

Evica Delova Jolevska<sup>1\*</sup>, Violeta Cvetkoska<sup>2</sup>

<sup>1</sup>University American College, Skopje, North Macedonia

<sup>2</sup>Ss. Cyril and Methodius University in Skopje, Faculty of Economics-Skopje, Skopje, North Macedonia

# Women in Corporate Governance in Banking: A Bibliometric Analysis

DOI: 10.7595/management.fon.2023.0005

---

## Abstract:

**Research Question:** The vital players on the financial market in developing countries, banks, need strong corporate governance to ensure better performance and stability. This is the first study that investigates the impact of women in corporate governance in the banking industry and identifies research hotspots. The focus is on journal-published papers indexed in the Web of Science (WoS) database. Descriptive analytics is used to show how papers are distributed in the observed period as well as by publisher, category in the WoS, and the most cited authors and papers. Content analysis is used to examine how women impact corporate governance in the banking industry. By mining the abstracts, research hotspots are identified for the entire examined period and for the last five years. In the last five years, 70.4% of papers have been published, indicating that researchers' interest in this area is growing. Emerald Publishing Group LTD is the top publisher, while the most cited authors are Berger, A.N., Kick, T., and Schaeck, K. The keywords "approach, responsibility, difference, institution, commitment, financial performance, and risk" were the most frequently used in the whole analyzed period, while in the last five years, the most commonly used keyword is "value". The positive impact of women in corporate governance prevails, especially on CRS disclosure data, bank performance, stability, and value. Our findings may serve as a starting point for further research for academics, researchers, and banking professionals, as well as for shareholders and regulatory bodies when composing the bank boards.

**Keywords:** corporate governance, banking sector, women, text mining, bibliometric analysis, research hotspots

**JEL Classification:** M12, M14

---

## 1. Introduction

On a global level, men are primarily in charge of organizations. Recent research that examined over 16,000 directors in over 1,400 companies, shows that only 4.4 of the companies had more than 50% female representation on their boards (BoardEx, 2021, February 16). The country with the highest percentage of female board members is France (44%), followed by Norway (40%) and countries like Sweden, Italy, Finland (37% each), etc. The first survey of this kind was undertaken in the United States in 2014, and the results from 2021 indicate a great improvement (up to 10 percent points) in the presence of women on boards, which is currently at 29%.

In Europe's largest publicly listed companies, women make up just 27.8% of the board members (Gender balance in decision-making, n.d.). Based on this study, the primary offenders include dominant political and business cultures, conventional gender stereotypes, and a lack of support for men and women trying to balance work and family.

The stability of a financial system is determined by how well its key players—banks—perform. This is particularly the case in developing nations. As a result, we concentrate on reviewing the literature on how women affect corporate governance in the banking industry.

---

\* Corresponding author: Violeta Cvetkoska, e-mail: vcvetkoska@eccf.ukim.edu.mk

In this paper, we conduct a bibliometric analysis of journal articles that have been indexed in the most prominent database Web of Science (WoS) and include the terms "corporate governance", "banking", and "women" in the topic since the first article in the database to 2022. We use descriptive analytics to analyze the distribution of articles during the observed period, the most cited authors and papers, and the top publishers as well as categories in the Web of Science. We also investigate whether women's effects on corporate governance in the banking sector are positive or negative. By mining the abstracts, we also determine the topics that researchers have investigated in the whole analysis period and the previous five years.

This is the first bibliometric analysis on women in corporate governance in banking by which we enrich the literature in this area. This study may serve as a starting point for further research for academics, researchers, and banking professionals who are curious about how gender affects the banking industry's corporate governance. Furthermore, the findings of this study can be used as evidence by shareholders, and regulatory bodies as to why women's inclusion in corporate governance is necessary for the successful operation in financial institutions, more specifically in the banks that are essential to the worldwide financial stability.

The remaining of the paper is arranged as follows. Section 2 provides a methodology and data description. The findings and their analysis are presented in Section 3; the conclusion is given in Section 4.

## 2. Methodology and Data

We identified 33 papers by conducting a search of the WoS database on March 7, 2022, using the keywords "corporate governance", "banking", and "women" as well as the document types "papers" and all other time periods (apart from 2022). Six papers are not adequate, as we have discovered from reading the abstracts, thus 27 papers comprise the sample for analysis. We use data visualization to present how papers are distributed by year and by publisher, as well as the most cited authors and five most cited papers. Furthermore, by mining the abstracts with the use of the software VOSviewer in the entire analyzed period (2007–2021) and in the last five years (2017–2021), we present research hotspots in network visualization and density visualization maps, respectively. The most recent version of the program that we are employing is VOSviewer 1.6.18. Based on our investigation of its website, this software was used to do bibliometric analysis on 515 papers between the years of 2006 and March 4, 2022. Van Eck and Waltman (2010) provide information about the software.

We are mining the abstract fields by omitting structured abstract labels and copyright claims to develop a keyword co-occurrence map (2007-2021). Binary counting is used, and a keyword must appear a minimum of once to count. There are 836 keywords found, and the software automatically selects the 60% most relevant ones based on the determined relevance score, keeping 502 keywords. Then, we have checked those 502 keywords and we have excluded keywords that are not relevant for the study, such as: papers, authors, basis, researchers, etc. (Appendix 1a), and 395 keywords remain. Of this sample, 375 are connected, and those are grouped into 15 clusters that create the keyword co-occurrence map. In this case, we use network visualization.

The procedure of creating the keyword co-occurrence map for the last five years (2017-2021) is the same as for the whole analyzed period, so there are 671 keywords identified, but the number of occurrences of a keyword is set at 2, so that 120 satisfy the threshold. The 60% most relevant present 72 keywords, and after verifying (by excluding not adequate ones (Appendix Ab)), 53 keywords are grouped into 5 clusters and create the keyword co-occurrence map for this period. In this case, we are using density cluster visualization.

## 3. Results and Analysis

### 3.1 Descriptive analytics

The year that is leading regarding the number of published papers is 2018, with 6 papers. Our findings show that 70.4% of the papers were published in the last five observed years, based on which we can state that researchers' interest in this topic is rising (Figure 1). We have also identified 11 publishers, out of which Emerald Group Publishing LTD. has the highest number of published papers (8 papers). Elsevier came next with four papers, followed by MDPI, Springer, and Wiley with three each, etc. (Figure 2).

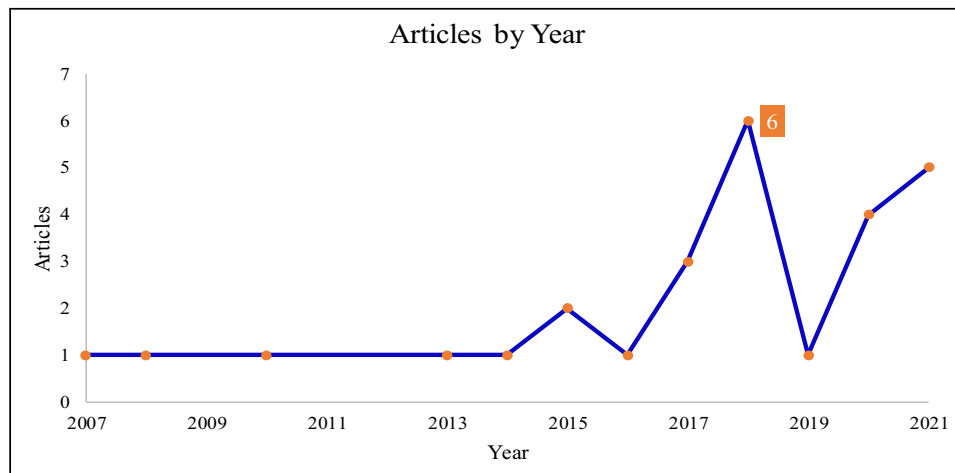


Figure 1: Paper distribution by year

Publisher	Number of articles
EMERALD GROUP PUBLISHING LTD	8
ELSEVIER	4
MDPI	3
SPRINGER	3
WILEY	3
ACADEMIC PRESS INC ELSEVIER SCIENCE	1
ASIA-PACIFIC MANAGEMENT ACCOUNTING ASSOC	1
CIRIEC-ESPANA	1
UNIV COMPLUTENSE MADRID, INST ESTUDIOS BURSATILES-IEB	1
UNIV MALAYSIA SARAWAK, FAC ECONOMICS & BUSINESS	1
VILNIUS UNIV	1

Figure 2: Papers by publisher

The papers are grouped into 11 categories in the Web of Science, so that the category Business and Finance has the highest number of papers (7), followed by the category Business with 5 papers, the category Economics with 3 papers, and so on. There are a total of 25 journals identified, thus two papers are published in each of the following journals: Corporate Governance (The International Journal of Business in Society) and Sustainability. There are 58 authors, and their mean number of papers is three. Authors that have more than fifty citations are presented in Figure 3, based on which we can see that the top cited authors are: Berger, A.N., Kick, T., and Schaeck, K.

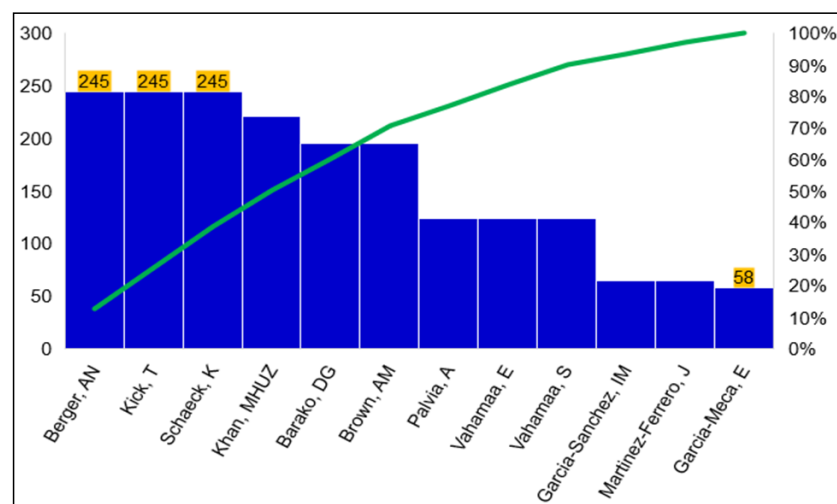


Figure 3: Authors with the most citations

Figure 4 lists the top five cited papers. "Executive board composition and bank risk taking," by Berger et al. (2014) is the top cited paper.

Reference	Times Cited, All Databases
Berger et al. (2014)	225
Khan (2010)	221
Barako and Brown (2008)	195
Palvia et al. (2015)	124
Birindelli et al. (2018)	42

Figure 4: The five most cited papers

In Table 1, we present the literature review of the 27 analysed studies in a tabular form so that the order is ascending based on the year.

In 15 studies, the research was conducted in 1 country, so that in Italy (Mazzotta & Ferraro, 2020; Del Prete & Stefani, 2021) and in Germany (Berger et al., 2013; Berger et al., 2014), there were two studies in each, while in 12 studies the research was conducted in more than 1 country, so that in the study of Tran et al. (2021), there is the largest sample of countries, i.e., 21 Western European countries. In 25 studies, the data are analysed for more than one year (the largest period is 1994-2021 in Berger et al. (2014)), while Dinu and Bunea (2018) analysed data for one year (2016), and Jamali et al. (2007) analysed data for a period less than a year (April-May, 2005). The smallest sample (10 banks) is analysed in two studies (Jubilee et al. (2018) and Othmani (2021)), while the largest consists of 6,729 banks (Palvia et al., 2015). Regarding the methodology used, regression analysis is used in most studies (Tobit for panel data, two-way cluster regression, instrumental variable regressions, general method of moments (GMM), etc.) and in one study the survey type questionnaire is used (Jamali et al., 2007).

Table 1: Literature review of WoS studies of women in corporate governance in banking

Author (s)	Year	Country	Period	Sample	Methodology
Jamali, D., Safieddine, A. and Daouk, M.	2007	Lebanon	April-May 2005	61 top and middle women managers in 12 banks	survey type questionnaire
Barako, D. and Brown, A.M.	2008	Kenya	Annual report of banks (no time frame specified)	40 banks	descriptive statistical analysis; (multiple) regression analysis
Khan, H.	2010	Bangladesh	2007-2008	30 commercial private banks	regression analysis
Berger, A.N., Kick, T., Koetter, M. and Schaeck, K.	2013	Germany	1993-2008	more than 10,900 executive appointments	regression analysis and duration analysis (accelerated failure time (AFT) model)
Berger, A.N., Kick, T. and Schaeck, K.	2014	Germany	1994-2010	entire population of executive officers in German banks (19,750 bank-year observations of 3525 banks)	difference-in-difference estimation techniques combined with matching methods
Martinez-Ferrero, J., Vaquero-Cacho, L.A., Cuadrado-Ballesteros, B. and Garcia-Sanchez, I.M.	2015	9 countries (Canada, France, Germany, Italy, the Netherlands, Spain, Sweden, the USA, the UK)	2004-2010	159 private banks	Tobit for panel data

Author (s)	Year	Country	Period	Sample	Methodology
Palvia, A., Vahamaa, E. and Vahamaa, S.	2015	US	2007-2010	6,729 US commercial banks (22,978 bank-year observations)	instrumental variable regressions
Pereira, V. and Filipe, J.A.	2016	Portugal	period following the onset of the financial crisis in the United States in 2007	25 banks	for board member qualification are used 3 variables and 9 governance variables
Garcia-Sanchez, I.M., Martinez-Ferrero, J. and Garcia-Meca, E.	2017	9 countries (Canada, France, Germany, Italy, the Netherlands, Spain, Sweden, the USA, the UK)	2004-2010	159 banks (877 observations)	general method of moments (GMM)
Ghosh, S.	2017	India	2003-2012	40 banks (all publicly listed banks)	regression analysis and robustness check
Palomo-Zurdo, R., Gutierrez-Fernandez, M. and Fernandez-Torres, Y.	2017	Spain	2000-2014	78 cooperative credit institutions	generalized method of moments
Birindelli, G., Dell'Atti, S., Iannuzzi, A., and Savioli, M.	2018	Europe and the United States	2011-2016	108 banks (406 bank-year observations)	fixed effects panel regression models
Dinu, V. and Bunea, M.	2018	Romania	2016	27 banks	regression analysis
Garcia-Meca, E., Uribe-Bohorquez, M.V. and Cuadrado-Ballesteros, B.	2018	9 countries (Canada, France, Germany, Italy, the Netherlands, Spain, Sweden, the USA, the UK)	2004-2010	159 banks (877 bank-year observations)	regression analysis
Garcia-Sanchez, I.M., Martinez-Ferrero, J. and Garcia-Meca, E.	2018	9 countries (Canada, France, Germany, Italy, the Netherlands, Spain, Sweden, the USA, the UK)	2004-2010	159 banks (bank-year 877 observations)	regression analysis
Jubilee, R.V.W., Khong, R.W.L. and Hung, W.T.	2018	Malaysia	2007-2016	10 banking institutions	panel data estimation methods
Lu, J. and Boateng, A.	2018	UK	2000-2014	79 banks (783 bank-year observations)	3 statistical models: 1) pooled ordinary least squares (OLS); 2) fixed effects, and 3) random effects

Author (s)	Year	Country	Period	Sample	Methodology
Abou-El-Sood, H.	2019	Gulf Cooperation Council countries	2002-2014	50 publicly traded conventionally banks and 32 Islamic banks (780 bank-year observations)	two-stage regression with instrumental variables
Baklouti, I.	2022	Tunisia, Algeria, Egypt, Jordan, Palestine, the Syrian Arab Republic, Sudan, Lebanon, Yemen, Iraq, UK and Sri Lanka	2011-2018	42 banks	random effects generalized least square method for regression analysis
Gallego-Sosa, C., Fernandez-Torres, Y. and Gutierrez-Fernandez, M.	2020	Europe and North America	2009-2018	the largest 52 banks in Europe and North America by market capitalization (28 from Europe and 24 from North America)	fixed effects econometric estimation
Khan, M.H., Fraz, A., Hassan, A. and Abedifar, P.	2020	11 Muslim countries (Bahrain, Bangladesh, Kuwait, Lebanon, Malaysia, Pakistan, Qatar, Saudi, Turkey, UAE, Yemen)	2010-2017	71 Islamic banks and 120 conventional banks (1,528 bank-year observations)	regression analysis
Mazzotta, R. and Ferraro, O.	2020	Italy	2008-2014	22 banks (131 bank-year observations)	regression analysis
Bechihi, O., Boumediene, S.L. and Nafti, O.	2021	7 MENA countries (Bahrain, United Arab Emirates, Qatar, Kuwait, Saudi Arabia (KSA), Tunisia, and Turkey)	2010-2016	40 Islamic banks (280 bank-year observations)	feasible general least square regression
Del Prete, S. and Stefani, M.L.	2021	Italy	1995-2010	more than 15,000 bank year observations	econometric (regression) analysis
Othmani, H.	2021	Tunisia	2005-2018	10 publicly listed banks	two-way cluster regression

Author (s)	Year	Country	Period	Sample	Methodology
Tran, C.D., Minh, L.P.T. and Wang, J.Y.	2021	21 Western European countries	2014-2017	310 listed financial institutions (4,960 bank-year observations)	two-stage approach least squares and generalized methods of moments
Issa, A., Zaid, M.A.A., Hanaysha, J.R. and Gull, A.A.	2022	Arabian Gulf countries	2011-2019	66 banks	two-step system generalized method of moments regression

### 3.2 Women's impact on banking corporate governance

According to Baklouti (2022), women on Sharia Supervisory Boards do not appear to have any effect on how Islamic banks financially perform. Khan (2010) provides findings that indicate there is no significant relationship between corporate social responsibility reporting and the number of women serving on boards (CRS). Ghosh (2017) discovered that the lack of a significant impact of female directors on bank behaviour is due to over monitoring or a lack of expertise on the part of the female board members. Dinu and Bunea (2018) demonstrate a direct link between gender diversity and the financial performance of the banking sector. Additionally, Gallego-Sosa et al. (2020) discovered that the scores for environmental performance are barely impacted by female directors' participation.

Six studies provide evidence of the indirect effect that women have on corporate governance in the banking industry (Table 2). According to Lu and Boateng's (2018) study, the presence of females on boards has a significant indirect credit risk effect. Tran et al. (2021) demonstrate that the presence of women at different management levels negatively affects the accounting of the institution, what their market performance is, etc.

**Table 2:** Women's negative impacts on the banking sector's corporate governance

Authors & year	Findings
Berger et al. (2014)	A greater representation of female directors increases the risk of a portfolio.
Birindelli et al. (2018)	The proportion of women on boards is negatively related to the performance of the environmental, social, and governance elements.
Jubilee et al. (2018)	The appointment of independent female directors has a negative impact on the value of banking institutions.
Lu and Boateng (2018)	Credit risk is adversely and significantly affected by boards with a female presence.
Abou-El-Sood (2019)	Bank risk-taking is inversely associated with having female directors on boards. (The association declines as regulatory capital increases); female directors in Islamic banks have a tendency to invest in risky asset positions less than female directors in conventional banks.
Tran et al. (2021)	The accounting and market performance of the company are negatively impacted by the participation of women at different management levels, including the chairman, executive, and all female board members.

However, there is evidence that women have a direct influence on the banking industry corporate governance in 16 of the reviewed papers, namely, the majority of the papers (Table 3). According to findings by Palvia et al. (2015), banks with smaller sizes and woman board presidents and CEOs saw lower failures during the financial crisis. Ghosh (2017) found evidence that having more women directors improved bank stability. According to findings by Birindelli et al. (2018), gender-balanced boards have a direct effect on

how banks operate in terms of sustainability. Bechihi et al. (2021) found that gender diversity on the board had an impact on financial transparency. Othmani (2021) claims that the association between female representation and bank performance (that is evaluated through return on assets and return on equity) is direct.

**Table 3:** Women's positive impacts on the banking sector's corporate governance

Authors & year	Findings
Jamali et al. (2007)	73.8 percent believe Lebanon has enough professional women with the necessary experience to serve on boards; 86.4 percent believe that having more women on board will help them attract a larger range of customers as well as investors.
Barako and Brown (2008)	There is a significant and direct relationship between the presence of female board members and how much information on corporate social responsibility is included in an annual bank statement.
Martinez-Ferrero et al. (2015)	The results reveal that both national and gender diversity have a favorable impact on individual rights issues.
Palvia et al. (2015)	More prudent capital levels are characteristic of banks managed by female CEOs. If a woman holds the position of CEO or president of the board, the bank is less likely to fail during financial crisis.
Garcia-Sanchez et al. (2017)	More female board members, conservative accounting, and high-quality bank profits are directly associated.
Ghosh (2017)	There is some evidence that the stability of banks is improved by having more executive women directors.
Palomo-Zurdo et al. (2017)	The rentability of credit union boards is directly impacted by the higher percentage of women who serve on them.
Birindelli et al. (2018)	The performance of a bank's sustainability efforts is directly impacted by gender-balanced boards.
Garcia-Meca et al. (2018)	Gender diversity has been found to positively affect CSR disclosure data only in banks with substantial cultural systems.
Garcia-Sanchez et al. (2018)	Involvement of females in the board of directors has a direct influence on the bank's commitment to corporate social responsibility. There is a larger likelihood that female-dominated bank boards would pursue socially responsible actions.
Jubilee et al. (2018)	The value of the bank and the presence of women in director positions are directly associated.
Khan et al. (2020)	Recently, there has been a noticeable growth in the number of female board members. (3 percent in 2010; 7 percent in 2017); yet, Islamic banks have significantly fewer female board members than conventional banks. Bangladesh has the highest female ratio in conventional banks, whereas Malaysia has the highest female ratio in Islamic banks. In Islamic banks, promoting gender equality and fostering an inclusive culture have no detrimental effects on performance.
Mazzotta and Ferraro (2020)	The number of female directors on boards, which measures gender diversity, is positively and statistically significant related with bank profitability (ROAE). The positions of female directors are not neutral, and the performance of banks is positively impacted by executive and independent female directors.
Bechihi et al. (2021)	Financial disclosure is affected by the number of women on the board.
Del Prete and Stefani (2021)	When reverse causation is taken into account, the diversity of gender on bank boards directly affects the loan portfolio's quality.
Othmani (2021)	The performance of banks and gender diversity are directly associated (as assessed by ROA and ROE).



### 3.3 Research hotspots in the whole analysed period

Twenty seven abstracts were utilized to find research hotspots by text mining, and Figure 5 shows the network visualization of keyword co-occurrence. Labels and circles that indicate items (keywords) and lines that depict connections between them make up the network map. The item weighs more when the label and circle are larger, and the relationship between the two items is stronger when they are closer together (Cvetkoska and Savic, 2021). The keywords have been grouped into 15 clusters, and the inclusion of a cluster is indicated by a keyword's shared colour. Each cluster represents a research topic. The keyword approach occurs 10 times and has the highest weight. Together with the other 24 terms, it belongs in the pink cluster (responsibility (the second keyword with the highest weight from all keywords in the map), boardroom level, female representation, women board representation, Lebanon, survey type questionnaire, etc). The blue cluster is composed of 38 keywords, so that the keyword difference has the highest weight (it occurs six times). In this cluster also belong the keywords: age, factor, board change, career outcome, educational composition, female executive, portfolio risk, outsider appointment, etc.

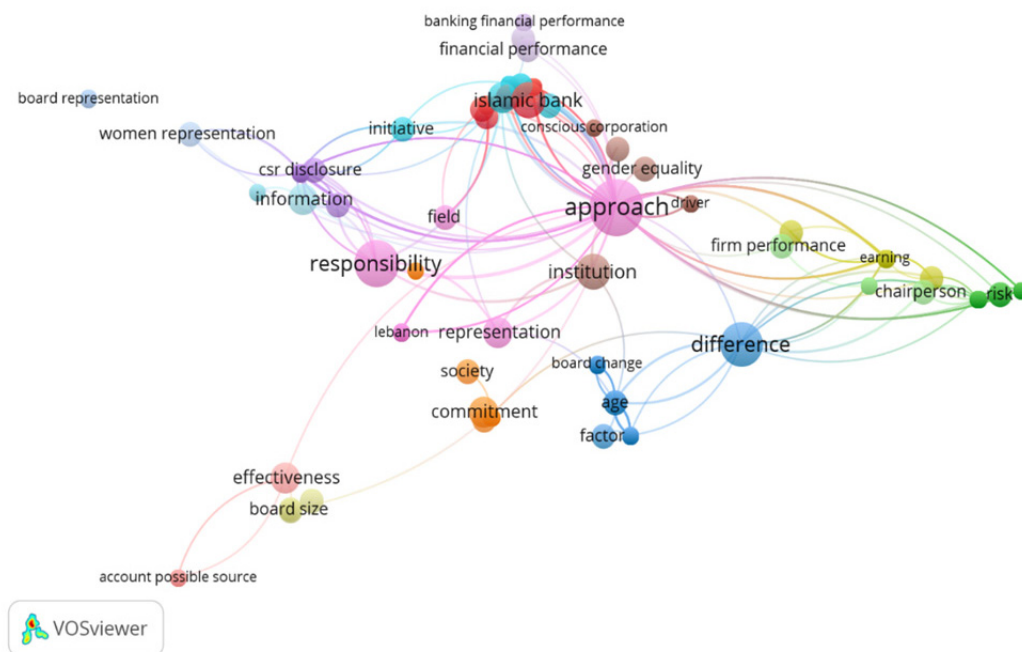


Figure 5: Keyword co-occurrence network visualization during the entire study period

### 3.4 Research hotspots in the last five years

We mined the abstracts of the papers that were published during the last 5 years (20 abstracts) and developed the cluster density visualization map with 53 keywords to learn what the researchers have investigated into (Figure 6). The keywords are segmented into five clusters. The keyword with the highest weight is value (7 occurrences) and belongs in the blue cluster along with 10 other keywords (appointment, conventional bank, board diversity, firm performance, gender equality, governance structure, market, positive relationship, Tobit). The second keyword with the highest weight is independent director (5 occurrences) and belongs to the violet cluster with 6 other keywords (banking industry, board characteristic, board independence, board size, CSR, independence, independent director). In addition, in the red cluster are 17 keywords, such as: profitability, measure, executive, Europe, corporate board, equity, female leadership, promotion, ROE, ROA, etc. Corporate governance is the term having the highest weight in the green cluster (4 occurrences). In this cluster are 10 other keywords such as: financial performance, Gulf Cooperation Council, Islamic bank, MENA, reputation, etc.

The term "bank board" has the highest weight in the yellow cluster (3 occurrences). The cluster consists of 7 other keywords (bank performance, effectiveness, endogeneity, gender quota law, Italy, return, and robustness).

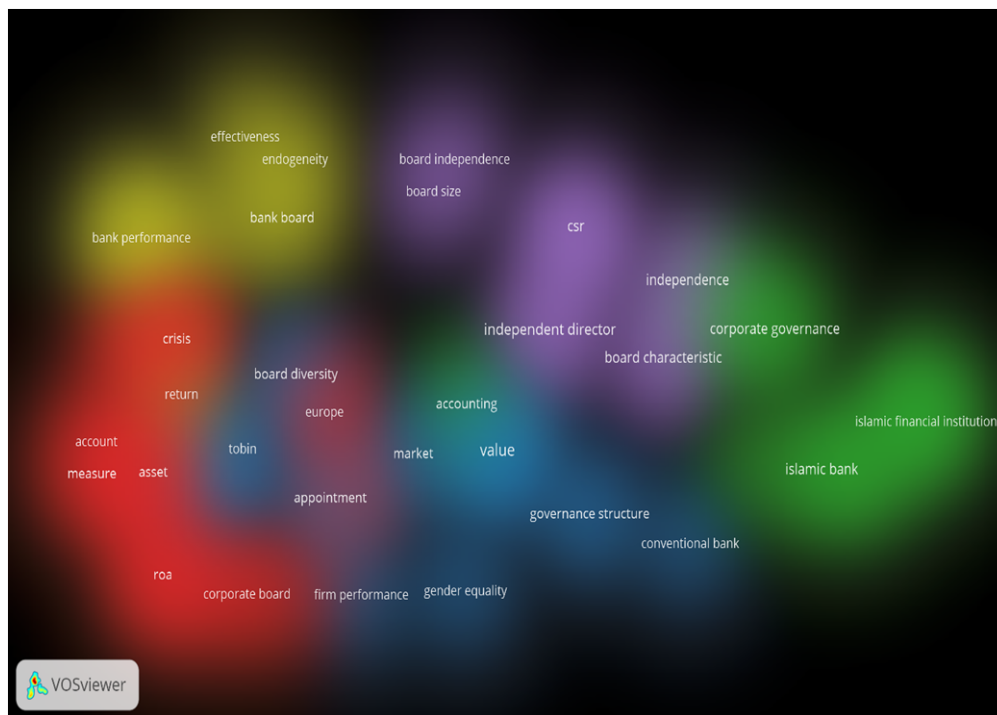


Figure 6: Keywords co-occurrence cluster density visualization (2017-2021)

## Conclusion

In this study, we provide the first bibliometric analysis related to the women's inclusion in banking corporate governance. We focused on the leading scientific database, Web of Science, and searched all indexed papers in peer-reviewed journals in the database that have the keywords "corporate governance", "banking", and "women", starting from the first paper in this database until 2022. Based on our findings: 1) The majority of papers in this area were published in 2018, with 70.4% published in the previous five years; 2) The top publisher based on the number of published articles (8 articles) is Emerald Publishing Group LTD; 3) The most cited authors are Berger, A.N., Kick, T., and Schaeck (with 245 citations each); 4) "Executive Board Composition and Bank Risk Taking" (Berger et al., 2014), which has 225 citations, represents the most cited paper; 5) The positive impact of women in corporate governance prevails, especially on CRS disclosure data, bank performance, stability, and value; 6) By mining the abstracts in the entire observed period, we found that the keywords "approach, responsibility, difference, institution, commitment, financial performance, and risk" were the most frequently used; additionally, analysis of the Islamic banks prevails in the research; 7) In the last five years, the most commonly used key word has been "value", and researchers have investigated the determinants of bank value, such as gender equality and board diversity, using tobit regression, primarily in the European market (blue cluster); The most frequently used keyword in the violet cluster is "independent director", and studies in this cluster concentrate on board characteristics, size, independence, and their impact on CSR information; in the green cluster, corporate governance in Islamic financial institutions is examined; in the red cluster, studies concentrate on how corporate boards deal with crises and their impact on ROA; and in the yellow cluster, the endogeneity and effectiveness of bank boards on the banks' performance are determined.

This paper's findings indicate that research in the analyzed area is increasing, so this paper can serve as a basis for designing original research by interested researchers. They could see what has been done so far in individual countries, what methodology has been used, and what insights have been gained regarding the impact of women in corporate governance in banks, which would support or contradict their own results. In addition, keyword cluster analysis for the last five years crystallizes the most relevant keywords that are of most current interest to researchers. Although the most commonly used method for determining the impact of women in corporate governance in banking is regression analysis, we suggest that in further research a two-phase approach be used in which, in the first phase, the data envelopment analysis (DEA) method would be applied to measure the performance of banks and branches and, in the next phase, machine learning algorithms would be used for regression analysis to determine which characteristics of boards lead to the relative efficiency of banks.

In terms of practical implications, we want to emphasize that good corporate decisions should be a combination of professional background, continuous improvement in the banking field, and the experience of the top management team that is balanced in terms of gender. In that direction, the regulatory bodies should advocate for reforms in which policies

will be adopted for the equal representation of women on the boards of banks, which will enable their nomination for such positions. The positive impacts of women in the corporate governance of banks are far more numerous based on the findings obtained from the studies analyzed in this paper, not only from the aspect of better performance but also from that of CSR, which is of essential importance at the global level.

The fact that we have only concentrated on English-published articles that are indexed in WoS is a limitation of our study, and papers from other databases like SCOPUS and Google Scholar may broaden the sample.

Women's effect on banking corporate governance in the Balkans is not examined in any of the studies we have analyzed; this is an area in which we plan to conduct further research.

## REFERENCES

- [1] Abou-El-Sood, H. (2019). Corporate governance and risk taking: The role of board gender diversity. *Pacific Accounting Review*, 31(1), 19–42. DOI: 10.1108/PAR-03-2017-0021
- [2] Baklouti, I. (2022). Is the Sharia supervisory board a friend or an enemy of Islamic banks? *Journal of Islamic Marketing*, 13(2), 526–541. DOI: 10.1108/JIMA-04-2020-0118
- [3] Barako, D. G., & Brown, A. M. (2008). Corporate social reporting and board representation: Evidence from the Kenyan banking sector. *Journal of Management & Governance*, 12(4), 309–324. DOI: 10.1007/s10997-008-9053-x
- [4] Bechihi, O., Boumediene, S. L., & Nafti, O. (2021). Compliance and determinants of the AAOIFI financial standards: Evidence from the MENA region. *Asia-Pacific Management Accounting Journal*, 16(1), 207–248. DOI: 10.24191/APMAJ.V16i1-09
- [5] Berger, A. N., Kick, T., & Schaeck, K. (2014). Executive board composition and bank risk taking. *Journal of Corporate Finance*, 28, 48–65.
- [6] Berger, A. N., Kick, T., Koetter, M., & Schaeck, K. (2013). Does it pay to have friends? Social ties and executive appointments in banking. *Journal of Banking & Finance*, 37(6), 2087–2105. DOI: 10.1016/j.jbankfin.2013.01.040
- [7] Birindelli, G., Dell'Atti, S., Iannuzzi, A., & Savioli, M. (2018). Composition and activity of the board of directors: Impact on ESG performance in the banking system. *Sustainability*, 10(12), 4699. DOI: 10.3390/su10124699
- [8] BoardEx. (2021, February 16). Boardex global gender balance report 2021. Retrieved April 8, 2022, from BoardEx website: <https://www.boardex.com/2020-global-gender-diversity-analysis-women-on-boards/>
- [9] Cvetkoska, V., & Savic, G. (2021). DEA in banking: Analysis and visualization of bibliometric data. *Data Envelopment Analysis Journal*, 5(2), 455–485.
- [10] Del Prete, S., & Stefani, M. L. (2021). Women as “gold dust”: Gender diversity in top boards and the performance of Italian banks. *Economic Notes*, 50(2). DOI: 10.1111/ecno.12183
- [11] Dinu, V., & Bunea, M. (2018). The Impact of the Gender Diversity on the Romanian Banking System Performance. *Transformations in Business and Economics*, 17(2), 42–59.
- [12] Gallego-Sosa, C., Fernandez-Torres, Y., & Gutierrez-Fernandez, M. (2020). Does gender diversity affect the environmental performance of banks? *Sustainability*, 12(23), 10172. DOI: 10.3390/su122310172
- [13] Garcia-Meca, E., Uribe-Bohorquez, M.V., & Cuadrado-Ballesteros, B. (2018). Culture, board composition and corporate social reporting in the banking sector. *Administrative Sciences*, 8(3), 41. DOI: 10.3390/admsci8030041
- [14] Garcia-Sanchez, I.M., Martinez-Ferrero, J., & Garcia-Meca, E. (2017). Gender diversity, financial expertise and its effects on accounting quality. *Management Decision*, 55(2), 347–382.
- [15] Garcia-Sanchez, I.M., Martinez-Ferrero, J., & Garcia-Meca, E. (2018). Board of directors and CSR in banking: The moderating role of bank regulation and investor protection strength: board of directors and CSR in banking. *Australian Accounting Review*, 28(3), 428–445. DOI: 10.1111/auar.12199
- [16] Gender balance in decision-making (n.d.). Retrieved April 7, 2022, from European Commission—European Commission website: [https://ec.europa.eu/info/policies/justice-and-fundamental-rights/gender-equality/gender-balance-decision-making-positions\\_en](https://ec.europa.eu/info/policies/justice-and-fundamental-rights/gender-equality/gender-balance-decision-making-positions_en)
- [17] Ghosh, S. (2017). Why is it a man's world, after all? Women on bank boards in India. *Economic Systems*, 41(1), 109–121. DOI: 10.1016/j.ecosys.2016.05.007
- [18] Issa, A., Zaid, M. A. A., Hanaysha, J. R., & Gull, A. A. (2022). An examination of board diversity and corporate social responsibility disclosure: Evidence from banking sector in the Arabian Gulf countries. *International Journal of Accounting & Information Management*, 30(1), 22–46. DOI: 10.1108/IJAIM-07-2021-0137
- [19] Jamali, D., Safieddine, A., & Daouk, M. (2007). Corporate governance and women: An empirical study of top and middle women managers in the Lebanese banking sector. *Corporate Governance: The International Journal of Business in Society*, 7(5), 574–585. DOI: 10.1108/14720700710827167

- [20] Jubilee, R. V. W., Khong, R. W. L., & Hung, W. T. (2018). Would diversified corporate boards add value? The case of banking institutions in Malaysia. *Asia-Pacific Journal of Business Administration*, 10(2/3), 218–228. DOI: 10.1108/APJBA-05-2018-0089
- [21] Khan, H. (2010). The effect of corporate governance elements on corporate social responsibility (CSR) reporting: Empirical evidence from private commercial banks of Bangladesh. *International Journal of Law and Management*, 52(2), 82–109. DOI: 10.1108/17542431011029406
- [22] Khan, M. H., Fraz, A., Hassan, A., & Abedifar, P. (2020). Female board representation, risk-taking and performance: Evidence from dual banking systems. *Finance Research Letters*, 37, 101541. DOI: 10.1016/j.frl.2020.101541
- [23] Lu, J., & Boateng, A. (2018). Board composition, monitoring and credit risk: Evidence from the UK banking industry. *Review of Quantitative Finance and Accounting*, 51(4), 1107–1128. DOI: 10.1007/s11156-017-0698-x
- [24] Martinez-Ferrero, J., Vaquero-Cacho, L.A., Cuadrado-Ballesteros, B., & Garcia-Sanchez, I.M. (2015). Corporate governance and corporate social responsibility in the banking sector: the role of the board of directors. *Investigaciones Europeas de Direccion y Economia de La Empresa*, 21 (3), 129-138. (in Spanish)
- [25] Mazzotta, R., & Ferraro, O. (2020). Does the gender quota law affect bank performances? Evidence from Italy. Corporate Governance: *The International Journal of Business in Society*, 20(6), 1135–1158. DOI: 10.1108/CG-08-2019-0252
- [26] Othmani, H. (2021). Does board gender diversity matter in the banking sector? Evidence from Tunisia. *African Development Review*, 33(1), 14–24. DOI: 10.1111/1467-8268.12487
- [27] Palomo-Zurdo, R., Gutierrez-Fernandez, M., & Fernandez-Torres, Y. (2017). The gender issue at the boards of directors of co-operative banks. *CIRIEC-Espana, Revista de Economia Publica, Socialy Cooperativa*, 89, 137-166. (in Spanish)
- [28] Palvia, A., Vahamaa, E., & Vahamaa, S. (2015). Are female CEOs and chairwomen more conservative and risk averse? Evidence from the banking industry during the financial crisis. *Journal of Business Ethics*, 131(3), 577–594. DOI: 10.1007/s10551-014-2288-3
- [29] Pereira, V. M. M., & Filipe, J. (2016). An examination of the Portuguese banking sector crisis. *Aestimatio: the IEB International Journal of Finance*, 13, 2–17.
- [30] Tran, C.D., Minh, L. P. T., & Wang, J.Y. (2021). The influence of female leadership towards performance: Evidence from western European financial firms. *International Journal of Business and Society*, 22(2), 513–531. DOI: 10.33736/ijbs.3731.2021
- [31] van Eck, N. J., & Waltman, L. (2010). Software survey: VOSviewer, a computer program for bibliometric mapping. *Scientometrics*, 84(2), 523–538. DOI: 10.1007/s11192-009-0146-3

## Appendix

### Appendix 1a: Excluded keywords

addition, aftermath, answer, appearance, paper, assistance, attention, attribute, authors focus, bad news, bank enhances stability, basis, category, complete lack, comprehensive literature survey, contrast, contribution, current study gauge, data observation, degree, direct relationship, direct relevance, interest, document, element, empirical research, empirical study, entire population, evidence, examination, facet, findings result, focus, form, further analysis, future research, key determinant, great interest, greatest challenge, hand, heightened interest, high level, higher level, higher proportion, interesting data, involvement, key conclusion, large panel, large sample, larger sample, latter effect, limited presence, low representation, main econometric result, main limitation, main objective, major effect, majority, monitoring, note, novel evidence, overall congruence, paper analysis, paper sheds light, particular attention, particular note, percentage, perception, playing field, positive effect, positive impact, possible impact, potential effect, potential influence, practitioner, primary concern, prior literature, prior research, random effect, recent initiative, regard, relevance, relevant variable, researcher, sample comprised, shortage, significance, significant difference, significant effect, significant impact, significant influence, small number, special attention, special groups, specific context, state, strong evidence, sub sample, theoretical contribution, unique characteristic, unique data set, unique paper divulge, unique sample, useful insight, value addition, value implication, variety, weak evidence

### Appendix 1b: Excluded keywords

body, case, context, empirical study, findings highlight, further analysis, high level, importance, lack, negative effect, negative impact, originality value, potential impact, practical implication, previous study, question, research limitations implication, term, unique data set

Received: 2023-01-11

Revision requested: 2023-01-17

Revised: 2023-01-21 (1 revision)

Accepted: 2023-02-20

////// About the Authors

**Evica Delova Jolevska**

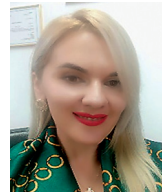
University American College, Skopje, North Macedonia  
evicadj@uacs.edu.mk



Dr Evica Delova-Jolevska is a full professor at the Faculty of Business Economics and Organizational Sciences at the American College University Skopje in the field of banking and bank management, as well as quantitative methods. She is the co-author of the book Money and Banking (2012) and the author of three textbooks in the field of statistics. Her current research interests include banking and finance, bank management, consumer protection, and financial education.

**Violeta Cvetkoska**

Ss. Cyril and Methodius University in Skopje, Faculty of Economics-Skopje,  
Skopje, North Macedonia  
vcvetkoska@eccf.ukim.edu.mk



Dr Violeta Cvetkoska is an Associate Professor of Operational Research and Fundamentals of Business Analytics at Ss. Cyril and Methodius University in Skopje, Faculty of Economics—Skopje. Her academic career has been developed through study visits and active participation in international conferences, symposia, and workshops at prestigious universities in Europe, North and South America, and Asia. Her current research interests include digital transformation, the use of analytics and machine learning algorithms in banking and finance, performance measurement, and the green economy.