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THE IMPACT OF FEMININE MANAGEMENT ON BANKS FINANCIAL PERFORMANCE: EVIDENCE FROM SELECTED COUNTRIES FROM EUROPE

TILIUȚĂ Bogdan Andrei

*Alexandru Ioan Cuza University of Iasi, Faculty of Economics and Business Administration,
Iasi, Romania*

DIACONU Ioana Raluca

*Alexandru Ioan Cuza University of Iasi, Faculty of Economics and Business Administration,
Iasi, Romania*

OANEA Dumitru Cristian

*Bucharest University of Economic Studies, Faculty of Finance and Banking,
București, Romania*

Abstract:

The main purpose of this paper is to fill the gaps in the literature regarding the main determinants of banking system performance. Thus, we studied the banking systems of some EU member states by analyzing the links and influences of women's involvement in the top management team (TMT) on economic performance. We studied the impact of gender diversity (especially the variation of women's involvement in top management) on financial key performance indicators (KPIs) for 134 selected banks from 8 countries, a total of 1060 firm-years, based on data obtained from Bureau van Dijk (BvD) Orbis and World Bank Database. We estimated for each country a regression model, using PLS (panel least squares) empirical setup, based on unbalanced panel data for period 2009-2019. We've determined statistically significant links between the presence of women in the top management team and the banks' financial KPI (ROA, ROE and NPL). However, we found clues that there is a level of femininity at which there's an inflection point in terms of the influence on defined KPIs. The empirical results contribute on the literature regarding gender segregation and economic performance of banks, concluding that a more gender-balanced TMT can generate superior banking outcomes.

Key words: bank performance, decision-making, female management, gender diversity

1. Introduction

Given the perspective of globalization approached at an increasingly in-depth level in the substrates of society, the issue of gender has become a hotly debated topic in all spheres of influence with an impact on the macroeconomy. In this context, the main

purpose of this paper is to determine the links between the involvement of women in the senior management of banking entities on financial performance. Thus, organizations or even nations can determine how they can influence the variables pursued in order to prevent inequalities or even gender discrimination.

Inequalities are currently being measured and reviewed by several organizations, with constant efforts to limit or even close the gaps between women and men in all areas such as: freedom of movement, access to employment, equal pay, and more. . As models that measure and monitor these gender inequalities we can mention: Social Institutions and Gender Index (SIGI) - Organization for Economic Co-operation and Development (OECD), "Balanced participation of women and men in decision-making" - annual report of the Committee on Gender Equality (GEC) of the Council of Europe (EC), "The world for women and girls" - the annual report of the United Nations (UN).

Positive correlations between gender diversity and various economic and social variables such as social responsibility, economic performance, risk and effectiveness are determined in the literature (Adams and Ferreira (2004), Cumming et al. (2015), Delgado-Pina et al. (2020), Fernando et al. (2020), Frias-Aceituno et al. (2012), Garcia-Meca et al. (2015), Graafland (2020), Heilman (2012), Proenca et al. (2020),). Other studies determined that there are no connections or even negative effect between women on board and economic performance (Khatib et al (2021), Nguyen et al. (2020)).

The work carried out by Hofstede et al. (2005) define an existing national culture as well as organizational cultures for each entity as sub-branches of the first cultures. Smircich (1983) in his study approached the issue of organizational culture from two perspectives: that of the independent variable (being debated as an explanatory variable, a framework, a general context) and that of the internal, dependent variable (viewed from the perspective of systems theory in which the organizational culture (OC) is defined as the sum of the subsystems of these components). If the first perspective of CO proposed by Smircich (1983) is widely used to conduct intracultural managerial research, the second perspective is used for intercultural analysis.

Therefore, the analysis will be performed using the second perspective proposed by Smircich (1983), namely the organizational culture from a dependent variable perspective. The study presents an intercultural analysis in order to determine the influences of promoting women in leadership positions that aims to determine if the proportion of women in top management has an effect on the financial performance of banking institutions.

In this context, the main purpose of the study is to fill the gaps of literature concerning the determinants of banking system performance. Thus, we studied the banking systems of some EU member states by analysing the links and influences of women's involvement (gender diversity) in the top management team on economic performance.

Given the conceptual framework for conducting the analysis, in order to determine a global trend in terms of gender diversity, we (Tiliuță & Diaconu, 2020) made a parallel of the values of the GGI indicator (Global Gender Gap Index developed by the World Economic Forum (2020)) calculated for 2006, 2018 and 2020 in parallel with the masculinity/femininity dimension (MAS), as Hofstede et al. (2005) defined it, and presented

in Table no. 1. We studied the two indicators for 28 countries, of which 26 in the European Union and two Nordic states (marked with *) known as having a national culture oriented towards femininity. We highlighted the values using a colour code, as follows: red the highest value, and green the lowest value. The GGI indicator has values between 0 and 1, and the unit value reflects gender parity.

Table 7. GGI values for the years 2006, 2018 and 2020 presented in parallel with the value of the MAS dimension defined by Hofstede

Top after GGI		Country	Values (between 0 and 1)			MAS
2020	2018		2020	2018	2006	
4	3	Sweden	0,820	0,822	0,813	5
2	2	Norway *	0,842	0,835	0,799	8
11	17	Latvia	0,785	0,758	0,709	9
38	27	Netherlands	0,736	0,746	0,724	14
14	13	Denmark	0,782	0,778	0,746	16
33	24	Lithuania	0,745	0,750	0,708	19
36	11	Slovenia	0,743	0,784	0,674	19
3	4	Finland	0,832	0,820	0,796	26
26	33	Estonia	0,751	0,734	0,694	30
35	2	Portugal	0,744	0,733	0,692	31
49	18	Bulgaria	0,727	0,756	0,687	40
60	59	Croatia	0,720	0,712	0,714	40
55	63	Romania	0,724	0,711	0,680	42
8	29	Spain	0,795	0,746	0,732	42
15	12	France	0,781	0,779	0,652	43
90	91	Malta	0,693	0,685	0,651	47
51	61	Luxembourg	0,725	0,712	0,667	50
27	32	Belgium	0,750	0,738	0,708	54
78	82	Czech Republic	0,706	0,692	0,671	57
84	78	Greece	0,701	0,697	0,654	57
40	42	Poland	0,736	0,728	0,680	64
10	14	Germany	0,787	0,776	0,753	66
7	9	Ireland	0,798	0,796	0,733	68
76	70	Italy	0,707	0,706	0,646	70
34	53	Austria	0,744	0,718	0,698	79
105	102	Hungary	0,677	0,674	0,670	88
63	83	Slovakia	0,718	0,692	0,675	100

Source: own processing according to data provided by the World Economic Forum (2020) and Hofstede et al. (2005)

In order to follow the evolution or trend, it is recommended to read the table from right to left, the MAS indicator being determined at the earliest from a temporary point of view, and the GGI 2020 value being the most current indicator.

It can be seen that in countries with low masculinity there is a higher value of the GGI index which tends to 1 (gender equality in all 4 spheres). Moreover, it can be seen that there is an increase in the value of the index in all cases for the period 2006-2020, which indicates that there are changes in the national organizational culture in terms of gender stereotypes, but they are slow.

The evolution of the GGI indicator was presented in parallel with the level of masculinity defined by Hofstede et al. (2005) to highlight the fact that since the date of his study the values of national cultures have changed.

Although the two indicators are defined differently, there are similarities in terms of colour code in the sense that most countries in the "green" area of the GGI indicator are in an area with a low value of the MAS indicator, and for the "red" area the situation is similar.

We notice that the dimension of masculinity / femininity guides us on the main direction of organizational cultures promoted at national level and gives us an overview of intercultural differences.

The originality of the paper is determined by the approach of the country selection for analysis according to the parallel made and presented in table no. 1, the reference period of the financial results and the use in the regression models of both bank-specific and macroeconomic variables but also proxy variables that aim to determine the impact of women's involvement in TMT. Another aspect of originality is the analysis of the aspects related to the characteristics defined by Hofstede applied in banking-type organizations in correlation with the financial results.

2. Model and Data

2.1. Sample

For the analysis, we selected at choice 8 countries marked with a yellow background in table 1. The choice of countries aimed to include countries from the upper part of the table (Norway, Latvia and the Netherlands - low MAS size level), in the middle zone (Bulgaria, Croatia and Romania) and in the lower zones (Austria and Hungary).

We wanted to include in the study the countries of Eastern Europe but in this area the size of MAS is generally medium or low, so for the upper area we opted for Nordic countries. For each country, the commercial banks were selected only if they have reported financial data for at least 2 consecutive years.

In order to achieve our objective in identifying the influence of women's involvement in top management activities regarding the financial performance, we extracted the data required for analysis from Orbis database provided by Bureau van Dijk (BvD). Based on this, we selected 134 banks from 8 countries from Europe (including Romania). The period of financial data varies among the banks between 2 and 11 years, as we can see in table 2. Despite this, our sample contains 90% of banks having more than 5 years historical data, resulting that our analysis is designed to follow up on possible changes in gender diversity within councils.

The methodology applied in the present study was also used in our research (Tiliuță et al., 2021) where we studied the Romanian banking system, and the present scientific approach having the role of developing the initial research.

Table 2. Number of selected banks by country and # years included in analysis

Country	# years included in analysis										TOTAL
	2	3	4	5	6	7	8	9	10	11	
Austria	1			2		11		4	5		23
Bulgaria			1	1	1	4	1	5	3		16
Croatia						3		9	3		15
Hungary			1		1	5		3	5		15
Latvia		1	1			8			3	1	14
Netherlands				1		4		8	7		20
Norway		1	3	1	2	9		1	1		18
Romania					2	6		3	2		13
TOTAL	1	2	6	5	6	50	1	33	29	1	134

Source: Own processing

2.2. Used variables

Based on previous literature, we have selected three main financial key performance indicators for each bank, namely: return on assets and/or equity (ROA, ROE) and the level of impaired loans on gross loans (NPL).

First indicator, ROA, points out how efficient each bank is using its assets in order to make profit. ROA is largely used in economic literature (Erhardt et al., 2003; de Andres and Vallelado, 2008; Adams and Ferreira, 2009; Pathan and Faff, 2013; Pucheta-Martinez et al., 2016; Andrieş et al., 2020) in order to quantify the management's ability and efficiency in using shareholders assets.

ROE, the second indicator, which is the ratios between extraordinary items, interest expense, and taxes, to the total equity. This KPI showing the capability of a bank to generate profit based on its available equity, it was approached in the economic literature (Pathan and Faff, 2013; Talavera et al., 2018; Shettima and Dzolkarnaini, 2018, Andrieş et al., 2020).

The last indicator, NPL, is in opposite to the first, and it is highlighting the bank's level of credit risk. Due to fact that a high credit risk (high NPL) indicates a lower profitability, also this indicator can be found in the economic literature as a proxy for financial performance (e.g., Altavilla et al., 2018; Detragiache et al., 2018; Elekdag et al., 2020, Andrieş et al., 2020).

The proxy variable for female impact on financial performance is the percentage of female members in the total number of board members – Female (%). Going further, we also defined a control variables to take into account bank specificity (size, capital structure, assets structure, board size) and macroeconomic situation (GDP growth and inflation rate). These variables are presented in table 3.

Table 3. Used variables

Variable	Definition	Formula
Dependent variables		
ROA*	Shows how profitable is a company regards to its total assets	Profit / Assets
ROE*	Shows how profitable is a company regards to its total equity	Profit / Equity
NPL*	Shows credit risk level of a company	Impaired loans / Gross loans
Independent variables		
Female (%)*	Women representation in top management	# Women / # Board members
Bank size*	Size of a bank according to total assets	ln(Assets)
Capital Structure*	Shows the way that a company founds her operations / growth	Equity / Assets
Asset Structure*	Shows the strategy of an entity regarding earnings using assets.	Loans / Assets
Board size*	The number of the boards' members	ln(# Board members)
GDP Growth**	Annual GDP growth rate	Annual change of GDP
Inflation rate**	The rate determined by the consumer price index in one year	Annual change of CPI

Source: * - Own processing based on information from Orbis; ** - World Bank Database

2.3. Model and data

We will estimate for each country and selected banks a multiple regression model, using PLS (panel least squares) empirical setup, based on unbalanced panel data for period 2009-2019. The method is adapted after the economic literature and previous studies (Andrieş et. al., 2020; de Andres and Vallelado, 2008; Ghosh and Ansari, 2018; Pathan and Faff, 2013;):

(1) $Performance_{t,i} = \alpha_0 + \alpha_1 \times Female_{t,i} + \alpha_2 \times Bank\ variable_{t,i} + \alpha_3 \times Macro-variable_{t,i} + \varepsilon_{t,i}$,
where

$Performance_{t,i}$ - the dependent variable showing ROA/ROE/NPL for bank i , and year t ;

$Female_{t,i}$ - the female % in board for bank i , and year t ;

$Bank\ variable_{t,i}$ - the proxy variables for bank's characteristics (size, capital structure, asset structure and board size) for bank i , in the t year;

$Macro-variable_{t,i}$ - the proxy variable for macroeconomic situation (GDP growth, inflation rate);

α_0 - Fixed effect with the aim to compensate the omitted variables at bank level;

$\alpha_1, \alpha_2, \alpha_3$ - the discriminant coefficients;

$\varepsilon_{t,i}$ - error term.

Table 4. Average for used variable

Variable	Austria	Bulgaria	Croatia	Hungary	Latvia	Netherlands	Norway	Romania
Dependent variables								
ROA*	0.5%	0.6%	0.1%	-0.2%	0.0%	0.5%	0.8%	0.3%
ROE*	4.7%	5.8%	14.1%	-5.4%	3.5%	4.8%	8.3%	0.7%
NPL*	2.5%	11.2%	10.8%	9.9%	9.2%	1.4%	1.1%	8.1%
Independent variables								
Female (%)*	22.5%	30.5%	18.6%	21.6%	23.7%	23.4%	34.4%	33.8%
Bank size*	14.50	13.87	13.92	14.55	13.66	16.15	14.55	14.81
Capital Structure*	17.5%	14.3%	11.3%	9.6%	11.8%	14.1%	11.6%	10.7%
Asset Structure*	58.5%	53.1%	58.9%	57.7%	33.6%	56.3%	82.3%	60.4%
Board size*	2.52	2.46	2.04	2.68	2.59	2.84	2.35	2.35
GDP Growth**	1.5%	2.7%	1.4%	3.2%	2.5%	1.5%	1.5%	4.0%
Inflation rate**	1.7%	1.4%	1.0%	2.1%	1.5%	1.6%	2.4%	2.1%

Source: * - Own processing based on information from Orbis; ** - World Bank Database

The average for all used variables are presented in table 4. At a first glance, we can see that there are 3 countries, namely Bulgaria, Romania and Norway in which we can see that female representation in TMT is around one third. On the rest of the countries, the female presence in top management is around 20%, with the lowest value in Croatia (18.6%). Also in the fig. 1 we are able to see the countries distribution between female (%) and ROE, ROA and NPL.

Figure 1. Average Female (%) versus average ROA, ROE and NPL across selected countries

Source: Own processing

The regression models, which will be estimated for each country, will reflect the impact of presence of woman in TMT over banks' financial performance. For testing the stationarity of all variables we will use Levin et. Al (2002) unit root test for all variables from panel data, and the result is that all series are stationary, results presented in table 5.

Table 5. Unit root test for panel data

Variable	Austria	Bulgaria	Croatia	Hungary	Latvia	Netherlands	Norway	Romania
Dependent variables								
ROA	-4.43***	-2.88***	-10.76***	-28.13***	-1.53*	-2.83***	-9.15***	-5.68***
ROE	-4.06***	-1.65**	-9.33***	-20.35***	-1.59***	-6.06***	-5.89***	-2.60***
NPL	-3.06***	-1.63*	-5.90***	-1.51*	-9.54***	-6.94***	-2.64***	-5.68***
Independent variables								
Female (%)	-4.72***	-3.42***	-21.51***	-5.97***	-7.65***	-8.62***	-58.11***	-12.87***
Bank size	-47.83***	-2.38***	-4.80***	-2.05**	-1.64*	-4.91*** ^(a)	-5.52***	-6.80***
Capital Structure	-61.22***	-1.79**	-35.12***	-6.42***	-1.79** ^(a)	-4.85***	-4.62***	-15.62***
Asset Structure	-1.78** ^(a)	-1.81** ^(a)	-3.13**	-3.81***	-2.76**	-1.92**	-19.46**	-2.27**
Board size	-13.66***	-8.45**	-4.87***	-14.34***	-5.34**	-8.54***	-6.83**	-11.66***
GDP Growth	-6.86***	-13.82***	-27.80***	-6.67***	-14.31***	-12.16***	-17.24***	-7.66***
Inflation rate	-8.76***	-1.19*	-8.40***	-3.76***	-2.04**	-1.45*	-2.76***	-4.73***

Source: Own processing; *, **, *** - Indicates significant at the 0.1 level, 0.05 level and 0.01 level; ^(a) – stationary on first difference

In table 6 we calculate the strongest correlation, whether negative or positive, across the selected variables for selected countries. It can be seen that between Bank size and Board size and some of other independent variables is registered the strongest correlation. To prevent multicollinearity we will estimate different regression models, in which we'll not include simultaneous these variables.

Table 6. Strongest correlation (negative/positive) recorded across countries

Variable	Female (%)	Bank size	Asset Structure	Capital Structure	Board size	GDP Growth
Bank size	0.65 (Netherlands)					
Asset Structure	-0.42 (Croatia)	-0.55 (Norway)				
Capital Structure	-0.31 (Croatia)	0.74 (Latvia)	-0.49 (Netherlands)			
Board size	0.57 (Romania)	0.61 (Bulgaria)	0.59 (Croatia)	0.53 (Bulgaria)		
GDP Growth	-0.19 (Romania)	-0.13 (Romania)	0.17 (Netherlands)	-0.22 (Bulgaria)	-0.17 (Romania)	
Inflation rate	-0.13 (Norway)	0.20 (Austria)	-0.15 (Austria)	0.20 (Romania)	0.11 (Norway)	-0.61 (Croatia)

Source: Own processing;

3. Results

All estimated regression models are presented in table 7. We estimated 3 regression models for each dependent variable (ROE, ROA and NPL). As we noticed in table 6, the highest corrections are recorded between board size / bank size and the others

independent variable. Due to this, in model 1, we didn't included Bank size and Board size. Model 2 include only bank size and the last model include only board size.

At a first glance, analysing the result from table 7 we are able to see that in ROE case, women representation in TMT (top management team) positively affects the financial profitably of banks from Austria and Romania (highly significant at 1% level), while in Latvia the impact is negative (small impact significant at 10% level). In ROA case, we can see again a positive impact in Austria and Romania, while in Bulgaria and Croatia we can see an impact representative at 10% significance level. The same vague negative effects is recorded for Latvia also in ROA case.

In NPL case it seems that the female representation affects in a greater manner the bank credit risk. We pointed out significant impact at 1% level, for Austria, Bulgaria, Croatia, Hungary, Latvia and Norway, which means that increasing the presence of women in top management will generate a decrease in level of bank's credit risk.

For Romania we are not able to find a statistically impact on NPL, while for Latvia we can see a positive impact, which means that the women presence in top management will increase banks' credit risk.

Table 7. Regression models estimation

Variable	Model 1 ROE	Model 2 ROE	Model 3 ROE	Model 1 ROA	Model 2 ROA	Model 3 ROA	Model 1 NPL	Model 2 NPL	Model 3 NPL
AUSTRIA									
Constant	0.0207	-0.0968 [*]	0.1796 ^{***}	-0.0005	-0.0004	0.0108	0.0348 ^{***}	0.0052	-0.0046
Female (%)	0.3681^{***}	0.4148^{***}	0.3901^{***}	0.0212^{**}	0.0212^{**}	0.0228^{***}	-0.0541^{***}	-0.0684^{***}	-0.0502^{***}
Capital Structure	-0.0760 [*]	-0.0867 ^{**}	-0.0999 ^{***}	0.0147 ^{***}	0.0147 ^{***}	0.0130 ^{**}	-0.0003	0.0032	0.0051
D(Asset Structure)	0.0517	-0.0442	0.0125	0.0146	0.0146	0.0118	-0.0398 ^{***}	-0.0375	-0.0333
Bank size		-0.0059			-0.0001			0.0022 ^{**}	
Board size			-0.0630 ^{***}			-0.0044 ^{**}			0.0147 ^{***}
GDP Growth	1.1294	0.9150	0.8853	0.2383 [*]	0.2382 [*]	0.2209 [*]	-0.5121 [*]	-0.3835	-0.4023
Inflation rate	-3.4353 ^{**}	-3.0946 ^{**}	-3.2119 ^{**}	-0.3201 [*]	-0.3199 [*]	-0.3042 [*]	0.6281	0.4441	0.5180
R-squared	0.2411	0.2538	0.3205	0.1293	0.1293	0.1565	0.1647	0.2078	0.2638
R-Squared (robustness)	0.0541	0.0618	0.1122	0.0873	0.0953	0.1085	0.0619	0.0669	0.1757
No. of cases	139	139	139	139	139	139	106	106	106
BULGARIA									
Constant	0.1967	0.3024	0.2284	-0.0015	-0.0536	-0.0267	0.1358 ^{***}	0.5229 ^{***}	0.3467 ^{***}
Female (%)	-0.0100	0.0066	-0.0121	-0.0081	-0.0163[*]	-0.0064	-0.1830^{***}	-0.1189[*]	-0.1876^{***}
Capital Structure	-0.3841	-0.4253	-0.3857	0.0061	0.0264	0.0073	-0.0139	-0.1645	-0.0221
D(Asset Structure)	-1.8205 ^{***}	-1.8312 ^{***}	-1.8242 ^{***}	0.0069	0.0122	0.0099	-0.3494 ^{***}	-0.3884 ^{***}	-0.3756 ^{***}
Bank size		-0.0072			0.0035 ^{***}			-0.0267 ^{***}	
Board size			-0.0123			0.0098 ^{***}			-0.0832 ^{***}
GDP Growth	-3.1193	-3.2553	-3.1352	0.3023	0.3694	0.3148 ^{***}	1.4471 [*]	0.9367	1.3301 ^{***}
Inflation rate	0.2178	0.2276	0.2088	0.0855	0.0807	0.0926	-0.1260	-0.0938	-0.1822
R-squared	0.1667	0.1672	0.1669	0.0752	0.1704	0.1468	0.1769	0.2580	0.2573
R-Squared	0.1667	0.1672	0.1669	0.0671	0.1401	0.1416	0.1117	0.2330	0.1888

(robustness)

No. of cases	110	110	110	110	110	110	110	110	110
CROATIA									
Constant	2.8797**	1.4526	1.4550	-0.0369***	-0.0487***	-0.0359***	0.3684***	0.3752***	0.2773***
Female (%)	-0.1782	-0.5624	0.1178	0.0155*	0.0123	0.0153*	-0.1594***	-0.1575***	-0.1424***
Capital Structure	-11.962***	-16.594***	-16.856***	0.1650***	0.1266***	0.1684***	-0.7291***	-0.7073**	-1.0551***
Asset Structure	-2.3357	-3.4795**	-1.5613	0.0215	0.0120	0.0210	-0.2610***	-0.2558***	-0.2126***
Bank size		0.1944*			0.0016			-0.0009	
Board size			0.7084*			-0.0004			0.0465**
GDP Growth	-3.7286	-4.4769	-2.0034	0.2197***	0.2135*	0.2185*	0.2574	0.2605	0.3654
Inflation rate	7.5607	7.6793	7.5876	0.0576	0.0586	0.0576	0.1902	0.1906	0.2006
R-squared	0.0938	0.1152	0.1161	0.1739	0.1893	0.1741	0.1354	0.1356	0.1633
R-Squared (robustness)	0.0935	0.1130	0.1160	0.1556	0.1783	0.1567	0.0781	0.0825	0.1186
No. of cases	132	132	132	132	132	132	132	132	132
HUNGARY									
Constant	-0.1781	0.4620	-0.1141	-0.0068	0.0364	-0.0086	0.1199***	0.1049**	0.0611
Female (%)	0.0985	0.0932	0.0846	0.0090	0.0087	0.0094	-0.0832***	-0.0834***	-0.0694**
Capital Structure	1.9373***	1.6615***	1.9251***	0.1302**	0.1116**	0.1306**	0.0309	0.0377	0.0302
Asset Structure	-0.5547***	-0.6911***	-0.5730***	-0.0544***	-0.0636***	-0.0539***	0.1594***	0.6532***	0.1789***
Bank size		-0.0373**			-0.0025*			0.0008	
Board size			-0.0187			0.0005			0.0170
GDP Growth	4.5110***	4.3823***	4.5298***	0.3420***	0.3333**	0.3415**	-1.6551***	-1.6532***	-1.6272***
Inflation rate	4.4718***	5.1529***	4.4963***	0.5002***	0.5463***	0.4996***	-2.0222***	-2.0366***	-2.0652***
R-squared	0.1975	0.2380	0.1980	0.2024	0.2265	0.2024	0.5971	0.5978	0.6049
R-Squared (robustness)	0.1952	0.2360	0.1964	0.1999	0.2242	0.1999	0.5520	0.5526	0.5778
No. of cases	122	122	122	122	122	122	101	101	101
LATVIA									
Constant	0.1118	-0.1555	-0.0551	-0.0400***	-0.1655**	-0.0917***	0.1561***	0.1761	0.2557***
Female (%)	-0.3644*	-0.4817*	-0.3385*	-0.0706*	-0.0581	-0.0625	0.1763***	0.1756***	0.1673***
D(Capital Structure)	-0.3736	-0.8259	-0.4088	0.3956***	0.4059***	0.3847***	-0.7255***	-0.7262***	-0.7094***
Asset Structure	0.1779	0.1871	0.1342	0.0486**	-0.0051	0.0351	-0.1052**	-0.0968	-0.0753
Bank size		0.0186			0.0101**			-0.0016	
Board size			-0.0690			0.0213**			-0.0424**
GDP Growth	0.6882	1.6755	0.7269	0.1201	0.0966	0.1321	0.1252	0.1296	0.1019
Inflation rate	-1.5615	-4.7013*	-0.5619	-0.6290*	-0.5443	-0.6291*	0.5361	0.5149	0.5615
R-squared	0.0826	0.1791	0.0969	0.4329	0.4525	0.4558	0.4272	0.4274	0.4567
R-Squared (robustness)	0.0536	0.1420	0.0721	0.4147	0.4405	0.4416	0.3659	0.3669	0.4018
No. of cases	104	104	104	104	104	104	96	96	96
NETHERLANDS									
Constant	0.1018***	0.1105***	0.2173***	0.0052*	0.0054*	0.0046	0.0173*	-0.0182	-0.0110
Female (%)	0.0159	0.0572	0.0048	-0.0076	-0.0055	-0.0076	0.0035	-0.0147	-0.0041

Capital Structure	-0.1309	-0.1785**	-0.1935*	0.0156**	0.0153*	0.0159**	0.1370***	0.1553***	0.1454***
Asset Structure	-0.0615	-0.1040**	-0.0445	-0.0017	-0.0038	-0.0018	-0.0114	-0.0152	-0.0159*
D(Bank size)		0.0466*			0.0034			0.0024**	
Board size			-0.0405*			0.0002			0.0110**
GDP Growth	0.9400	1.3700	0.9523	0.0240	0.0297	0.0239	-0.3399*	-0.3537**	-0.3457**
Inflation rate	-1.1725	-0.6769	-1.1836	-0.0032	0.0268	-0.0031	-0.3616	-0.3970*	-0.3621
R-squared	0.0465	0.0929	0.0643	0.0364	0.0540	0.0365	0.2884	0.3119	0.3190
R-Squared (robustness)	0.0462	0.0888	0.0642	0.0264	0.0487	0.0267	0.2880	0.3074	0.3185
No. of cases	162	162	162	162	162	162	135	135	135
NORWAY									
Constant	0.0456	-0.4528***	0.0511	-0.0209	-0.0856***	-0.0151	0.0477***	0.0098	0.0352*
Female (%)	0.0001	0.0023	-0.0001	0.0022	0.0024	0.0019	-0.0353***	-0.0347***	-0.0340***
Capital Structure	-0.2400	0.2628	-0.2452	0.0043	0.0704**	-0.0003	0.0551**	0.0932***	0.0680**
Asset Structure	0.0345	0.1817**	0.0316	0.0237*	0.0438***	0.0210	-0.0215	-0.0099	-0.0153
Bank size		0.0203***			0.0026***			0.0015*	
Board size			-0.0010			-0.0009			0.0025
GDP Growth	0.7415	1.1426	0.7455	0.1608	0.2135	0.1644	-0.4537	-0.4400	-0.4808
Inflation rate	1.0213	1.6627	1.0250	0.2144	0.2987	0.2178	-0.2572	-0.0099	-0.2731
R-squared	0.0288	0.1387	0.0288	0.0399	0.1191	0.0410	0.2643	0.2910	0.2713
R-Squared (robustness)	0.0288	0.1387	0.0288	0.0395	0.1185	0.0406	0.1485	0.1779	0.1658
No. of cases	113	113	113	113	113	113	105	105	105
ROMANIA									
Constant	-0.3014	-0.8088*	-0.2195	-0.0040	-0.0657**	0.0010	0.2184***	0.1353**	0.1954***
Female (%)	0.3493**	0.2092	0.5061***	0.0210**	0.0039	0.0306**	0.0222	-0.0041	-0.0268
Capital Structure	2.5505***	2.2714**	2.9944***	0.1882***	0.1543**	0.2156***	0.0616	0.0076	-0.0766
Asset Structure	-0.2667	-0.1131	-0.3052	-0.0452**	-0.0265	-0.0476**	-0.1746***	-0.1461***	-0.1605***
Bank size		0.0330			0.0040***			0.0054*	
Board size			-0.0628			-0.0038			0.0184***
GDP Growth	1.9250	2.0527	1.6711	0.1658*	0.1813**	0.1502	-0.9481***	-0.9372***	-0.8832***
Inflation rate	0.0162	-0.1086	-0.0352	-0.0029	-0.0181	-0.0061	-0.3753**	-0.3981**	-0.3622**
R-squared	0.1295	0.1483	0.1476	0.1982	0.2614	0.2139	0.3040	0.3236	0.3683
R-Squared (robustness)	0.0821	0.1362	0.0825	0.1593	0.2604	0.1595	0.2965	0.3224	0.3611
No. of cases	101	101	101	101	101	101	98	98	98

Source: Own processing; *, **, *** - Indicates significant at the 0.1 level, 0.05 level and 0.01 level;

Moreover, Netherlands is the only country for which we are not able to see any impact on any of the 3 selected key performance indicators (ROA, ROE and NPL), while in Hungary and Norway we see that there is no impact on female representation in top management to ROA and ROE.

To check the robustness we re-estimated all models excluding the variable "Female (%)". Due to size constraints for the paper, we did not present the full results, but we included just the R-Squared for each robustness check model. Based on this, we were

able to see that the models in which “Female (%)” has a significant impact, the R-squared considerably decreased when re-estimating the models. On the other hand, for the models in which we didn't see an impact, the R-squared remained unchanged.

Our results highlight the positive impact of women representation in top management team over bank's profitability, and are in concordance with the previous literature (Andrieş et al., 2020; Dezso and Ross, 2012; Jabari and Muhamad, 2020; Khatib et al., 2021; Mazzotta and Ferraro, 2020; Nguyen et al., 2020; Ouni et al., 2020; Pathan and Faff, 2013; Reinert et al., 2016).

4. Conclusions and discussions

This paper aims to point out the impact of female representation in top management team over the financial performance for 134 selected banks from 8 countries, based on data obtained from Bureau van Dijk (BvD) Orbis and World Bank Database.

The originality of the paper is determined by the approach of the selection of the countries of analysis according to the parallel made and presented in table no. 1, the reference period of the financial results and the use in the regression models of both bank-specific and macroeconomic variables but also proxy variables that aim to determine the impact of women's involvement in TMT.

Our findings suggest that ROE will increase in banks from Austria and Romania if there will be recorded an increase in female representation in top management. On the other hand, ROA will increase in Austria, Bulgaria, Croatia and Romania if there will be recorded an increase in female representation in TMT. In NPL case it seems that the female representation affects in a greater manner the bank credit risk. We pointed out significant impact at 1% level, for Austria, Bulgaria, Croatia, Hungary and Norway, which means that the presence of women in TMT will decrease the level of bank's credit risk.

Latvia seems to be a special case, as we are able to see an opposite effect compared with the other countries, meaning that the performance in banks from Latvia will decrease if there will be recorded an increase in female representation in top management team.

Netherlands is the only country for which we are not able to see any impact on any of the 3 selected key performance indicators (ROA, ROE and NPL), while in Hungary and Norway we see that there is no impact on female representation in top management to ROA and ROE.

We determined statistically significant links between female representation in TMT and the financial KPIs of banks (ROA, ROE and NPL). However, we noted that there is a turning point in the influence of TMT women on the financial KPI.

The empirical results contribute and complement the literature on gender segregation and economic performance of banks, concluding that a more balanced management in terms of gender diversity can generate superior banking outcomes.

Although there have been major advances in the use of women in employment and their access in most areas, aspects of occupational segregation by gender are still relevant and produce negative organizational effects.

The ever-changing social norms, the highly volatile economic environment, and the technological development that produces effects in all social spheres contribute to generating a limiting effect on individuals' career choices, thus distorting the field of work through wage changes, reorientation of organizational investments (from R&D towards improvement) and ultimately affecting productivity (Kiser (2015), Koch et al. (2015), Stefanovic and Barjaktarovic (2021)).

For example, Adams and Ferreira (2009) determine a negative correlation between the presence of women on the board and the level of supervision, but when the proxy variable of the endogeneity of gender diversity is eliminated, the correlation becomes positive. The authors conclude by stating that the mere introduction of women to the board of directors does not automatically generate positive results.

Therefore, given the above-mentioned theory, with the involvement of women in the board of directors in order to generate increased performance, this general trend of occupational segregation must be diminished, thus reducing the impact of the endogenous proxy variable.

In conclusion, we can say that the introduction of women in management boards does not only improve the financial results of entities, but generates an improvement in corporate governance, a change in organizational behaviour and thus a change in organizational culture.

We conclude by emphasizing the positive impact of changing organizational culture on financial outcomes in the context of eliminating gender gaps and discriminatory elements. However, the turning point in terms of women's involvement in the senior management system must be taken into account, a turning point that varies according to the maturity of the organization.

Among the limitations of the present study we can mention the relatively small number of countries included in the analysis and the relatively short period of time subject to attention. The data necessary for the study are hard to acquire, and database access is surcharge, thus the area of research and development is limited according to the financial allocations of the researcher.

For future studies, it should be considered the extension of the analysis on all banking systems within the European Union as well as the analysis of these data for a longer period of time in order to determine the value of the inflection point regarding the percentage of the women best to be involved in the TMT to acquire the best results.

Consideration should also be given to the fact that women's involvement in TMT should be approached from the perspective of female-specific skills and that the skills needed to be implemented by TMT members should be established as far as possible in order to generate the best results. In other words, the number of women in the leadership should be replaced by the specifically feminine skills that women bring with them when they are included in the management team.

From our point of view, the turning point is generated by the necessary balance between hard and soft skills within an organization that leaders (in this case management boards) must have in order to generate the best financial results.

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