

# “Board gender diversity and corporate financial performance: evidence from CAC 40”

<b>AUTHORS</b>	Maelia Bianchi George Iatridis
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Maelia Bianchi (UK), George Iatridis (Greece)

## Board gender diversity and corporate financial performance: evidence from CAC 40

### Abstract

This study aims to provide an understanding of the impact of board gender diversity on corporate financial performance and of women's perceptions regarding the attributes and the role of gender-balanced boards. The focus is CAC 40 constituents and the period of investigation from 2008 to 2012. This study considers the percentage of women on company boards and women's perceptions, as these two areas are considered key to determine what drives the implementation of gender diversity in companies. Quantitative analysis and a questionnaire survey are used to answer the research questions. This study has found that companies with a higher proportion of women on their boards outperform those with a lower proportion in terms of return on sales and EBITDA margin. Our questionnaire survey indicates that increased board gender diversity leads to better corporate governance and increased corporate value. Also, women perceive that board gender diversity is a performance enhancer, that there are barriers in the way of becoming board members, and that legislation is essential to change the gender landscape. Women do not place 'being a board member' within their top-3 career achievement priorities, suggesting that while they feel comfortable with the idea of being appointed to a company board, they might also have other objectives in mind when planning their career.

**Keywords:** Company boards, women, gender diversity, gender effect, financial performance, women's perceptions.

**JEL Classification:** M41.

### Introduction

*"Man is defined as a human being and a woman as a female – whenever she behaves as a human being, she is said to imitate the male"* – Simone de Beauvoir, 1952.

Women at work and specifically women on boards have held a predominant position in the press over the recent years. As women become increasingly present in areas and domains traditionally dominated by men, attention is focusing on the relatively small proportion of women in senior management positions of companies. The global debate on this matter is intensifying and there is not one easy way to explain why gender diversity matters. Scholars and professionals have long argued that women have distinctive and particularly effective management skills, explaining why several public institutions have become more vocal in supporting increased participation of women in leadership roles in organizations.

Many studies and reports have analyzed the relationship between the economic and financial performance of companies and the proportion of women in management teams. If these analyses show a positive relationship, then policies in favor of gender diversity are not only justified socially, but also economically. However, despite incremental progress, corporate boards remain male-dominated worldwide (Vinnicombe et al., 2008).

Approaches to increasing gender diversity on company boards among European countries broadly fall within two categories: corporate self-regulation

instruments, such as Corporate Governance Codes (UK, Austria, Denmark, Germany, Sweden and Poland) and national mandatory legislation or targets (Norway, Spain, Iceland, Finland, Italy, Belgium and the Netherlands) (Doldor et al., 2012).

Figure 1 shows that, in France, the percentage of women in the boards of directors of CAC 40 companies went from 10.7% in 2009 to 24.3% in 2012 (Ethics and Boards Observatory, 2013). Therefore, with respect to gender balance, the French CAC 40 has gone first from last compared to London FTSE and New York Dow Jones.

In January 2011, the French Parliament passed legislation named the 'Loi Copé-Zimmermann', imposing a 40% female quota on the boards of CAC 40 companies by 2017, with an intermediary target of 20% by 2012. The enforcement of this legislation on board gender balance was a key driver of positive evolution. However, board imbalance is still a reality and observers believe that the mid-term objective of 40% will be difficult to achieve. Although some argue that in a competitive and efficient labor market, the 'right' person should always be in the 'right' job regardless of the gender, there is an increased concern for gender diversity and gender balance on boards. The reasons for this increasing awareness include increased demand for female candidates, adding diversity to corporate agenda, no shortage of qualified women candidates, and the increased rate of female appointments.

Based on the discussion presented above, we have delved deeper into the issue and have addressed two aspects of gender diversity in companies: 1) the examination of the percentage of women on boards and the impact of board gender diversity on

company performance, and 2) women's perceptions on this matter. A central question that motivates our study is to what extent board gender diversity can improve company financial performance. Is the association between board gender diversity and corporate performance causative, i.e. more women on boards cause better performance, or spurious, i.e. more women on boards are related to key corporate indicators, such as size, which is the real cause of

better performance? Although there has been some progress, the number of female executive directors remains far too low to expect a clear causative link between board gender diversity and performance (Thomson and Graham, 2005). This study uses quantitative analysis and a questionnaire survey to answer the two research questions. Our focus of analysis is the CAC 40 constituents and the period of investigation from 2008 to 2012.

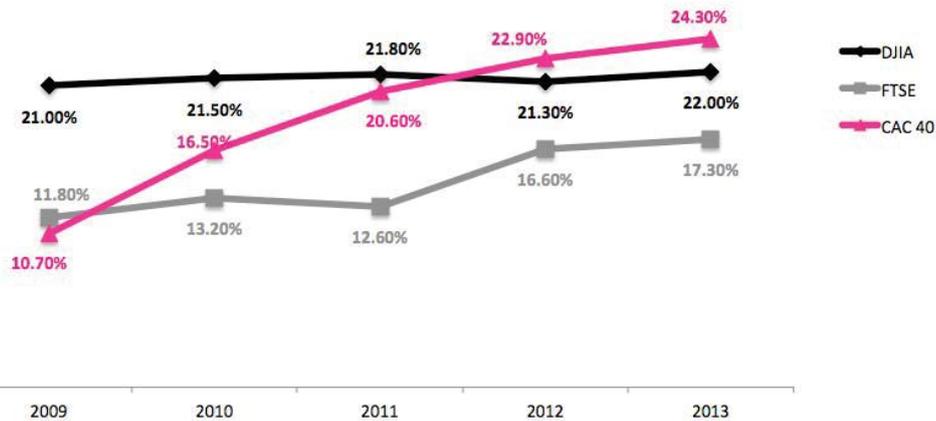


Fig. 1. International evolution of the percentage of women on boards

This study has found that companies with a higher proportion of women on their boards outperform those with a lower proportion in terms of return on sales and EBITDA margin. Our questionnaire survey indicates that increased board gender diversity leads to better corporate governance and increased corporate value. Also, women perceive that board gender diversity is a performance enhancer, that there are barriers in the way of becoming board members, and that legislation is essential to change the gender landscape. Women do not place 'being a board member' within their top-3 career achievement priorities, suggesting that while they feel comfortable with the idea of being appointed to a company board, they might also have other objectives in mind when planning their career.

The remaining sections of the study are as follows. Section 1 presents the literature review. Section 2 describes the research questions and the dataset. Section 3 discusses the empirical findings, and the final section presents the conclusions of the study.

## 1. Literature review

The process of appointing board members may sometimes be subjective. Kristof-Brown (2000) argues that the social fit for top managers is a primary criterion for selection. Access to corporate elite tends to be restricted to those with elite social and educational credentials (Useem and Karabel, 1986). Maclean et al. (2006) found that the appointment of new directors entails considerable reputation risk from an individual, board and

corporate perspective. This can be directly linked to the tendency of some managers to recruit in one's own image, often referred to by the literature as the similarity-attraction principle (Byrne, 1971) or the self-categorization theory (Tajfel and Turner, 1986).

Having personal connections with the CEO or chairman as well as other members of the corporate elite is critical for gaining non-executive director positions (Singh and Vinnicombe, 2006). Some argue that women are at a disadvantage when looking to obtain board positions in large corporations because of the impenetrable and homogeneous nature of corporate elites (Hillman et al., 2002) and their inability to fit in 'old-boys' high-powered networks, competitive behaviors and long-hours culture. This would make it difficult for them to build the relationships and trust that they need to access these board positions. It is because of such barriers and obstacles that women tend to be seen as mere 'tokens'. Kanter (1977) defined tokenism as a social marketing and communication scheme targeted to stakeholders. This 'social window dressing' consists in appointing one or two women to executive committees, more as a way to satisfy both economic and political pressure for increased board gender diversity rather than a real need for increased governance.

Women may advance at a slower pace because male directors believe they lack adequate skills and experience and perhaps because they have been in the pipeline intermittently or not long enough (Catalyst, 1996). However, women directors may

sometimes possess more human capital compared to their male counterparts (Singh et al., 2008). Key obstacles for women in the appointment process may include unclear selection criteria and subconscious bias in the selection process, lack of diversity in current boards and nomination committees, or selection practices that emphasize existing – typically male-dominated – board cultures rather than actual skills (Doldor et al., 2012).

Boardrooms have been dominated by male executives for a long time. While including women on boards was often seen as a bad business decision because of hypothesized lower performance, today, the business case for women on boards implies that women may have unique attributes that increase the performance of the board, and ultimately the performance of the firm (Simpson et al., 2010). Indeed, Adams and Ferreira (2009) argue that women directors, usually being a minority and thus more of an outsider, increase the ability of the board to monitor CEO performance. Also, McInerney-Lacombe et al. (2008) suggest that women tend to positively change groups dynamics, personal interactions and decision-making, therefore leading to more creativity and, as a result, better board performance.

McKinsey and Company (2007) focus on female advancement in the US workplace and show that companies with a higher proportion of women at board level usually exhibit greater corporate performance benefits. In particular, they have found that companies with the most gender diverse top management teams outperformed the industry average by 10% higher return on equity and 48% higher EBIT margin. Carter et al. (2003) have found that gender diversity is positively related to Tobin's Q. Adams and Ferreira (2009) found that women have better board meeting attendance and a significant contribution to board inputs. Ellis and Keys (2003) presented evidence that the stock market greets positively the appointment of women into board positions.

Overall representation of women at top executive positions remains low when considering the overall percentage of women in the workforce. According to UNESCO, male and female tertiary graduation rates in the USA and in Western Europe hit parity in the early 1980s, and have continued to move up in favor of higher female graduation rates since (Credit Suisse report, 2012). This means that there is a wide pool of potential women directors with relevant education and experience that may very well be a consideration especially to boards pursuing value-maximizing additions. However, Terjesen et al. (2008) argue that they may not represent the 'right' kind of human capital, being more suited for medicine or academics rather than high-level business positions. Nevertheless, 'companies finally start to understand

that if they want to remain competitive in an ageing society they cannot afford to ignore female talent: 60% of university graduates are women', said Vice-President Viviane Reding, the EU's Justice Commissioner.

Governments should not try to correct imbalance 'artificially' by imposing quotas, on the basis that chairmen and CEOs should understand the benefits of gender diversity and commit to achieving them (Sealy and Vinnicombe, 2013). For example, quota laws in Norway have received mixed reviews, resulting in over 40% female board participation but in a shortage of women at executive level (Davies, 2013). Indeed, despite introducing quotas in 2003, Norway still has no female chief executive running a top company (Doldor et al., 2012).

## 2. Research questions

The first research question of the study is to examine whether board gender diversity has a positive impact on company performance. Here, we examine the differences in the financial characteristics of companies with larger and with smaller percentages of women on boards. Subsequently, we investigate women's perceptions regarding gender-diverse boards. The sample consists of CAC 40 constituents. CAC 40 consists of companies with the largest market capitalization in France. Our sample is composed of 39 companies because one company was removed due to lack of financial data. The period under investigation from 2008 to 2012.

**2.1. Board gender diversity and company financial performance.** To answer the first research question, we analyzed corporate accounting data for the period from 2008 to 2012, in order to extend the results of previous studies to a different era and to examine if the impact of the percentage of women on boards has evolved over time. Accounting and financial data has been obtained from Bloomberg. Data on company boards has been provided from Bloomberg and from the Ethics and Boards website.

In line with Catalyst (Catalyst, 2011), we have chosen to arrange the companies of our sample in quartiles, and to analyze the differences in the financial characteristics of companies in the top quartile (Quartile 1) with companies in the bottom quartile (Quartile 4). Here, we examine whether companies with a greater percentage of women on boards have different financial performance measures compared to those with a lower percentage.

Board gender diversity is determined by looking at the annual percentages of women on boards. The financial performance measures used are return on common equity (ROE), return on sales (ROS) and EBITDA margin. ROE measures company

performance from a shareholder's viewpoint (Penman, 2010). It is calculated as comprehensive income over average common shareholders' equity. ROS, also referred to as the operating margin, evaluates a company's operational efficiency. It is calculated as net income (before interest and tax) over total sales. EBITDA margin is considered to be a good measure of performance for companies in mature industries and for large companies with significant depreciable assets. Because it excludes depreciation and amortization, it is deemed to provide a 'cleaner' view of a company's core profitability.

**2.2. Women's perceptions and board gender diversity.** The examination of the second research question has been based on a questionnaire survey aiming at capturing women's perceptions towards gender diverse boards on a cross-sectional basis. Only women that belonged to the 'executive pipeline' participated in the questionnaire survey. The questions have been based on the existing literature. All perception-related questions were rating questions used to collect perception data. Seven-point Likert-style rating scales were used in order to capture opinion variations between respondents (see Creswell, 2009). The questionnaire survey was initially sent to 'test' respondents prior to wider circulation to ensure validity and to 'improve format and scales' (Creswell, 2009, p. 150). The questionnaire was sent to personal connections via LinkedIn, to women leaders and CEOs on a spontaneous basis and to various professional networks, such as Women'Up, 2020 Women on Boards, EDHEC'Elles, Forté Foundation, JUMP – Empowering Women Advancing the Economy, and Women Tomorrow. After removing ineligible and unreliable responses, we were left with a usable sample of 68 respondents.

To address the research question at hand, we conducted a series of statistical tests. In all statistical tests, a 5% significance level was used as the threshold to accept/reject the null hypothesis. As we increased the number of hypotheses, the likelihood of rejecting the null hypothesis when it

was true (Type I error) also increased. Therefore, we employed the Bonferroni adjustment, which involved dividing the 5% significance level by the number of comparisons to protect against Type I errors (see Pallant, 2010). The questionnaire survey has been based on the following five pillars (see Appendix).

H1: Women perceive that gender diversity has a significant connection with board governance.

H2: Women perceive that gender diversity has a significant connection with company performance.

H3: Women feel that there are significant barriers to becoming part of company boards.

H4: Women think legislation is the solution to achieving balanced representation of women and men on company boards.

H5: Women are interested in holding board positions in order to contribute to firm performance.

The key statistics about the sample are presented below.

- ◆ Respondents' age ranged between 24 and 63, with 40% being more than 47 years old.
- ◆ 54.4% of the respondents were French, 14.7% were Europeans (excluding French), 20.6% were Americans and 10.3% included various other nationalities.
- ◆ 33.82% of the respondents worked in the technology, media and telecommunications industry, 20.59% worked in business services, 16.18% worked in financial services, 13.24% worked in the education industry, 7.35% worked in industrial companies, 2.94% worked in the real estate sector, and 5.88% worked in other sectors.
- ◆ 23.5% of the respondents had held a board position before.

Table 1 presents a descriptive analysis of all non-demographic variables and provides an indication of the responses received.

Table 1. Descriptive statistics

	N	Range	Min	Max	Mean	Std. deviation	Variance
Governance_Org_Value	68	4	3	7	<b>6.06</b>	1.063	1.131
Governance_Integrity	68	5	2	7	<b>5.43</b>	1.163	1.353
Governance_Boardroom_Dynamics	68	5	2	7	<b>5.25</b>	1.189	1.414
Governance_Leadership_Style	68	3	4	7	<b>5.68</b>	1.014	1.028
Governance_Male_Dominated_Boards	68	6	1	7	<b>3.81</b>	1.677	2.814
Governance_Homogeneous_Boards	68	5	2	7	<b>4.63</b>	1.208	1.46
Governance_Positive_Message	68	3	4	7	<b>6.09</b>	1.061	1.126
Performance_Male_Dominated_Boards	68	6	1	7	<b>4.15</b>	1.887	3.56
Performance_Risk_Aversion	68	6	1	7	<b>3.9</b>	1.613	2.601
Performance_Value_Creation	68	5	2	7	<b>5.94</b>	1.105	1.22
Performance_Critical_Number	68	4	3	7	<b>5.21</b>	1.216	1.479
Performance_GenderDiversity_Goals	68	5	2	7	<b>5.24</b>	1.328	1.765

Table 1 (cont.). Descriptive statistics

	N	Range	Min	Max	Mean	Std. deviation	Variance
Performance_Abnormal>Returns	68	5	1	6	<b>3.68</b>	1.387	1.924
Performance_Economic_Benefits	68	3	4	7	<b>5.56</b>	1.056	1.116
Performance_Driver	68	2	0	2	<b>1.76</b>	0.55	0.302
Barriers_Availability	68	6	1	7	<b>5.06</b>	1.16	2.594
Barriers_Double_Burden	68	6	1	7	<b>5.43</b>	1.568	2.457
Barriers_Self_Promotion	68	6	1	7	<b>5.5</b>	1.697	2.881
Barriers_Role_Models	68	6	1	7	<b>5.07</b>	1.678	2.815
Barriers_Networking	68	6	1	7	<b>4.46</b>	1.996	3.983
Barriers_Family_Policy	68	6	1	7	<b>5.32</b>	1.44	2.073
Barriers_Ambition	68	6	1	7	<b>3.44</b>	2.047	4.191
Barriers_Flexible	68	4	1	5	<b>3.15</b>	1.427	2.038
Barriers_Part_Time	68	4	1	5	<b>3.82</b>	1.171	1.371
Barriers_Maternity_Leave	68	3	2	5	<b>3.87</b>	1.145	1.311
Barriers_Woman	68	4	1	5	<b>3.28</b>	1.337	1.786
Barriers_Culture	68	4	1	5	<b>4.34</b>	1.002	1.003
Legislation_Measures	68	6	1	7	<b>5.07</b>	1.73	2.995
Legislation_Quotas1	68	6	1	7	<b>5.22</b>	1.761	3.1
Legislation_Quotas2	68	6	1	7	<b>4.37</b>	1.946	3.788
Long_Term_Balance	68	0	0	0	<b>0</b>	0	0
Aspirations_Comfortable	68	4	1	5	<b>4.16</b>	0.956	0.914
Aspirations_Achievement_Compensation	68	1	0	1	<b>0.154</b>	0.2091	0.044
Aspirations_Achievement_Social	68	1	0	1	<b>0.304</b>	0.3303	0.109
Aspirations_Achievement_Entrepreneur	68	0.5	0	0.5	<b>0.116</b>	0.157	0.025
Aspirations_Achievement_Board	68	1	0	1	<b>0.116</b>	0.1913	0.037
Aspirations_Achievement_Politics	68	0.3	0	0.3	<b>0.026</b>	0.0857	0.007
Aspirations_Achievement_Balance	68	1	0	1	<b>0.224</b>	0.266	0.71
Aspirations_When	68	5	1	6	<b>3.56</b>	1.146	2.131

Note: The variable names are presented in Appendix 1 – Questionnaire survey structure.

### 3. Empirical findings

**3.1. Board gender diversity and company financial performance.** We began by constructing two distinct groups of companies. The first group contained 27 companies that have had more than 20% women on board on average over the years 2008-2012, while the second group contained 17 companies that have had less than 20% women on board on average. Although the critical mass theory, developed by Konrad et al. (2008), states that ‘the magic seems to occur when three or more women serve on a board together’, we have used 20% as our benchmark as it is the threshold imposed by the ‘Loi Copé-Zimmerman’ law. In 2012, the companies examined had average revenues of € 36.7 billion and an average market value of € 24 billion.

We began by tracking the evolution of the percentage of women on company boards in order to assess whether the change in the gender landscape was sufficiently important to be analyzed further. Figure 2 shows that the CAC 40 average is above the 20% threshold recommended by the ‘Loi Copé-Zimmerman’ law.

While the average return on ROE for the whole sample is 10.9%, there is a small difference between the bottom and the top quartile companies. Companies with more women on board outperform those with less by only 0.20%. While the link is positive, the difference remains very small and is deemed to be insignificant. The average ROS for the whole sample is 12.19%. We notice here a significant difference of 74% between the performance of the bottom and top quartile companies. This is in line with the results reported by Catalyst in their 2011 report. Their report has shown that Fortune 500 top quartile companies have outperformed bottom quartile companies by 16% over the period of 2004-2008. In a similar vein, with respect to EBITDA margin, top quartile companies have outperformed bottom quartile companies by 46%. The average EBITDA margin for our sample is 12.19%. Our findings support our hypothesis that companies with a greater number of women on board display significantly stronger financial characteristics, and are consistent with those reported by Catalyst (2011), despite a smaller sample and a different time period. It follows that board gender diversity and the efficient utilization of women talents is an attribute of companies with stronger financial performance.

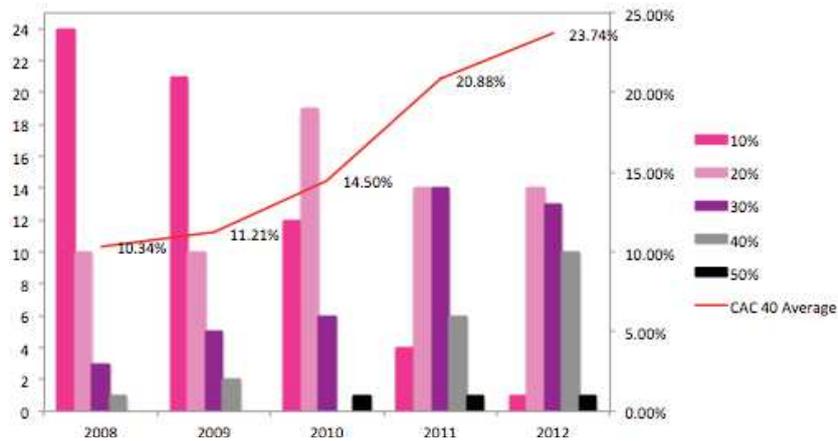


Fig. 2. Evolution of the percentage of women on boards for CAC 40 companies

**3.2. Women’s perceptions and board gender diversity.** The findings of the questionnaire survey are reported below. Women perceive that gender diversity has a significant positive connection with organizational value and that there are significant differences between male-dominated boards and homogeneous boards. Whilst women perceive that gender diversity has a significant connection with value creation, they do not believe that gender diversity acts as a performance driver. Women perceive that there are a variety of barriers in the way of becoming a board member and that there are many factors, which lower their chances of career progression, such as the double burden syndrome and the corporate culture. Women are in favor of legal measures being taken to ensure board gender balance, but they do not believe that imposing quotas on companies is the right solution. Women are comfortable with the idea of being appointed to a board; however, this does not represent one of their top career achievement priorities.

*3.2.1. Gender diversity and corporate governance.* According to the Friedman test presented in Table 2, we can observe a significant chi-square value of 135.906. This shows that women perceive that gender diversity has a positive connection with at least one aspect of corporate governance, namely ‘Org\_Value’ and ‘Positive\_Message’ with mean ranks of 5.25 and 5.16 respectively (that is equivalent to the ‘Somewhat Agree’ on the Likert scale).

Table 2. Friedman test

Ranks	
	Mean rank
Governance_Org_Value	5.25
Governance_Integrity	4.1
Governance_Boardroom_Dynamics	3.88
Governance_Leadership_Style	4.44
Governance_Male_Dominated_Boards	2.34
Governance_Homogeneous_Boards	2.82
Governance_Positive_Message	5.16

Test statistics <sup>a</sup>	
N	68
Chi-Square	135.906
df	6
Asymp. sig.	0.000

Notes: <sup>a</sup>Friedman Test. Governance\_Org\_Value is the extent to which gender diverse boards add more organizational value through the quality of decision-making. Governance\_Integrity is the extent to which gender diverse boards have directors who act with greater integrity. Governance\_Boardroom\_Dynamics is the extent to which gender diverse boards have healthier boardroom dynamics. Governance\_Leadership\_Style is the extent to which gender diverse boards have a more effective leadership style. Governance\_Male\_Dominated\_Boards is the extent to which gender diverse boards have the same governance attributes as male-dominated boards. Governance\_Homogeneous\_Boards is the extent to which gender diverse boards have a higher level of unit than homogenous board. Governance\_Positive\_Message is the extent to which gender diverse boards send a positive message to shareholders and the public on company values.

To determine which of the above corporate governance aspects are significantly different, we used the Wilcoxon Signed Rank Matched Pairs (hereafter Wilcoxon) test on the first four aspects that have obtained a higher mean rank. We want a 5% significance level and therefore need to reduce the threshold p-value for the tests to 1.25% (following the Bonferroni adjustment: 0.05/4 comparisons). According to Table 3, we can conclude at the 1.25 % level of significance that:

- ◆ The difference between ‘Integrity’ and ‘Org\_Value’, and between ‘Boardroom\_Dynamics’ and ‘Org\_Value’, and between ‘Leadership\_Style’ and ‘Org\_Value’, and between ‘Boardroom\_Dynamics’ and ‘Leadership\_Style’, is significant.
- ◆ The difference between ‘Boardroom\_Dynamics’ and ‘Integrity’ is not significant.

Table 3 indicates that all corporate governance attributes (‘Integrity’, ‘Leadership\_Style’ and ‘Org\_Value’) rank higher than ‘Boardroom\_Dynamics’. However, there is no statistically significant difference between these three attributes, although ‘Org\_Value’ has a higher mean rank (5.25 vs. 4.44 and 4.10 under Table 2).

Table 3. Wilcoxon test

Ranks				
		N	Mean rank	Sum of ranks
Governance_Integrity – Governance_Org_Value	Negative ranks	31	21.42	664.00
	Positive ranks	8	14.5	115.00
	Ties	29		
	Total	68		
Governance_Boardroom_Dynamics – Governance_Org_Value	Negative ranks	39	23.81	928.50
	Positive ranks	6	17.75	105.50
	Ties	23		
	Total	68		
Governance_Leadership_Style – Governance_Org_Value	Negative ranks	27	16.39	442.50
	Positive ranks	6	19.75	118.50
	Ties	35		
	Total	68		
Governance_Boardroom_Dynamics – Governance_Integrity	Negative ranks	21	19.57	411.00
	Positive ranks	15	17.00	255.00
	Ties	32		
	Total	68		
Governance_Boardroom_Dynamics – Governance_Leadership_Style	Negative ranks	25	18.78	469.50
	Positive ranks	9	13.94	125.50
	Ties	34		
	Total	68		
Test statistics <sup>a</sup>				
	Z	Asymp. sig (2-tailed)		
Governance_Integrity – Governance_Org_Value	-3.918 <sup>b</sup>	<b>.000</b>		
Governance_Boardroom_Dynamics – Governance_Org_Value	-4.790 <sup>b</sup>	<b>.000</b>		
Governance_Leadership_Style – Governance_Org_Value	-3.017 <sup>b</sup>	<b>.003</b>		
Governance_Boardroom_Dynamics – Governance_Integrity	-1.262 <sup>b</sup>	.207		
Governance_Boardroom_Dynamics – Governance_Leadership_Style	-3.028 <sup>b</sup>	<b>.002</b>		

Notes: <sup>a</sup>Wilcoxon Signed ranks test. <sup>b</sup>Baswd on positive ranks. Governance\_Org\_Value is the extent to which gender diverse boards add more organizational value through the quality of decision-making. Governance\_Integrity is the extent to which gender diverse boards have directors who act with greater integrity. Governance\_Boardroom\_Dynamics is the extent to which gender diverse boards have healthier boardroom dynamics. Governance\_Leadership\_Style is the extent to which gender diverse boards have a more effective leadership style.

### 3.2.2. Gender diversity and corporate performance.

According to the Friedman test presented in Table 4, we can observe a significant chi-square value of 173.503. Therefore, we conclude that women perceive that gender diversity has a significant connection with at least one aspect of corporate performance, namely 'Value\_Creation' which has the only mean rank above 4. Here, we can see that respondents tend to agree that gender diversity brings economic benefits to the firm (Table 1 shows that 'Economic\_Benefits' has a mean of 5.56, i.e. between 'Somewhat agree' and 'agree'), but tend to disagree that gender diversity acts as a performance driver ('Performance\_Driver' has a mean of 1.76).

We then used the Wilcoxon test on two similar corporate performance aspects, 'Economic\_Benefits' and 'Performance\_Driver', to determine if they are significantly different.

Table 4. Friedman test

Ranks	
	Mean rank
Performance_Male_Dominated_Boards	2.99

Performance_Value_Creation	4.32
Performance_Abnormal_Returns	2.5
Performance_Economic_Benefits	3.89
Performance_Driver	1.29
Test statistics <sup>a</sup>	
N	68
Chi-Square	173.503
df	4
Asymp. sig.	0.000

Notes: <sup>a</sup>Friedman Test. Performance\_Male\_Dominated\_Boards is the extent to which gender diverse boards have the same performance as companies with male-dominated boards. Performance\_Value\_Creation is the extent to which adding women to boards results in value creation. Performance\_Abnormal\_Returns is the extent to which firms announcing diversity measures such as the appointment of a woman director on their board would experience significant abnormal returns on the announcement date. Performance\_Economic\_Benefits is the extent to which an increased presence of women on company boards would bring economic benefits. Performance\_Driver is whether or not gender diversity is recognized as a performance driver.

Table 5 shows that, at the 2.50% level of significance (following the Bonferroni adjustment: 0.05/2 comparisons), the difference between 'Economic\_Benefits' and 'Performance\_Driver' is significant.

Although women believe that gender diversity brings economic benefits to the company, board gender balance cannot be considered as a performance driver in itself. This implies that women believe that corporate performance is not only about creating economic benefits, and that adding women to the board is not the only way to enhance performance.

Table 5. Wilcoxon test

Ranks				
		N	Mean rank	Sum of ranks
Performance_Driver - Performance_Economic_Benefits	Negative ranks	68 <sup>a</sup>	34.5	2346.00
	Positive ranks	0 <sup>b</sup>	0.00	0.00
	Ties	0 <sup>c</sup>		
	Total	68		
Test statistics <sup>d</sup>				
	Performance_Driver - Performance_Economic_Benefits			
Z	-7.269 <sup>e</sup>			
Asymp. sig (2-tailed)	0.000			

Notes: <sup>a</sup>Performance\_Driver < Performance\_Economic\_Benefits. <sup>b</sup>Performance\_Driver > Performance\_Economic\_Benefits. <sup>c</sup>Performance\_Driver = Performance\_Economic\_Benefits. <sup>d</sup>Wilcoxon signed ranks test. <sup>e</sup>Based on positive ranks. Performance\_Driver is whether or not gender diversity is recognized as a performance driver. Performance\_Economic\_Benefits is the extent to which an increased presence of women on company boards would bring economic benefits.

3.2.3. *Gender diversity, barriers and glass ceiling.* According to the Friedman test presented in Table 6, we can observe a significant chi-square value of 68.682. Therefore, there is sufficient evidence to conclude that women perceive that there are barriers making it more difficult to become a board member. According to Table 6, all the barriers presented in the questionnaire are deemed to be equally important, with mean ranks around 4, except women’s supposed lack of ambition, which is not considered to be a barrier, with a mean rank of 2.47.

In addition to barriers making it difficult for women to access board membership, we wanted to see if there were also factors, which lowered women’s chance of career progression. To do so, we used another non-parametric test, the Kendall’s W test of concordance, used to assess the trend of agreement among the respondents.

Table 6. Friedman test

Ranks	
	Mean rank
Barriers_Availability	4.15
Barriers_Double_Burden	4.55
Barriers_Self_Promotion	4.76
Barriers_Role_Models	4.18
Barriers_Networking	3.48
Barriers_Family_Policy	4.4
Barriers_Ambition	2.47

Test statistics <sup>a</sup>	
N	68
Chi-Square	68.682
df	6
Asymp. sig.	0.000

Notes: <sup>a</sup>Friedman test. Barriers\_Availability is the effect of the “Anytime, anywhere” performance model on gender diversity. Barriers\_Double\_Burden is the effect of the “Double burden” syndrome on gender diversity. Barriers\_Self\_Promotion is the effect of the tendency of women not to promote themselves on gender diversity. Barriers\_Role\_Models is the effect of the absence of women role models on gender diversity. Barriers\_Networking is the effect of the tendency of many women to network less effectively than men on gender diversity. Barriers\_Family\_Policy is the effect of the lack of pro-family public policies or support services on gender diversity. Barriers\_Ambition is the effect of the tendency of women to have less ambition than men on gender diversity.

From Table 7, we can observe that Kendall’s W is closer to 0 than 1, meaning that there is no significant trend of agreement among the respondents, reflecting a low degree of unanimity among the various responses. This implies that women perceive that there is not one single barrier to their career progression, but a variety of barriers.

Table 7. Kendall’s W test

Ranks	
	Mean rank
Barriers_Flexible	2.41
Barriers_Part_Time	3.13
Barriers_Maternity_Leave	3.18
Barriers_Woman	2.44
Barriers_Culture	3.85
Test statistics	
N	68
Kendall's W <sup>a</sup>	0.181
Chi-Square	49.141
df	4

Notes: <sup>a</sup>Kendall’s coefficient of Concordance test. Barriers\_Flexible is working flexibly. Barriers\_Part\_Time is working part time. Barriers\_Maternity\_Leave is maternity leave. Barriers\_Woman is being a woman. Barriers\_Culture is a company’s male-dominated culture.

3.2.4. *Gender diversity and legislation.* Through our questionnaire, we examined whether women perceived legislation as an effective means to achieve balanced representation of women and men on company boards. 63% of our sample is in favor of legal measures being taken to promote and ensure board gender balance. However, the answers to the question ‘are quotas the only way to ensure board gender balance?’ are more contrasted with 20% of our respondents being neutral. While women seem to be in favor of legal measures being taken to tackle the issue of balanced gender board representation, it would appear that quotas are not women’s preferred option. This can be linked to the fact that women may not wish to be considered as

mere ‘tokens’ as defined by Kanter (1977). Women believe that there are other ways to ensure board gender balance and it would be worthwhile to explore these options in further detail.

*3.2.5. Women and their interest in holding board positions.* Despite the wide acknowledgement that women do bring positive attributes to corporate boards, we subsequently examined whether women are indeed interested in holding board positions. We began by asking them if they would feel comfortable being appointed to a board.

We found that 75% of our respondents are comfortable with the idea of being appointed to a board. This shows that, without considering the various barriers mentioned above, women would generally feel confident to accept a board position if they were offered one.

We then asked women what would be their ultimate career achievement. They were given a list of six different goals presented below and they were asked to choose a maximum of three: obtain maximum financial compensation; make a significant connection with society; become an entrepreneur and start your own company; be a board member of your company; start a political career; and achieve work-life balance.

Approximately 60% of our sample chose three goals to illustrate their ultimate career achievement, meaning that in general, women have several objectives and priorities when steering their careers. Knowing this, and in order to have a relevant and coherent analysis, we decided to attribute weights to each answer. We suppose that a respondent who chose only one goal is different from a respondent who chose three different goals. As such, the following weights were attributed:

- ◆ 1 – when only one goal was chosen;
- ◆ 0.50 – when two goals were chosen;
- ◆ 0.33 – when three goals were chosen;
- ◆ 0 – when no goal was chosen.

We found that making a ‘Significant connection with society’ is the ultimate career achievement for women as it has collected most answers and has often been chosen as the only possible achievement. Further, women choosing ‘Board member’ as a career achievement have usually done so in conjunction with ‘Maximum compensation’ and ‘Social impact’. Thus, we can infer that women may be ready to become board members, if they are asked to, but in the end, it may not be their top priority.

## Conclusions

Our analysis of the financial performance of CAC 40 constituents over the period of 2008 to 2012 has

yielded similar results to those reported by Catalyst for Fortune 500 companies in their 2011 report. We have shown that a positive link exists between the percentage of women on boards and corporate performance, concluding that companies with a higher percentage of women on their board experience better financial performance. In particular, we found a significant connection between board gender diversity on ROS and EBITDA margin, but an insignificant positive connection with ROE. Although in France a lot of efforts have been made towards increasing the percentage of women on company boards, more insight is needed to analyze the potential changes in boardroom dynamics and corporate performance following the appointment of female directors. It is too early and the percentage of women in the executive suite remains too low to help us identify with certainty the actual role and contribution of women in corporations.

By analyzing questionnaire responses, we investigated women’s perceptions of gender diversity with regards to corporate governance, corporate performance, barriers and glass ceiling, legislation, and aspirations. Our findings indicated that increased board gender diversity leads to better corporate governance and increased corporate value. Our study has also shown that women feel that there are many barriers on the way of their career advancement, and that legislation is essential to change the gender landscape. Although they are in favor of legal measures being taken to improve board gender diversity, they feel that quotas may not be the best practice as they may ultimately lead to ‘tokenism’ (see Kanter, 1977). Thus, we suggest that board composition should not be ‘gender-blind’. A striking finding is that women do not place ‘being a board member’ within their top-3 career achievement priorities. This suggests that, while the majority feels comfortable with the idea of being appointed to a company board, they might also have other objectives in mind when planning their career.

This study has shown that women are aware that they can add value to corporations by sitting on their boards. However, the situation is complex as there are discrepancies between women’s aspirations and companies’ economic needs. As highlighted by Thomson and Graham (2005), there is a difference between the ‘demand’ side with chairmen and CEOs who may wish to appoint more women on their boards, and the ‘supply’ side with women who are ready to take these positions but find that the closer they get to top echelons of management, the more barriers there are. Nowadays, more and more initiatives and policies are being set up by various key economic players, such as corporations, women’s networks, mentoring and coaching professionals, political groups, etc., to support the

appointment of female directors. However, more insight is needed to determine how effective and applicable these initiatives are.

Our study contributes to a still growing academic knowledge base on board gender diversity, by analyzing the case of France, and by serving as a springboard for further research on this captivating matter that is the association of gender diversity with corporate governance, financial performance

and regulation. Future research should implement this analysis using a larger sample and should also examine different accounting settings, such as common-law or code-law countries, which display different corporate governance qualities and unlike regulatory and cultural attributes (see Kang et al., 2007). Future research should also investigate the role of women in non-executive positions and their connection with corporate performance.

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## Appendix

Hypothesis	Variable	Survey Question
H1 Governance	Governance_Org_Value	Gender diverse boards add more organisational value through the quality of decision-making, to what extent do you agree?
H1 Governance	Governance_Integrity	Gender diverse boards have directors who act with greater integrity, to what extent do you agree?
H1 Governance	Governance_Boardroom_Dynamics	Gender diverse boards have healthier boardroom dynamics, to what extent do you agree?
H1 Governance	Governance_Leadership_Style	Gender diverse boards have a more effective leadership style, to what extent do you agree?
H1 Governance	Governance_Male_Dominated_Boards	Gender diverse boards have the same governance attributes as male-dominated boards, to what extent do you agree?
H1 Governance	Governance_Homogeneous_Boards	Gender diverse boards have a higher level of unity than homogeneous boards, to what extent do you agree?
H1 Governance	Governance_Positive_Message	Gender diverse boards send a positive message to shareholders and the public on company values, to what extent do you agree?
H2 Performance	Performance_Male_Dominated_Boards	Gender diverse boards have the same performance as companies with male-dominated boards, to what extent do you agree?
H2 Performance	Performance_Risk_Aversion	Women are more risk-averse than men, to what extent do you agree?
H2 Performance	Performance_Value_Creation	Adding women to boards results in value creation, to what extent do you agree?
H2 Performance	Performance_Critical_Number	A critical number of women on boards needs to be achieved for firms to witness positive impacts on financial performance, to what extent do you agree?
H2 Performance	Performance_GD*_Goals	Better performing firms are able to focus more on gender diversity goals, to what extent do you agree?
H2 Performance	Performance_Abnormal>Returns	Firms announcing diversity measures such as the appointment of a women director on their board would experience significant abnormal returns on the announcement date, to what extent do you agree?
H2 Performance	Performance_Economic_Benefits	An increased presence of women on company boards would bring economic benefits, to what extent do you agree?
H2 Performance	Performance_Driver	Do you recognise gender diversity as a performance driver?
<i>The following are generally considered to have an effect on gender diversity within the top management of corporations. To what extent do you agree?</i>		
H3 Barriers	Barriers_Availability	"Anytime, anywhere" performance model
H3 Barriers	Barriers_Double_Burden	"Double burden" syndrome
H3 Barriers	Barriers_Self_Promotion	Tendency of women not to promote themselves
H3 Barriers	Barriers_Role_Models	Absence of women role models
H3 Barriers	Barriers_Networking	Tendency of many women to network less effectively than men
H3 Barriers	Barriers_Family_Policy	Lack of pro-family public policies or support services
H3 Barriers	Barriers_Ambition	Tendency of women to have less ambition than men
H3 Barriers	Barriers_None	No barriers
<i>Some factors are believed to lower a woman's chance of career progression. Please rank the following.</i>		
H3 Barriers	Barriers_Flexible	Working flexibly
H3 Barriers	Barriers_Part_Time	Working part-time
H3 Barriers	Barriers_Maternity_Leave	Maternity leave
H3 Barriers	Barriers_Woman	Being a woman
H3 Barriers	Barriers_Culture	Company's male-dominated culture
H4 Legislation	Legislation_Measures	Some European countries have already taken legal measures to ensure a more balanced representation of women and men on company boards; are you in favour or opposed to legislation on this matter?
H4 Legislation	Legislation_Quotas1	Do you agree with the idea that companies should adopt measures to ensure faire quotas of women in their boards?
H4 Legislation	Legislation_Quotas2	Do you agree with the idea that adopting quotas would be the only way to ensure board gender diversity?
H5 Aspirations	Aspirations_Comfortable	As a woman, how comfortable are you about being appointed to a board?
<i>What would be your ultimate career achievement? Please choose THREE maximum</i>		
H5 Aspirations	Aspirations_Achievement_Board	Being a board member of your company
H5 Aspirations	Aspirations_Achievement_Compensation	Obtaining maximum financial compensation
H5 Aspirations	Aspirations_Achievement_Entrepreneur	Starting your own company
H5 Aspirations	Aspirations_Achievement_Balance	Achieving work-life balance
H5 Aspirations	Aspirations_Achievement_Politics	Starting a political career
H5 Aspirations	Aspirations_Achievement_Social	Making a significant impact on society
<i>When do you think you will achieve this?</i>		
H5 Aspirations	Aspirations_Next_2years	Within the next 2 years
H5 Aspirations	Aspirations_Next_5years	Within the next 5 years
H5 Aspirations	Aspirations_Next_10years	Within the next 10 years
H5 Aspirations	Aspirations_Next_Never	Never
H5 Aspirations	Aspirations_Next_Done	Already achieved

Fig. 3. Questionnaire survey structure