuony et al. (2023) found that executive female directors negatively affect firms' financial performance, but it is the opposite for non-executive female directors.

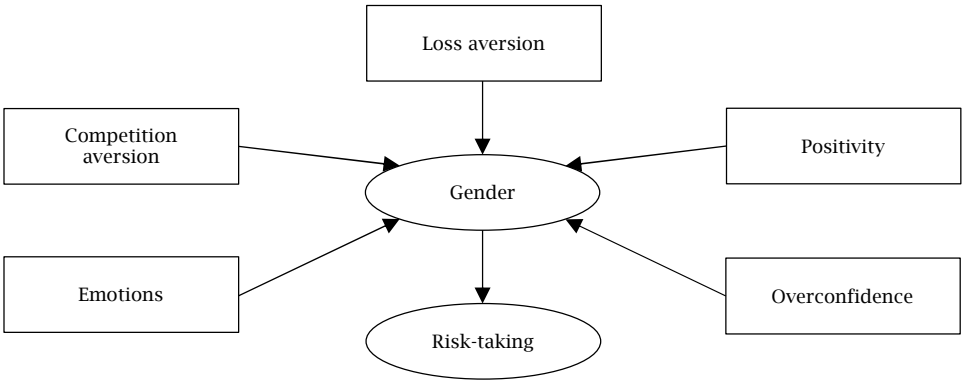
The relationship between gender and risk is one of the most studied aspects when trying to highlight the differences between men and women, but empirical data provides inconsistent conclusions. Buratti et al. (2018) concluded that female entrepreneurs have a lower propensity toward

offensive strategies (innovation, development, and growth). Referring to financial decisions, Brooks et al. (2019) found that men are more risk-tolerant than women, but this difference cannot be explained by differences in age, employment patterns, or by the effect of being in-versus out-of-work, and that previous investment experience plays a significant explanatory role. Yang et al. (2019) found a negative effect of female representation on firm performance and on firm risk. In the experiments conducted by Friedl et al. (2020), women turn out to be more risk-averse than men in social risk-taking and these gender differences are culture-specific. The results provided by Menicucci and Paolucci (2020) show that there is a negative relationship between gender diversity and risk-taking. Female CEOs, chief financial officers (CFOs), and chairmen of the board of directors are less risky than their male colleagues. According to Dawson (2023), women report a lower willingness to take risks than men. Furthermore, income losses are less painful to men than to women, but there are no differences between them in the psychological responses to income gains.

However, Osmani (2016) found that in the banking sector, women are more risk-seeking than men. Rinne and Sonnabend (2021), provide evidence that shows a lower level of risk-taking by males compared to females. The authors underline the importance of considering institutional differences or labor market specifics. Hurley and Choudhary (2020) found mixed evidence of risk aversion by females in executive and leadership positions, depending on the measures used and the management responsibilities they undertake. Morgenroth et al. (2022) found no evidence for gender differences in risk-taking and suggested that if and when women do avoid risk, it is because their risk-taking leads to less rewarding consequences. Also, Pacheco et al. (2023) could not reject their hypothesis that women and men have the same level of risk aversion.

Empirical evidence provides mixed data on the relationship between gender and risk-taking. The purpose of this investigation is not simply to show what the relationship between these two variables is, but also to offer possible explanations. Based on the upper echelons perspective of Hambrick and Mason (1984) and Hambrick (2007), which call for more attention on top managers characteristics and also on a careful analysis of empirical evidence on gender diversity and decision-making, we tried to build a new framework in order to better understand what the determinants of risk-taking are.

Figure 1. Theoretical framework



Source: Authors' elaboration.

The main explanation for gender-related differences in risk-taking can be emotions. There are significant gender differences in experiencing emotions, with women experiencing them more strongly, especially negative emotions (Carlton et al., 2020). So, women are more risk-averse than men because under risk conditions they feel nervous and fearful (Fiorenzato et al., 2024), while men feel more angry (Fischer & Evers, 2011). Fear leads the decision-maker to risk overestimation, while anger leads him to risk underestimation (Lerner et al., 2015). Based on these conclusions, we assume that in an attempt to avoid negative emotions, women are more risk-averse than men.

Other studies have concluded that men believe in their abilities and are more overconfident. Overconfidence is a cognitive bias that differs the behavior of men and women and leads to risk-taking (Burkhard et al., 2022). Many studies have shown that women are less overconfident than men (Niederle & Vesterlund, 2007; Herbst, 2020, Sarsons & Xu, 2021). Women attribute their past successes to luck, instead of attributing them to their abilities and skills. Other studies did not find significant differences between men and women (Kim et al., 2021, Bandiera et al., 2022). The empirical results regarding gender impact on overconfidence are mixed, but if it is true that women are less overconfident, as most studies suggest, then they will be more risk-averse compared to men.

Gender differences have been found also for positivity bias. Empirical evidence shows that women are less influenced by this bias because usually have a pessimistic view of situations (Karmarkar, 2023; Dawson, 2023). The positivity bias is collected to optimism and often leads to higher risk-seeking (Dohmen et al., 2023). On the basis of this conclusion provided by previous studies, we assume that if women are less influenced by positivity, they will be more risk-averse compared to men.

Referring to gender differences in risk-taking, women are much more risk-averse and do not like competitive situations (Niederle & Vesterlund, 2007; Croson & Gneezy, 2009; Saccardo et al., 2017). The competition aversion could derive from the fact that women do not require information, are less optimistic about their performance, and because competitive situations are often accompanied by stress. Buser et al. (2023) found that gender is an important variable in understanding the different

approaches to competitiveness and men are more competitive than women both in experimental and real-world conditions. Gürtler et al. (2023) found that risk-taking behavior depends on the level of competition faced. Their study showed that more intense competition leads to higher risk-taking. The conclusions provided by previous studies on gender differences in competition aversion, and the attempt of this study to find possible explanations for the differences between men and women in risk behavior, lead us to raise the assumption that women are risk-averse also because they do not like situations associated with competitiveness.

With prospect theory, Kahneman and Tversky (1979) introduce the concept of loss aversion. Loss-averse decision-makers are more sensitive to losses than to equivalent gains. There is empirical evidence that gender is a determinant variable of loss aversion. So, it is well-documented that women tend to be more loss-averse than men (Dawson, 2023; Georgalos, 2024). Based on these results, we assume that women are more risk-averse than men as they feel more of the pain of losses. So, women tend to make decisions that avoid losses and orient towards certain profits.

We think that the theoretical framework we presented, provides a strong basis for hypothesizing that women are more risk-averse than men. So, the main hypothesis of the study is as follows:

H1: Women top managers are more risk-averse than men top managers.

3. RESEARCH METHODOLOGY

3.1. Sample and data collection

The study investigates gender diversity in risk-taking focusing on Albanian top managers. In order to have a sample size large enough, it is restricted to small and medium enterprises (SMEs) located in Durrës and Tirana. The main reason for targeting SMEs is statistics on the number of enterprises by size class. According to the Albanian Institute of Statistics (INSTAT) for 2022 the total number of big enterprises operating in the country was only 181. SMEs make up 99.8% of businesses operating in Albania, while Durrës and Tirana are the two most important cities in the industrial context. Also, we believed that in the case of SMEs, it was easier to access and contact top managers. So, taking into account the possibility of low willingness of top managers to participate in the study, we decided to target only SMEs. This allowed the study to have a sample size large enough for reliable statistical analysis.

For the purposes of this research, were included in the study SMEs from industries with high exposure to risk, such as finance, information technology, construction, and trade with the important international activity. To meet the research objective, top managers, including CEO, chief operating officers (COO), and CFO, who are responsible for strategic decisions in their organizations, were included in the study. To identify companies and participants, reliable data sources such as chambers of commerce registers. Also, secondary data from industry reports and official publications were utilized to identify potential companies to include in the investigation. Based on the research criteria and the accessibility and availability of top managers, the current investigation was conducted the convenience sampling method.

A total of 247 questionnaires were collected while participating companies were 158. In the current research, 80 men, and 167 women. Data on corporate governance were collected manually based on the consulting of firms' websites and other contacts. This allowed us to have a frequent attendance of women in top managerial positions within the sample.

3.2. Statistical methods

The measurement of attitudes towards risk is carried out through a structured questionnaire with a Likert scale (from one to five), which is developed based on a careful analysis of the existing literature on the impact of gender diversity in risk-taking and its effects on decision-making. A pilot test was conducted to ensure the validity and objectivity of the questionnaire. The purpose of this pilot test was to identify any potential problems that participants might encounter while answering the questions and recording data. Cronbach's alpha was calculated to assess the internal reliability or consistency of the questionnaire, resulting in a value of 0.715, indicating that the data are reliable. For the study, a quantitative approach and data processing is done through Statistical Package for the Social Sciences (SPSS). The statistical methods used in this research include:

- Descriptive statistics, to provide a general overview of the participants' attitudes.
- Spearman correlation analysis, to study the correlations between gender and attitudes toward risk for each variable included in the investigation.
- Two sample t-tests to compare attitudes towards risk of men and women.

Referring to Knapp (2017) and based on the fact that we are dealing with a dichotomous variable (gender) and ordinal variables to be assessed on a Likert scale (from one to five) the selected methodology is appropriate and allows the analysis of risk attitudes and the influencing factors, such as gender.

While the quantitative approach is considered appropriate for this investigation, alternative methods could also provide valuable insights for conducting the research. For instance, the Mann-Whitney U test would be suitable for comparing risk attitudes between the two groups. Also, the case study approach could be used to collect qualitative data, having the opportunity to go deeper into issues that can help to better understand and explain the results obtained. Also, experimental research could be employed to test gender impact on strategic risk-taking. This method would involve designing controlled experiments to manipulate variables and measure their impact on participant responses.

4. RESEARCH RESULTS

The findings of this research provide an understanding of how gender diversity impacts risk-taking with a focus on strategic decision-making. Through the analysis of 158 different companies and 247 male and female top managers (CEO, COO, and CFO), key patterns, challenges, and opportunities have emerged, shedding light on the multifaceted nature of risk behavior and its determinants. Following are reported statistical analyses (descriptive statistics, correlations, and t-tests). The main results of this study are presented in Tables 1, 2 and 3.

In particular, Table 1 provides a summary of the descriptive statistics for all the variables, while Table 2 provides correlations for all the variables investigated. In addition, Table 3 provides data on the differences between males and females based on two-sample t-tests.

Descriptive statistics in Table 1, summarize characteristics of data and provide valuable information about where the center lies and how the data varies about that center. Variable 1 has a mean of 3.8 (std. deviation = 1.08), reflecting a relatively conservative approach to risk. Participants show a neutral to negative attitude towards Variable 2, with a mean of 2.6 (std. deviation = 1.25). Regarding Variable 3, the mean of 3.92 (std. deviation = 2.19) indicates that participants somewhat agree with the idea that risk-taking is necessary, but the standard deviation is relatively high indicating a considerable spread in participants' views. The mean of 3.93 (std. deviation = 0.82), indicates a strong support by participants for Variable 4 which is compatible with the results for Variable 1, underlining the importance of being cautious in the decision-making process. The results for Variable 5, with a mean of 2.95 (std. deviation = 1.23) suggest that participants do not have a strong positive or negative tendency to avoid or postpone decision-making, representing a balanced approach between risk-taking and caution. Regarding Variable 6, (mean = 3.81, std. deviation = 0.91) data reflects a moderate positive tendency towards engagement in the presence of risk. For Variable 7, the mean of 3.42 (std. deviation = 1.14) indicates a moderate tendency of participants to accept risk in an attempt to achieve important results, with some agreeing and others having reservations. Data for Variable 8 (mean = 2.47; std. deviation = 1.15), indicates that participants generally do not perceive risk as a threat that should be avoided.

Table 1. Descriptive statistics

Variables	*N*	*Minimum*	*Maximum*	*Mean*	*Std. deviation*
1. *I always prefer a certain outcome instead of a possible one.*	247	1.00	5.00	3.8	1.08
2. *Being cautious makes the decision-maker a boring person.*	247	1.00	5.00	2.6	1.25
3. *Taking some risk is necessary.*	247	1.00	5.00	3.92	2.19
4. *I always anticipate precautions to avoid the unforeseen consequences of a decision.*	247	1.00	5.00	3.93	0.82
5. *For complex and risky situations I try to avoid or postpone the decision-making.*	247	1.00	5.00	2.95	1.23
6. *Risky situations represent a challenge and stimulate me to increase engagement.*	247	1.00	5.00	3.81	0.91
7. *To achieve high and important results I prefer to risk.*	247	1.00	5.00	3.42	1.14
8. *Risky decisions imply a threat, so they should be avoided.*	247	1.00	5.00	2.47	1.15

Source: Authors' elaboration using SPSS.

Spearman correlation analysis in Table 2 shows a weak, but statistically significant, positive correlation between gender and the first variable "certain vs. possible outcomes" ($r_s = 0.126$, $p = 0.049$), suggesting that women have a higher tendency to prefer certain outcomes compared to men. This means that women, in general, are more likely to make decisions that offer certainty and stability. For all the other variables included in the investigation, correlations with gender are not statistically significant. This suggests that gender differences in risk-taking are limited and focus mainly on the preference for stability in decision-making.

Table 2. Spearman correlation for all variables (Part 1)

Spearman's Rho		***Gender***	***Variable 1***
Gender	Correlation coefficient	1.000	0.126*
	Sig. (2-tailed)		0.049
	N	247	247
Variable 1	Correlation coefficient	0.126*	1.000
	Sig. (2-tailed)	0.049	
	N	247	247
Spearman's Rho		***Gender***	***Variable 2***
Gender	Correlation coefficient	1.000	0.028
	Sig. (2-tailed)		0.658
	N	247	247
Variable 2	Correlation coefficient	0.028	1.000
	Sig. (2-tailed)	0.658	
	N	247	247
Spearman's Rho		***Gender***	***Variable 3***
Gender	Correlation coefficient	1.000	0.027
	Sig. (2-tailed)		0.672
	N	247	247
Variable 3	Correlation coefficient	0.027	1.000
	Sig. (2-tailed)	0.672	
	N	247	247
Spearman's Rho		***Gender***	***Variable 4***
Gender	Correlation coefficient	1.000	0.058
	Sig. (2-tailed)		0.361
	N	247	247
Variable 4	Correlation coefficient	0.058	1.000
	Sig. (2-tailed)	0.361	
	N	247	247

Table 2. Spearman correlation for all variables (Part 2)

Spearman's Rho		***Gender***	***Variable 5***
Gender	Correlation coefficient	1.000	-0.039
	Sig. (2-tailed)		0.543
	N	247	247
Variable 5	Correlation coefficient	-0.039	1.000
	Sig. (2-tailed)	0.543	
	N	247	247
Spearman's Rho		***Gender***	***Variable 6***
Gender	Correlation coefficient	1.000	-0.043
	Sig. (2-tailed)		0.501
	N	247	247
Variable 6	Correlation coefficient	-0.043	1.000
	Sig. (2-tailed)	0.501	
	N	247	247
Spearman's Rho		***Gender***	***Variable 7***
Gender	Correlation coefficient	1.000	0.004
	Sig. (2-tailed)		0.946
	N	247	247
Variable 7	Correlation coefficient	0.004	1.000
	Sig. (2-tailed)	0.946	
	N	247	247
Spearman's Rho		***Gender***	***Variable 8***
Gender	Correlation coefficient	1.000	-0.014
	Sig. (2-tailed)		0.823
	N	247	247
Variable 8	Correlation coefficient	-0.014	1.000
	Sig. (2-tailed)	0.823	
	N	247	247

*Note: * Correlation is significant at the 0.05 level (2-tailed).*
Source: Authors' elaboration using SPSS.

Table 3 analyzes the statistical differences between men and women for all the variables related to risk perception included in the study, using the independent samples t-test to compare the means between the two groups of participants. The results show that for Variable 1, Levene's test for equality of variances gives a significant relationship (p = 0.000), indicating that the variances are not equal between the groups. In further analysis, the option "Equal variances not assumed" is taken into account, and the t-test shows a statistically significant difference between men and women for this variable. The mean difference suggests that women are more inclined towards certain outcomes than men.

For Variables 2, 4, 7, and 8, Levene's test has given a statistically significant value, but the t-test has not shown any significant difference between men and women, suggesting that: being careful in decision-making, taking precautions to avoid unforeseen consequences, the necessity of risk-taking to achieve important results and the perception of risk as a threat to be avoided are not influenced by gender.

Regarding Variables 3, 5, and 6, Levene's test is not significant, indicating equal variances and the t-test hasn't shown a significant difference between the two groups. These results indicate that men and women share similar attitudes regarding the necessity of risk-taking, the tendency to avoid or postpone decision-making in risky conditions, and the motivation to engage more in risky situations.

The results of statistical tests converge indicating that only for Variable 1 there is a statistically significant difference between men and women, with women having a higher tendency towards certainty in decision-making than men. For the other risk-related variables, no statistically significant differences were found between the two groups, suggesting that in general men and women share similar attitudes towards decision-making under risk conditions. This suggests that, although there are some differences in preferences for certain outcomes, men and women are similar in terms of overall risk tolerance.

Table 3. Independent samples t-test

Variables		***Levene's test for equality of variances***		***t-test for equality of means***						
		F	***Sig.***	***t***	***Df.***	***Sig. (2-tailed)***	***Mean difference***	***Std. error difference***	***95% confidence interval of the difference***	
									Lower	***Upper***
Variable 1	Equal variances assumed	22.982	0.000	-2.692	245	0.008	-0.39064	0.14511	-0.67646	-0.10483
	Equal variances not assumed			-2.403	119.402	0.018	-0.39064	0.16254	-0.71248	-0.06880
Variable 2	Equal variances assumed	4.546	0.034	-0.102	245	0.919	-0.01729	0.16963	-0.35141	0.31682
	Equal variances not assumed			-0.098	140.503	0.922	-0.01729	0.17683	-0.36689	00.33231
Variable 3	Equal variances assumed	0.220	0.640	-1.129	245	0.260	-0.33645	0.29804	-0.92349	00.25059
	Equal variances not assumed			-1.412	244.981	0.159	-0.33645	0.23828	-0.80578	0.13288
Variable 4	Equal variances assumed	14.061	0.000	-1.686	245	0.093	-0.18802	0.11151	-0.40766	0.03161
	Equal variances not assumed			-1.507	119.665	0.134	-0.18802	0.12478	-0.43508	0.05904

Table 3. Independent samples t-test

Variables		Levene's test for equality of variances		t-test for equality of means						
		F	Sig.	t	Df.	Sig. (2-tailed)	Mean difference	Std. error difference	95% confidence interval of the difference	
									Lower	Upper
Variable 5	Equal variances assumed	1.786	0.183	0.541	245	0.589	0.09034	0.16686	-0.23833	0.41901
	Equal variances not assumed			0.523	143.137	0.602	0.09034	0.17262	-0.25088	0.43157
Variable 6	Equal variances assumed	1.467	0.227	0.081	245	0.935	0.01010	0.12428	-0.23468	0.25489
	Equal variances not assumed			0.077	134.414	0.939	0.01010	0.13199	-0.25095	0.27116
Variable 7	Equal variances assumed	4.906	0.028	-0.318	245	0.751	-0.04963	0.15590	-0.35670	0.25745
	Equal variances not assumed			-0.301	136.084	0.764	-0.04963	0.16471	-0.37535	0.27610
Variable 8	Equal variances assumed	4.888	0.028	0.365	245	0.715	0.05741	0.15718	-0.25219	0.36701
	Equal variances not assumed			0.350	139.837	0.727	0.05741	0.16418	-0.26719	0.38201

Source: Authors' elaboration using SPSS.

5. DISCUSSION

In the attempt to highlight decision-making differences between men and women, risk tolerance can be considered one of the most studied aspects. The findings of this research shed light on the relationship between gender-risk behavior, and try to find some explanations about the gender impact on risk preferences for strategic decision-making, focusing on the Albanian top managers. Although empirical evidence is mixed and does not allow for definitive conclusions, based on a theoretical framework, we develop *H1* that women top managers will be more risk-averse than men. The results of the study show that gender does not significantly influence risk propensity, contrary to what is generally thought considering women more risk-averse than men. Following we discuss the results obtained and try to provide some explanations.

A statistically important relationship is found between gender and preference for certain outcomes. Women prefer more than men certain results instead of possible results. The tasks of top managers are multidimensional and oriented towards the overall well-being of the organization. They are the main leaders and bear the responsibility for achieving the vision, mission, and strategic objectives of the company. Risk is an integral part of strategic management. In an increasingly competitive environment, creativity and innovation become important for competitive advantages which means taking risks. Leaders of today's organizations must be willing to take on some degree of risk (Dunn & Jensen, 2021). This discussion leads us to the opinion that female strategic managers are in a certain way forced to risks, but do not like risk. Also, we may refer to the prospect theory and certainty effect (Kahneman & Tversky, 1979). The certainty effect describes how decision-makers tend to overestimate certainty. So, when the outcomes are formulated in terms of gains, they choose the option that offers a certain gain instead of a possible gain, but if the results are formulated in terms of losses, decision-makers tend to choose an alternative with a possible loss, instead of one with a certain loss. So, we may suggest that women show more risk aversion than men because they mean by "results" the gains.

If it is true that women are more risk-averse than men, as most studies have concluded, then they will make decisions based on imitation. Of course, acting like this minimizes the risk, but the lack of creativity and innovation makes the decision-maker more predictable and he does not arouse enthusiasm in others. According to Dawson (2023), women are more cautious than men. As Crossan et al. (2017) argue, a courageous person is confident. There is empirical evidence that shows that women are less overconfident and more pessimistic than men. Due to all these conclusions, we assumed that women would not perceive a risk-averse decision-maker as a boring person. However, the results of the present research indicate that there are no differences between men and women in the perception of a cautious decision-maker. This research focuses on strategic decisions, which are very important, affect the whole organization, require a lot of resources, and generate important incomes if good. According to Shevlin et al. (2022), for incoming high-value decisions, decision-makers show more caution. This could be an explanation for no differences between men and women in the perception of "being cautious".

According to Niederle and Vesterlund (2007), women are more aware of their limited capacities and attribute their past successes to luck, while men attribute successes to their abilities and skills. More recently, Herbst (2020) found that women underestimate their performance and skills and thus they do not take credit for the successes achieved. Based on these conclusions we assumed that women do not perceive risk as a necessity, but contrary to what we expected, the results show no gender differences.

If women do not like risk, are pessimistic, cautious, and feel more fear, they will continually engage in contingency plans and scenario elaboration, with the aim of reducing risk and helping the company to recover from unexpected events. The results obtained show that the anticipation of precautions to avoid the unforeseen consequences of a decision is not influenced by gender. Previously, Sanz de Acedo Lizárraga et al. (2007) found that both men and women have the same information processing skills, are equally good at retrieving from memory relevant data, and have the same skills in objectively judging the different options, evaluating outcomes, and monitoring all the phases of the decision-making process.

Dealing with complexity and risk depends, among other things, on self-confidence. There is

strong and well-documented evidence to prove that women are less overconfident compared to men. According to Goldberg et al. (2020), CEO's overconfidence leads to risk-taking. On the basis of this conclusion, we assumed that if women are more complex and risk-averse than men, they will avoid or postpone decision-making, but the results obtained show no gender differences.

Previous studies have documented that high levels of self-esteem and overconfidence are associated with high levels of engagement. Individuals with high levels of self-esteem need constantly to achieve some goals, so they can prove to themselves that are good (Zeigler-Hill et al., 2013). Decision makers with low self-esteem are more risk-averse than individuals with high self-esteem in monetary gain situations (Sekścińska et al., 2021). Previously, Arch (1993) had concluded that men perceive risky situations as challenges that call for participation, while women perceive risky situations as threats and try to avoid them. On the basis of these conclusions, we assumed that if women are more risk-averse than men, this would lead them to less motivation and engagement in risky situations. However, the results obtained do not confirm this opinion. Also, there are no gender differences in the perception of risk as a threat that should be avoided.

According to Powell and Ansic (1999), women use strategies that help them eliminate the worst scenario, while men use strategies that help them obtain the highest payoff. As other studies found women to feel more fear, experience more intense emotions from negative outcomes, to be less optimistic and overconfident compared to men, we expected to find a negative correlation for women regarding the perception of risk as a behavior that makes possible to achieve high and important results, but the present investigation indicates that there are no gender differences.

Gender diversity in top manager positions is a topic of concern for firms, researchers, and policymakers. Although trends of women's presence in the labor market are encouraging, women are still under-represented in strategic decision-making positions. The current investigation on the gender differences in risk-taking by top managers shows that we are dealing with a research field that has not yet been sufficiently explored. As Croson and Gneezy (2009) argue, gender differences regarding risk preferences of the population cannot be extended to managers. We did not find support for the main hypothesis *H1* and our study concluded that there are no gender differences among top managers in risk behavior. We suggest that further studies are needed to understand why women are under-represented at the strategic level. Such studies take on particular importance as empirical evidence regarding the positive impact of gender diversity on a firm's performance is strong.

6. CONCLUSION

The main purpose of this research was to investigate how gender diversity impacts on risk-taking of SMEs in Albania. More specifically, we examined the attitudes toward the risk of male and female top managers, including the CEO, COO, and CFO.

Women's underrepresentation in top managers' positions has been well-documented, but the reasons behind it are not well understood. A substantial and growing literature focuses on gender diversity and risk-taking. Based on a careful analysis of previous empirical evidence, we carry out a theoretical framework to explore the relationship between gender and risk-taking for strategic decisions. By adopting a quantitative approach, this research tries not only to explore the relationship between gender and risk-taking but also to provide some explanations about the findings in order to better understand what the determinants of risk behavior are.

The findings reveal that there is not a significant association between gender and risk-taking for top managerial positions. More specifically, we found that female top managers prefer certain outcomes instead of possible ones more than male top managers. However, the correlation between these variables is weak. On the other hand, there are no differences between men and women in the perception of a cautious decision-maker and the perception of risk as a necessity. If women were risk-averse, they would continually engage in contingency plans and scenario elaboration, with the aim to reduce risk. The results obtained indicate that the tendency to anticipate precautions aimed at avoiding the unforeseen consequences of a decision is not influenced by gender. Moreover, if women were less risk-seeking than men, then they would try to avoid or postpone decision-making, but the results indicate that women top managers do not differ from their men colleagues in this. Also, the perception of risky situations as a threat that should be avoided is not influenced by gender. On the other hand, high-risk situations are not perceived as opportunities either. So, the perception of risky situations as challenges that increase engagement is not influenced by gender. In addition, risk-taking to achieve high and important results does not depend on gender.

Although previous empirical evidence on gender diversity and risk-taking is mixed, most of them have concluded that women are more risk-averse than men. This leads us to raise the same assumption for top managers. The findings of this research were unexpected, showing that there are no gender differences in risk behavior for strategic decisions. However, this result is in line with the conclusions of Hurley and Choudhary (2020), Morgenroth et al. (2022), and Pacheco et al. (2023). The findings of the current research suggest that the greater risk aversion of female top managers compared to their male colleagues is a wide agreement based on generalizations and gender stereotypes.

This study aims to bridge the research gap concerning gender diversity in Albanian SMEs. In particular, there is little empirical evidence converging on the impact of gender diversity on SMEs' risk-taking. Therefore, this study contributes in several ways to the existing literature on how the gender of top managers impacts firms' risk-taking. There is empirical evidence that gender differences in risk behavior can have significant consequences for firms' decision-making and governance.

By exploring the attitudes of Albanian top managers, the study offers important insights. The research provides some important implications. Scholars can build upon the insights gained from the present research to explore related topics, expand the geographical scope, or delve into specific aspects of gender diversity and strategic decision-making. These contributions collectively enhance the knowledge base in these fields. Referring to managers, the study contributes to the understanding that gender diversity by improving creativity,

inclusivity, and collaborations creates suitable conditions for good strategic decisions and firms' performance. Referring to policymakers, first, they should encourage and incentivize ethical practices of employment, promotion, and performance evaluation. Second, policymakers and managers can actively collaborate for policies that support women's growth, gender equality, and prohibition of discrimination.

This study provides some limitations. First, it specifically investigates gender diversity in risk-taking for strategic decisions. While this investigation allows for in-depth generalizable insights into the risk behavior of top managers, we cannot understand if the findings are directly related to other top manager characteristics, company size, characteristics of the industry, or management philosophy. These could be interesting topics for future research. Second, this study employs a quantitative methodology. While such methodology provides results that can be generalized, they may lack rich and context-specific insights. Also, this study focuses on a specific geographic area within a country. Would the same or similar findings be found in different geographic areas and countries? Hence, this could be an interesting starting point for future research. Third, this study was conducted within a specific timeframe, and the findings are reflective of the economic, social, and political conditions prevailing during that period. Economic and market dynamics, as well as government policies, can change over time, impacting strategic decision-making and risk behavior. Although additional research needs to be done, this study represents an opportunity for women to progress in their professional careers, for companies to improve gender diversity within top management, and for policymakers to elaborate politics and measures that promote gender diversity in corporate governance.

REFERENCES

Arch, E. C. (1993). Risk-taking: A motivational basis for sex differences. *Psychological Reports*, *73*(1), 3–11. https://doi.org/10.2466/pr0.1993.73.1.3

Arrfelt, M., Mannor, M., Nahrgang, J. D., & Christensen, A. L. (2018). All risk-taking is not the same: Examining the competing effects of firm risk-taking with meta-analysis. *Review of Management Science*, *12*, 621–660. https://doi.org/10.1007/s11846-016-0225-9

Arun, K., & Özmutlu, S. Y. (2023). Effects of gender diversity in strategic orientation and strategy execution. *Leadership & Organization Development Journal, 44*(7), 882–906. https://doi.org/10.1108/LODJ-10-2021-0494

Bandiera, O., Parekh, N., Petrongolo, B., & Rao, M. (2022). Men are from Mars, and women too: A Bayesian meta-analysis of overconfidence experiments. *Economica, 89*(1), 38–70. https://doi.org/10.1111/ecca.12407

Basuony, M. A. K., Bouaddi, M., EmadEldeen, R., & Noureldin, N. (2023). The effect of gender board diversity across market quotation on firm performance: Evidence from the UK. *Corporate Ownership & Control, 20*(2), 146–155. https://doi.org/10.22495/cocv20i2art12

Brooks, C., Sangiorgi, I., Hillenbrand, C., & Money, K. (2019). Experience wears the trousers: Exploring gender and attitude to financial risk. *Journal of Economic Behavior & Organization, 163*(5), 483–515. https://doi.org/10.1016/j.jebo.2019.04.026

Buratti, A., Cesaroni, F. M., & Sentuti, A. (2018). Does gender matter in strategies adopted to face the economic crisis? A comparison between men and women entrepreneurs. In L. Mura (Ed.), *Entrepreneurship — Development tendencies and empirical approach.* https://doi.org/10.5772/intechopen.70292

Burkhard, B., Sirén, C., van Essen, M., Grichnik, D., & Shepherd, D. A. (2022). Nothing ventured, nothing gained: A meta-analysis of CEO overconfidence, strategic risk taking and performance. *Journal of Management, 49*(8), 2629–2666. https://doi.org/10.1177/01492063221110203

Buser, T., van den Assen, M. J., & van Dolder, D. (2023). Gender and willingness to compete for high stakes. *Journal of Economic Behavior & Organization, 206,* 350–370. https://doi.org/10.1016/j.jebo.2022.12.016

Carlton, S., Harrison, A., Honoré, S., & Goodmon, L. B. (2020). Conceal, don't feel: Gender differences in implicit and explicit expressions of emotions. *Modern Psychological Studies*, *25*(1), Article 10. https://scholar.utc.edu/mps/vol25/iss1/10

Croson, R., & Gneezy, U. (2009). Gender differences in preferences. *Journal of Economic Literature*, *47*(2), 448–474. https://doi.org/10.1257/jel.47.2.448

Crossan, M. M., Byrne, A., Seijts, G. H., Reno, M., Monzani, L., & Gandz, J. (2017). Towards a framework of leader character in organizations. *Journal of Management Studies, 54*(7), 986–1018. https://doi.org/10.1111/joms.12254

Dawson, C. (2023). Gender differences in optimism, loss aversion and attitudes towards risk. *British Journal of Psychology, 114*(4), 928–944. https://doi.org/10.1111/bjop.12668

Deep, G. (2023). Strategic decision-making: A crucial skill for business managers. *World Journal of Advanced Research and Reviews, 20*(3), 1639–1643. https://doi.org/10.30574/wjarr.2023.20.3.2463

Dohmen, T., Quercia, S., & Willrodt, J. (2023). On the psychology of the relation between optimism and risk taking. *Journal of Risk and Uncertainty, 67*, 193–214. https://doi.org/10.1007/s11166-023-09409-z

Dunn, S. L., & Jensen, J. D. (2021). Risk in leadership and management: Risk-seeking vs. risk averse. *International Journal of Business Administration, 12*(2), 64–75. https://doi.org/10.5430/ijba.v12n2p64

EmadEldeen, R., Elbayoumi, A. F., Basuony, M. A. K., & Mohamed, E. K. A. (2021). The effect of the board diversity on firm performance: An empirical study on the UK [Special issue]. *Corporate Ownership & Control, 18*(3), 337–347. https://doi.org/10.22495/cocv18i3siart8

European Commission (EC). (2020). A union of equality: Gender equality strategy 2020–2025. https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A52020DC0152

European Commission (EC). (2022). Directive (EU) 2022/2381 of the European Parliament and of the Council of 23 November 2022 on improving the gender balance among directors of listed companies and related measures. http://data.europa.eu/eli/dir/2022/2381/oj

Fine, C., Sojo, V., & Lawford-Smith, H. (2020). Why does workplace gender diversity matter? Justice, organizational benefits, and policy. *Social Issues and Policy Review, 14*(1), 36–72. https://doi.org/10.1111/sipr.12064

Fiorenzato, E., Bisiacchi, P., & Cona, G. (2024). Gender differences in the effects of emotion induction on intertemporal decision-making. *PLoS ONE, 19*(3), Article e0299591. https://doi.org/10.1371/journal.pone.0299591

Fischer, A. H., & Evers, C. (2011). The social costs and benefits of anger as a function of gender and relationship context. *Sex Roles*, *65*, 23–34. https://doi.org/10.1007/s11199-011-9956-x

Friedl, A., Pondorfer, A., & Schmidt, U. (2020). Gender differences in social risk taking. *Journal of Economic Psychology, 77,* Article 102182. https://doi.org/10.1016/j.joep.2019.06.005

Georgalos, K. (2024). Gender effects for loss aversion: A reconsideration. *Journal of Economic Psychology, 105,* Article 102760. https://doi.org/10.1016/j.joep.2024.102760
Goldberg, C. S., Graham, C. M., & Ha, J. (2020). CEO overconfidence and corporate risk taking: Evidence from pension policy. *The Journal of Corporate Accounting & Finance, 31*(4), 135–153. https://doi.org/10.1002/jcaf.22470
Gürtler, O., Struth, L., & Thon, M. (2023). Competition and risk-taking. *European Economic Review*, *160*, Article 104592. https://doi.org/10.1016/j.euroecorev.2023.104592
Hambrick, D. C. (2007). Upper echelons theory: An update. *Academy of Management Review, 32*(2), 334–343. https://doi.org/10.5465/amr.2007.24345254
Hambrick, D. C., & Mason, P. A. (1984). Upper echelons: The organization as a reflection of its top managers. *Academy of Management Review, 9*(2), 193–206. https://doi.org/10.2307/258434
Hellerstedt, K., Uman, T., & Wennberg, K. (2024) Fooled by diversity? When diversity initiatives exacerbate rather than mitigate bias and inequality. *Academy of Management Perspectives, 38*(1), 23–42. https://doi.org/10.5465/amp.2021.0206
Herbst, T. H. H. (2020). Gender differences in self-perception accuracy: The confidence gap and women leaders' underrepresentation in academia. *SA Journal of Industrial Psychology*, *46*, Article a1704. https://doi.org/10.4102/sajip.v46i0.1704
Hurley, D., & Choudhary, A. (2020). Role of gender and corporate risk taking. *Corporate Governance*, *20*(3), 383–399. https://doi.org/10.1108/CG-10-2018-0313
Kahneman, D., & Tversky, A. (1979). Prospect theory: An analysis of decision under risk. *Econometrica*, *47*(2), 263–292. https://doi.org/10.2307/1914185
Karmarkar, U. R. (2023). Gender differences in "optimistic" information processing in uncertain decisions. *Cognitive, Affective, & Behavioral Neuroscience, 23*, 827–837. https://doi.org/10.3758/s13415-023-01075-7
Kim, K. T., Lee, S., & Kim, H. (2021). Gender differences in financial knowledge overconfidence among older adults. *International Journal of Consumer Studies*, *46*(4), 1223–1240. https://doi.org/10.1111/ijcs.12754
Knapp, H. (2017). *Introductory statistics using SPSS* (2nd ed.). SAGE Publications. https://doi.org/10.4135/9781071878910
Lerner, J. S., Li, Y., Valdesolo, P., & Kassam, K. S. (2015). Emotions and decision making. *Annual Review of* Psychology, *66*, 799–823. https://doi.org/10.1146/annurev-psych-010213-115043
Menicucci, E., & Paolucci, G. (2020). Does gender diversity matter for risk-taking? Evidence from Italian financial institutions. *African Journal of Business Management, 14*(10), 324–334. https://doi.org/10.5897/AJBM2020.9089
Mohsni, S., Otchere, I., & Shahriar, S. (2021). Board gender diversity, firm performance and risk-taking in developing countries: The moderating effect of culture. *Journal of International Financial Markets, Institutions and Money, 73*, Article 101360. https://doi.org/10.1016/j.intfin.2021.101360
Morgenroth, T., Ryan, M. K., & Fine, C. (2022). The gendered consequences of risk-taking at work: Are women averse to risk or to poor consequences? *Psychology of Women Quarterly, 46*(3), 257–277. https://doi.org/10.1177/03616843221084048
Morrone, C., Bianchi, M. T., Marsocci, V., & Faioli, D. (2022). Board diversity and firm performance: An empirical analysis of Italian small-medium enterprises. *Corporate Ownership & Control, 19*(3), 8–24. https://doi.org/10.22495/cocv19i3art1
Niederle, M., & Vesterlund, L. (2007). Do women shy away from competition? Do men compete too much? *The Quarterly Journal of Economics*, *122*(3), 1067–1101. https://doi.org/10.1162/qjec.122.3.1067
Osmani, J. (2016). Gender income inequality: Why are women less preferred for executive or managerial positions in the banking institutions in Albania? *ICEA-Proceeding of International Conference on Economics and Administration*. University of Bucharest.
Pacheco, L., Lobão, J., & Coelho, S. (2023). Gender and risk aversion: Evidence from a natural experiment. *Games, 14*(3), Article 49. https://doi.org/10.3390/g14030049
Pavliček, A., Bobenič Hintošová, A., & Sudzina, F. (2021). Impact of personality traits and demographic factors on risk attitude. *Sage Open*, *11*(4). https://doi.org/10.1177/21582440211066917
Powell, M., & Ansic, D. (1999). Gender differences in financial decision-making: A new approach for experimental economic analysis. *Economia Società e Instituzioni, 11*(1), 71–90. http://surl.li/cthzzc
Ranaldo, S., Dicuonzo, G., & Donofrio, F. (2023). Gender diversity and financial and environmental performance in SMEs: A systematic literature review. *Corporate Ownership & Control, 20*(2), 21–33. https://doi.org/10.22495/cocv20i2art2
Rinne, U., & Sonnabend, H. (2021). Female workers, male managers: Gender, leadership, and risk-taking. *Southern Economic Journal, 88*(3), 906–930. https://doi.org/10.1002/soej.12545
Rubin, J. D., Atwood, S., & Olson, K. R. (2020). Studying gender diversity. *Trends in Cognitive Sciences, 24*(3), 163–165. https://doi.org/10.1016/j.tics.2019.12.011
Saccardo, S., Pietrasz, A., & Gneezy, U. (2017). On the size of the gender difference in competitiveness. *Management Science, 64*(4), 1541–1554. https://doi.org/10.1287/mnsc.2016.2673
Sanz de Acedo Lizárraga, M. L., Sanz de Acedo Baquedano, M. T., & Cardelle-Elawar, M. (2007). Factors that affect decision making: Gender and age differences. *International Journal of Psychology and Psychological Therapy*, *7*(3), 381–391. https://www.ijpsy.com/volumen7/num3/176/factors-that-affect-decision-making-gender-EN.pdf
Sarsons, H., & Xu, G. (2021). Confidence men? Evidence on confidence and gender among top economists. *AEA Papers and Proceedings*, *111*, 65–68. https://doi.org/10.1257/pandp.20211086
Sekścińska, K., Jaworska, D., & Rudzinska-Wojciechowska, J. (2021). Self-esteem and financial risk-taking. *Personality and Individual Differences, 172*, Article 110576. https://doi.org/10.1016/j.paid.2020.110576
Shevlin, B. R. K., Smith, S. M., Hausfeld, J., & Krajbich, I. (2022). High-value decisions are fast and accurate, inconsistent with diminishing value sensitivity. *Proceedings of the National Academy of Sciences of the United States of America, 119*(6), Article e2101508119. https://doi.org/10.1073/pnas.2101508119
Sicoli, G., Bronzetti, G., Ippolito, D., & Leonetti, G. (2020). Gender diversity and governance: Analysis of Italian listed companies [Special issue]. *Corporate Ownership & Control, 17*(4), 329–338. https://doi.org/10.22495/cocv17i4siart10
Teodosio, J., Vieira, E., & Madaleno, M. (2021). Gender diversity and corporate risk-taking: A literature review. *Managerial Finance, 47*(7), 1038–1073. https://doi.org/10.1108/MF-11-2019-0555
Yang, P., Riepe, J., Moser, K., Pull, K., & Terjesen, S. (2019). Women directors, firm performance, and firm risk: A causal perspective. *The Leadership Quarterly, 30*(5), Article 101297. https://doi.org/10.1016/j.leaqua.2019.05.004
Zeigler-Hill, V., Li, H., Masri, J., Smith, A., Vonk, J., Madson, M. B., & Zhang, Q. (2013). Self-esteem instability and academic outcomes in American and Chinese college students. *Journal of Research in Personality, 47*(5), 455–463. https://doi.org/10.1016/j.jrp.2013.03.010

APPENDIX. THE QUESTIONNAIRE

I. Personal information

1. Gender:
   - ○ Male
   - ○ Female

2. Age: _____

3. Education:
   - ○ Bachelor degree
   - ○ Master degree
   - ○ Doctoral degree

4. Position:
   - ○ COO or CFO
   - ○ CEO

5. Years of work (in total): _____

6. Years of work in the current position: _____

II. Please, read the following statements and tick the answer that best fits your risk tolerance.

Statements	*Strongly disagree*	*Disagree*	*Neutral*	*Agree*	*Strongly agree*
1. I always prefer a certain outcome instead of a possible one.					
2. Being cautious makes the decision-maker a boring person.					
3. Taking some risk is necessary.					
4. I always anticipate precautions to avoid the unforeseen consequences of a decision.					
5. For complex and risky situations I try to avoid or postpone the decision-making.					
6. Risky situations represent a challenge and stimulate me to increase engagement.					
7. To achieve high and important results I prefer to risk.					
8. Risky decisions imply a threat, so they should be avoided.					