Stock market reaction to announcements of management changes in listed companies and the impact of national culture

ARTICLE INFO

ABSTRACT

<u>Keywords:</u> Culture Cross-country Board of directors Gender Corporate governance Market reaction This article explores the financial market reaction to the announcement of the appointment of a female member in a company's decision-making body and analyses to what extent a country's culture may explain this reaction. To this end, we use Hofstede's six cultural variables, an event study methodology over the period 2002 to 2019 (post-Sarbanes Oxley and pre-Covid19 crisis period) and multivariate regressions. Our results indicate that markets react differently depending on the gender and the appointment position. We also show that markets reaction to female appointments is different depending on the country of origin of companies thus stressing the impact of the culture. Moreover, several cultural dimensions influence these different reactions, as for example "masculinity", "individualism" and "indulgence".

I/ Introduction

Diversity in corporate decision-making bodies is a highly topical issue and a political priority in many countries. For example, Norway was the first country to adopt a quota law to establish a minimum of 40% representation of each gender on the boards of public limited companies. This trend was followed by other countries, including France in 2017 (Deloitte, 2021). According to Fama and Jensen (1983), thoughts and measures on good corporate governance concern the board of directors and its driving role in the value creation process.

These boards are over-represented by men, with little or no women presence. For example, according to Catalyst (2013), in 2013, female board members accounted for only 15.9% of the Financial Post 500. This under-representation of women in these decision-making bodies is often associated with an invisible but insurmountable barrier, the 'glass ceiling', which prevents them from reaching a certain level in the corporate hierarchy. Even if the presence of women on boards is increasing lately, it is still far from reaching parity. For example, on the boards of large listed companies in the European Union in 2016, only 23.3% were women (Bloomberg 2016). If we combine the proportion of CFOs with the statistics for CEOs, women represent only about 10% of the workforce in US companies (Ho and al., 2015). Depending on the country, these proportions are not uniform, for example, women hold 20% of the seats in the US compared to 3% in Japan in 2015 (Bloomberg, 2016). Kirsch, (2018) shows that institutional and social factors may disadvantage women's access to boards. Culture may also play a role.

Numerous studies have emerged to highlight the impact of gender on stock market performance when a woman is appointed to the top of a company. For example, Lee and James, (2007) document negative reactions when a woman is appointed to the management of listed companies in the US. In contrast, Campbell and Minguez-Vera, (2010) who study the short and long term effects of appointing women to boards of directors on the market values of companies in Spain, conclude that in the short term the market reacts positively to these appointments and in the long term it has a positive and significant effect on the value of the company. Other studies, also point to these same results, including Adams and al., (2010) for Singapore. A consensus has therefore not been reached.

In this paper, we investigate the role of culture in stock markets reactions when a woman, rather than a man, is appointed to lead a company. To test this relationship empirically, we use an event study methodology to detect possible significant differences between the male and female samples across countries. Subsequently, we use the multivariate regression method to understand which cultural dimensions influence these different reactions. To quantify culture, we rely on the work of Hofstede, namely the six cultural variables that he introduced. Our sample consists of 17,878 appointments, of which 2,348 are for female appointments in 45 countries over the period 08/01/2002 - 12/31/2019.

This paper contributes to the literature by showing the impact of culture on stock market reactions when a woman is appointed to the management of a listed company. Furthermore, the inclusion of the more recent two Hofstede cultural variables (Long term vs. short-term orientation and Indulgence vs. restraint) is an additional contribution. By using data from 45 countries, we are not constrained like most previous studies to a sample illustrating the phenomenon in only one country. Moreover, it shed light on our understanding of the absence of consensus on the different stock market reactions.

In line with our hypotheses, we find different reactions in different countries. Indeed, our event study allows us to show that, depending on the country, markets may overreact positively to one of the two genders. For example, in Malaysia, markets overreact significantly and positively to the nomination of men on different windows, in contrast to Mexico where markets value women's appointments. Secondly, our multivariate regression allowed us to highlight that culture is a determinant of these different reactions. In particular, markets tend to overreact positively to the appointment of men in countries with a high score in terms of 'Masculinity'. while in countries with a high score in the 'Individualism' variable, the nomination of women penalizes the concerned companies.

We have also tried to highlight the influence of the position of appointment: Director, Chairman, and CEO. Indeed, our results show that the position also plays a role in the reactions of the stock markets. For example, the markets overreact positively to men appointed as Directors in UK companies. This contrasts with Australia, where the markets value the appointment of women as Directors. Finally, our estimations also show that certain cultural dimensions influence these reactions depending on the position of appointment. For example, markets value the appointment of men as Directors in countries with high Masculinity and Indulgence scores. All these results are robust.

Our paper is organized as follows. Section 2 reviews the existing literature on the subject. Section three outlines the hypotheses of our study, while section four describes the sample data and the methods used. Section 5 presents the results while section 6 synthesizes several robustness tests. Finally, section 7 concludes.

II/ Literature review

The low representation of women in corporate decision-making bodies (Ferrary, 2017) contradicts the numerous empirical studies that show that women leaders add value to the firm. For example, Krishnan and Parsons (2008) observe that companies with more female executives have higher profitability. In companies with female managers, Faccio and al. (2016) also observe lower leverage, less volatile profits, and higher survival chances. This positive association between corporate performance and gender diversity in senior management has also been analyzed within boards of directors. The presence of women may be associated with better board communication, due to a more collaborative, participative, and consensual management and leadership style than men. Adams and Ferreira (2009) show that board diversity, measured as the fraction of women directors on the board, is an effective control mechanism and, in particular, reduces problems of board attendance. More specifically, the higher the fraction of women on the board, the better the attendance behavior of male directors. The authors also find that the more diverse the board, the more sensitive the turnover rate of the chairman and CEO is to stock performance. Similarly, Schwartz-Ziv (2017) shows that a board with at least three directors of each gender is 79% more active at board meetings than boards without such gender diversity. Srinidhi and al. (2011) examine diversity through the participation of women on the board, which indicates on the one hand the presence of one or more female directors on the board (binary variables) and on the other hand the extent of female representation on the board, measured by the percentage of female directors. The authors show that the participation of women on the board contributes to improving the quality of governance and decreasing earnings management. More generally, Hoogendoorn and al. (2013) conclude that teams with gender parity perform better in terms of sales and profits than male-dominated teams. In this vein, Adams and Ferreira (2009) conclude that the presence of women on the board of directors

has a significant and positive impact on the performance of companies listed on the S&P¹ 500, S&P MidCaps, and S&P SmallCap.

Some studies have explored these issues from an international perspective. By adopting a comparative approach across countries, the literature underlines the importance of the institutional environment² and culture in understanding the issues around women' presence. Post and Byron (2015) conduct a meta-analysis and show that firms with greater female gender representation on boards tend to have higher accounting returns and notably show that the link between female board membership and market performance is positive for countries where parity is higher. More recently, Belaounia, Tao, and Zhao (2020) analyse gender on boards in a multi-country context. Their results show that in countries with a higher gender equality indicator, the presence of women improves board performance, especially in risk management and market performance. In contrast, in nations with low gender equality, female directors do not appear to have an impact on board performance. Further on the influence of the institutional environment, Lubatkin and al. (2005) show that beliefs embedded through basic socialization processes (school, religion, etc.) shape a nation's institutions and conclude that a nation's corporate governance practices can only work in a specific context. Furthermore, according to DiMaggio and Powell (1983), the legal foundation upon which a corporation rests is characterized by a set of binding rules as well as values and beliefs that the members of a corporation share which in turn shape the behaviors at the work place. Therefore, since values and beliefs are at the roots of culture, a society's cultural values can strongly influence how organizational structures are set up. North (1990) and Williamson (2000) argue that culture embodies the system of values and beliefs that shape formal and informal institutions. Williamson's model of social analysis is structured in levels that constrain each other from top to bottom. At the first level, informal institutions such as customs, traditions, norms, and religion change very slowly, over centuries or even millennia. Regarding the second level, the so-called 'institutional environment', some countries have introduced quota laws to force companies to have a certain proportion of directors of each gender, intending to help increasing gender equality (Schwartz-Ziv, 2017). Women quota legislation has a considerable impact on the composition of boards of directors and thus on the strategic direction of listed companies (Terjesen, Aguilera, and Lorenz, 2015). For example, Wang and Kelan (2013) report that the

¹ Standard & Poor's

² The institutional environment is understood here in the sense of Williamson and includes the formal rules linked to property rights, laws, constitutions, etc. (Williamson, 2000)

quota law in Norway has had a positive impact on the number of female board chairs and female CEOs. Ferrari and al. (2018) document a positive effect of the gender quota law on stock market returns in board elections for companies listed on the Milan Stock Exchange. In Norway, Matsa and Miller (2013) study the impact of gender quotas on corporate decisions and find that firms affected by the law reduce their workforce less than others, resulting in lower short-term profits due to higher labor costs. Governance institutions mainly constitute the third level of Williamson's model. La Porta and al. (1998) support the idea that legal systems, especially Common law and Civil law systems³, are important for corporate governance. Companies must adapt to the limitations of the systems in which they operate. They also show that corporate governance is intrinsically linked to the development of financial markets. Cultural differences between nations influence both the form and functioning of organizations (Landsberger, 1970; Hamilton and Biggart, 1988; Hofstede, 1991; Scott, 1992). Carrasco and al. (2015) examine whether the proportion of women on boards is culturally induced and conclude that cultural, legal, and institutional aspects come into play in the representation of women on boards.

Hofstede, who defines culture as "the collective programming of the human mind that distinguishes the members of one human group from those of another. Culture in this sense is a system of collectively held values" (Hofstede, 1991) identifies 4 cultural dimensions⁴. Hierarchical distance, described as "the extent to which the members of a society accept that power in institutions and organizations is distributed unequally" (Hofstede, 1984; p. 83) is the first of these cultural dimensions. Thus, in societies with high power distance, individuals accept a hierarchical order in which each person has a defined place without asking for justifications. On the contrary, in societies with low power distance, individuals will ask for justifications for power inequalities (Hofstede, 1984). Uncertainty avoidance is the second cultural dimension, defined as "the degree to which the members of a society feel uncomfortable with uncertainty and ambiguity". (Hofstede, 1984; p. 83). A society with a high score in this dimension will therefore have a low tolerance of uncertainty and will be oriented towards rules, laws, etc. to reduce this uncertainty. On the contrary, societies with a low score in this

³ The first system is based on case law, the judge is the legislator and has regulatory power. It is mainly used in Anglo-Saxon countries, such as the United Kingdom, the United States, Canada, and the Commonwealth countries. The second legal system is derived from Roman law; it developed in France, Germany, and the Scandinavian countries and then spread in the 19th century via colonization (Tetley, 2000). This system is predominant on the European continent.

⁴ "Culture's Consequences: International Differences in Work-Related Values" (1980) and "Cultural dimensions in management and planning" (1984) based on responses from employees of IBM and its subsidiaries in 50 countries.

dimension will be more oriented towards change. Previous studies show that greater uncertainty avoidance leads to less risk-taking and innovation due to the low likelihood that such a society is willing to overcome organizational inertia and hierarchy violation (Kwok and Tadesse, 2006; Mihet, 2013; Shane, 1993). Another cultural variable introduced by Hofstede is individualism versus collectivism. "Individualism stands for a preference for a loosely knit social framework in society wherein individuals are supposed to take care of themselves and their immediate families only" (Hofstede, 1984; p. 83). In contrast, "Collectivism, stands for a preference for a tightly knit social framework in which individuals can expect their relatives, clan, or other ingroup to look after them in exchange for unquestioning loyalty (Hofstede, 1984; p. 83). More individualistic societies value individual characteristics such as autonomy, the ability to set personal goals, among others, while more collectivistic societies value adherence to group norms for example (Carrasco and al., 2015). Hofstede's fourth dimension is the degree of masculinity of a country defined as "...a preference in society for achievement, heroism, assertiveness, and material success. Its opposite, Femininity, stands for a preference for relationships, modesty, caring for the weak, and the quality of life" (Hofstede, 1984; p. 83). According to the study of IBM employees, it turns out that women' values differ less from company to company than men' (Hofstede, 2011). Male societies are more oriented towards competition and material success, while female societies have more modest and caring values (Hofstede, 2011). Two additional variables were introduced by Hofstede in 2010: long-term orientation, as requested by Asian countries, and indulgence versus restraint. Regarding shortterm vs. long-term orientation, it refers to the temporal perception of important events. For example, in the short term, important events in one's life are considered to occur in the past or the present moment, as opposed to the long-term orientation which tells us that important events occur in the future (Hofstede, 2011). Finally, indulgence vs. restraint refers to the fact that an indulgent society allows people to satisfy human desires related to enjoying life and having fun (Hofstede, 2011). Restraint is defined as a society that regulates the satisfaction of individuals' needs (Hofstede, 2011).

To investigate how a nation, depending on its cultural characteristics, may react to the presence of women in positions of responsibility in the socio-economic world, we can use the financial market's reaction to the announcement of such appointments. Indeed, studies on the reaction of the financial markets following announcements of various kinds made by companies explore the influence of behavioral, institutional, legal, or cultural factors specific to each country and analyze their impact on companies' decisions. Warner, Watts, and Wruck (1988) show that the higher the probability of a change in board leadership, the lower the stock performance. Adams and al. (2011) find a positive market overreaction to the addition of a female board member around the dates of such announcements on the Australian market. Specifically, they find that announcements of female board appointments lead to stronger market reactions than for men in companies that have introduced measures to improve working conditions for women. In the same vein, Adams and al. (2010) highlight that the voluntary appointment of women can create value for the company and that the market reacts 2.1% more than for men. Based on all these considerations, cultural differences between nations play an important role in the place that women occupy/should occupy in society, and more specifically in corporate governance bodies. Moreover, these same cultural differences can also explain the reaction of financial markets to the appointment of women to senior positions in companies.

Thus, our study focuses on the presence of women on the boards of listed companies, and more specifically on the perception of the financial markets regarding this presence. The theories and arguments presented above lead us to investigate the role the culture plays in this context. We analyze how the culture of a country influences the reactions/perceptions of the financial markets when a woman is appointed to the board of a listed company. The use of Hofstede's cultural dimensions as explanatory variables, especially the more recent ones, is an important contribution of our work.

III/ Hypothesis

Women's representation in corporate decision-making bodies is intrinsically linked to cultural context (Licht and al., 2005; Chizema and al., 2015). To better understand how cultural factors influence the level of women's representation in firms, we use the six cultural dimensions introduced by Hofstede and analyze their impact in terms of market response. Bullough and al. (2012) document a negative relationship between the power distance variable and women's political leadership presence. This means that nations with women involved in the political sphere favor the rise of diverse individuals occupying higher positions, regardless of gender (Bullough and al., 2012). Thus, women in these countries are more likely to be present in influential political positions due to the low distance from power. Also, Carrasco and al. (2015) find that the proportion of women on boards is higher if the power distance is low. Thus, we hypothesize the following:

1a) The lower a country's power distance, the more likely the stock market will react positively to the announcement of the appointment of a woman to corporate decision-making bodies.

1b) Countries with high power distance will either not react or react negatively to the announcement of the appointment of a woman to corporate decision-making bodies.

Regarding uncertainty avoidance in its risk-taking dimension, previous studies show that women are more risk-averse than men (Croson and Gneezy, 2009; Apesteguia and al., 2012). In contrast, this finding is not shared by Adams and Funk (2012), who, using a Schwartz Portrait Value Questionnaire (PVQ), find that women on boards are more risk-loving than their male counterparts. In terms of the impact of uncertainty avoidance and women' presence on boards, Carrasco and al. (2015) do not find significant results. The lack of consensus emerging from past studies leads us to formulate the following hypothesis:

2) The uncertainty avoidance variable will positively or negatively influence stock market perceptions and reactions.

Taking into account the societal approach, individualism vs. collectivism is important for our study. Indeed, practices related to collectivism seem to be negatively related to women's presence in political leadership, while individualism seems to be positively related (Bullough et coll., 2012). Individualistic societies view people as autonomous and independent, so that individual goals are valued over collective goals. Women may be perceived as more legitimate by the market in individualistic societies. We, therefore, make the following hypotheses:

3a) Stock markets belonging to countries with high individualism ratings will value women' appointment to corporate decision-making bodies.

3b) Stock markets belonging to countries with a low rating in terms of individualism will not value women' appointment to corporate decision-making bodies and will not react or will react negatively.

As for the fourth dimension relating to the degree of masculinity, institutional theory suggests that societies will or will not put in place structures, laws that aim to facilitate the presence of women in corporate decision-making bodies. Carrasco, and al. (2015) find that the proportion of women on boards is higher if masculinity is low. The inverse relationship between the degree

of masculinity and the presence of women is true for societies with a low score on this dimension, such as Norway. We, therefore, make the following assumptions:

4a) The lower a country's masculinity, the more likely the stock market will react positively to the announcement of the appointment of a woman to corporate decision-making bodies.

4b) Countries with a high degree of masculinity will either not react or will react negatively to the announcement of the appointment of a woman to corporate decision-making bodies.

To our knowledge, the fifth variable "long term vs. short term" has never been used in a study that links the impact of appointing women to the top of companies and the reactions of stock markets. Yet, a long-term orientation could be beneficial for the company via an increase in its value and operational performance materializing through innovative strategies and via its relationships with stakeholders (Flammer and Bansal, 2017). Moreover, a company that focuses on short-term results is exposed to the risk that senior managers may decide to manipulate the company accounts due to the pressure to achieve immediate results (Tonnello, 2006). On the investor side, short-term goals are more volatile due to fluctuations in the economic, political, and social environment (Tonnello, 2006). Therefore, this variable may be of interest to our study. Thus, we formulate the following hypotheses:

5a) The market in countries with a higher long-term orientation will react positively to the announcement of the appointment of a woman to corporate decision-making bodies.

5b) The market in countries with a lower long-term orientation will not react or react negatively to the announcement of the appointment of a woman to corporate decision-making bodies.

Finally, to our knowledge, indulgence versus restraint has also never been used in a study comparable to ours, albeit its potential interest. According to Sun and al. (2018), this dimension has an impact on the influence of a company's social performance on its financial performance. They use a sample of 3,753 firms across 43 countries and find that social performance has a weaker impact on firms' financial performance in the most indulgent countries. Therefore, this variable may play a role in explaining the financial market's perception of announcements of appointments to decision-making positions in companies. Thus, we formulate the following hypotheses:

6a) The market will react positively to the announcement of the appointment of a woman to corporate decision-making bodies for countries with low indulgence.

6b) The market will not react or react negatively to the announcement of the appointment of a woman to corporate decision-making bodies for countries with higher indulgence.

IV/ Data and Methods

1. Event study.

Our analysis uses the event study technique (Fama and al., 1969). To construct our sample, we start by identifying the events linked to an appointment to a decision-making position (director, CEO, Chairman).

The data collection was done using the "Factiva" database. First, we use different combinations of the keywords "board"; "appoint*"; "CEO"; "chief executive officer"; "director*"; "chairman"; "elect*"; "announce*"; "names". We also select articles that appear on the following topics: "Management change"; "Press releases"; "Senior management"; "Factiva filters"; "Management"; "Company and industry information"; "Board of directors". Secondly, we decided to eliminate announcements where certain words were present; for example: "resign"; "retire*"; ... This decision was taken so that the announcement only reflects the appointment of a person and not another event. Finally, in line with previous literature, we eliminate companies from specific sectors: financial companies (Sudeck and Latridis, 2014), insurance companies, real estate companies, electrical, gas, and sanitary services (Farrel and Hersch, 2005). After excluding duplicate ads, our sample consists of 87,711 observations. Each data item represents an announcement made by a company on a given date. They are then read one by one to detect those that deal with the appointment of a person as a director, CEO, or chairman. We remove announcements where multiple events are present (contaminated) (Schmid and Dauth, 2014; Campbell and Minguez-Vera, 2010; Nthoesane and Kruger, 2014; and others) and we remove those where multiple directors are appointed at the same time (Singhvi, Raghunandan & Mishra, 2013; etc.).We are thus left with 42,772 announcements. The following information is then retained: the date of the announcement, the first and last name of the person named, the company, and the position. To keep only the listed companies in our sample, we used the "Refinitiv workspace" database. First, we retrieve the code of each company from the database. We use the PermID site (belonging to Refinity) and search the companies one by one to obtain these codes. To retrieve our financial data (stock prices), we use the "Datastream" database. Also, to retrieve our control variables (Table 7) we use "Refinitiv Workspace". Our final sample consists of 17,878 announcements of listed companies.

Table 1 shows the distribution of these announcements by year.

Insert table 1

As in Lee and James (2007), the appointment announcements of female and male directors are selected to compare and highlight the market reaction according to the gender of the director. Here the male sample serves as a control (Table 2).

Insert table 2

Although men are over-represented in these decision-making bodies, the proportion of women appointed increases between 2002 and 2015 (from 3.85% to 16.32%) and then remains constant for the following three years before reaching 22.03% of women appointed in 2019. This is consistent with the mechanisms put in place to promote the presence of women in corporate decision-making bodies. For example, Wang and Kelan (2013) report that the quota law in Norway has had a positive impact on the number of female board chairs and female CEOs.

Furthermore, we select all changes in the board of directors; we do not limit ourselves to one category of directors (CEO, outside or inside directors) to identify the possible impact of the importance of the position held (Table 3). Indeed, the job title can have a significant influence on the market reaction. For example, Warner, Watts, and Wruck (1988) conclude that the higher the probability of a management change, the lower the stock performance. Also, Nthoseane and Kruger (2014), highlight the fact that the Johannesburg Stock Exchange reacts negatively to CEO appointment announcements.

Insert table 3

We notice that director and CEO appointments dominate the sample (55.41% and 30.27% respectively). As for the gender distribution, women are much less often appointed to the positions of CEO and Chairman than to the position of Director (6% versus 20%).

Given the nature of our study, country-related statistics are necessary. We need to compare stock market reactions when a woman is nominated with stock market reactions when a man is nominated (Lee and James, 2007); as such, we decide to remove countries where there are no female nominees. This reduces our sample to 45 countries (Table 4).

Insert table 4

We identify a majority of announcements from companies domiciled in the USA, Canada, and Australia. We can perhaps explain this by the fact that our search on the Factiva database was conducted exclusively in English. On our total sample, female nominations represent only 13.03%.

The issue of women's representation is at the heart of the literature on diversity and corporate governance. Regulatory measures in the 2000s, such as the Sarbanes Oxley Act (2001) in the United States, the New Economic Regulation Act (2001), and the Financial Security Act (2003) in France, reflect the desire to strengthen corporate governance practices. More specifically, the Sarbanes Oxley Act (SOX) enacted on 30 July 2002 to set new standards for American public companies was introduced following commercial and accounting scandals such as those of Enron and Tyco International among others. It aims to restore investor confidence in companies by improving corporate governance through the introduction of accounting standards (Defond and al., 2004). It includes, for example, the addition of an accounting oversight board for public companies, independence standards for external auditors to limit conflicts of interest, increased requirements in terms of financial information, and the addition of criminal sanctions for the manipulation, destruction, or modification of financial records (Act, Sarbanes-Oxley, 2002). We will take this law as a starting point for our study, as did Singhvi and al. (2013), Defond and al. (2004), and Cai and al. (2009). Our analysis will therefore focus on the period from 2002 to 2019, the post-Sarbanes-Oxley and pre-Covid-19.

We use the market model (Farrel and Hersch, 2005; Adams, Gray, and Nowland, 2010; 2011) to study market reactions to a director's addition to the board. We estimate the model over the period between 150 and 20 days before the announcement, in line with the literature using the event study method. For example, Lee and James (2007) use a window of - 240 days to -20 days, while Schmid and Dauth (2014) use a window of -100 days to -50 days:

The observed returns (Rit) are described as follows:

$$R_{it} = a_i + b_i \times R_{mt} + \varepsilon_{it}$$

 R_{mt} = market performance for day t. $\epsilon_{i,t}$ = error term i = company t = day

Abnormal returns are then computed as follows:

$$AR_{it} = R_{it} - (\hat{a}_i + \hat{b}_i \times R_{mt})$$

The average abnormal returns can then be calculated:

$$AAR_t = \frac{1}{N} \sum_{i=1}^{N} AR_{it}$$

N = Sample size

and cumulative abnormal returns:

$$CAR_i(T1,T2) = \sum_{t=T1}^{T2} AR_{it}$$

Finally, the cumulative average abnormal returns are obtained as:

$$CAAR(T1, T2) = \frac{1}{N} \sum_{i=1}^{N} CAR_i(T1, T2)$$

T1 and T2 stand for the beginning and the end of the event period.

Finally, to analyze the significance of abnormal returns, we use two statistical tests, a parametric and a non-parametric one, as in Cambell and Minguez Vera (2010).

- The first is the Standardized Cross-Sectional Test of Boehmer, Musumeci, and Poulsen (1991). We use this test rather than the classic T-test following previous studies (e.g.

Cambell and Minguez Vera, 2010) because this test has the particularity of considering the volatility induced by the events.

It is defined as follows:

$$\sqrt{N} \frac{SCAR}{S_S \overline{CAR}}$$

SCAR denotes the average normalized cumulative abnormal returns for the N firms.

$$\overline{\text{SCAR}} = \frac{1}{N} \sum_{i=1}^{N} SCAR_{i}$$

$$SCAR_i = \frac{CAR_i}{S_{CAR_i}}$$

 S_{CAR_i} is the standard deviation corrected for forecast errors of Mikkelson and Partch (1988)

- The second is a non-parametric test (Corrado 1989). Many researchers have used it for event studies (e.g. Cambell and Minguez Vera,2010).

To perform this test, we need to sort and transform the series of abnormal returns into their respective ranks, both for the estimation period and for the event window. The rank statistic is calculated as follows:

$$\frac{\frac{1}{N}\sum_{i=1}^{N}(k_{i,t}-\bar{k}_i)}{s(k)}$$

s(k): Estimated standard deviation of the average rank of the abnormal portfolio return over the estimation and event windows.

$$s(k) = \sqrt{\frac{1}{t_1 + t_2} \sum_{t=1}^{T} (\frac{1}{N} \sum_{i=1}^{N} (k_{i,t} - \bar{k}_i))}$$

Then, to test the significance of the difference between the male and female samples in different countries, two tests are used:

The first is a parametric test, the T-test. It is defined as follows:

$$\frac{CAR(T1,T2)}{s(CAR)}$$

s(CAR) = Standard deviation of CAR

$$s^{2}(CAR) = \frac{1}{N^{2}} \sum_{i=1}^{N} ((CAR_{i}(T1, T2) - CAAR_{i}(T1, T2_{i}))^{2})$$

In addition to the t-test, we use a non-parametric test, the Wilcoxon Rank-Sum test. This test is often described as a non-parametric alternative to the t-test. It is recommended for comparing two independent samples (Wilcoxon, 1947).

For robustness, an alternative model for estimating abnormal returns is used, namely the Fama-French 3-factor model defined as follows:

$$E(r_i) - r_f = p_i (E(r_m) - r_f) + g_i E(SMB) + h_i E(HML)$$

E(r_i): expected return on a financial asset

rf: risk-free interest rate

rm: market return

SMB: size (market capitalization) risk factor; small-cap returns minus large-cap returns.

HML: value/growth factor measured by the ratio of book value to market capitalization; returns on high-VC/VM stocks minus returns on low-VC/VM stocks

2. Multivariate analysis.

In this section, we use a multivariate regression model to explore the potential relationship between the cumulative average abnormal returns (CAAR) and the 6 cultural dimensions defined by Hofstede. The model will be estimated by using OLS.

The general model for our multivariate analysis is the following:

$$\begin{aligned} CAR &= \beta_0 + \beta_1 MASC + \beta_2 POWER + \beta_3 IND + \beta_4 AVOID + \beta_5 TERM + \beta_6 INDULG \\ &+ Ycontrol_{i,t} + \alpha_i + \delta_t + \varepsilon_{i,t} \end{aligned}$$

 α_i = random effects by company size

 $\delta_t = random \ effects \ per \ year$

 $\epsilon_{i,t} = error \ term$

We decide to run this regression with the control variables only, then incorporate the variables of interest one by one in 6 different models, before incorporating all these variables in the eighth model.

We decided to introduce random effects because according to Konchitchki and O'Leary (2011), event studies can potentially capture substantial industry and firm size effects.

The different variables we use are presented below.

Our main variables of interest are those related to the 6 cultural dimensions. We also indicate several former studies that include these variables in their estimations.

Variables	Authors
Masculinity (MASC)	Carrasco, and al. (2015)
	Chizema, Kamuriwo, and Shonozawa (2015)
	Li and Harrison (2008)
Power distance (POWER)	Cabeza-Garcia, Del Brio, Rueda (2019)
	Carascon, and al. (2015)
	Li and Harrison (2008)
Individualism vs. collectivism (IND)	Carrasco and al. (2015)
	Li and Harrison (2008)
Uncertainty avoidance (AVOID)	Carrasco and coll. (2015)
	Li and Harrison (2008)
Court-term orientation vs long-term (TERM)	
Indulgence vs. Restraint (INDULG)	

All these variables were exported from the Hofstede Insights website: <u>www.hofstede-insights.com</u>

We also include several control variables as follows:

- Variables related to the characteristics of the appointed administrator:

Gender of the appointed	Adams,	Gray	and	Dichotomous variable: it takes the
director	Nowland	(2010;20)11)	value of 1 if the administrator is a
				woman and 0 otherwise.
Function	New			the function of director is equal to 1,
				that of "Chairman" is 2 and finally
				"CEO" is 3

These variables come from the "Factiva" database.

- Company-related variables:

According to Adams, Gray, and Nowland (2010), the assessment of women on boards is related to the characteristics of the firm and the hiring board, hence the interest in controlling for firm-related characteristics.

Variables	Authors	Observations
At least one woman on	Adams and Ferreira	Dummy variable that takes the value of
the Board of Directors	(2009)	1 if at least one woman is present on the
		board and 0 otherwise.
The proportion of	Ding and Charoenwong	Schwartz-Ziv (2017) confirms the
women on the Board of	(2010)	presence of a critical mass, showing that
Directors	Greene and al. (2020)	a board with at least three directors of
	Belaounia, Thao and	each gender is 79% more active at board
	Zhao (2020)	meetings than boards without this
		gender diversity.
The proportion of	Ding and Charoenwong	A dominant number of outside directors
independent directors	(2010)	is a good way to ensure board
		independence (Hermalin and Weisbach,
		1998; Laux, 2008), and this
		independence is valued by the market.

Company size	Cambell and Minguez-	Gender diversity on boards has a much
(logarithm of total	Vera (2010)	greater positive impact on firm
assets)	Ismaïl and Manaf	performance in high-performing firms
	(2016)	compared to low-performing firms
	Kang and Ding (2010)	(Conyon and He, 2017).
Board size (number of	Adams and Ferreira	
directors)	(2009)	
	Greene and al. (2020)	
	Belaounia, Thao and	
	Zhao (2020)	
Board size (Ln (number	New	
of directors))		
Market capitalization	Belaounia, Thao and	
(ln)	Zhao (2020)	
Book-to-market ratio	Adams, Gray, and	Defined as the ratio of common
	Nowland (2011)	shareholders' equity to market
		capitalization
Ago of the	Comboll and Marine	According to Strong of 1 -1 (2014)
Age of the company	Varia (2010)	According to Strøm and al. (2014),
(number of years since	Vera (2010)	younger companies prefer to add more
form do d	Low, Roberts, and $W_{\rm biting}$ (2015)	women to company boards.
Tounded)	Whiting (2013)	
A an of the	1 ermack (1990	
Age of the company	Loy and Rupertus	
(Ln)	(2020)	

Liquidity of the listing	New	
market (ln (Volume))		

-Macroeconomic environmement related variables

Variables	Auteurs	Observations
Ln (GDP per capita)	Belaounia Thao and	Bullough and al. (2012) find a positive
	Zhao (2020)	relationship between GDP per capita
	Cabeza-Garcia, Del Brio,	and the number of women in political
	Rueda (2019)	leadership positions.
	Bullough and al. (2012)	
GDP per capita growth	Belaounia Thao and	Economic growth is linked to the
	Zhao (2020)	establishment of gender-equal policies
		(Annesley and Gains, 2013).
Education (percentage	Ismaïl and Manaf (2016)	Education is an important aspect for
of female students	Bullough and al. (2012)	women to access leadership positions
enrolled in all	Cabeza-Garcia, Del Brio,	(Bullough and al., 2012).
secondary education	Rueda (2019)	
programs in a given		
school year)		
Unemployment rate	Belaounia, Thao, and	Unemployment increases the self-
	Zhao (2020)	employment rate only for men. This
	Saridakis, Marlow, and	employment rate is measured by the
	Storey (2014)	ratio of the "Labour Force Survey" to
		the total labor force (Saridakis and al.,
		2014).
Indicateur de corruption	Belaounia, Thao and	This indicator shows society's
(WGI): contrôle de	Zhao (2020)	awareness of justice and equity
corruption and rule of		(Belaounia, Thao, and Zhao, 2020)
law		

Legal system	Cabeza-Garcia, Del Brio,	Dummy variable which takes the value			
	Rueda (2019)	of 1 if the legal origin is common law			
		and 0 otherwise.			
Law (degree of law and	Cabeza-Garcia, Del Brio,	Takes the value of 1 for the most			
code of good	Rueda (2019)	demanding countries (apply a quota			
governance)		law establishing a percentage of			
		women directors)			
		Takes the value of 0 for the other cases			
		(countries without a quota law)			

These variables are available in the World Bank database: https://data.worldbank.org

Table 5 shows the characteristics of the variables presented above.

Insert table 5

Table 6 shows the correlations between the different variables, significant at the 5% threshold.

Insert table 6

V/ Results

1. Results of the event study ⁵.

a. Samples Country / Gender

We conducted an event study to determine whether stock markets overreact to announcements of female rather than male appointments, and if so, in what direction.

To retrieve the company data, we used Datastream. For the market data, we took the main market on which the company is listed. When the information was not available, we used Datastream's national indices. Table 7 is a summary of the results showing significance at least at 10% in both tests.

Insert table 7

⁵ These values are given as examples. These positive and negative abnormal returns may be present over several event windows (see Table 11).

Only the overall sample was tested with a t-test and the Wilcoxon rank test. For the country samples, we used the Standardized Cross-Sectional test and the Corrado test.

The overall male sample sees significant positive abnormal returns on the day of the announcement, the day after the announcement and on the (-1; 0), (-1; 1), (0; 5), (-5; 0) and (-5; 5) windows for values ranging from 0.14% to 0.65% significant at the 1% risk level.

On the other hand, the results for the female sample are more contrasted. Indeed, we notice positive and significant abnormal returns on the day before the announcement and on the (-1; 0) and (-1; 1) windows, while on the window (0; 10), the returns are negative (-0.53%).

Then, when we take the samples by country and by gender, we observe several differences between them. We can, for example, observe positive abnormal returns when a man is nominated for Malaysia (+0.47% one day before the announcement), Australia (+0.44% on the day of the announcement), Switzerland (+0.56% over the window (-1; 1)) or Singapore (+0.51% over the window (0; 5)). On the other hand, some markets overreacted negatively to the announcement of the appointment of a man, such as Brazil (-2.51% on the window (-5; 0)), Russia (-0.45% on the window (-5; 0)), Saudi Arabia (-1.24% on the window (0; 10)) and Sweden (-1.21% on the window (0; 10)). Finally, some countries show contrasting reactions depending on the event window as for Germany, where we notice positive reactions on the window (0; 10) (+0.93%) but negative reactions on the day of the announcement (-0.04%).

Regarding the appointment of women, we identify positive reactions in Canada (+1.09% on the day before the announcement), the UK (+0.73% on the (-1; 1) window), France (+3.75% on the (-10; 10)), Nigeria (+10.57% on the window (-10; 10)), South Africa (+0.32% on the day of the announcement), Israel (+4.76% on the window (-5; 5)) or India (+1.46% on the window (0; 10)). Conversely, Sweden (-1.20% on the day before the announcement), Pakistan (-1.02% on the day before the announcement), Malaysia (-5.21% on the window (-10; 10), Thailand (-7.55% on the window (0; 5)) and Luxembourg (-1.49% on the window (-5; 0)) show negative results.

All these results are significant at least at the 10% level with a parametric and non-parametric test.

b. Differences between the male and female samples by country

We now turn to the results concerning the difference between market reactions to male and female appointments by country.

Insert table 8

Table 8 shows a summary of the results of the differences and the two tests applied across countries. In this paragraph, we focus only on countries where the difference between men and women is significant.

For the sake of simplicity, when we name a country, it corresponds to the origin of the company (e.g., Australia refers to Australian companies).

Overall, the markets in our samples show a more positive reaction for women than for men one day before the announcement ($\pm 0.148\%$), over the (0; 5) window ($\pm 0.52\%$) and over the (0; 10) window ($\pm 0.533\%$) (significant at the 5% risk level (non-parametric test), at the 5% risk level (parametric test) and the 10% risk level (non-parametric test), respectively). The opposite conclusion is reached on the day of the announcement and one day after the announcement when the markets overreact for men ($\pm 0.198\%$ and $\pm 0.178\%$ respectively) at the 10% risk level (parametric and non-parametric tests). The same result holds for the (0; 5) and (0; 10) windows, i.e. 0.52% and 0.61%, at the 5% and 10% risk levels (parametric test).

Markets value the appointment of men over women in many countries, and the result is significant with parametric and non-parametric tests. We can take for example Belgium, one day before the announcement ($\pm 1.56\%$) or Malaysia on the (± 10 ; 10), (± 1 ; 0), (± 1 ; 1), (± 5 ; 0) and (± 5 ; 5) windows and amounts ranging from $\pm 1.51\%$ to $\pm 5.53\%$. However, other markets value the nomination of a female. It is the case of Luxembourg one day before the announcement ($\pm 2.91\%$) and on the window (± 5 ; 0) ($\pm 11.08\%$) or of Mexico, on the window (0; 10) ($\pm 4.50\%$).

Other results are significant with only a parametric test. For example, in Australia ($\pm 2.86\%$ in the (-10; 10) window), Singapore ($\pm 3.74\%$ in the (0; 5) window), and the United Kingdom ($\pm 2.48\%$ in the (-10; 10) window), where the markets value the appointment of men. The

opposite conclusion is that the female gender is valued in Greece (+2.49% one day before the announcement) and South Africa (+2.28% on the window (0; 10)).

Finally, some results are only significant with a non-parametric test. This is the case for the United States ($\pm 1.13\%$ over the (-10; 10) window), China ($\pm 1.55\%$ over the (-5; 5) window) or Russia ($\pm 3.19\%$ the day after the announcement) where the markets value men appointments. On the contrary, for Spain ($\pm 1.32\%$ on the (-1; 0) window), Sweden ($\pm 2.53\%$ on the (-5; 0) window), India ($\pm 2.70\%$ on the (0; 10) window) or Canada ($\pm 1.01\%$ one day before the announcement), women nomination is valued.

We have therefore identified different stock market reactions depending on the origin of the companies and the event windows. These results indicate that the markets value women or men appointments more or less according to these criteria and thus, some specific characteristics.

c. Samples Country / Gender / Function

Having studied the impact of gender on stock market reactions in the different countries in our sample, we now examine the impact of the position of appointment.

To do so, the sample was reduced to countries with at least 8 nominees in the three different positions: Director, Chairman, and CEO. This leaves us with 12 countries (see Table 3).

Insert table 9

Table 9 is a summary of the samples showing positive or negative significance by gender and function. For the position of "Director", the markets overreact positively when a man is appointed in German companies (+0.57% on the day before the announcement), Canada (+0.83% on the (-1; 0) window), Australia (+0.31% on the day of the announcement) and Hong Kong (+0.59% on the day of the announcement). However, a negative overreaction appears for India (-0.33% the day after the announcement). Regarding the appointment of women, we notice that the markets show positive overreactions for companies from Australia (+0.57% on the day before the announcement), the United Kingdom (0.82% on the (-1; 1) window) and India (+0.97% on the (0; 10) window).

The contrary is observed for companies in the United States (-1.71% on the (-10; 10) window) and Hong Kong (-2.82% on the (0; 5) window).

Only companies from China ($\pm 0.64\%$ on the day before the announcement), Hong Kong ($\pm 2.13\%$ on the (0; 5) window) and Germany ($\pm 1.54\%$ on the (0; 5) window benefit from positive overreactions from the markets for the appointment of a man as Chairman. This is in contrast to Singapore (-3.13% on the (-1; 0) window) and India (-1.32% on the (0; 10) window). As for the appointment of women to this position, we find companies from India ($\pm 2.70\%$ on the day after the announcement), Hong Kong ($\pm 3.01\%$ on the day after the announcement), and Poland ($\pm 28.11\%$ on the day after the announcement) showing positive abnormal returns. This is in contrast to Poland (-22.39% on the day before the announcement) and the US (-0.59% on the day before the announcement).

Finally, markets value the appointment of men as CEOs in companies in the US (+0.44% on the (-1; 1) window) and Australia (+1.60% on the (0; 5) window) as opposed to those from Hong Kong (-0.84% on the (-1; 0) window). As for women nominations, they are valued by the market in Italy (+0.90% on the day after the announcement) and Australia (+2.02% on the day of the announcement). We do not find any negative results when a woman is appointed CEO.

d. Differences between the male and female samples by country and function

To comment on our results, we look at the full sample and then provide a quick summary of the different countries. Table 10 shows the significant differences between the male and female samples according to country and the function of the person appointed.

Insert table 10

First, we look at the function of "Director". Overall, men appointments to this position are valued by the markets on the day of the announcement, the day after the announcement, and over the (-10; 10), (-1; 1), (0; 5), (0; 10) and (-5; 5) windows for values ranging from +0.26% to +1.24% significant at the 5% and 10% risk levels (parametric test). The opposite conclusion is reached on the day before the announcement, where the appointment of a woman engenders a +0.012% market overreaction at the 1% confidence level (non-parametric test). Moreover, we find higher overreactions for the appointment of men rather than women in China (0.20% one

day before the announcement), Germany (+3.85% on the (0; 5) window), Hong Kong (+3.05% on the (0; 5) window), and the United States (+0.85% on the (0; 10) window). This trend is strictly opposite in the UK (-0.39% on the day of the announcement), Canada (-0.34% on the day before the announcement), and Poland (-3.80% over the (-1; 1) window). Australia, on the other hand, shows results valuing women nominations on the day before the announcement (+0.37%), while men appointments are valued on the day of the announcement (+0.65%) and over the (-10; 10) window (+2.95%).

Then, for the "Chairman" function, overall, men nominations are again valued on the day before the announcement ($\pm 0.71\%$) at the 10% confidence level (parametric and non-parametric tests). On the other hand, one day after the announcement, the markets overreact positively toward women nominations by 0.61% at the 10% risk level (non-parametric test). We notice more positive reactions when a man is appointed rather than a woman in companies originating in the United States ($\pm 0.65\%$ on the day before the announcement), India ($\pm 2.17\%$ on the day before the announcement), Italy ($\pm 0.16\%$ on the day after the announcement), Poland ($\pm 5.48\%$ on the (± 10) window), Singapore ($\pm 4.87\%$ on the (0; 5) window), and the United Kingdom ($\pm 3.41\%$ on the (± 5 ; 0) window). The opposite is true for companies from France ($\pm 2.91\%$ on the day of the announcement), Australia ($\pm 6.34\%$ on the day of the announcement), Hong Kong ($\pm 2.19\%$ on the day of the announcement), and Poland ($\pm 1.77\%$ on the day of the announcement), where the appointment of women is valued.

Finally, for the CEO position, we do not obtain significant results for the overall sample, unlike in the UK, where men appointed as CEOs are valued over women by 6.65% over the (-10; 10) window. Female nomination is valued by the market in Hong Kong (+1.58% on the day of the announcement), China (+2.77% on the (-1; 1) window), and Germany (+6.21% on the (-1; 1) window). The case of Singapore shows that men nominations are valued on the day of the announcement and on the (-1; 0), (-1; 1), and (0; 10) windows for values ranging from 1.97% to 12.41%, while women appointments are valued on the (-5; 5) window (+9.29%).

All the above results are significant with at least one of the two tests and at least at a 10% confidence level.

Hence, we show that depending on the country and the function of the nominee, markets react in different ways. This shows that depending on the origin of the companies and the function of the appointee, the markets do not value gender in the same way.

Let us now analyze the influence of culture on these different reactions. To do so, we conducted a multivariate regression to highlight which cultural factor(s) may be at the origin of these overreactions.

Results of the multivariate analysis By Country and Gender

First, we apply our regression to the abnormal returns over the (0; 10) event window. In order to proceed, we had to delete all the announcements where we could not get all the control data. Indeed, for some companies, the data was missing in Datastream. This left us with a sample of 4,414 announcements, of which 943 were for female appointments. Table 11 shows the descriptive statistics of these remaining data.

Insert table 11 Insert table 12

The multivariate analysis (Table 12) shows that the cultural variable "individualism" has a negative influence on the CAR (0; 10) when a woman is appointed to the management of a company. In other words, the higher a country's score on the cultural variable "individualism", the more the markets will react negatively to the announcement of a female appointment on the (0; 10) window (at the 1% risk level). On the other hand, this cultural variable has no impact on the CAR when a man is appointed. This seems to be at odds with previous literature since according to Bullough and al. (2012), practices related to individualism are positively associated with the presence of women in political leadership. Furthermore, associating the legitimacy theory, women are perceived as more legitimate by the market in individualistic societies. Another argument is made by Carrasco and al. (2015), who indicate that a high value in this dimension may reflect a commitment to individual human rights and thus include gender equality through personal merit. They also indicate that "individualism" manifests itself as a desire to pursue one's preferences regardless of stereotypes, conventions, etc. Therefore, our

hypothesis 3a is rejected. When we include all cultural variables (model 8), we find the same results.

Regarding masculinity (model 4), we can see that Masculinity plays a role in market reactions when a man is appointed. Indeed, the higher a country's Masculinity score, the more likely the markets will react positively when a man is appointed to the top of a company (at the 10% risk level). On the other hand, this variable does not seem to influence the market reaction when a woman is appointed. This seems to be consistent with our hypotheses, since according to Hofstede (2000), in a "masculine" society, men are expected to be assertive, focusing on material success, while women are expected to be modest, close to their emotions, preoccupied with the quality of life, personal relationships, and solidarity. Moreover, gender roles are more clearly differentiated in male societies than in female societies (Hofstede, 1980). This argument refers to what Sealy and al. (2009a) call gender stereotypes. These stereotypes lead to consistent gender biases in the assessment of competence and merit in favor of men. Hypothesis 4b is therefore confirmed.

The last cultural variable to show significance is "Indulgence". Indeed, this variable has a negative effect on the CAR (0; 10). In other words, the higher a country's score on the "Indulgence" variable, the more stock markets will tend to react negatively when a woman is appointed to the management of a listed company (at the 1% risk level). On the other hand, this variable does not show any impact on the market reaction when a man is appointed.

This result seems consistent in the sense that board diversity is an effective control mechanism (Adams and Ferreira, 2009) and relates to the definition of "restraint" which indicates stronger regulation and in particular restrained human desires and pleasures, in contrast to indulgence, which values the satisfaction of individuals' needs and desires. A country with a low score in "indulgence" will therefore have greater moral discipline. A more lenient society will therefore tend to penalize a company that appoints a woman to its decision-making body. Our hypothesis 6b is thus confirmed.

For the other models, where we included the cultural variables "Power distance", "Uncertainty Avoidance" and "Long Term Orientation" one by one, we find no significance, which implies that these variables do not seem to have an impact on stock market reactions when a man or a woman is appointed. Similarly, in model 8, the inclusion of the six cultural variables does not seem to affect the CAR, due to a lack of significance. This confirms hypotheses 1b, 4b, and 6b.

Finally, for the institutional control variables, we find that the legal system plays a role in explaining cumulative abnormal returns on (0; 10) window. Indeed, the coefficient is negative, which means that the markets react negatively to male appointments in firms from common law countries (at the 5% threshold) for models 2, 4, and 7. In contrast, this coefficient is positive when a woman is appointed in model 3. These results support the findings of Cabeza-Garcia and al. (2019), since according to them, the presence of women on boards is higher in common law countries. The female gender, therefore, seems to be valued. Finally, the fact that a quota law is present is associated with a positive coefficient when a woman is appointed (model 5). This seems to be consistent in the sense that countries with a quota law want women to have a minimum representation in the management of companies and therefore women nominations are positively valued.

b. By Country / Gender / Function

In a second step, we conduct a multivariate analysis by adding the function variable to the different sub-samples.

We thus have 6 groups: Men appointed as Director, Chairman, and CEO, and women as Director, Chairman, and CEO.

We first look at the function "Director". Table 13 allows us to understand which variables can explain the cumulative abnormal returns over the window (0; 10) for those appointed as directors.

Insert table 13

Concerning our cultural variables, the variable "individualism" plays a role in explaining the CAR (0; 10). Indeed, we detect a negative coefficient for models 3 and 8 when a man is nominated. This implies that the higher a country's score on the individualism variable, the more the markets will tend to react negatively when a man is appointed as a director for companies originating from these countries at the 5% risk level. The same conclusion is reached when a woman is appointed (model 7) at the 10% risk level. This is consistent with the fact that the board of directors, consisting of several individuals, is the body that makes major decisions about the company (Krechovská and Procházková, 2014). Individualistic societies, therefore,

seem to penalize appointments to this position regardless of gender. The variable "Indulgence" seems to have the same impact on the CAR (0; 10) when a man is appointed. On the other hand, we do not detect any significance for the appointment of women. In other words, the higher a country's score on the "Indulgence" variable, the more markets tend to react negatively when a man is appointed as a director for companies from these countries at the 5% risk level. Again, we argue that such a result is consistent, since a board of directors is the decision-making and controlling body of a company, so indulgence, in the sense of satisfying desires and enjoying life, does not really have a place in such an assembly. We also find for model 8, a negative and significant coefficient for the variable "Power distance". This implies that the higher a country's score on this variable, the more companies from that country will see the markets react negatively when a man is appointed to the position of "Director". This is consistent, since in an organization with high power distance, the quality of decisions may be lower due to a lack of input from lower-level employees and poor communication and information sharing (Ghosh, 2011). Finally, we note a positive and significant coefficient for the variable "Uncertainty Avoidance" for the Male sample. In other words, companies from countries with a high score on this variable will see the markets react positively to the appointment of a man as Director. This result is consistent with the arguments that employees from high-scoring countries are less supportive of risk-taking by individual decision-makers (Hofstede, 1984). Also, in these same countries, decision-makers tend to make extensive use of quantitative data to reduce uncertainty (Schneider, 1989).

The other cultural variables", "Masculinity", and "Long Term Orientation" do not seem to affect the response of financial markets to such nominations.

Insert table 14

We now focus on the "Chairman" function. Table 14 shows the results of the analysis for this function. Concerning our variables of interest, we find that model 7 displays a significant negative coefficient for women. In other words, financial markets react negatively to companies from countries with a high score on the "Indulgence" variable. This seems consistent since the chairman has an important position on the board. We can therefore use the same explanation as for the previous item, indulgence does not really have a place in this decision-making body.

Finally, for the third and last function (Table 15), we observe that the variables "Masculinity", "Uncertainty Avoidance" and "Long Term Orientation" show positive coefficients when a man is appointed as CEO. In other words, financial markets react more positively in countries with a high score in the variables "Masculinity", "Uncertainty Avoidance" or "Long Term Orientation" when a woman or a man is appointed as CEO. Such an output seems to be consistent with the "Masculinity" because this position is the highest in the company and therefore requires the ability to lead. However, gender stereotypes indicate that men are supposed to be assertive and focus on material success. Also, they have values such as performance or success (Hofstede, 2000). In addition, Uncertainty Avoidance is consistent with the CEO function, since according to Hofstede and Bond (1986), countries with a high score in the latter have a large number of rules, laws, norms, etc. Therefore, in these societies, people tend to believe that uncertainty about the future is best managed if everyone follows the guidelines. A leader must therefore impose rules and control to reduce the level of uncertainty. Finally, the variable "Long Term Orientation" is also consistent with the CEO's role since the literature shows that companies with a short-term vision may abandon projects with a positive net present value to satisfy short-term objectives (Holmstrom, 1999). However, the CEO must ensure the company's sustainability and therefore favor a long-term vision.

VI/ Robustness

- 1. Results of the Event study
 - a. Differences between male and female samples by country.

To check the robustness of the results from the event study, we use a different model in the computation of abnormal returns, namely the Fama French 3 Factors model.

We show the differences in stock market reactions to male and female appointments across countries with the Fama French 3 Factors model. The results shown in bold are the results that are similar in the two estimates (see Table 7).

Insert table 16

Unfortunately, we were unable to obtain data for this model for 10 countries in our sample: Bangladesh, Vietnam, Bermuda, Israel, Jersey, Kenya, Luxembourg, Hong Kong, and Russia. Our sample now consists of only 35 countries.

For the overall sample, we find the same results. Indeed, on the day of the announcement and one day after the announcement, the markets overreact to the nomination of men (+0.21%) at the 10% risk level (parametric test). The observation is the same for the (0; 5) and (0; 10) windows, at 0.54 and 0.67% at the 5 and 10% confidence levels (parametric test). It should be noted that the values are similar for all these conclusions. Individually, we find Malaysia, Belgium, Pakistan, the United States, Switzerland, and Singapore where the markets react more positively to the appointment of men than women. We note the opposite results for Southern Europe, Canada, Sweden, and Mexico.

These results are robust to similar event windows. albeit some minor differences, such as when a woman is appointed in companies from Greece, Luxembourg, or India.

b. Differences between male and female samples by country and function

We now turn to the robustness analysis with country and function segmentation. As before, we have used the Fama and French 3 factors model for the estimation of abnormal returns. The results shown in bold are the ones similar in two estimates (see Table 8).

Insert table 17

First, we look at the Director function. Overall, the results are robust. Indeed, we find the same results for the overall sample on the day before the announcement where women appointments are valued at +0.0011% at the 1% risk level (non-parametric test). As for men, these nominations are valued on the day of the announcement, the day after the announcement and over the (-10; 10), (-1; 1), (0; 5), (0; 10) and (-5; 5) windows with values ranging from 0.24% to 1.47% at the 5 and 10% risk levels (parametric test). The conclusions are also the same when we do the country-by-country analysis. Indeed, the markets value the appointment of women in companies from Canada, Poland, and Australia on the day before the announcement. Men appointments are valued for companies in Australia, Germany, and the US.

Secondly, the role of "Chairman" also shows robust results. As in the previous estimations, men nominations are valued the day before the announcement at 0.80% for the overall sample at the 5% risk level (non-parametric test). The country-by-country analysis shows that a positive market overreaction is present when a man is appointed rather than a woman in the United States, India (on the day before the announcement), Poland (on the (-10; 10) window), Singapore, and the United Kingdom. The opposite conclusion is reached for companies in Australia, India (the day after the announcement), Poland (the day after the announcement), France, and China.

Finally, the analysis of the CEO function also shows robust results. The overall sample shows no significant results. In contrast, markets value men appointed as CEOs in UK companies for the (0; 10) window. Markets overreact toward women nominations in companies from China and Germany.

We have reported here only those results that are robust to the same event windows and significant at least at the 10% confidence level with at least one of the two tests.

2. Multivariate analysis

For the robustness check concerning the multivariate analysis, we use the event windows (-10; 10) and (-1; 1). This choice is necessary to check the stability of our results independently of the length of the chosen event window.

Insert table 18 Insert table 19

Table 19 summarises the results of the multivariate analysis on the (-10; 10) window and Table 20 concerns the (-1; 1) window. Let us first look at the (-10; 10) window. Our results are robust to the findings of models 3 and 4. Markets tend to react negatively when a woman is appointed for companies that originate from countries with a high score in the cultural variable "individualism". As for the "masculinity" variable, markets will tend to react positively when a man is appointed for companies from countries with a high score in the latter. We note, however, other significant results. Indeed, model 6 shows that the variable "Long term orientation" plays a role concerning men. The higher a country's score on this variable, the more likely the markets will react positively when a man is appointed to the top management. This

is consistent with the literature, as research has shown that some managers make short-term investments to meet or exceed short-term goals (e.g. Holmstrom, 1999), even though other long-term projects are more valuable. Managers with a short-term view, therefore, turn down attractive investment opportunities, reflecting a decline in the value of the company (Flammer and Bansal, 2016). In the same vein, Graham and al. (2005) show that if the company, by adopting projects with a positive net present value, could not achieve its quarterly profit targets, then 78% of the managers surveyed would be prepared to abandon them. The results are also robust to model 7 where the variable "Indulgence" has a negative coefficient when a woman is appointed. In contrast to the results in the (0; 10) window, model 8 displays significance for 2 cultural variables. The higher a country's score on the "individualism" variable, the more the markets tend to react negatively when a woman is appointed to the management of a company (at the 5% risk level). This rejects hypothesis 3a. The "Uncertainty avoidance" variable plays a role that runs counter to the previous one. That is to say, the higher a country's score on the uncertainty avoidance variable, the more positive the markets will react (at the 5% risk level) (models 5 and 8). We can justify this result using the same arguments as in section V/2.b) (p30). Indeed, to reduce uncertainty, decision-makers will rely heavily on quantitative data because "truth and reality" are determined by what is tangibly measurable (Schneider, 1989).

Let us move on to the short window (-1; 1). We notice once again that our results are robust to the cultural variable "masculinity" at the 5% threshold. Contrary to the two previous windows, our results are not significant for the variable "individualism". Like the window (-10; 10), the variable "Long-term Orientation" plays a positive role when a man is named for the CAR in this window, this is also the case when a woman is appointed (modèle 8).We use the same arguments as with the previous window as a justification. Finally, a new result appears in model 8, where "Uncertainty Avoidance" shows a positive coefficient when a man is named.

Insert table 20

We performed a final robustness test on this multivariate analysis. Since announcements in US companies represent a large part of our sample, we decided to remove them (table 20). Our results indicate, once again, that the variable "Individualism" impacts the CAR (0; 10) negatively when a woman (model 3) or a man (model 8) is named. The same is true for the variable "Indulgence".

We may therefore argue that the majority of our results are robust based on the various tests applied.

VII/ Conclusion.

Our study looks at the influence of culture on the reactions of stock markets when a woman is appointed to the top management of a listed company.

Our event study allowed us to highlight the fact that financial markets react differently depending on the country of origin of firms in which men and women are appointed. For example, markets react positively for UK companies when a woman is nominated while the opposite is observed for companies in Malaysia.

Also, we wanted to know whether the differences in reactions between the male and female samples could be significant across countries. It turns out that the country of origin of the companies matters. We can mention Luxembourg, where the markets will overreact positively to the appointment of women, while in the case of companies from Thailand, the markets overreact positively for men on the window.

Next, we created sub-samples by incorporating the "function" of the appointee. Again, it turns out that function plays a role in the reaction of stock markets. For example, men appointed in German companies as "Director" will see the markets reacting positively while the opposite is observed for Hong Kong companies that appoint men as CEOs.

Again, we wanted to know if the differences in market reactions were significant across countries and the position of the person appointed. Our study shows that this is indeed the case. For example, we find a positive significant difference for women appointed as Chairman, whereas for the position of Director, the opposite is true.

Our second part deals with the influence of national culture on these different reactions. We therefore conducted a multivariate analysis to show which cultural variables are likely to influence stock market reactions. It turns out that stock markets react more positively to male nominees when the company comes from a country with a high Masculinity score. We find that the opposite is true for companies appointing women when they are in countries with a high Individualism score. These results are robust on different event windows.

Finally, we conducted the same multivariate analysis incorporating the function of the appointee. Our results show that function plays a role in explaining the reactions. Indeed, when a man is appointed as a director, the markets react more negatively to companies from countries with a high score in the variables "Masculinity" and "Indulgence". These same variables influence market reactions when a woman is appointed as Chairman.

This study, therefore, makes a unique contribution to the literature by identifying national culture as a determinant in stock market reactions to the announcement of a woman's appointment to the top management of a listed company. The position of appointment also impacts these reactions across cultures.

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Year	# announcements	Percentage
2002	26	0,15%
2003	169	0,95%
2004	283	1,58%
2005	301	1,68%
2006	437	2,44%
2007	546	3,05%
2008	840	4,70%
2009	730	4,08%
2010	841	4,70%
2011	733	4,10%
2012	783	4,38%
2013	940	5,26%
2014	1214	6,79%
2015	1842	10,30%
2016	2586	14,46%
2017	2442	13,66%
2018	1530	8,56%
2019	1635	9,15%
Total	17878	100,00%

Table 1 : Distribution of the number of announcements per year.

Year	Women appointments	Men appointments	Total	% Women nominated	% Men nominated
2002	1	25	26	3,85%	96,15%
2003	12	157	169	7,10%	92,90%
2004	13	270	283	4,59%	95,41%
2005	22	279	301	7,31%	92,69%
2006	42	395	437	9,61%	90,39%
2007	31	515	546	5,68%	94,32%
2008	51	789	840	6,07%	93,93%
2009	61	669	730	8,36%	91,64%
2010	61	780	841	7,25%	92,75%
2011	66	667	733	9,00%	91,00%
2012	47	736	783	6,00%	94,00%
2013	84	856	940	8,94%	91,06%
2014	149	1065	1214	12,27%	87,73%
2015	302	1540	1842	16,40%	83,60%
2016	396	2190	2586	15,31%	84,69%
2017	378	2064	2442	15,48%	84,52%
2018	270	1260	1530	17,65%	82,35%
2019	362	1273	1635	22,14%	77,86%
Total	2348	15530	17878	13,13%	86,87%

Table 2: Distribution of announcements by year and by gender

	Director Men	Director Women	Chairman Men	Chairman Women	CEO Men	CEO Women	
United States of America	2608	877	501	49	1599	110	
Canada	2156	364	322	15	832	38	
United Kingdom	490	173	242	9	355	29	
Australia	645	118	270	7	446	29	
Hong Kong	233	59	147	11	154	12	
China	142	18	193	12	117	9	
India	150	29	127	2	364	8	
France	29	9	45	2	100	12	
Germany	69	8	58	2	120	8	
Singapore	52	6	30	5	46	4	
Italy	11	3	27	2	43	7	
Poland	9	2	51	6	67	4	Total
Total	6594	1666	2013	122	4243	270	14908

Table 3: Function by country and gender

Table 4: Distribution of appointment announcements by country and gender (after deleting countries where no women are appointed).

Country	Total men appointed	Total women appointed	Total	% Men	% Women	% whole sample
Australia	1374	154	1528	89,92%	10,08%	8,55%
Bangladesh	4	2	6	66,67%	33,33%	0,03%
Belgium	39	9	48	81,25%	18,75%	0.27%
Bermuda	27	10	37	72,97%	27,03%	0,21%
Brazil	27	2	29	93,10%	6,90%	0,16%
Canada	3333	418	3751	88,86%	11,14%	20,98%
China	473	39	512	92,38%	7,62%	2,86%
Denmark	51	6	57	89,47%	10,53%	0,32%
Egypt	28	2	30	93,33%	6,67%	0,17%
Finland	126	12	138	91,30%	8,70%	0,77%
France	177	24	201	88,06%	11,94%	1,12%
Germany	247	18	265	93,21%	6,79%	1,48%
Greece	27	2	29	93,10%	6,90%	0,16%
Hong Kong	542	82	624	86,86%	13,14%	3,49%
India	645	39	684	94,30%	5,70%	3.83%
Ireland; Republic of	136	19	155	87,74%	12,26%	0,87%
Israel	69	8	77	89,61%	10,39%	0.43%
Italy	83	13	96	86,46%	13,54%	0,54%
Japan	150	4	154	97,40%	2,60%	0.86%
Jersey	21	5	26	80,77%	19,23%	0,15%
Kenya	17	3	20	85,00%	15,00%	0.11%
Korea; Republic (S. Korea)	79	2	81	97,53%	2,47%	0,45%
Luxembourg	24	4	28	85,71%	14,29%	0,16%
Malaysia	294	17	311	94,53%	5,47%	1,74%
Mexico	18	3	21	85,71%	14,29%	0,12%
Netherlands	74	3	77	96,10%	3,90%	0,43%
New Zealand	109	20	129	84,50%	15,50%	0,72%
Nigeria	15	7	22	68,18%	31,82%	0,12%
Norway	109	7	116	93,97%	6,03%	0,65%
Pakistan	50	5	55	90,91%	9,09%	0,31%
Philippines	24	5	29	82,76%	17,24%	0,16%
Poland	128	12	140	91,43%	8,57%	0,78%
Qatar	24	3	27	88,89%	11,11%	0,15%
Russia	107	8	115	93,04%	6,96%	0,64%
Saudi Arabia	90	2	92	97,83%	2,17%	0,51%
Singapore	131	15	146	89,73%	10,27%	0,82%
South Africa	242	58	300	80,67%	19,33%	1,68%
Spain	54	5	59	91,53%	8,47%	0,33%
Sweden	210	22	232	90,52%	9,48%	1,30%
Switzerland	118	7	125	94,40%	5,60%	0,70%
Taiwan	77	8	85	90,59%	9,41%	0,48%
Thailand	92	9	101	91,09%	8,91%	0,56%
United Kingdom	1098	211	1309	83,88%	16,12%	7,32%
United States of America	4756	1042	5798	82,03%	17,97%	32,43%
Vietnam	11	2	13	84,62%	15,38%	0,07%
Total	15530	2348	17878	86,87%	13,13%	100,00%

Variable	Obs	Mean	Std. dev.	Min	Max
Board characteristics					
Boardsize	6.904	9,879	3,107	1,000	30,000
Lnboardsize	6.904	2,241	0,322	0,000	3,401
% Indepent Director	7.045	0,654	0,242	0,000	1,000
% Board Gender (women)	7.117	0,148	0,119	0,000	1,000
Women presence ?	17.878	0,900	0,300	0,000	1,000
CEOboard	6.841	0,882	0,322	0,000	1,000
CEOchairman duality	7.112	0,398	0,490	0,000	1,000
Dummy (Gender of the nominee)	17.878	0,131	0,338	0,000	1,000
Firm characteristics					
Age (year)	16.744	24,147	23,589	0,011	120,008
Ln (Year)	16.744	2,756	1,002	-4,514	4,788
Ln (Market Capitalization)	14.993	8,890	1,372	1,398	13,444
Ln (total asset)	17.232	8,754	1,497	2,083	14,314
Book to market ratio	14.568	-1,174	260,968	-30403,370	5872,039
Country characteristics					
Power distance	17.878	45,524	16,051	0,000	100,000
Individualism	17.878	74,552	22,897	0,000	91,000
Masculinity	17.878	56,962	11,763	0,000	95,000
Uncertainty Avoidance	17.878	47,253	13,425	0,000	100,000
Long Term Orientation	17.878	38,721	18,133	0,000	100,000
Indulgence	17.878	59,614	17,748	0,000	97,000
GDP per capita growth	17.878	1,608	2,130	-8,513	23,999
Ln (GDP per capita)	17.767	4,554	0,382	2,738	5,092
Unemployement rate	17.878	5,910	3,551	0,000	32,310
Population growth	17.878	0,933	0,501	-1,854	9,232
Rule of law	17.878	1,425	0,648	-1,181	2,130
Control of corruption	17.878	1,380	0,740	-1,275	2,470
Legal system	17.878	1,846	0,381	0,000	3,000
Quotas law ?	17.872	0,233	0,425	0,000	1,000
Education (%)	5.006	0,487	0,013	0,430	0,534
Market characteristics					
Ln (Volume Market)	4.414	20.35378	1,896	7,742	26,982

Table 5: Descriptive statistics of the different variables

Table 6: Correlation matrix between the different variables (significant at the 5% threshold)

1	Board	Ln(board	%Independen	nt %Board	Women	CEO	CEOchairman
	size	size)	director	gender	presence ?	board ?	duality ?
Boardsize	1.0000						
Ln(boardsize)	0.9734*	1.0000					
%Independent Director	-0.0877*	-0.0376	* 1.0000				
% Board Gender (women)	0.1277*	0.1453	* 0.2104*	1.0000			
Women presence ?	0.2364*	0.2735	* 0.2154*	0.6831*	1.0000		
CEO board ?	0.0336*	0.0783	* 0.1156*	-0.0737*	0.0470*	1.0000	
CEO chairman duality ?	0.1355*	0.1547	* 0.1659*	0.0004	0.0422*	0.2064*	1.0000
Dummy (gender of the nominee)	-0.0634*	-0.0517	* 0.1257*	0.0188	0.0062	0.0783*	0.0687*
Age (year)	0.2249*	0.2344	* 0.0434*	0.1469*	0.1075*	0.0380*	0.0733*
Ln (Age)	0.2273*	0.2403	* 0.0429*	0.1305*	0.1162*	0.0437*	0.0946*
Ln (Market Capitalization)	0.5076*	0.5173	* -0.0660*	0.0908*	0.0976*	-0.0151	0.1376*
Ln (total asset)	0.5709*	0.5756	* -0.1006*	0.0815*	0.1004*	-0.0112	0.1076*
Book to market ratio	-0.0250	-0.0273	-0.0423*	-0.0502*	-0.0314*	0.0171	-0.0283*
Power distance	0.1834*	0.1770	* -0.3639*	-0.1738*	-0.1410*	0.0485*	0.0327*
Individualism	-0.1696*	-0.1477	* 0.4632*	0.1477*	0.1596*	0.1420*	0.1169*
Masculinity	0.0398*	0.0425	* -0.0197	-0.0978*	-0.0103	0.3561*	0.1053*
Uncertainty Avoidance	0.1497*	0.1063	* -0.1020*	0.0411*	-0.0152	-0.1630*	0.0797*
Long Term Oriantation	0.1956*	0.1663	* -0.4768*	-0.0786*	-0.1041*	-0.2034*	-0.1351*
Indulgence	-0.2131*	-0.1849	* 0.4383*	0.1742*	0.1714*	0.1214*	0.0257
GDP per capita growth	0.0325*	0.0355	* -0.0923*	-0.0956*	-0.0617*	0.0313*	0.0202
Ln (GDP per capita)	-0.1867*	-0.1759	* 0.3313*	0.1047*	0.0868*	-0.0198	0.0890*
Unemployement rate	0.1459*	0.1512	* -0.0555*	0.1099*	0.1000*	0.0553*	-0.0588*
Population growth	-0.1055*	-0.1140	* -0.0461*	-0.0091	-0.0433*	-0.0280*	-0.2156*
Rule of law	-0.1859*	-0.1780	* 0.3268*	0.1196*	0.1107*	-0.0663*	0.0015
Control of corruption	-0.1975*	-0.2010	* 0.2225*	0.1209*	0.0814*	-0.1361*	-0.1115*
Degal system	-0.1687*	-0.1226	* 0.3602*	0.0097	0.0989*	0.4547*	0.0578*
Education (%)	0.1215*	0.1027	* -0.0200	0.0437*	0.0001	-0.1230*	-0.0343*
Education (%)	0.1229*	0.1682	* 0.1156*	0.1337*	0.1483*	0.0358*	0.0719*
Lif (Volume Market)	-0.0370*	-0.0018	0.2109*	0.0263	0.0881*	0.2884*	0.2017*

	Dummy Age Ln(Market (gender) (Year) Ln (Age) Capitalization Ln (total Book to Power) asset) market ratio distance
Dummy (gender of the nominee) Age (year)	1.0000
Ln (Age)	
Ln (Market Capitalization)	
Ln (total asset)	-0.0439* 0.2323* 0.2441* 1.0000
Book to market ratio	-0.0778* 0.2388* 0.2440* 0.0038* 1.0000
Power distance	
Individualism	0.1276* 0.0524* 0.0054 -0.3705* -0.3885* -0.0275 -0.7118*
Masculinity	0.0367* 0.0616* 0.0329* -0.0264 -0.0180 -0.0130 -0.0389*
Uncertainty Avoidance	-0.0348* -0.0130 0.0051 0.0352* 0.0734* 0.0273 0.1038*
Long Term Oriantation	-0.1247* 0.0155 0.0060 0.2363* 0.2860* 0.0070 0.4390*
Indulgence	0.1105* 0.0402* 0.0014 -0.4034* -0.4150* -0.0094 -0.6614*
GDP per capita growth	-0.0254 -0.0571* -0.0457* 0.2170* 0.1735* -0.0449* 0.3204*
Ln (GDP per capita)	0.1035* -0.0963* -0.1261* -0.4451* -0.4410* -0.0104 -0.6801*
Demployement rate	-0.0258 0.1189* 0.1251* 0.0170 0.0414* 0.0361* -0.0402*
Population growin Rule of law	-0.0454* -0.0307* -0.0174 -0.0380* -0.0297* 0.0632* 0.1011*
Control of corruption	0.0/58* -0.0414* -0.0//9* -0.430/* -0.4212* -0.0120 -0./100*
Legal system	0.0507* -0.0476* -0.0910* -0.4364* -0.4156* 0.0067 -0.0964*
Quotas law?	0.0043 -0.0677* -0.0702* 0.0483* 0.0709* 0.0209 0.1289*
Education (%)	0.0492* 0.1123* 0.0918* 0.0269 0.0112 -0.0717* -0.1362*
Ln (Volume Market)	0.0665* 0.0435* 0.0185 -0.0853* -0.0807* -0.0120 -0.2400*
	Individualis Masculini Uncertainty Long Term Indulger GDP per In (GDP per
	m ty Avoidance Orientation ce capita growth capita)
Individualism	1.0000
Masculinity	0.3097* 1.0000
Uncertainty Avoidance	0.0951* 0.0230 1.0000
Long Term Oriantation	
GDP per capita growth	0.0350* 0.2001* -0.0202 -0.3224* 1.0000
Ln (GDP per capita)	0.5674* 0.0232 0.0233 -0.3384* 0.5356* -0.3116* 1.0000
Unemployement rate	-0.0072 0.0231 0.1855* -0.0674* 0.1470* -0.2763* -0.2559*
Population growth	-0.0782* -0.0241 -0.0312* -0.1936* 0.0601* -0.1131* -0.1960*
Rule of law	0.6118* 0.0085 -0.0847* -0.2722* 0.5910* -0.2944* 0.8600*
Control of corruption	0.4844* -0.0633* -0.1054* -0.1363* 0.5236* -0.2853* 0.7993*
Legal system	0.5035* 0.4395* -0.4289* -0.5792* 0.4565* -0.0435* 0.0930*
Quotas law?	-0.1473* -0.3091* 0.2392* 0.2232* -0.2062* 0.0404* -0.2117*
I n (Volume Market)	0.0150 -0.1192* -0.1081* -0.0128 0.1612* -0.1306* -0.0050
En (Volume Market)	0.3248* 0.27/5* -0.1478* -0.2731* 0.2698* -0.1165* 0.4215*
	Unemploye Population ment rate growth Rule of law corruption system Quotas law Ln (Volume Market)
Unemployement rate	1.0000
Population growth	0.1988* 1.0000
Rule of law	-0.2853* -0.0657* 1.0000
Control of corruption	-0.2381* 0.0293* 0.9510* 1.0000
Legal system	0.0168 0.2166* 0.2446* 0.1284* 1.0000
Quotas law?	-0.0248 0.0935* -0.0384* 0.0090 -0.1514* 1.0000
Education (%)	0.3843* -0.2612* -0.0618* -0.0817* 0.0169 -0.0498* 1.0000
Li (volume Market)	-0.0860* -0.2649* 0.2436* 0.1384* 0.2532* -0.3624* 0.0283
	Ln (Volume Market)
Ln (Volume Market)	1.0000

Table 7: Summary of samples showing positive or negative significant returns with parametric and non-parametric tests.

	Al	R -1			A	R 0	
+	Value	-	Value	+	Value	-	Value
Bermuda H	1,44%	Pakistan F	-1,02%	Australia H	0,44%	Germany H	-0,04%
Canada F	1,09%	Sweden F	-1,20%	Croatia H	0,59%		
Halaysia H	0,47%			South Africa F	0,32%		
				UK F	0,53%		
	Al	R 1			CARR	-10;10	
+	Value	-	Value	+	Value	-	Value
Australia F	0,17%			France F	3,75%	Bermuda F	-3,61%
Switzerland H	0,25%			Nigeria F	10,57%	Brazil H	-6,80%
						Malaysia F	-5,21%
						Saudi Arabia H	-1,75%
						Sweden H	-2,05%
	CAAI	R-1;0			CAA	R -1 ; 1	
+	Value	-	Value	+	Value	-	Value
CanadaF	1,43%	Korea H	-0,14%	Germany H	0,47%	Malaysia F	-2,90%
Malaysia H	0,61%			UK F	0,73%	Korea H	-0,81%
UK F	0,61%			Switzerland H	0,56%		
Australia H	0,53%						
Luxembourg F	3,20%						
	CAA	R0;5			CAAI	R 0;10	
+	Value	-	Value	+	Value	-	Value
Australia H	0,74%	China H	-0,97%	Germany H	0,93%	India H	-1,24%
Germany H	1,14%	Thailand F	-7,55%	India F	1,46%	Saudi Arabia H	-1,24%
Singapore H	0,51%					Thailand F	-8,52%
						Sweden H	-1,21%
	CAAI	R-5;0			CAA	R-5;5	
+	Value	-	Value	+	Value	-	Value
Australia H	`1,30%	Bermuda F	-2,79%	Australia H	1,61%	Bermuda F	-3,65%
Canada F	1,39%	Brazil H	-2,51%	Bermuda H	5,81%	Malaysia F	-5,29%
Malaysia F	0,86%	Luxembourg F	-1,49%	Israel F	4,76%	Thailand F	-9,84%
		Russia H	-0,45%	Singapore H	1,13%		

Table 8: Summary of countries showing significant differences between men (H) and women (F) with a parametric and/or non-parametric test (Market Model)^{6,7}.

	AR-1 ((2 tests)		AR-1 (parametric)				AR-1 (non parametric)			
Н	Differences	F	Differences	Н	Differences	F	Differences	Н	Differences	F	Differences
Belgium	1,56%	Luxembourg	2,91%	Japan	1,73%	Greece	2,49%	Malaysia	1,51%	Full Sample	0,15%
								Pakistan	1,05%	Australia	0,24%
										Canada	1,01%

	AR0 (2 tests)		AR0 (parametric)				AR0 (non parametric)				
Н	Differences	F	Differences	Н	Differences	F	Differences	Н	Differences	F	Differences	
				Full Sample	0,20%			Singapore	1,04%			

	AR1 (2 tests)		AR1 (parametric)				AR1 (non parametric)			
Н	Differences	F	Differences	Н	Differences	F	Differences	Н	Differences	F	Differences
Full Sample	0,18%							Russia	3,19%	Australia	0,19%

	CAAR -10	;10 (2 tests)		CAAR -10 ;10 (parametric)				CAAR -10 ;10 (non parametric)				
Н	Differences	F	Differences	Н	Differences	F	Differences	Н	Differences	F	Differences	
Malaysia	5,53%	Nigeria	8,89%	Australia	2,86%	Greece	22,62%	USA	1,13%	Canada	1,18%	
Thailand	9,89%	Sweden	6,49%	UK	2,48%					Luxembourg	12,23%	

	CAAR -1	; 0 (2 tests)		CAAR -1 ; 0 (parametric)				CAAR -1 ; 0 (non parametric)			
Н	Differences	F	Differences	н	Differences	F	Differences	Н	Differences	F	Differences
Malaysia	2,45%							Philippines	3,81%	Luxembourg	2,57%
Singapore	2,12%									Spain	1,32%

	CAAR -1	; 1 (2 tests)		CAAR -1 ; 1 (parametric)				CAAR -1 ; 1 (non parametric)				
Н	Differences	F	Differences	Н	Differences	F	Differences	Н	Differences	F	Differences	
Malaysia	3,14%											
Singapore	3,38%											

CAAR 0 ; 5 (2 tests)				CAAR 0 ; 5 (parametric)				CAAR 0 ; 5 (non parametric)			
Н	Differences	F	Differences	Н	Differences	F	Differences	Н	Differences	F	Differences
Bangladesh	7,52%			Full Sample	0,52%			Bermuda	3,59%	France	2,00%
Philippines	3,78%			Singapore	3,74%			China	1,28%		
Thailand	8,57%										

	CAAR 0;	10 (2 tests)		CAAR 0; 10 (parametric)				CAAR 0 ; 10 (non parametric)			
Н	Differences	F	Differences	Н	Differences	F	Differences	Н	Differences	F	Differences
Bangladesh	10,77%	Mexico	4,50%	Full Sample	0,61%	South Africa	2,28%	Bermuda	3,11%	India	2,70%
Thailand	9,52%			Russia	10,09%			USA	0,80%		
				UK	1,75%						

	CAAR -5	; 0 (2 tests)		CAAR -5 ; 0 (parametric)				CAAR -5 ; 0 (non parametric)				
Н	Differences	F	Differences	Н	Differences	F	Differences	Н	Differences	F	Differences	
Bermuda	4,70%	Luxembourg	11,07%	Australia	1,53%			Switzerland	3,45%	Sweden	2,53%	
Malaysia	4,87%			Thailand	3,16%							

	CAAR -5 ; 5 (2 tests)				CAAR -5 ; 5	(parametric)		CAAR -5 ; 5 (non parametric)			
Н	Differences	F	Differences	Н	Differences	F	Differences	Н	Differences	F	Differences
Bermuda	9,46%							China	1,55%	Canada	0,35%
Malaysia	5,56%							Philippines	8,11%	Luxembourg	12,94%
Switzerland	6,37%							Russia	2,84%		
Thailand	10,37%										

⁶ H: Men and F: Women. When the country mentioned is in column H, it means that the market overreacts more positively to male appointments. If the country mentioned is in column F, it means that the market overreacts more positively to female appointments.

⁷ Bolded countries mean that the results are robust (see Table 20).

	A	R -1			AR	0	
+	Value	-	Value	+	Value	-	Value
Australia1 F	0,57%			Canada1 H	0,69%		
Germany1 H	0,71%			UK1 F	0,53%		
Canada1 F	0,48%			Australia1 H	0,31%		
				Hong Kong1 H	0,59%		
	A	AR 1			CARR -1	10;10	
+	Value	-	Value	+	Value	-	Value
Australia1 F	0,26%	India1 H				USA1 F	-1,71%
	CAA	AR -1;0			CAAR	-1;1	
+	Value	-	Value	+	Value	-	Value
Canada1 H	0,83%			Canada1 H	1,48%		
UK1 F	0,64%			UK1 F	0,82%		
Canada1 F	0,95%			Australia1 H	0,82%		
	CAA	AR 0;5			CAAR	0;10	
+	Value	-	Value	+	Value	-	Value
Germany1 H	1,58%	Hong Kong1 F	-2,82%	India1 F	0,97%		
Australia1 H	0,81%						
India1 F	0,64%						
	CAA	AR -5;0			CAAR	-5;5	
+	Value	-	Value	+	Value	-	Value
Canada1 H	0,98%			Canada1 H	1,24%		

Table 9.1: Significantly positive or negative samples by gender for the appointment to the position of 'Director'.

Table 9.2: Significantly positive or negative samples by gender for the appointment to the position of 'Chairman'.

	AR	-1			AR	0				
+	Value	-	Value	+	Value	-	Value			
China2 H	0,64%	Poland2 F	-22,39%							
		USA2 F	-0,59%							
	AR	1			CARR -1	10;10				
+	Value	-	Value	+	Value	-	Value			
India2 F	2,70%			Hong Kong2 F	8,42%					
Hong Kong2 F	3,01%									
Poland2 F	28,11%									
	CAAR	-1;0		CAAR -1 ; 1						
+	Value	-	Value	+	Value	-	Value			
		Singapore2 H	-3,13%	Hong Kong2 F	4,33%					
	CAAR	10;5			CAAR	0;10				
+	Value	-	Value	+	Value	-	Value			
Hong Kong2 H	2,13%					India2 H	-1,32%			
Germany2 H	1,54%									
	CAAR -5 ; 0				CAAR	-5;5				
+	Value	-	Value	+	Value	-	Value			
China2 H	2,20%									

	А	R -1			A	R 0	
+	Value	-	Value	+	Value	-	Value
		Hong Kong3 H	-0,64%	Australia3 F	2,02%		
	A	AR 1			CAR	R -10 ; 10	
+	Value	-	Value	+	Value	-	Value
Italy3 F	0,009						
	CAA	R -1 ; 0			CAA	R -1 ; 1	
+	Value	-	Value	+	Value	-	Value
		Hong Kong3 H	-1,21%	USA3 H	0,44%	Hong Kong3 H	-1,21%
	CAA	AR 0;5			CAA	R 0 ; 10	
+	Value	-	Value	+	Value	-	Value
USA3 H	0,56%						
Australia3 H	1,60%						
Australia3 F	2,60%						
	CAA	R-5;0			CAA	R-5;5	
+	Value	-	Value	+	Value	-	Value
Australia3 H	2,93%			Australia3 H	3,57%		
				USA3 H	0.94%		

Table 9.3: Significantly positive or negative samples by gender for CEO appointment

Table 10: Summary table of samples showing a positive and significant (parametric and/or non-parametric test) over-reaction of gender to the positions of "director", "president" and "CEO"⁸.

	AR-1 I	Director			AR-1 C	hairman	•		AR-1	CEO	
Н	Differences	F	Differences	Н	Differences	F	Differences	Н	Differences	F	Differences
China	2,05%	Full Sample	0,01%	Full Sample	0,71%						
		Australia	0,37%	USA	0,65%						
		Canada	0,34%	India	2,17%						

	AR0 E	Director			AR0 C	hairman			AR0	CEO	
Н	Differences	F	Differences	Н	Differences	F	Differences	Н	H Differences F D		
Full Sample	0,26%	UK	0,39%			France	2,91%	Singapore	1,97%	Hong Kong	1,58%
Australia	0.65%										

	AR1 I	Director			AR1 C	hairman			AR1	CEO	
Н	Differences	F	Differences	Н	Differences	F	Differences	Н	Differences	F	Differences
Full Sample	0,30%			Italy	1,60%	Full Sample	0,61%				
						Australia	6,34%				
						Hong Kong	2,19%				
						India	2,87%				
						Poland	1,77%				

	CAAR -10	; 10 Director			CAAR -10	10 Chairman			CAAR -1	10 CEO;	
Н	Differences	F	Differences	Н	Differences	F	Differences	Н	Differences	F	Differences
Full Sample	1,24%			Poland	5,48%	France	16,75%	UK	6,65%		
Australia	2,95%					Hong Kong	5,48%				

	CAAR -1 ; 0 Director				CAAR -1;	0 Chairman			CAAR -	1;0 CEO	
Н	Differences	F	Differences	Н	H Differences F Differences				Differences	F	Differences
						France	1,92%	Singapore	4,59%	Hong Kong	1,99%

CAAR -1 ; 1 Director					CAAR -1;	1 Chairman			CAAR -1	; 1 CEO	
Н	Differences	F	Differences	Н	Differences	F	Differences	Н	Differences	F	Differences
Full Sample	0,54%	Poland	3,80%			Australia	6,50%	Singapore	4,10%	China	2,77%
						France	3,22%			Germany	6,21%
						Hong Kong	2,95%				

	CAAR 0;	5 Director			CAAR 0;	5 Chairman			CAAR 0	; 5 CEO	
Н	Differences	F	Differences	Н	Differences	F	Differences	Н	Differences	F	Differences
Full Sample	0,66%	Poland	8,91%	Singapore	4,87%	China	7,47%				
Germany	3,85%					France	6,90%				
Hong Kong	3,05%										

	CAAR 0;	10 Director		CAAR 0 ; 10 Chairman				CAAR 0 ; 10 CEO				
Н	Differences	F	Differences	Н	Differences	F	Differences	Н	Differences	F	Differences	
Full Sample	0,85%	Poland	7,47%			China	10,39%	Singapore	12,41%			
USA	0,85%					France	14,06%	UK	4,17%			
						Hong Kong	3,44%					
						India	8,21%					

	CAAR -5	; 0 Director			CAAR -5;	0 Chairman			CAAR -	5; 0 CEO	-
Н	Differences	F	Differences	Н	Differences	F	Differences	Н	Differences	F	Differences
				UK	3,41%					China	6,11%
										Singapore	6,93%

	CAAR -5	5 Director			CAAR -5;	5 Chairman			CAAR -	5 ; 5 CEO	
Н	Differences	F	Differences	н	Differences	F	Differences	Н	Differences	F	Differences
Full Sample	0,83%	Canada	0,14%	Singapore	7,52%					China	5,84%
		Poland	10,77%	UK	6,66%					Singapore	9,29%

⁸ Bolded countries mean that the results are robust (see Table 21).

Table 11: Distribution of appointment announcements by country and gender (after removing companies with missing data)

	Total Men	Total				N
Country	appointe	women	Total	% Men	% Women	% whole
	d	appointed				sample
United States of America	1475	519	1994	42.49%	55.04%	45.17%
United Kingdom	362	103	465	10.43%	10.92%	10.53%
Australia	287	67	354	8.27%	7.10%	8.02%
Japan	31	1	32	0.89%	0.11%	0.72%
Spain	14	2	16	0,40%	0,21%	0,36%
Germany	68	6	74	1,96%	0,64%	1,68%
South Africa	140	37	177	4,03%	3,92%	4,01%
Greece	3	0	3	0,09%	0,00%	0,07%
France	68	9	77	1,96%	0,95%	1,74%
Hong Kong	84	13	97	2,42%	1,38%	2,20%
China	98	4	102	2,82%	0,42%	2,31%
Canada	270	104	374	7,78%	11,03%	8,47%
Netherlands	24	1	25	0,69%	0,11%	0,57%
Finland	41	5	46	1,18%	0,53%	1,04%
Switzerland	58	5	63	1,67%	0,53%	1,43%
Ireland; Republic of	52	10	62	1,50%	1,06%	1,40%
New Zealand	37	13	50	1,07%	1,38%	1,13%
Luxembourg	15	3	18	0,43%	0,32%	0,41%
Sweden	35	4	39	1,01%	0,42%	0,88%
India	149	14	163	4,29%	1,48%	3,69%
Singapore	35	2	37	1,01%	0,21%	0,84%
Saudi Arabia	24	0	24	0,69%	0,00%	0,54%
Norway	22	1	23	0,63%	0,11%	0,52%
Denmark	13	4	17	0,37%	0,42%	0,39%
Thailand	15	1	16	0,43%	0,11%	0,36%
Bermuda	12	8	20	0,35%	0,85%	0,45%
Egypt	1	0	1	0,03%	0,00%	0,02%
Belgium	9	1	10	0,26%	0,11%	0,23%
Poland	2	0	2	0,06%	0,00%	0,05%
Italy	4	0	4	0,12%	0,00%	0,09%
Philippines	5	1	6	0,14%	0,11%	0,14%
Israel	4	2	6	0,12%	0,21%	0,14%
Nigeria	0	1	1	0,00%	0,11%	0,02%
Mexico	4	1	5	0,12%	0,11%	0,11%
Qatar	10	0	10	0,29%	0,00%	0,23%
Malaysia	0	1	1	0,00%	0,11%	0,02%
Total	3471	943	4414	100.00%	100.00%	100.00%

N					DOTAT	C 12	DOINT	CI +	MIO	c let	MOC	lel b	Mod	lel 7	Moc	lel 8
;	Aan	Woman	Man	Woman	Man	Woman	Man	Woman	Man	Woman	Man	Woman	Man	Woman	Man	Woman
			6.69e-06	.00058											00026	.00013
					00010	00074***									00050**	00053
							.00028*	00038							.00020	00032
ce									.00019	00036					.00032	.00034
u											.00010	.00020			20000.	.00021
													-2.46e-	00083***	.00031	00027
0	0002	.00010	00002	.00011	00001	.00013	00003	60000.	00002	60000.	00002	.00010	00002	.00012	00002	.00014
0	0089	00574	00198	00436	00214	00467	00157	00425	00206	00403	00188	00412	00196	00474	00180	00501
0.	0005	00791	.00044	00785*	.00056	00723	60000.	00688	.00004	00693	.00051	00778*	.00044	00805*	00016	00780*
0	0157	.06266*	00760	05099	00877	.04723	00492	.04557	00374	.04564	00858	.05127	00754	.05585	00145	.05167
ctor .0(0144	.00046	.00261	00182	.00401	.00008	.00574	00836	.00286	00546	.00439	00283	.00255	.00159	.00609	.00341
r.	0810	.01101	.01114	.03005	.01266	.03164	.01239	.02858	.01044	.03000	.01174	.02901	.01110	.02798	.01457	.03030
oard .0(0264	00726	.00328	01412	.00327	01484*	.00319	01451*	.00341	01440*	.00317	01409	.00328	01554*	.00324	01516*
<u>ю</u> .	0257	00606	.00587	00640	.00557	00454	.00512	00041	.00555	00217	.00539	00478	.00590	00386	.00330	00581
lity ? .006	37***	.00952*	***60900"	.00877	***60900.	.01128**	*00597*	*01019*	**86500.	.01040*	.00607***	*89600.	.00610***	.01123	.00603***	.01078*
zation)013	387***	00388	01668***	00383	01685***	00720	01652***	00552	01651***	00546	01664***	00424	01668***	00727	01698***	00670
.011	71***	.00859	.01290***	.01169	.01267***	.01338*	.01265***	.01299*	.01273***	.01262*	.01276***	.01214*	.01291***	.01364*	.01228***	.01320*
tio0	0029	.00615	7.47e-06	*87900.	00001	.00616	.00004	.00663*	.0000	.00655*	.0000	.00685*	2.54e-0	.00641*	00001	.00636*
wth0	0052	.00081	-00099	.00117	00104	77000.	00102	.00135	00081	66000.	00103	.00106	-00099	.00052	00111	.00080
ita) .0(0310	00774	.00362	.02772	.00453	.00245	.00063	.00479	.00198	.00933	.00720	.02243	.00358	.00553	.00321	.01591
ate0	0040	.00086	00022	.00118	00016	.00181*	00026	.00125	00040	.00142	00019	.00116	00022	.00177*	00067	.00166*
-00.	0231	.00867	.00607	.00376	.00600	.00183	.00731*	.00383	.00555	.00674	*00719*	.00441	00609.	.00829	.00630	.00210
			.00856	01420	.01241	.03596	.01116	.00706	.00309	.01398	.01014	00381	.00856	.01801	.01483	.01587
tion			01072	.00774	01342	02087	01111	00750	00585	01537	01380	00665	01078	00785	01820	00854
			00937	.01263	00759	.02405	01413**	.01474	00587	.00167	00706	.01331	00941	.01793	00096	.04038
			00337	.01410	00329	.00842	00164	.01022	00516	*01610*	00333	.01497	00335	.00706	00245	.00312
tet			.00045	00242	.00046	00243	.00038	00242	.00059	00261	.00039	00264	.00045	00257	.00056	00239
			12426	.15700	13417	05338	07682	01159	08668	03534	12629	.00113	12506	.07313	11985	.01317
0'(0144	0,0479	0,0198	0,0620	0,0201	0,0694	0,0209	0,0613	0,0203	0,0611	0,02	0,0605	0,0198	0,0681	0,0228	0,0704
0,5	5754	0,3588	0,2329	0,4310	0,1573	0,4714	0,3196	0,4301	0,3464	0,4376	0,2120	0,4791	0,2357	0,5275	0,2938	0,5124
0,(0147	0,0502	0,0198	0,0646	0,0201	0,0724	0,0208	0,0637	0,0203	0,0635	0,02	0,0631	0,0198	0,0710	0,0227	0,0735
58	8,56	53,68	69,31	63,28	70,26	71,41	73,02	62,43	71,01	62,19	70,04	61,75	69,31	70	79,44	72,21
0,(0040	0,0129	0,0027	0,0109	0,0022	0,0016	0,0011	0,0132	0,0018	0,0138	0,0023	0,0152	0,0027	0,0023	0,0227	0,0062

Table 12: Summary of the 8 models of the multivariate analysis for the (0; 10) window

Variables : CAR (0; 10)	Mot	lel 1	Mo	del 2	Mod	el 3	Mod	el 4	Moc	lel 5	Moi	del 6	Mod	lel 7		Mo
director	Man	Woman	Man	Woman	Man	Woman	Man	Woman	Man	Woman	Man	Woman	Man		Woman	Woman Man
Power distance			.00010	.00049												00087**
Individualism					00036**	00052*										00080**
Masculinity							00022	00024								00022
Uncertainty Avoidance									00008	00051						.00100**
Long Term Orientation											.00005	00008				.00038
Indulgence													00051**	0004	2	00015
Age (year)	4.65e-06	.00017	00002	.00015	4.53e-06	.00016	00001	.00014	00002	.00014	00002	.00014	-4.39e-06	.000	~	5 .00001
Ln (year)	00077	00641	00186	00545	00246	00567	00196	00533	00169	00523	00170	00527	00224	0055	2	500255
Board size	00120	00650	00245	00351	00183	00348	00234	00345	00250	00312	00258	00349	00234	0037	F	
In (board size)	.01712	.05606	.02979	.01716	.02451	.01805	.02898	.01804	.03025	.01522	.03103	.01813	.02783	.0216	2	2 .03407
% independent director	00331	00312	00587	.00359	00228	.00627	00782	00111	00621	.00220	00571	00162	00088	.0039	5	5 .00139
% Board Gender	.02082	.02333	.02753	.04120	.03149	.04437	.02644	.04294	.02681	.04339	.02652	.04244	.03060	.0435	~	7 .02449
Women presence board	00951	00892	01348*	01590*	01330*	01650*	01321*	01597*	01337*	01591*	01343*	01568*	01299*	01668	*	*01244*
CEO board ?	00113	01367	01189	00772	01314	00702	01115	00579	01187	00758	01186	00595	01148	00634		01030
CEO chairman duality ?	.00833**	.01085**	.00754*	.01162*	.00788*	.01266**	.00764*	.01233	.00766*	.01292**	.00765*	.01216**	.00772*	.01253*	*	* .00835**
og (Market Capitalization)	-0,0188***	01141	01932***	00940	02007***	01127	01933***	01001	01926***	00989	01928***	00975	01992***	01097		02064***
Log (total asset)	.01318**	.01338	.01285**	.01457	.01228**	.01544*	.01296**	.01509*	.01292**	.01465	.01294**	.01492	.01230**	.01528*		.01258*
Book to market ratio	.00229	.00247	.00228	.00718	.00167	.00671	.00227	.00720	.00230	.00715	.00230	.00728	.00173	.00706		.00128
GDP percapita growth	00013	00182	60000.	00238	00017	00264	.00014	00229	.00006	00249	60000.	00230	00001	00266		00010
Log (GDP per capita)	.00103	01860	.00477	02296	.00612	03369	.00359	03699	.00399	03137	.00551	03802	.00861	03015		.01167
Unemployement rate	00013	.00072	.00024	.00108	.00035	.00131	.00022	.00104	.00026	.00129	.00021	66000'	.00061	.00118		00044
Population growth	.00283	.00639	.00732	00076	.00693	00326	.00711	00107	.00773	.00271	.00796	00192	.00827	.00132		.00822
Rule of Law			.01109	.02288	.02199	.04664*	.01097	.03487	.01313	.04197	.01150	.03295	.01413	.03367		.01362
Control of corruption			01218	00368	02021	01946	01311	01437	01457	02289	01406	01214	01292	01257		02358
System Law			.00359	.00450	.01112	.01794	.00520	.00467	.00132	00520	.00416	00049	.01086	.01053		.04716**
Quotas law			00239	.00566	00278	.00328	00378	.00406	00163	.00914	00219	6900.	00306	.00454		01004
Ln volume market			.00077	00264	.00094	00258	06000.	00265	.00072	00284	.00074	00268	.00084	00273		.00163
Education			15663	.27655	19728	.11072	18667	.15746	18468	.08090	17319	.17846	15114	.19478		19535
R within	0,0187	0,0283	0,0261	0,0447	0,0296	0,0475	0,0262	0,044	0,0261	0,0451	0,0260	0,0438	0,0291	0,0455		0,0338
R between	0,3218	0,4833	0,0225	0,4855	0,0208	0,4760	0,0258	0,4772	0,0290	0,5006	0,0371	0,4710	0,0069	0,4736		0,0034
Overall	0,0184	0,0323	0,0257	0,0488	0,0290	0,0517	0,0259	0,0480	0,0256	0,0491	0,0256	0,0478	0,0285	0,0495		0,033
Wald chi2	34,19	28,78	42,49	40	48,12	42,51	42,85	39,33	42,43	40,24	42,40	39,13	47,34	40,65		54,77
Prob F	0.0051	0.0255	0.0080	0.0154	0.0016	0.0079	0.0072	0.0182	0.0081	0.0144	0.0082	0.0192	0.0020	0.0130		0.0018

Table 13: Summary of the 8 models of the multivariate analysis for the (0; 10) window for the Director function

Variables : CAR (0 ; 10)	Mo	del 1	Mot	lel 2	Mod	lel 3	Mod	lel 4	Moc	lel 5	Mot	iel 6	Moc	del 7	Moc	el 8
Chairman	Man	Woman	Man	Woman	Man	Woman	Man	Woman	Man	Woman	Man	Woman	Man	Woman	Man	Woman
Power distance			00020	.00246											.00025	01364
Individualism					.00018	00259									00027	.00767
Masculinity							.00010	-00091							00070	01017
Uncertainty Avoidance									00019	00377					00067	.00416
Long Term Orientation											00020	.00128			00066	.01284
Indulgence													.00049	00457**	.00073	01671
Age (year)	00019	00113	00008	00278*	00008	00190	00007	00260*	-00006	00232	00007	00294*	00010	00150	00011	00135
Ln (year)	.00290	.03146	.00123	*26795*	.00105	.08323*	.00085	*16060.	76000.	.08924*	.00080	.10029**	.00150	.07590*	.00236	.07923
Board size	.00605	05369	*79600.	01025	.00976*	.04902	*26600.	01209	.01049**	.02993	.00944*	03496	*0700.	.03828	.00992*	06400
In (board size)	06499	.52199	11215*	.02012	11437**	57126	11602**	.05328	12026**	36964	11017*	.27940	11246*	46193	11309*	.61166
% independent director	.02942*	03049	.02256	05901	.02021	.02180	.02553	08216	.02481	05293	.02113	06525	.01184	.09192	00699	.28654**
% Board Gender	00176	22846	00541	42583**	00665	46459**	00569	44202**	00444	45578**	00420	43465**	00698	-,49084***	00302	63482***
Women presence board	.01152	.01140	.01893	01294	.01913	02703	.01911	.00334	.01907	00201	.01887	.01688	.01916	02199	.01907	.11716
CEO board ?	.00584	00213	.02340	05168	.02258	11526	.02257	07260	.02291	07106	.02358	05276	.01878	17210	.01859	28095
CEO chairman duality ?	.00286	.04741	.00372	01759	.00329	01395	.00338	01434	.00377	01344	.00295	01713	.00379	01113	.00359	.00116
Log (Market Capitalization)	01376	.01209	01230	.05336	01152	00423	01235	.05678	01295	.03750	01250	.06240	01128	04120	01297	10643
Log (total asset)	.01616	00599	.01338	00895	.01351	.03643	.01299	01207	.01332	.00247	.01357	01246	.01392	.07008	.01430	.15195
Book to market ratio	.00354	.00661	.00213	.00116	.00239	00831	.00207	.00336	.00189	00156	.00221	.00318	.00233	01248	.00184	01979
GDP percapita growth	.00187	.00198	.00141	01478	.00144	01380	.00141	00517	.00133	00532	.00150	00953	.00095	01445	.00022	.00802
Log (GDP per capita)	.01120	.03373	.03369	.44985	.03512	.50314**	.03413	.34547	.03568	.45648*	.02784	.44202	.03706	.58697**	.01846	.98493
Unemployement rate	26000.	01696	.00086	01876	.00085	01747	.00094	02083	.00111	01652	26000.	01874	.00035	01977	.00068	02142
Population growth	.00465	.07317	.00915	.32310	.00892	.41221**	.00984	.24796	.01058	.32169*	20900.	.30002	.00952	.45030***	.00756	.54066**
Rule of Law			00562	06304	01075	.08770	00428	.02121	60000.	.10807	00748	07906	01193	.01214	.00863	30873
Control of corruption			00793	19771	00378	37946*	00678	19887	01055	34780	00128	18638	00729	31494*	01028	25183
System Law			01730	17785	01843	06146	01765	05421	01992	11256	02184	09729	01758	.06409	05125	.96815
Quotas law			00374	.00914	00392	01030	00343	.02218	00246	.07437	00390	.00525	00110	03048	.01287	17089
Ln volume market			00230	.01272	00227	.00054	00227	.01310	00240	.01293	00206	.01100	00216	01493	00213	05633*
Education			16634	2.5554	13325	4.0454	11288	.25186	15512	.24084	13293	1.5288	14621	5.6909	10145	5.3729
R within	0,0231	0,392	0,0379	0,6747	0,0385	0,7133	0,0375	0,6673	0,0382	0,6796	0,0382	0,6699	0,0417	0,7446	0,0467	0,8219
R between	0,9242	0,6649	0,5253	0,7556	0,4854	0,7381	0,5346	0,8054	0,4267	0,7772	0,5119	0,7877	0,4692	0,7816	0,3822	0,9967
Overall	0,029	0,3992	0,0423	0,6779	0,0428	0,7124	0,0420	0,6738	0,0423	0,6832	0,0426	0,6761	0,0455	0,7454	0,050	0,8325
Wald chi2	18,8	19,93	23,11	35,78	23,40	42,11	22,93	35,12	23,12	36,65	23,27	35,49	24,94	49,76	27,27	59,63
Prob F	0.2793	0.2233	0.4544	0.0434	0.4377	0.0088	0.4646	0.0506	0.4536	0.0353	0.4453	0.0465	0.3531	0.0010	0.5035	0.0005

Table 14: Summary of the 8 models of the multivariate analysis for the window (0; 10) for the Chairman function

Variables : CAR (0 ; 10)	Mot	lel 1	Moc	lel 2	Mod	lel 3	Mod	el 4	Mod	lel 5	Mod	el 6	Mod	lel 7	Mod	el 8
CEO	Man	Woman	Man	Woman	Man	Woman	Man	Woman	Man	Woman	Man	Woman	Man	Woman	Man	Woman
Power distance			20000.	00116											0002	00194
Individualism					.00004	00040									00021	00022
Masculinity							.00051***	00069							.00022	.00049
Uncertainty Avoidance									.00042*	.00106					.00037	.00081
Long Term Orientation											.00031	.00008			.00022	.00058
Indulgence													.00008	00181**	.00015	00140
Age (year)	00001	.00044	00001	.00064	00002	.00070	00004	00079	00002	.00070	00002	.00075	00002	.00063	00004	.00067
Ln (year)	00159	02733	00278	02748	00261	02977	00165	03148	00260	02913	00240	03137	00264	02695	00183	02511
Board size	00082	00482	00058	01204	00062	01243	00126	01553	00136	01561	00057	01398	00065	01219	00157	01466
In (board size)	.00282	.01807	00029	.03092	.00019	.03328	.00464	.05112	.00746	.04078	00150	.04680	.00060	.02522	.00825	.02691
% independent director	00531	.00825	00549	00432	00646	00417	.00228	.00141	00422	.00271	.00014	.00390	00719	01768	.00224	02042
% Board Gender	00153	.02534	.00294	.04271	.00241	.05949	.00988	.07831	.00317	.07073	.00453	.07173	.00201	.01534	.00807	.00426
Women presence board	.01335*	-0,0501*	.01592*	08576**	.01582*	07087*	.01551*	08105**	.01641*	-07996*	.01543*	07651*	.01577*	06183*	.01569*	08110**
CEO board ?	.00352	.00460	.00876	.04513	.00912	.03250	.00749	.02548	.00717	.02705	.00806	.03294	.00883	.03070	.00611	.03604
CEO chairman duality ?	.00606	.00372	.00386	.01576	.00397	.01160	.00364	.00642	.00342	.00753	.00373	.00947	.00398	.01825	.00360	.02142
Log (Market Capitalization)	00260	00042	01032*	00415	01024*	.00243	01010*	.00128	00950	.00351	01030*	.00115	01030	.00375	01001	00204
Log (total asset)	.00309	.00793	.00816	.02341	.00827	.01698	.00736	.02070	.00703	.02330	.00778	.01840	.00838	.01920	.00688	.03045
Book to market ratio	00018	00914	.00011	02020	.00010	01874	.00018	02168	.00014	02251	.00017	01981	.00010	02025	.00017	02496
GDP percapita growth	00167	00368	00227	00514	00227	00435	00222	00519	00182	00312	00248	00497	00233	00475	00210	00332
Log (GDP per capita)	.00389	.04021	00671	.01336	00752	.04554	01484	.06603	01074	.06686	.00083	.05425	00723	.00895	00755	00780
Unemployement rate	-0.0010*	.00128	00107*	.00311	00113*	.00294	00116*	.00262	00144*	.00236	00103*	.00263	00118*	.00402	00148**	.00507
Population growth	.00041	.00928	.00411	.01238	.00432	.01161	.00702	.01267	.00374	.00103	.00726	.01176	.00416	.01593	.00735	.00226
Rule of Law			.02611	03327	.02461	04113	.03126	07590	.01689	12429	.03005	0656	.02466	00740	.02751	00500
Control of corruption			02269	.04339	02226	05090	02307	.06711	01450	.11026*	03042**	.06027	02298	05790	02662	.05383
System Law			01429*	04075	01537*	01863	02453***	04297	00702	.00055	00891	02504	01513*	01397	00690	01922
Quotas law			00427	.07114***	00412	.06223**	00086	**09070.	00808	**16750.	00450	.06340**	00352	.04574	00442	.05288
Ln volume market			.00125	00890	.00126	.00814	.00126	.00915	.00144	.00887	.00122	.00802	.00124	.01022*	.00137	.01184*
Education			01935	27287	01978	13148	09019	.15825	.04904	.13494	00765	07175	03081	12180	.05295	40543
R within	0,0105	0,1219	0,0204	0,2723	0,0204	0,2631	0,0265	0,2707	0,024	0,2831	0,0224	0,2590	0,0205	0,3095	0,0277	0,3427
R between	0,0589	0,037	0,11	0,2745	0,0977	0,2060	0,1381	0,1697	0,0022	0,21	0,0626	0,2112	0,1140	0,3238	0,0761	0,3038
Overall	0,0104	0,1068	0,0203	0,2554	0,0203	0,2450	0,0256	0,2486	0,0232	0,2568	0,0223	0,2429	0,0204	0,2848	0,0266	0,3136
Wald chi2	15,26	11,12	26,09	25,38	26,11	24,01	33,08	24,48	29,94	25,57	28,74	23,74	26,21	29,47	34,29	31,53
Prob F	0,5054	0,8022	0,2968	0,3312	0,2958	0,4034	0,0798	0,3775	0,1510	0,3214	0,1892	0,4182	0,2908	0,1651	0,1913	0,2942

Table 15: Summary of the 8 models of the multivariate analysis for the window (0; 10) for the "CEO" function

Table 16: Summary of countries showing significant differences between men and women appointments with a parametric and/or non-parametric test (Fama French 3 Factors Model) (Robustness)

	AR-1 (2 tests)			AR-1 (pa	trametric)			AR-1 (non	parametric)	
Н	Differences	F	Differences	Н	Differences	F	Differences	Н	Differences	F	Differences
Belgium	1,40%	Canada	1,00%	China	1,40%			Malaysia	1,53%	Australia	0,21%
Pakistan	1,54%										

	AR0 (2 tests)			AR0 (pa	rametric)			AR0 (non	parametric)	
Н	Differences	F	Differences	Н	Differences	F	Differences	Н	Differences	F	Differences
				Full Sample	0,21%			Philippines	3,23%	Spain	1,22%
										Taiwan	0.92%

	AR1 (2 tests)	•		AR1 (pa	rametric)			AR1 (non	parametric)	
Н	Differences	F	Differences	Н	Differences	F	Differences	Н	Differences	F	Differences
				Full Sample	0,21%					Australia	0,24%
				Canada	0.86%						

	CAAR -10	;10 (2 tests)			CAAR -10 ;1	0 (parametric))	C	AAR -10 ;10	(non parametr	ic)
Н	Differences	F	Differences	Н	Differences	F	Differences	Н	Differences	F	Differences
Malaysia	6,54%	Sweden	6,45%	Full Sample	1,07%			Philippines	41,09%	Egypt	7,12%
USA	1,41%			Canada	1,00%			South Africa	1,68%		

	CAAR -1	; 0 (2 tests)	•		CAAR -1 ; 0) (parametric)	•	0	CAAR -1 ; 0 (1	non parametrie	c)
Н	Differences	F	Differences	Н	Differences	F	Differences	Н	Differences	F	Differences
Malaysia	2,53%							Pakistan	2,19%	Spain	1,69%
Philippines	7,55%										

	CAAR -1	; 1 (2 tests)			CAAR -1 ; 1	(parametric)		CAAR -1 ; 1 (non parametric)				
Н	Differences	F	Differences	Н	Differences	F	Differences	Н	Differences	F	Differences	
Malaysia	3,26%			Philippines	8,15%			Pakistan	2,24%	Australia	0,23%	
								Singapore	2,40%	Spain	1,85%	

	CAAR 0;	5 (2 tests)			CAAR 0;5	(parametric)		CAAR 0 ; 5 (non parametric)				
Н	Differences	F	Differences	Н	Differences	F	Differences	Н	Differences	F	Differences	
Taiwan	5,26%			Full Sample	0,54%	Taiwan	5,26%	Philippines	10,05%			
				USA	0,57%							

	CAAR 0;	10 (2 tests)			CAAR 0; 10	0 (parametric)		C	AAR 0 ; 10 (non parametri	c)
Н	Differences F Differences H Differen				Differences	F	Differences	Н	Differences	F	Differences
USA	0,89%	Mexico	6,46%	Full Sample	0,68%					Egypt	3,23%
				Thailand	7,79%						

	CAAR -5	; 0 (2 tests)	•		CAAR -5 ; () (parametric)		0	AAR -5 ; 0 (non parametri	c)
Н	H Differences F Difference				H Differences F Differences				Differences	F	Differences
Malaysia	5,15%							Philippines	16,63%	Sweden	2,52%
								Switzerland	2,96%		

	CAAR -5	; 5 (2 tests)	•		CAAR -5 ; 5	(parametric)		(CAAR -5 ; 5 (non parametri	c)
Н	Differences	F	Differences	Н	Differences	F	Differences	Н	Differences	F	Differences
Malaysia	6,02%			Full Sample	0,70%			Philippines	23,45%		
Switzerland	5,92%			Thailand	7,14%						
				USA	0,93%						

Table 17: Summary table of samples showing positive gender overreaction to the position of Director, Chairman and CEO (Fama French 3 Factors model) (Robustness)

	AR-1 I	Director			AR-1 C	hairman			AR-1	CEO	
Н	H Differences F Difference			Н	Differences	F	Differences	Н	Differences	F	Differences
		Full Sample	0,0011%	Full Sample	0,80%						
		Australia	0,39%	India	2,03%						
		Canada	0,31%	USA	0,58%						

	AR0 E	Director	•		AR0 C	hairman			AR0	CEO	
Н	Differences	F	Differences	Н	Differences	F	Differences	Н	Differences	F	Differences
Full Sample	0,24%	UK	0,41%								
Australia	0,57%										

	AR1 D	Director			AR1 C	hairman		AR1 CEO				
H Differences F Differences H				Differences	F	Differences	Н	Differences	F	Differences		
Full Sample	0,33%					Australia	6,79%					
China	1,95%					India	2,51%					
						Poland	1.36%					

	CAAR -10	; 10 Director			CAAR -10 ;	10 Chairman			CAAR -1	0 ;10 CEO	
Н	Differences	F	Differences	Н	Differences	F	Differences	Н	Differences	F	Differences
Full Sample	1,47%	Poland	8,22%	India	14,81%	France	19,12%	Singapore	11,90%		
Australia	23,84%			Poland	7,39%						
USA	1,20%										

	CAAR -1	; 0 Director			CAAR -1;	0 Chairman		CAAR -1 ; 0 CEO				
Н	Differences	F	Differences	Н	Differences	F	Differences	Н	Differences	F	Differences	
China	China 3,57%											

	CAAR -1	; 1 Director			CAAR -1 ;	1 Chairman			CAAR -1	; 1 CEO	
Н	Differences	F	Differences	Н	Differences	F	Differences	Н	Differences	F	Differences
Full Sample	0,57%	Poland	4,20%							China	2,70%
USA	0.44%									Germany	6.59%

	CAAR 0;	5 Director			CAAR 0;	5 Chairman			CAAR 0	; 5 CEO	
Н	Differences	F	Differences	Н	Differences	F	Differences	Н	Differences	F	Differences
Full Sample	0,64%	Poland	9,87%	Singapore	4,09%	China	7,34%				
Germany	3,83%					France	9,09%				
USA	0,68%										

	CAAR 0;	10 Director			CAAR 0 ; 1	0 Chairman			CAAR 0	; 10 CEO	
Н	Differences	F	Differences	Н	Differences	F	Differences	Н	Differences	F	Differences
Full Sample	0,81%	Poland	8,94%	Germany	11,90%	China	9,35%	UK	3,60%		
USA	0,90%					France	12,82%				

	CAAR -5	; 0 Director			CAAR -5 ;	0 Chairman			CAAR -	5;0 CEO	
Н	Differences	F	Differences	Н	Differences	F	Differences	Н	Differences	F	Differences
Full Sample	0,59%			UK	3,87%					China	6,58%
										Singapore	13,06%

	CAAR -5	5 Director	•		CAAR -5 ;	5 Chairman	•		CAAR -	5 ; 5 CEO	
Н	Differences	F	Differences	Н	Differences	F	Differences	Н	Differences	F	Differences
Full Sample	1,00%	Poland	12,02%	Italy	4,58%	France	9,18%			China	6,83%
USA	1,07%			UK	7,08%					Singapore	19,86%

Variables · CAB (-10 · 10)	Mod	lel 1	Mod	lel 2	Mod	lel 3	Mod	lel 4	Mod	el 5	Moc	del 6	Mod	lel 7	Mo	lel 8
Variables : CAIN (-10 ; 10)	Man	Woman	Man	Woman	Man	Woman	Man	Woman	Man	Woman	Man	Woman	Man	Woman	Man	Woman
Power distance			.00011	.00045											00003	00112
Individualism					00006	-,00081**									00037	00173**
Masculinity							.00056***	00044							.00063*	00136
Uncertainty Avoidance									*00039*	.00002					.00023	.00186**
Long Term Orientation											.00016	.00017			00014	.00109
Indulgence													00004	00082**	.00013	.00083
Age (year)	-0,0001	0,0003	00026**	.00027	00026**	.00030	00029**	.00027	00027**	.00026	00027**	.00027	00027**	.00029	00027**	.00032
Ln (year)	0,0073	-0,0138**	.00813**	01086	.00823**	01128	.00915**	01083	.00814**	01065	.00848**	01067	.00830**	01128	.00862**	01188*
Board size	0,0013	-0,0097	.00195	00691	.00194	00633	.00115	00591	.00106	00674	.00197	00687	.00188	00718	.00086	00682
In (board size)	-0,0151	0,0607	02132	.01730	02111	.01344	01504	.01138	01265	.01704	02193	.01756	02062	.02230	01158	.01514
% independent director	-0,0051	0,0216	.00428	00495	.00427	00130	87600.	01066	.00398	00871	.00620	00558	.00406	00051	.01105	00265
% Board Gender	0,0051	0,0253	.01131	.04601	.01164	.04830	.01325	.04495	.00931	.04460	.01164	.04524	.01101	.04433	.01600	.04529
Women presence board	0,0062	-0,0078	.00486	01190	.00486	01270	.00469	01235	.00514	01186	.00470	01187	.00488	01331	.00490	01196
CEO board ?	-0,0004	-0,0030	.00178	00677	.00205	00587	00069	00121	.00156	00412	.00148	00559	.00237	00503	00055	00503
CEO chairman duality ?	0,0100***	0,1383*	**08600.	.01460*	.00994**	.01704**	**89600'	.01586**	**0700.	.01532*	**06600"	.01530*	**\$6600.	.01683**	.00952**	.01718**
Log (Market Capitalization)	-0,0101**	-0,0218**	01184**	01845*	01197**	02188**	01153**	02007*	01151**	01902*	01179**	01875*	01188**	02168**	01189**	02078**
Log (total asset)	0,0073	0,0286***	.00650	.02962***	.00654	.03120***	.00618	.03079***	.00633	.03026***	.00646	.02995***	.00661	.03137***	.00560	.03184***
Book to market ratio	-0,0005	0,0010	00093	.00223	00096	.00154	00086	.00205	-,00091	.00226	00092	.00229	00095	.00186	00091	.00214
GDP percapita growth	0,0000	-0,0006	00076	.00053	-00079	.00006	00082	.00070	00039	.00058	00083	.00043	00074	00013	-00079	.00102
Log (GDP per capita)	0,0030	-0,0228	01185	.02608	01208	.00397	01864	.00625	01590	.01281	00706	.02247	01266	.00786	02306	.01455
Unemployement rate	-00000	0,0003	.00014	.00019	.00012	.00088	.0000	.00028	00028	.00015	.00013	.00017	.00012	.00077	00017	.0000
Population growth	0,0037	0,0119	.00709	.01385	.00726	.01183	.00980*	.01404	.00623	.01339	.00903*	.01438	.00739	.01840	.00754	00597
Rule of Law			.00877	00034	.01105	.04970	.01388	.01829	00242	.01059	.01107	.00748	.00934	.02824	.01693	.03476
Control of corruption			00227	01009	00486	03739	00386	02287	.00675	01904	00788	02128	00330	02279	00315	04377
System Law			01394*	.02652	01348	.04038*	02415***	.03048	00748	.02387	-,01099*	.02723	01433*	.03268	01909	.12370**
Quotas law			01209*	.01544	01169*	.00911	00828	.01087	01538*	.01554	01170	.01613	01194*	.00839	00905	01051
Ln volume market			.00122	00389	.00122	00387	.00107	00385	.00149	00398	.00111	00407	.00122	00402	.00130	00371
Education			33461*	.47537	35405*	.28616	25087	.32993	27078	.38112	35019**	.35390	34571**	.42035	23585	06781
R within	0,012	0,0505	0,0169	0,0615	0,0169	0,0662	0,0191	0,0616	0,0178	0,0609	0,0171	0,0610	0,0168	0,0644	0,0202	0,0703
R between	0,9327	0,3491	0,7578	0,3657	0,7546	0,3872	0,8729	0,3614	0,8855	0,3739	0,7562	0,3881	0,7652	0,4164	0,8776	0,4455
Overall	0,0126	0,0484	0,0175	0,0591	0,0175	0,0643	0,0198	0,0593	0,0185	0,0586	0,0177	0,0587	0,0174	0,0626	0,0207	0,0687
Wald chi2	50,34	51,66	60,97	57,57	60,93	62,88	69,11	57,74	64,56	56,99	61,69	57,14	60,77	61,14	72,33	67,02
Prob F	0,0272	0,0204	0,0179	0,0355	0,0181	0,0119	0,0029	0,0344	0,0082	0,0397	0,0154	0,0385	0,0187	0,0173	0,0060	0,0182

Table 18: Summary of the 8 models of the multivariate analysis for the (-10; 10) window (robustness)

Variables · CAR (-1 · 1)	Mod	el 1	Mot	iel 2	Mod	lel 3	Mod	lel 4	Mod	lel 5	Mo	del 6	Mod	lel 7	Mo	iel 8
	Man	Woman	Man	Woman	Man	Woman	Man	Woman	Man	Woman	Man	Woman	Man	Woman	Man	Woman
Power distance			.00006	.00003											00020	00040
Individualism					00006	00006									00014	00011
Masculinity							.00020**	.00013							00001	00048
Uncertainty Avoidance									.00011	.00014					.00026*	.00054
Long Term Orientation											.00018**	.00028*			.00024**	.00062**
Indulgence													00008	00018	00001	00002
Age (year)	-0,0000	0,0000	00004	.00006	00003	.00006	00005	.00006	00004	.00006	00004	90000.	00004	.0000	00004	.0000
Ln (year)	0,0016	-0,0033	.00185	00100	.00186	00103	.00226	00093	.00191	00101	.00212	00102	.00188	00112	.00213	00128
Board size	0,0005	-0,0002	.00131	00024	.00134	00020	.00100	00046	.00104	00047	.00138	00052	.00129	00034	.00092	00073
In (board size)	0,0022	-0,0075	00587	01172	00609	01203	00341	01018	00319	-00999	00710	01034	00587	01052	00274	00844
% independent director	-0,0008	-0,0023	.00254	00978	.00293	00946	.00436	00944	.00220	01049	.00518	00502	.00334	00824	.00716	00474
% Board Gender	0,0053	0,0077	.01128	.01436	.01188	.01455	.01186	.01420	.01054	.01363	.01200	.01511	.01157	.01418	.01252	.01334
Women presence board	0,0028	-0,0058	.00212	00716	.00211	00723	.00205	00702	.00219	00704	.00193	00715	.00214	00748*	.00204	00734
CEO board ?	0,0003	0,0068	.00072	.00319	.00078	.00324	.00042	.00253	00079	.00311	.00012	.00086	.00119	.00317	00017	.00194
CEO chairman duality ?	-0,0004	-0,0001	00199	.00094	00191	.00113	00200	.00085	00197	.00075	00196	.00089	00190	.00132	00189	.00132
Log (Market Capitalization)	-0,0002	0,0006	00081	.00077	00093	.00050	00071	.00102	00073	.00103	00075	.00127	00086	.00014	00079	.00100
Log (total asset)	-0,0018	-0,0015	00178	00046	00182	00033	00186	00057	00177	00045	00192	00093	00183	00016	00226	00038
Book to market ratio	-0,0002	0,0045**	00014	.00344*	00016	.00338*	00011	.00349*	00013	.00353*	00011	.00352*	00015	.00335*	00012	.00367*
GDP percapita growth	-0,0000	-0,0011	00012	00078	00015	00081	00014	00082	00002	00068	00020	00100	-00009	00093	00005	00084
Log (GDP per capita)	0,0025	-0,0038	00350	.00868	00337	.00702	00612	.00965	00486	.00814	.00225	.02380	00391	.00663	.00230	.02461
Unemployement rate	-0,0001	0,0001	00016	.00062	00015	.00067	00022	.00058	00030	.00051	00014	.00061	00011	.00075	00035	.00044
Population growth	0,0023	0,0046	.00370*	00174	.00378*	00190	.00473**	00188	.00353	00303	.00573**	00052	*795.00397*	00070	**10500.	00369
Rule of Law			.01250*	00816	.01480*	00425	.01432*	00931	.00933	01227	.01513**	01400	.01377*	00358	.01378	01701
Control of corruption			00845	.00381	01059*	.00170	00920*	.00401	00618	.00720	01414**	.00070	00917*	.00244	01455**	00147
System Law			00492	.01252	00418	.01365*	00876	.01016	00331	.01496*	00128	.01868**	00475	.01436*	.00659	.04419**
Quotas law			00357	*00870*	00333	*00819*	00212	.01014*	00439	.00805*	00334	.00949**	00378	.00709	00525	.00181
Ln volume market			.00052	00050	.00052	00050	.00046	00055	.00059	00048	.00040	00065	.00053	00052	.00055	00064
Education			03178	16524	04498	17960	00400	15856	01771	14746	04144	20942	03456	16262	02835	31187
R within	0,0097	0,0442	0,011	0,0462	0,0112	0,0464	0,0122	0,0467	0,0111	0,0468	0,0127	0,0492	0,0112	0,0476	0,0143	0,0538
R between	0,0520	0,1240	0,0960	0,0065	0,0683	0,0059	0,2832	0,0045	0,2442	0,0070	0,0859	0,0005	0,0860	0,0025	0,2438	0,0129
Overall	0,0094	0,0459	0,0107	0,0486	0,0109	0,0489	0,0122	0,0491	0,0110	0,0491	0,0123	0,0519	0,0108	0,0501	0,0143	0,0565
Wald chi2	37,17	56,82	37,01	52,78	37,68	53,04	42,39	53,26	38,18	53,28	42,88	59,07	37,62	54,30	49,70	60,40
Prob F	0,2829	0,0061	0,6056	0,0849	0,5754	0,0812	0,3684	0,0782	0,5525	0,078	0,3487	0,0472	0,5779	0,0652	0,2916	0,0622

Table 19: Summary of the 8 models of the multivariate analysis for the (-1; 1) window (robustness)

	Mod	el 1	Moc	lel 2	Mod	el 3	Mod	el 4	Moc	lel 5	Mod	lel 6	Moc	lel 7	Moc	lel 8
Variables : CAK (0 ; 10)	Man	Woman	Man	Woman	Man	Woman	Man	Woman	Man	Woman	Man	Woman	Man	Woman	Man	Woman
Power distance			.00005	.00071											00017	.00030
Individualism					00010	00073**									-,00051**	00067
Masculinity							.00026	00029							.00021	00006
Uncertainty Avoidance									.00023	-00006					.00032	.00035
Long Term Orientation											.0000	-4.30e-06			.0000	00006
Indulgence													.00002	-00067*	.00033	00005
Age (year)	0,0001	0,0002	.00016	.00045*	.00017	.00047*	.00013	.00042	.00015	.00041	.00015	.00041	.00015	.00044*	.00017	.00050*
Ln (year)	-0,0073*	-0,0150**	00814**	01841**	00833**	01830**	00729*	01790**	00808**	01750**	00789*	01754**	00792**	01791**	-,00819**	01893**
Board size	0,0019	-0,0113**	.00187	01080*	.00198	01035*	.00146	00987*	.00127	01034*	.00188	01047*	.00180	01123**	.00117	01103*
In (board size)	-0,0201	0,1152**	02082	*60660	02188	.09622*	01767	.09371	01493	*76960.	02115	*77760.	02001	.10569*	01355	.10054*
% independent director	0,0031	-0,0015	.00675	00286	.00703	01367	.01005	01386	.00766	01110	.00750	01116	.00596	00975	.00865	01175
% Board Gender	0,0030	0,0402	.00396	.07004*	.00615	.08543**	.00550	.07066*	.00233	.07004*	.00425	*80690	.00312	*1097601*	.00939	.08032*
Women presence board	0,0039	-0,0067	.00563	01031	.00548	01238	.00544	01088	.00595	01032	.00547	01018	.00568	01318	.00522	01193
CEO board ?	0,0042	0,0035	.00445	00269	.00499	.00656	.00400	.00507	.00347	.00287	.00455	.00243	.00450	.00573	.00252	.00297
CEO chairman duality ?	0,0037	0,0064	.00543	.00345	.00518	.00599	.00538	006900.	.00548	.00666	.00541	.00650	.00562	.00678	.00436	.00408
Log (Market Capitalization)	-0,0077*	0,0207**	01060**	.01939*	01103^{**}	.01386	01040**	.01663	01021**	.01765*	01065**	.01782*	01059**	.01458	01148**	.01501
Log (total asset)	0,0086**	-0,0130	.00854*	00955	.00846*	00640	.00829*	00662	.00821*	00752	.00855*	00746	.00872*	00612	.00784	00656
Book to market ratio	0,0002	0,1241***	.00017	.01164***	.00014	.01115***	.00021	.01143***	.00019	.01158***	.00018	.01161***	.00016	.01144***	.00014	.01126***
GDP percapita growth	-0,0005	0,0000	00098	00102	00102	00118	00101	00107	00080	00115	-00099	00111	00098	00149	00108	00096
Log (GDP per capita)	0,0059	-0,0049	.00954	.03049	.00735	01872	.00606	.00371	.01054	.00811	.01067	.00924	.00966	00972	.00312	00647
Unemployement rate	-0,0002	0,0003	00019	.00036	00012	.00123	00024	.00040	00048	.00038	00018	.00032	00025	.00101	00061	.00094
Population growth	0,0021	0,0060	.00595	.00257	.00625	.00394	.00717*	.00370	.00498	.00363	.00687	.00287	.00598	.00890	.00596	.00035
Rule of Law			.01954	.01085	.02154	.03427	.02198	.03035	.01418	.02917	.02002	.02776	.01941	.02216	.02170	.02080
Control of corruption			02225	01653	02237	00994	02294*	02940	01974	03035	02375*	02976	02309*	00683	02305	00100
System Law			00842	.01587	00796	.01788	01340*	.01456	00330	.00894	00750	.01054	00867	.01220	00238	.02814
Quotas law			00352	.00585	00309	.00633	00182	.00404	00569	.00711	00335	.00670	00328	.00426	00235	.00289
Ln volume market			.00088	00145	.00088	00119	.00081	00133	.00101	00149	.00083	00148	.00088	00137	.00094	00107
Education			08497	.21831	10802	06868	04702	.04648	04069	.05874	09334	.07285	09050	07070.	09467	.08122
R within	0,0085	0,0511	0,0157	0,0637	0,0160	0,0724	0,0172	0,0589	0,0169	0,0577	0,0158	0,0576	0,0157	0,0653	0,0203	0,0745
R between	0,0062	0,6250	0,0065	0,5428	0,0248	0,4584	0,0047	0,5908	0,0003	0,6278	0,0036	0,6546	0,0042	0,8595	0,1360	0,5742
Overall	0,0085	0,0574	0,0160	0,0707	0,0162	0,0792	0,0173	0,0661	0,0169	0,0649	0,0160	0,0649	0,0159	0,0733	0,0199	0,0813
Wald chi2	20,06	27,72	31,97	30,44	32,55	34,40	34,62	28,33	33,87	27,77	32,16	27,75	31,92	31,65	39,93	34,95
Prob F	0,2176	0,0341	0,1008	0,1372	0,0891	0,0596	0,0567	0,2036	0,0670	0,2246	0,0968	0,2255	0,1019	0,1077	0,0670	0,1712

Table 20: Summary of the 8 models of the multivariate analysis for the (0; 10) window without the USA sample (robustness)