MASTER THESIS

The effect of gender-diverse boards on firms financial performance: Evidence from France and the United States

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Abstract

Recently, the subject of women directors on corporate board received a lot of attention in both academic and popular press. In this study, the relationship between board gender diversity and financial firm performance is examined in the French and U.S. context. Based on a sample of 107 firms listed on the SBF 120 (France) and the S&P 500 (U.S.) for the periods 2010-2011 and 2016-2018, ordinary least squares (OLS) regression analysis is conducted.

The results show no evidence that the percentage of women corporate directors on the board influences the financial performance of French and U.S. firms. Besides, the results show no evidence that executive and independent women directors increase financial firm performance for the French sample. However, the U.S. sample shows some limited evidence that executive women directors have a beneficial effect on Tobin's Q. Furthermore, there is no evidence that the results of the French sample support the critical mass theory while the evidence for the U.S. sample shows some very limited evidence. Also, the results show no evidence that the implementation of the mandatory gender quota in France has had a negative effect as a consequence of the restrictions in the freedom to choose directors. Last, the results indicate that the choice of board structure (one-tier vs two-tier) and the attendance of women board directors do not impact the performance of firms. In conclusion, the presence of women on the board of directors does not influence the financial performance of French and U.S. firms. Firms can add women directors to their boards, however, increasing firm performance should not be the reason.

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1. Introduction

This thesis focuses on the impact of a gender-diverse board on the financial performance of firms from France and the United States. The first chapter gives an introduction about the background of corporate governance, board diversity, gender diversity and the impact on firm performance. Furthermore, it discusses the research objective, contribution and the research question. At the end of the chapter, a short overview of the structure of the thesis will be presented.

1.1. Background information

1.1.1. Corporate governance and board diversity

Corporate governance is a subject that retrieved a lot of attention in both academic and popular press during the last decades. One of the main reasons for this increased attention was the result of the high-profile failures of companies such as Enron and WorldCom (Campbell & Mínguez-Vera, 2008). The corporate governance mechanisms can be divided into two categories; internal and external mechanisms (Weir, Laing, & McKnight, 2002). The internal mechanisms are firm-oriented while the external mechanisms are market-oriented. According to Tian and Twite (2011), examples of internal corporate governance mechanisms are; board characteristics, ownership structure and managerial compensation. The internal mechanisms are used by shareholders to make sure that the managers act in the interest of the shareholders. These mechanisms can reduce the agency problem. Examples of external mechanisms are the market for corporate control, competition in product markets and the external managerial labor market (Rediker & Seth, 1995). This study focuses on the internal mechanisms specified to board characteristics. The reason to do this is that firms have more influence on their internal mechanisms than there external mechanisms. Besides, this study will not investigate ownership structure and managerial compensation. The ownership structure is not a mechanism that can be easily changed in a short period. This makes it hard for stakeholders to actively influence this mechanism. Besides, Managerial compensations is a sensitive topic after the financial crisis. The managerial compensation mechanism was for a part accountable for the crisis because it caused that managers focused too much on short-term results. This has been proven to not be beneficial for firms in the long-term.

Board characteristics is a broad concept that makes it impossible to investigate all of the aspects of this study. Examples of board characteristics are; number of independent directors, board committees, board size, number of board meetings, etc. (Van den Berghe & Levrau, 2004). One of the most interesting aspects of board characteristics is board diversity. According to Carter, Simkins, and Simpson (2003), the relationship between shareholder value creation and board diversity seems to be a critical factor in good corporate governance. Kang, Cheng, and Gray (2007) add to this with

the statement that board composition is a growing area of research because it is increasingly accepted as an important driver of firm performance. Besides, a group of directors that is homogenous do not reflect the current society and therefore the company misses opportunities to increase firm financial performance (Lückerath-Rovers, 2011). Board diversity can be divided into two parts; observable (demographic) and non-observable (cognitive) diversity. According to Erhardt, Werbel and Shrader (2003), examples of observable (demographic) diversity are gender, race, ethnicity and age while examples of non-observable diversity are education, values, personality and knowledge. All of the aforementioned characteristics are investigated in the past. For example Frijns, Dodd and Cimerova (2016) examine the impact of cultural diversity in corporate boards while Kim and Lim (2010) investigate the effect of the profession, experience, age and education of the board on the performance of companies. Besides, Rose (2007) studied the effect of gender-diverse boards on the performance of a company where Carter, D'Souza, Simkins, and Simpson (2010) add the effect of an ethnic diverse board to this.

This study will not take into account all the aspects mentioned by Erhardt et al. (2003) but focus on one specific aspect of diversity, namely gender. Most of the existing work focuses on observable (demographic) dimensions of diversity. As a result of this, it will be difficult to investigate the non-observable (cognitive) dimension of diversity (Brammer, Millington, & Pavelin, 2007). This is because it will be hard to find a sufficient number of papers on this subject. This study will also not take into account the race of directors, where other papers do this. According to multiple papers, ethnic dimensions play at this moment no considerable role in Europe. For example Rose (2007), who says that the study only takes gender into account because racial diversity does not play a role in Denmark or Singh (2007) who proves that there are extremely few directors from ethnic minorities groups in the UK listed companies so that it is impossible to test a relation. Summarizing the previous paragraphs, this study will focus on the effect of a gender diverse board on the financial performance of a company. Why gender diversity is most interesting to study will be discussed in the next paragraph.

1.1.2. Board gender diversity

Women are becoming a larger part of the workforce. As a result of this, the proportion of women who are eligible for management positions will increase over time (Erhardt et al., 2003). The main argument of this is that women are just as capable as men in fulfilling a role on the board of directors (Chen, Crossland, & Huang, 2016). At this point, the relation between financial firm performance and board gender diversity has received a lot of attention (Ahern & Ditmar, 2012; Bohren & Staubo, 2016; Campbell & Mínguez-Vera, 2008; Carter et al., 2010; Erhardt et al., 2003; Liu, Wei, & Xie, 2014; Lückerath-Rovers, 2011; Marinova, Plantenga, & Remery, 2015; Miller & Triana, 2009; Smith, Smith,

& Verner, 2006). However, the studies show that there is no conclusive evidence on the effect of a gender diverse board on firm performance.

There are multiple advantages to the presence of women on the board. According to Liu et al. (2014), women directors bring different perspectives and experiences into the boardroom. As a result of this, diversity can increase the independence of the board because people with a different background might ask different questions that would not be asked by directors with a traditional background (Caucasian white man). When a board is more diverse, problem-solving will be more effective and besides, the decision making of the board is more creative, of a higher quality and the board is better able to understand the market conditions (Carter et al., 2003). So, when the number of women on boards increases, the board finds more alternatives to solve problems, more strategic opportunities and can better handle environmental change (Wiersema & Bantel, 1992). Also, increased gender diversity leads to a better monitoring process and can substitute for stronger corporate governance control (Gul, Srinidhi, & Ng, 2011). Directors with a nontraditional background are considered as the ultimate outside directors and therefore diverse boards might be more activists (Carter et al., 2003). Besides, gender diversity on the board can lead to a better deliberation process of important choices. Smith et al. (2006) add to this that a diverse board is positive for the public image which results in better firm performance. As a final advantage, women are more risk-averse than men, which can influence the risk-taking behavior of a company. This can have as a result that the company has less large returns while on the other hand, the losses are not as huge when there are only men on the board (Perryman, Fernando, & Tripathy, 2016). The results of the study of Perryman et al. (2016) indicate that firms with greater gender diversity on their boards take less risk and have in general a more stable performance reducing the possibility of financial distress and bankruptcy and increasing firm performance.

However, in contrast with the advantages, there are some disadvantages. According to Rose (2007) the decision process may take longer, as there are more perspectives on solving the problem. Besides, the decision-making process can be disturbed by a fragmented board. This can be a result of all the different opinions within the boardroom. This is supported by Pletzer, Nikolova, Kedzior and Voelpel (2015), they argue that a diverse board can create different groups on the board. This can lead to increased conflicts between board members, which has negative consequences for the decision-making process of the company. Besides, Eagly (2007) mentions that women face obstacles that men do not face. When women are treated differently than men, this can be a disadvantage. In some instances, women are not taken seriously while the quality of the women is equal to that of the men. This is called a prejudicial disadvantage because women are treated differently than men. In summary, a gender diverse board has both advantages and disadvantages

As earlier mentioned, despite the advantages and disadvantages of women on the board,

there is no conclusive evidence on the effect of a gender diverse board on the performance of the company. While studying large listed US firms, Erhardt et al. (2003) results show that gender-diverse boards are positively associated with return on assets. These results are supported by Carter et al. (2003), showing a positive relationship when the firm value is measured as Tobin's Q. However, when Carter et al. (2010) did a follow-up study on the same subject as the study from 2003, the results show no significant relationship between financial firm performance and board gender diversity. Also, Adams & Ferreira (2009), find a negative effect between board gender diversity and firm performance measured.

Besides, the European evidence shows also some contradicting results. Both the studies of Lückerath-Rovers (2011) and Smith et al. (2006) show a positive relationship between women on boards and financial performance of firms from the Netherlands and Denmark. In contrast with this Rose (2007) and Marinova et al. (2015) investigated Danish and Dutch listed firms and find no significant relationship between board gender diversity and firm performance. Campbell and Mínguez-Vera (2008) find that the number of women on the board has a relation with the financial performance of the firm. The study concludes that "firms should focus on the balance between women and men rather than simply the presence of women" (Campbell & Mínguez-Vera, 2008). This is supported by Joecks, Pull and Vetter (2013), who find a U-shaped effect between gender diversity and financial firm performance measured as return on equity (ROE).

In addition, Boards around the world are under increasing pressure to choose female directors (Adams & Ferreira, 2009). Some countries take extreme measures to force companies to start electing female board members. The most extreme measure that was taken is the mandatory gender quota. This quota force companies to have a minimum percentage of women on boards. The first country which implemented this quota was Norway. As early as the beginning of 2003, the Norwegian Parliament passed a law that required all public listed firms to have 40% women on the board before July 2005. At first, this law was not mandatory but voluntary. However, the voluntary compliance failed and the Norwegian Parliament intervened and forced companies to select women board members by making the law mandatory. Firms had until January 2008 the time to fulfill the requirement. Recently, some researchers investigated the effect of the mandatory gender quota on the financial performance of the firm. For example, Ahern and Ditmar (2012) and Bohren and Staubo (2016), who investigated this for the Norwegian case. Both of the studies show a negative relation between the mandatory gender quota and the financial performance of companies.

In summary, there are several causes of why the evidence is not conclusive. The first cause is that the measure of financial performance differs between the studies. Some of the studies use accounting based measures (ROI, ROA, ROE), others use market-based measures (Tobin's Q), and then there are studies who use other specific measures or a combination of measures. The second

cause is that the way in how gender diversity is measured in the studies differ. Examples of this are; the number of women on the board, if there is at least one woman on the board, the percentage of women on the board, etc. The third cause is that in some countries the number of women on the board is too small to get a sample that is representative. When the sample is not representative, the results will also become insignificant or they can give the wrong impression. The fourth and last cause is the mandatory gender quota. It is possible that there is a difference between countries who use a mandatory gender quota and countries who do not.

1.2. Research objective and contribution

This study focuses on firms from France and the US. France is a really interesting country to investigate at this moment. France implemented the mandatory quota in 2017. A report of the Deloitte Global Center Of Corporate Governance shows the data of women in the boardroom in a global perspective. In 2017 41% of the board seats of the SBF (Société des Bourses Françaises 120) 120 index companies are held by women, this makes France the leader in Europe with regards to the number of women on the board. This index is based on the 120 most actively traded stocks listed on Euronext Paris. The index includes all stocks of the CAC 40 and CAC next 20. In addition, 60 additional stocks that are listed on the Euronext Paris are taken into account in this index. CAC 40 is the French stock market index that tracks the 40 largest French stocks based on the Euronext Paris market capitalization. The CAC next 20 index tracks the stocks from number 41 till 60. The percentage of 41% is an increase of 27,3% compared to 12,7% of board seats held by women in 2010 (Deloitte, 2017). This increase is mainly caused by the 40% legislative quota implemented by the government of France in 2017. The characteristics of gender did not receive much attention in French literature, this especially applies to the mandatory gender quota. Some studies investigate the effect of a gender diverse board on the financial performance of a firm. Boubaker, Dang and Nguyen (2014) find an insignificant negative effect when more women were added to the board of directors. The study of Ahmadi, Nakaa and Bouri (2018) contradicts with this and find a significant positive relationship between women on the board and financial performance. In addition, the study provides evidence that the percentage of women on board matters. When the percentage of women on the board is higher, the results will be better. So, just like the evidence from other countries from Europe, the evidence on French firms is not conclusive. This study can add new evidence on the effect of a diverse board on the financial performance of firms.

Besides, because the mandatory gender quota in France was implemented in 2017, there are almost no studies on the results of the mandatory gender quota. This means that there is no or almost no evidence is on what the effect of the mandatory gender quota is. Because most of the studies on the subject of the mandatory gender quota focus on Norway and the results show

negative results, one can only assume that the mandatory gender quota decreases the results of the company (Ahern & Ditmar, 2012; Bohren & Staubo, 2016; Isidro & Sobral, 2015). Evidence from France can help to confirm the negative results or to give an opposite view by providing positive results.

This study also provides evidence of firms from the United States. The first reason why this is interesting is that the governments of France and the U.S. have a different way in how to handle the unequal ratio between women and men on the board of directors. As earlier mentioned, the France government take an active stand by implementing the mandatory gender quota. However, the government of the U.S. does not do this, they leave the choice to the companies (Deloitte, 2017). This study can contribute to the field of government interference and the effect of this on the financial performance of the company. Where France set strict borders on the number of women on the board, the U.S. does not do this. It would be really interesting to see what the effect of mandatory gender quota is. Do firms from the U.S. perform better because they have more freedom to select board members, or do French firms perform better because they have more women on the board? The second reason is the difference in governance models. Companies from France work with the Continental corporate governance model and companies from the US with the Anglo-Saxon model. This makes it possible to look at differences between countries and between different models for corporate governance. According to Terjesen, Aguilera and Lorenz (2015), due to missing legislative standards, the U.S. corporate governance code is one of the most underdeveloped and poorly institutionalized codes in the world. It could be possible that the underdeveloped corporate governance code in the U.S. leads to poorer results in comparison with France.

To contribute to a better understanding of what the effect is of a diverse board on the financial performance of the company, the following research question will be investigated: *What is the influence of the presence of women on the board of directors on the financial performance of French and U.S. firms?*

To answer this question, this study will make use of three different theoretical frameworks; the agency theory, the resource dependency theory, and the critical mass theory. The agency theory is focused on resolving the conflicts and aligning the interests between a principal (shareholder) and the agent of the principal (directors and managers). There is a difference in the level of risk taken by managers and wanted by shareholders (Fama & Jensen, 1983). The resource dependence theory is introduced by Pfeffer and Salancik (1978), they suggest that external resources affect the behavior of a firm. The board of a company serves as a link between the company, its environment and the external resources on which the company depends. The last theory, the critical mass theory, can be combined with tokenism. Kanter (1977), states that tokens are individuals based on their

characteristics. Examples of these characteristics are; race, gender or age. According to Liu et al. (2014), a lone female director may be treated as a token and the impact of this director is likely to be limited. Critical mass theory suggests that when the size of the subgroup reaches a certain number, the impact of this group increases (Granovetter, 1978). The critical mass for women is achieved when there are at least three women on the board (Liu et al., 2014; Torchia, Calabrò, & Huse, 2011). These three theories are discussed in chapter 2.3.

1.3. Outline of the study

The remainder of this paper is organized as follows. In chapter two the literature review is presented. The literature review discusses the corporate governance mechanisms, the characteristics of the board of directors, the underlying theories of board gender diversity, the empirical evidence found by other researchers and the development of the tested hypotheses in this study. The third chapter of this study focuses on the research methodology, variables, robustness tests and the sample and data used in this study. The fourth chapter discusses the results of the OLS regression analyses and shows whether the hypotheses are confirmed. Lastly, chapter five presents the conclusion, the limitation and recommendations for future research based on this study.

2. Literature review

This chapter reviews the existing literature with regards to board gender diversity and financial firm performance. First, the concept of corporate governance will be explained. Second, the characteristics of the board of directors in general and in France and the U.S. will be explained. Third, underlying theories based on board gender diversity will be reviewed. Fourth, the empirical evidence concerning the effect of board gender diversity on financial firm performance from previous research will be discussed. Lastly, based on the previous sections, the hypothesis which will be tested in this research will be formulated.

2.1. Corporate governance

Recent research has viewed corporate governance in different ways. Shleifer and Vishny (1997) define corporate governance as a mechanism that deals with how suppliers of finance make sure they get a return on their investment. This definition is extended by La Porta, Lopez-de-Silanes, Shleifer, and Vishny (2000), who state that corporate governance is a set of mechanisms that makes sure that outside investors can protect themselves against expropriation by the insiders. Expropriation by insiders can be done in various ways, for example, insiders can steal profit or sell the output of assets of the company to another company below the actual market price. The expropriation of outsiders by insiders can be mitigated by the legal system, which consists of laws and their enforcement. Gillan & Starks (1998) define the concept somewhat differently. They state that corporate governance can be defined as "the systems of laws, rules, and factors that control operations at a company". According to Claessens and Yurtoglu (2013), there is no clear definition of corporate governance. The definitions can be divided into two categories. The first category contains definitions that identify behavioral patterns and the second category focuses on the normative framework. According to the paper, the first category of definitions is mainly focused on studies that investigate a single country or firms within a country. When investigating comparative studies, what will be done in this study, the second category of definitions is the better choice to use. This type of study investigates how the normative framework affects the behavior of firms, investors and other stakeholders. In short, there is no clear definition of the broad concept of corporate governance. Most simply said, corporate governance focus on how to monitor/control the management of a company in the best way.

Corporate governance consists of a wide range of aspects. According to Oh, Chang, & Martynov (2011), companies' responsibilities include the fields of economic, legal, ethical and discretionary and the results of it have to match the expectations that the society has of the companies. The main item of corporate governance is the relationship of companies with shareholders, creditors, financial markets and institutions and employees (Claessens & Yurtoglu,

2013). In general, there are two ways in how to allocate power within the firm. The first type of governance model is the one that is focused on maximizing shareholder value, this model is typical for firms in the U.S. The second type of governance model is not only focused on maximizing shareholder value, but on fulfilling the interests of diverse stakeholder. This model is typical for firms from Continental Europe and Asia (Aguilera, 2005). In summary, companies in Europe and Asia take not only the interests of the shareholders into account but also the interests of all the other shareholders where firms in the U.S. take only the interests of the shareholders into account.

As mentioned in the introduction, corporate governance mechanisms can be divided into external and internal mechanisms. Examples of internal mechanisms are managerial compensation, the board of directors and the ownership structure. The internal mechanisms intend to control and monitor the activities of the company. This control and monitoring activities are usually done by the board of directors and the most important shareholders (Cuervo, 2002; Tian & Twite, 2011). Examples of external mechanisms are the market for corporate control, the market for managers, the market for products and services, disclosure of information and regulation (Cuervo, 2002; Rediker & Seth, 1995). Daily, Dalton and Cannella (2003) state that the market of corporate control serves as an external mechanism that is typically activated when internal mechanisms for controlling managerial opportunism have failed. According to, Cuervo (2002), the legal system of a country and the codes of good corporate governance are other external mechanisms that are important. In summary, stakeholders of companies can use internal and external mechanisms to control and monitor the company. The mechanisms can differ across countries. In the next section, first the most-used internal and external corporate governance mechanisms are described. After this, the most important findings of corporate governance codes for France and the U.S. will be discussed. Because the board of directors is a key corporate governance mechanism in this study, this will be discussed in chapter 2.2.

2.1.1. Internal governance mechanisms

According to Tian and Twite (2011), internal governance mechanisms consist of four dimensions: managerial compensation, ownership structure, shareholder rights and board characteristics. Therefore, these four dimensions will be discussed. As mentioned before, because board characteristics are the core mechanisms in this study, this mechanism will be discussed in chapter 2.2.

2.1.1.1. Managerial compensation

The first important internal governance mechanism that will be discussed is managerial compensation. The compensation of managers does not only exist of a salary component. According to Hartzel and Starks (2003), managerial compensation consists of salary, bonus, option and stock

grants, and long-term incentive plan payouts. The total of these compensation components together is called the compensation package. Compensation packages are used to motivate managers to take actions that maximize the shareholders' wealth (Florackis, 2008). Guay, Core, and Larcker (2003) state that there is information asymmetry between shareholders and managers. Managers can observe the growth opportunities of the firms and can act on this. For the shareholders it is hard to measure if the managers act in their best interest. Due to this asymmetric information between the managers and shareholders, both equity and compensation-related incentives are required. When managers only receive a salary and some bonuses, they will be risk-averse. Managers are not willing to risk their salary and bonus because there is no benefit for them. When there is an increase in the compensation package of managers based on the performance of the company, they will be less likely to make decisions that are in contradiction with the interest of shareholders. Therefore, agency costs are low when the compensation package of managers is in line with the interest of the shareholders.

2.1.1.2. Ownership structure

The second important internal governance mechanism that will be discussed is the ownership structure. The ownership structure of a company is based on the number of shares owned by each shareholder. According to Florackis (2008), shareholders with a small number of shares can monitor the management in active ways. However, small shareholders have no incentive to monitor the behavior of management. When there are a lot of small shareholders, none of the shareholders have an incentive to monitor the behavior of the management. As a consequence, this leads to what is called the free-riding problem in monitoring. None of the shareholders benefit from monitoring the management, so, none of them will do this. In contrast with this, shareholders with a large stake in the company have more incentive to monitor the management (Shleifer & Vishny, 1997). Large shareholders are willing to protect their valuable investment and have therefore more benefit by monitoring the management than small shareholders. Large shareholders reduce agency problems through active monitoring. However, when large shareholders gain nearly full control of a corporation, this can lead to conflicts with smaller shareholders. According to Shleifer & Vishny (1997), large shareholders can act only in their self-interest to the expense of smaller shareholders. Therefore, a balanced ownership structure is recommended.

2.1.1.3. Shareholder rights

The third and last internal governance mechanism that will be discussed is shareholder rights. Shareholder rights differ across countries and can even differ across companies. As mentioned before, large shareholders can select board members that can protect their interests. However, to prevent that large shareholder's act only in their self-interest corporate law, corporate charters and

securities regulations limits this power. Even a basic right like corporate voting and appointments to the board can vary across companies and firms. For example, shareholders have to wait three years to remove directors (staggered board) or ordinary resolutions can only pass by a supermajority (Brecht, Bolton, & Roëll, 2003). In addition, if the board of directors does a worse job in monitoring the management, shareholders have the right to replace them by a proxy fight (Brecht et al., 2003). According to Hancock (1990), the role of proxy voting is to transfer voting right from one party to another party to make it possible to replace the board of directors. Multiple groups of shareholders join forces and gather enough votes (proxies) to replace the board of directors.

2.1.2. External governance mechanisms

In this study two external governance mechanisms will be discussed: the market of corporate control and the legal system and codes of good corporate governance.

2.1.2.1. The market of corporate control

The first external governance mechanism that will be discussed is the market of corporate control. According to Weir et al. (2002), the market of corporate control is the key external governance mechanism. Jensen and Ruback (1983) view the market for corporate control, often referred to as the takeover market, as a market in which alternative management teams compete for the right to manage corporate resources. There are three types of business activities in the market for corporate control; firms that actively seeking and completing an acquisition, managing a portfolio of businesses, or firms that only sell businesses. There are multiple reasons why these firms are active in this market. The first reason is that firms try to increase their market power which increases their resources and capabilities to compete. Second, firms use takeovers to overcome barriers to entry into markets that are otherwise closed. Also, firms can divest for several reasons. For example firms can sell a part of their company that does not fit in the overall picture of the company. As a result of this, firms can use this money by investing it in the core business and competencies of the company (Hitt, Hoskisson, Johnson, & Moesel, 1996). One special form of takeovers is hostile takeovers. When a hostile takeover happens, the buyer beliefs that the target firms are underperforming. According to Brecht et al. (2003), hostile takeovers are powerful governance mechanisms because they offer the possibility of bypassing the management to take permanent control of the company, by concentrating voting and cashflow rights.

2.1.2.2. Legal system and codes of good corporate governance

The second and last external governance mechanism that will be discussed is the legal system and the codes of good corporate governance. The legal system of a country can establish a norm that can regulate the behavior of a firm, protect the rights of minority shareholders by offering different levels of protection of the rights of minority shareholders, influence the development of the capital market

and the growth of a country. The legal system can be divided into common law and civil law. Civil law is based on codes and is applied in Continental European countries, whereas common law is mostly used in Anglo-Saxon countries and depends on case-based law (Kock & Min, 2016). In addition, the codes of good corporate governance give recommendations regarding the behavior and the structure of the board of directors. The efficiency in the application of the codes of good governance is limited by the type of legal system of the country. In common law countries judges can apply the codes of good governance directly, making these codes rules. However, in civil law countries law is developed by parliament, this means that judges can not apply the codes of good governance with the force of regulation (Cuervo, 2002).

2.1.3. Corporate governance code in France

In this chapter, the state of corporate governance in France is described. In France, all listed companies have to fulfill the rules of the International Financial Reporting Standards (IFRS). The International Accounting Standards Board sets the rules of the IFRS. According to the IFRS Foundation, the standards must bring transparency, accountability, and efficiency to financial markets around the world. At this moment, IFRS is used in at least 120 countries including the countries in the EU. A big criticism is that IFRS is not used in the U.S., the U.S. has its own standards called the U.S. GAAP. Concerning the legal system, France makes use of a civil law system. France uses, just like Spain and Spanish colonies (including countries in Latin America) as well as many countries conquered by Napoleon, a system that is called the French of Napoleonic civil law tradition. The civil law system is based on a Code of Law. Within the civil law system, the laws are stated explicitly and clearly. As a result of this, there is not much room for judges to make rules. There is evidence that common law countries have better systems of corporate law compared to civil law countries. However, this is not easy to prove (Mahoney, 2001). The company law code in France is called the Code de Commerce and was last updated in 2017. In the Code de Commerce, most of the corporate governance laws are described. The most important articles about corporate governance, are the articles from L225-37 up to L225-68 (OECD, 2019).

Besides the company law code, the regulatory framework of France also consists of a national corporate governance code. This code is called the Corporate Governance Code of Listed Corporations (OECD, 2019). The first national code in France was the Vienot report in 1995. The Vienot report was a request of two employers' unions to Marc Vienot, at that moment Chairman of the Societe Generale. The goal of the report was to reflect upon the role of directors of French listed companies. The report includes a list of recommendations to the board of director of France listed companies which were not mandatory. The recommendations of the report covered different areas, examples of this are the independence of directors, the operation of the board of directors and the

creation of specialized committees (Cuomo, Mallin, & Zattoni, 2016). After the Vienot report in 1995, some other codes appeared as an extension of this report. In the end, these reports lead to the AFEP-MEDEF Code also known as the Corporate Governance Code of Listed companies. This report was first published in September 2002 and is updated on a regular basis. AFEP stands for the French Association of Private Enterprises, this association represents the 113 largest private corporations of France. The association is governed by the French law and certified annually by an auditor. MEDEF stands for Movement of the Enterprises of France, this is the largest employer federation in France (AFEP/MEDEF, 2018). The AFEP MEDEF governance code (2018) states that ''the code, that was adopted by almost all of the SBF 120 companies, provides a set of demanding and precise recommendations on corporate governance and, in particular, on the compensation of their executive and non-executive officers''. In France, the surveillance of the corporate governance code is partly done by a private organization and partly by the securities regulator. This contradicts most of the other countries where most of the time only the securities regulator or/and the stock exchange is responsible for the surveillance (OECD, 2019).

As earlier mentioned, France implemented the mandatory gender quota of 40% for all listed companies in 2017. This was done by the Law2011-103 with the title "the equal representation of men and women on boards of directors and supervisory board and professional equality" (Rosenblum & Roithmayr, 2015). The mandatory gender quota was implemented after the implementation of the Sauvadet law in 2012. This law required governmental bodies to implement gender quota requirements. Besides the mandatory gender quota, there are other measures to address the components of diversity beyond gender. The most important articles of the AFEP MEDEF corporate governance code with regards to diversity are 6.2 and 16.2.1. The governance code recommends that boards of directors take diversity into account. This is not only gender diversity but also nationality, age, skills, expertise, etc.. The code also requires companies to disclose the diversity policies in their annual reports (AFEP/MEDEF, 2018; Deloitte, 2017).

2.1.4. Corporate governance code in the U.S.

In this chapter, the state of corporate governance in the U.S. is described. In the U.S., all listed companies have to fulfill the rules of the U.S Generally Accepted Accounting Principles (U.S. GAAP). The U.S. GAAP is a set of accounting principles, standards, and procedures that are mandatory to follow when companies compile their financial statements. The U.S. GAAP is the American counterpart of the IFRS. Within the U.S. GAAP, there are rules for the disclosure of financial information. Opposite to most of the other countries, the U.S. does not have a corporate governance framework. Instead, the U.S. relies upon its laws, regulations and listing rules as its legal corporate governance framework. The primary source of corporate governance is state law, however, the

federal regulator, the Securities and Exchange Commission (SEC), regulate some governance matters (OECD, 2019). The legal system that is used in the U.S., is the common law system. This system is used in most of the former colonies of England, such as Canada, New Zealand and Australia. Common law countries have the strongest protection of outside investors. This is a result of the fact that rules in the common law system are made by judges, they have to apply general principles on every case they are handling. In contrast with the civil law system, there is no exact letter of the law to which the judge is bound. So, the judge can consider for each case which decision is best without being bound by exact letter of law (Aggarwal, Erel, Ferreira, & Matos, 2010; Aguilera, 2005; La Porta et al., 2000).

The U.S. corporate governance framework is not a static system but dynamic and has changed continuously over the past decades. The primary sources of rules and regulations are the Securities Act of 1933 and the Securities Exchange Act of 1934, both of the acts were last updated in 2018. (OECD, 2019). At the beginning of the 21st century, the U.S. model of corporate governance shows that the most important elements of good corporate governance models around the world were in place. The influence of shareholders was provided by active institutional investors, boards were independent and rewarded by long-term equity incentives linked to the price of a share and auditors and accountants certified the (financial) information from the board (Lazonick, 2007). However, the U.S. corporate scandals at the end of 2001 were the beginning of the re-examination and improvement of corporate governance, not only in the U.S. but worldwide (Aguilera, 2005). The scandals were a consequence of the fact that the weakness ineffectiveness of each element could undermine another. Examples of this are that boards failed to protect the correctness of the disclosed financial information despite the correct presence of board members and shareholders failed to value companies in the right way (Jackson, 2010). The scandals have resulted in the introduction of the Sarbanes-Oxley Act (SOX) in 2002. The SOX Act caused a fundamental change in the corporate governance of the U.S. The traditional disclosure requirements were replaced by regulatory mandates. Besides, areas that in the past were regulated by the states are now under the control of the SEC, this shows that the federal government of the U.S. has increased its role. The SOX Act has five main objectives; 1) make the independence of auditing stronger, 2) increase the quality and transparency of disclosure of financial statements, 3) improve corporate governance, 4) increase the objectivity of research and 5) make the laws of federal security stronger and use criminal penalties (Jackson, 2010).

For several years, the economic situation in the U.S. was good. The situation changed with the financial crisis of 2008-2009. The U.S. government had to act to solve the problems that were created by this crisis. The U.S. government did this by introducing The Dodd-Frank Act of 2010, this was a book of over 1500 pages that reflects the drivers and issues related to the financial crisis.

Within the Dodd-Frank Act, some sections extend the corporate governance framework in the U.S. With the SOX Act, the U.S. government had strengthened the position of the federal government with regards to corporate governance. This trend continued with the introduction of the Dodd-Frank Act. The federal regulation of public regulation became even stronger. The most important areas that were reformed with the new act were; shareholder nomination of candidates for the director position and a non-binding shareholder vote on executive compensation (Vasudev & Watson, 2012). In summary, in the first instance, there was not much federal regulation of corporate governance in the U.S., however, in the last decades due to several crises the federal government strengthens their position.

Despite the fact that the federal government has strengthened the position in the field of corporate governance, there are still no mandatory quotas for the number of women on the board. Through the implementation of mandatory quotas by other countries, the SEC is stimulated to investigate the issue (Deloitte, 2017). According to (O'Connell, Stephens, Betz, Shepard, & Hendry, 2005), argue that regulatory participation, by for example the SEC, is important for giving support during the process of change in board composition. However, implementing a mandatory quota is only possible when the American law allows this. At this moment, the implementing of mandatory quota such as in Norway is unconstitutional. Therefore, it is not likely that the government of the U.S. will implement a mandatory gender quota. As a response to the increasing pressure of a gender diverse board, the SEC implemented a new rule on February 2010. This rule (SEC Rule 407(c)(2)(vi)) requires that listed firms add to their proxy disclosure statements regarding board diversity (Perrault, 2015).

2.2. Board of directors

The characteristics of a board of directors of a company can differ between companies. These corporate board characteristics are one of the key measures of corporate governance. The board of directors is responsible for all of the important decisions that are made in the company, examples are decisions about managerial compensations, investments and the expansion of business activities (Bhagat & Bolten, 2008). Board tasks can be divided in multiple ways, one of the most common separations is between board service and control tasks. The tasks of the board of directors can have an internal, external and strategic focus. According to the papers, advice and counsel, networking and strategic participation are service-related tasks. Control related tasks are behavioral, output and strategic control (Forbes & Milliken, 1999; Minichilli, Zattoni, & Zona, 2009). When looking at the service tasks, the advisory task is based on an internal focus. The board of directors is focused on improving the decision-making process to fulfill the interests of the shareholders. The networking task has an external focus and is based on the relationship between the firm and its external

shareholders. Besides, the networking tasks can contribute to the legitimacy of the company. The strategic task is focused on strategic focus. The purpose of this task is to create a competitive advantage for the company. The behavioral task is the first task of control-related tasks. The task has an internal focus and its primary purpose is to monitor the behavior of the CEO and top managers. The output control task is externally focused and has a goal to monitor the firm corporate financial performance. Lastly, the strategic control task has its focus on a strategic level. This task consists of both evaluating and monitoring strategic decision making (Minichilli et al., 2009).

According to Carter et al. (2010), the board of directors has at least four important tasks. These four tasks are described as (1) the monitoring and controlling of the managers, (2) giving information and counsel to managers, (3) make sure that the company is complying with law and regulations, and (4) link the company to the external environment. The composition of the board affects the way in how the board performs the functions, this can influence the financial performance of the company. Van den Berghe & Levrau (2004) do not speak about tasks, but about roles that the board of directors fulfills. According to the study, there are six board roles identified, which are derived from different theories of corporate governance. These roles are (1) the linking role, (2) the control role, (3) the strategic role, (4) the maintenance role, (5) the coordinating role, and (6) the support role. The linking role refers to the access that each board member has to valuable resources and information. The control role is linked to the monitoring role the management has towards corporate performance. The strategic role involves making important decisions on a strategic level, while the maintenance role must ensure that the company keeps its daily activities up-to-date. The coordinating role has a goal to keep all stakeholders satisfied to make sure that the company is in balance. Lastly, the support role is there to make sure that the board is there to support the choices of professional management. Overall, the studies use different terms to describe the tasks/roles of the board, However, for a large part, they describe similar tasks/roles.

As earlier mentioned, there are differences between the Continental European model of corporate governance used in France, and the Anglo-Saxon model of corporate governance used in the U.S. As a result of this, there are differences between the board of directors of the two models. One of the key differences between the board of directors of the two models is the structure. The Continental European model consists of a two-tier board structure, whereas the Anglo-Saxon model uses a one-tier board structure (S. Terjesen, Sealy, & Singh, 2009). The two-tier board consists of an executive board, the supervisory board, and chairperson(s). The role of the supervisory board is to monitor the board of directors. One important task of the supervisory board is to control the important decision-making of the firm. The executive board is responsible for all the day-to-day activities (Millet-Reyes & Zhao, 2010). The two-tier board represents a clearer formal separation between the function of supervision and that of management. The one-tier board does not have a

supervisory board, instead, there is a distinction made between the executive and non-executive directors. However, both of the executive and non-executive directors take place on the same management board. The non-executive managers fulfill the task of the supervisory board in the two-tier model, namely supervising the executive directors that are responsible for the day-to-day activities (Cernat, 2004). The one-tier board is characterized by a closer relationship between the directors and better information flow.

As mentioned in the introduction, there are both advantages and disadvantages when there are women on the board of directors. When the advantages outweigh the disadvantages of women on the board, for companies it will be more attractive to acquire women to the board of directors. One of the most important advantages is that talent and ability are spread around all different groups in society. This means that when there is a more diverse board, more talents and abilities will be used in the activities of the company (Van den Berghe & Levrau, 2004). Kang et al. (2007) suggest that there are two advantages to having women on board. The first is that women are not part of the "old boys" network, this has as a result that women can be more independent than men. The second advantages are that women have in general a better understanding of consumer behavior, the needs of customers, and opportunities for companies. Carter et al. (2003) mention also the first advantage. According to the study, diversity can increase the independence of the board because people with a different background might ask different questions that would not be asked by directors with a traditional background (Caucasian white man). Besides, the study mentions another advantage regarding the problem-solving capacity of a gender diverse board. When a board is more diverse, problem-solving will be more effective and besides, the decision making of the board is more creative, from a higher quality and the board is better able to understand the market conditions. In addition, women can create an competitive advantage by helping in creating diversity in companies products and labor markets (Van den Berghe & Levrau, 2004). Smith, Smith and Verner (2006) add to this that a diverse board is positive for the public image which results in better firm performance. Besides, boards are more innovative when they are more diverse (Miller & Triana, 2009; Nielsen & Huse, 2010).

However, in contrast with the advantages, there are some disadvantages. According to Rose (2007) the decision process may take longer, as there are more perspectives on solving the problem. Besides, the decision-making process can be disturbed by a fragmented board. This can be a result of all the different opinions within the boardroom. This is supported by (Pletzer, Nikolova, Kedzior and Voelpel (2015), they argue that a diverse board can create different groups on the board. This can lead to increased conflicts between board members, which has negative consequences for the decision-making process of the company. In addition, Eagly (2007) mentions that women face obstacles that men do not face. When women are treated differently than men, this can be a

disadvantage. In some instances, women are not taken seriously while the quality of the women is equal to that of the men. This is called a prejudicial disadvantage because women are treated differently than men. When this happens, it is possible that initiatives initiated by women directors which can be beneficial for the company are not taken seriously. This can have as consequence that the company misses opportunities (Eagly, 2007). In summary, a gender diverse board has both advantages and disadvantages.

2.2.1. Board of directors in France

After the general introduction on the board of directors, this chapter focus on how the board of directors is structured in France. According to the corporate governance code of France, ''the Board of Directors performs the tasks conferred by the law and acts in all times in the corporate interests" (AFEP/MEDEF, 2018). As mentioned before, companies can have a one-tier board or a two-tier board. France's policy on this point differs compared to most of the other countries. In most countries, it is only possible for companies to be governed by the one-tier or the two-tier structure. However, in France companies have the choice to choose between both of the board structures (Charreaux & Wirtz, 2007). This has not always been this way before 1966 companies in France were only allowed to use a unitary board of directors to govern the company. This system is normally used in Anglo-Saxon common law countries like the U.S. and the United Kingdom. The unitary board structure has a combined chairman and chief executive officer. After the introduction of the Commercial Code implemented by the French government in 1966, the two-tier board structure which is closely linked to the German structure was allowed to use to govern the company. The two-tier structure consists of a supervisory board, management board, and separate chairpersons. The supervisory board tasks are to monitor the management board which is responsible for the day-to-day activities. Depending on the size of the firm, up to one-third of the supervisory board seats must be filled in by employees. As a result of this, shareholders cannot appoint all the non-executive directors. Because the supervisory board controls the important decision-making in the firm, the previous point is interesting. The power in the supervisory board is not only in the hands of the shareholders but also in the hands of the employees (Millet-Reyes & Zhao, 2010). At this moment when looking at the CAC 40 companies, most of them had chosen the unitary board structure. However, the two-tier board structure is adopted by several large French companies and is favored by corporate governance reformers (Charreaux & Wirtz, 2007; Millet-Reyes & Zhao, 2010).

Aste (1999) wrote an article on corporate governance in France. In the article Aste (1999) mentions the strengths of the two-tier board structure in France. The first strength is that there is a clear border between the responsibility of the management board and the supervisory board. Second, because of the small size of the management board (three to five members), the decision-

making process is quick. Third, the two-tier board structure provides non-traditional board members an opportunity to become a director, this creates more diversity in boardrooms. Fourth, the two-tier board structure creates legitimacy, this results in positive publicity and attracting more foreign capital. Last, it can satisfy the interests of the directors when changing from one-tier to a two-tier board structure (one the head of the management board, the other of the supervisory board). When one director is no longer willing or capable to manage a company but still needed and willing to provide supervision on corporate affairs, a two-tier board structure can be better.

Besides the strengths, the two-tier board system has also some weaknesses. The first weakness is that not economic- but political reason is often the reason why a company changes its board structure. This makes it for example possible to replace a director of the management board by assigning the director to the supervisory board. Second, companies can change between the unitary and two-tier boards constantly. For example, when the power of new directors rises, the older directors can lack confidence in the new directors, therefore, the older directors can change the structure to keep power in a supervisory role. Last, there may be an imbalance in power between the supervisory board and the management board. The supervisory board can exercise too much power which can lead to poor business decisions and corporate wrong-doing (Aste, 1999). Companies in France have to make a decision based on the advantage and disadvantages of both structures when choosing one of both. As earlier mentioned, most companies choose the unitary structure because with this structure the company keeps more in control.

As mentioned in the introduction, in 2017 41% of the board seats of the SBF 120 companies in France were held by women. The percentage of 41% is an increase of 27.3% compared to 12.7% of board seats held by women in 2010 (Deloitte, 2017). This increase is mainly caused by the 40% legislative quota implemented by the government of France in 2017. In December 2011, the French Parliament voted for the 'Zimmermann-Cope' law, this law requires companies to have at least 40% director representation of both genders with a threshold of at least 20% in 2014. This law applies to all listed companies (Rebérioux & Roudaut, 2017). However, where the number of women on board increased extensively in the last years, the number of CEOs (1%) that are women and the number of women board chairs of SBF 120 companies is still low (2.7%) (Deloitte, 2017). Carol Lamber, the France governance leader, states that "quotas such as the one implemented in France have changed the way board composed". According to a study that was performed by Deloitte France Center for Corporate Governance and Human Capital Practice, women directors are six years younger than male directors and a large part of these women have international experience.

2.2.2. Board of directors in the U.S.

After the discussion of the characteristics of the board of directors in France, this chapter deals with the characteristics of the board of directors in the U.S. According to Delaware Law, Title 8, Article 141(a), the board of directors in the U.S. is responsible for all the business and affairs of the company, except otherwise determined. The corporation law of all states assigns managerial power in the same to the board of directors. In the U.S., the board of directors is always a one-tier (unitary) board, which is a characteristic of Anglo-Saxon countries (Cernat, 2004). This is in contrast with the board of directors in French firms were companies have the choice between a one-tier or two-tier structure. The one-tier board of directors has both the managerial and supervisory responsibilities. So, the board of directors is responsible for both the day-to-day activities and the monitoring of these activities, there is no clear separation between the tasks. The board of directors in the U.S. traditionally consists of (1) the Chief Executive Officer (CEO), (2) executive directors, (3) Chairman which is often the CEO, and (4) independent directors. In the U.S., companies may designate their CEO as both CEO and chairman, however, this is not the norm. At this moment around 50% of the boards have a separate CEO and chairman, while at the other 50% of the companies, the CEO is the same person as the chairman. The independent directors serve as the supervisory board of the company. The tasks of the independent directors are to (1) monitor the day-to-day activities, and (2) to challenge the strategy of the company (Block & Gerstner, 2016).

Just like the board structure in France, the U.S. board structure has some strengths and some weaknesses. The first strength is that the one-tier board structure in the U.S. has an efficient and effective information flow. This is a result of the structure and size of the board when using the single-tier structure. Because the single-tier board has numerous meetings where all members of the board are present, the board has a wide scale of knowledge on both the manager and the independent directors. Second, the decision making in a single-tier board is fast. The management board and supervisory board are combined, so, the decision does not need approval from a separate supervisory board. Third, the board has a better understanding of the business. The third strength is a result of frequent meetings and unity in the management board and supervisory board, this makes it possible for the entire board to take a part in the strategy of the company and the decision-making process (Jungmann, 2007). Besides the advantages, there are some disadvantages. The biggest disadvantage of the single-tier structure is that the board is responsible for the day-to-day activities and the monitoring of these activities. So, the board is monitoring its own decisions. This can lead to problems and the company has to make sure that there are truly independent. Second, when there is a combined CEO/chairman, this can decrease the effectiveness of corporate control. When the power of the CEO/chairman is too big, it can be hard/frightening for independent directors to stand up to the CEO/chairman. Last, personal relationships can disturb effective monitoring. Monitoring

can be difficult when there is a feeling of gratitude or norms of social difference between directors (Block & Gerstner, 2016).

Despite the fact that the U.S. does not have a mandatory gender quota, the number of women on boards of Fortune 100 companies has increased with 5.2% to 25% in 2018 compared to 19.8% in 2012 (Deloitte, 2018). According to the 2018 Missing Pieces Report of Deloitte, with regards to the board of directors of Fortune 500 companies women have made more progress between 2016 and 2018 than between 2012 and 2016. The report states about this; "this increased rate of change, while still slow, is encouraging" (Deloitte, 2018). Just like in France, the percentage of women that are CEO (4.6%) and the percentage of women that are chair (3.7%) is still low. Although the U.S. government does not advocate a mandatory quota and state that self-regulation is more effective, there are several states who have passed nonbinding measures. For example California, this state passed a resolution that has the goal greater representation of women on boards in public traded companies, and that all these companies had at least one women on the board by 2016. Another example is Illinois, Illinois passed a resolution in 2015 to encourage public companies to have at least three women on the board by the end of 2018. Besides this, there are initiatives of organization to increase the number of women on the board. The 30% club of the United States is a great example. This organization with chapters all over the world has the objective of achieving 30% representation of women on S&P 100 boards by the end of 2020 (Deloitte, 2017). In summary, even though there is no mandatory quota, there are a lot of initiatives by states and organization to increase the number of women on the board.

2.3. Underlying theories of board gender diversity

Theories of different fields (e.g. finance, psychology, and economics) can be used to explain the relationship between board gender diversity and firm financial performance. According to Carter et al. (2010), no single theory can predict the relationship between board gender diversity and firm financial performance. It is best to use an 'interdisciplinary' approach and take from different fields the most important theories regarding your subject. Terjesen, Sealy and Singh (2009) did research about the theoretical perspectives used in studies that investigate the effect of women on boards. The result of this study was that the study finds a wide range of theoretical frameworks that are used in several different levels of analysis. Some of the theoretical frameworks are used more often in studies that investigate the relationship between women on boards and the financial performance of firms than others. For example the agency theory, human capital theory and the resource dependency theory you often come across in studies. In contrast, the gendered theory of trust, ingratiation theory and leadership theory you only occasionally see in studies that investigate the relationship between women on the board on the financial performance of a company.

Looking at previous studies in this subject, they do not always use the same theories to explain the relationship between board gender diversity and firm performance. The study of Liu et al. (2014) use, for example, three theories; the resource dependency theory, the agency theory, and the token status theory. Carter et al. (2010) also uses the resource dependency theory and the agency theory but do not use the token status theory. Besides the study used two more theories; the social psychological theory and the human capital theory. Lückerath-Rovers (2011) use the same theories as Liu et al. (2014), however, the study extends it with the critical mass theory. These examples show that not all the studies on the subject use the same theories to get support for their results. However, looking at a wide scale of studies, the statement of S. Terjesen et al. (2009) gets confirmed. The most used theories in the literature are the agency theory and the resource dependency theory. Besides, the critical mass theory and tokenism have been on the rise in recent years.

This study will focus on four theories; the resource dependency theory, the agency theory, the critical mass theory, and tokenism. The resource dependency theory is interesting because the theory explains how the board is the link between the company and the external resources. Some other studies take also the human capital theory into account, this study does not. The human capital theory complements the resource dependency theory by stating that board diversity leads to a variety of unique human capital. With human capital, they mean a person's experience, skills, education, etc. (S. Terjesen et al., 2009). However, this study only focuses on gender so these characteristics are not that important for this study. Besides, this study takes critical mass theory and tokenism together. Both theories focus on the effect of minorities on the board and complement each other.

2.3.1. Resource dependency theory

The first theory that can explain the relationship between board gender diversity and firm financial performance is the resource dependency theory. The resource dependency theory is mainly based on the work of Pfeffer and Salancik (1978). The study suggests that the board has to serve as a link between the company and the external resources on which the company depends. The link between the board and external resources is essential for the company in gaining the necessary resources for good corporate performance. Members of the board can provide important resources to the company (Hillman & Dalziel, 2003). According to Pfeffer and Salancik (1978), the resource dependency theory gives the company four advantages of linking the company to the external environment. These four advantages are: (1) supply of resources such as expertise and information; (2) creation of communication channels with important external parties; (3) gaining the commitment of support from important external parties; (4) creating legitimacy.

The four advantages mentioned before can be divided into three groups; advice and counsel,

communication channels and legitimacy (Pfeffer & Salancik, 1978). When it comes to advice and counsel, the literature suggests that gender-diverse boards have a higher quality of board consultations of issues that are highly complex. Some of these complex issues are hard or unpleasant to solve if the board is all-male (Huse & Solberg, 2006; Kravitz, 2003). With regard to communication channels, because of the different life experiences and perspectives, women directors are better to link the firm to female customers, women in the labor force and society (Liu et al., 2014). The last benefit, legitimacy, enhance the firm's external legitimacy. When there are women on the board, it gives a positive signal to gender equality and underlines the important role of women in the workforce (Isidro & Sobral, 2015). All these three points can have a positive influence on firm performance. Besides these three benefits, there are some other benefits in how the board links to performance. According to Williamson (1984), firms can benefit from better linkages by the reduction of transaction costs related to environmental interdependency. In addition, firms can mitigate uncertainty in the environment (Pfeffer, 1972). Lastly, it can help companies to match changes in the environment with the changes in the organization so the firm can survive (J. Singh, House, & Tucker, 1986).

According to Carter et al. (2010), the resource dependency theory is one of the most important theories in relation to board diversity. When a board is more diverse, the board will provide more resources. This is a consequence of the fact that different types of directors will provide different valuable resources to the firms. This will result in better firm performance (Hillman, Cannella, & Paetzold, 2000). In addition, companies with gender-diverse boards can show that they want to improve the governance with the help of diversity to use the available talent and enhance the relationship with the stakeholders (V. Singh, 2007). Lastly, when the company adds more women on the board, the board can make decisions that are more creative, innovative and non-traditional because there are directors who look all from a different angle to the problem (Carter et al., 2010). In summary, all of the previously mentioned points can contribute to a better financial performance of the company.

2.3.2. Agency theory

The second theory that can explain the relationship between board gender diversity and firm financial performance in the agency theory. Jensen and Meckling (1976) define the agency relationship as an agreement between two parties, the principal (e.g. shareholder) and the agent (e.g. director or manager). The principal outsources responsibilities and decision making authority to the agent which will act on behalf of the principal. When the principal thinks that the agent will not always act in the best interest of the principal, the principal can minimize this by giving the right incentives to the agent and monitor the agent to limit deviant activities. Eisenhardt (1989) adds to

this that the agency theory is concerned with solving two problems. The first problem is the problem that the goals of the principal and the agent are not the same and that is it very difficult or expensive to check how the agent is acting. The problem is that it is hard to verify if the agent is acting on behalf of the principal. The second problem is that the principal and the agent can have a different attitude towards risk. As a result of this, the principal and the agent prefer different actions. The control of the agency problem is most important when the managers who make the decisions do not have a major share in the firm. The managers who do not have a major share in the company, do not bear the wealth effect of their decision. As a result of this, the interest of the manager (agent) may be different than that of the shareholder (principal) (Fama & Jensen, 1983). In short, the agency theory deals with the problems financers (principals) have in making sure that their funds are used for the right projects (Shleifer & Vishny, 1997).

To overcome the agency problem, there are some solutions. In the ideal situation, managers sign a complete contract. This contract tells the managers exactly what to do in all circumstances and how to divide the profit of the firm. However, because nobody can predict the future, complete contracts are not possible. As a consequence, managers get control right and by these rights, the managers can decide on how to spend funds of the firm (Shleifer & Vishny, 1997). So, complete contracts are not a solution. According to the literature, there are two solutions. The first solution is to get a better monitoring/oversight of the decisions the management makes and how they implement it (Baysinger & Butler, 1985; Fama & Jensen, 1983). The monitoring of the management is affected by the board composition. When there are people with a different gender or cultural background on the board, they will probably ask different questions that directors from a cultural background. This has as a result that a diverse board is more activist and results in more effective monitoring (Carter et al., 2003). The second solution to mitigate the agency problem is to use incentive mechanisms, for example equity ownership or a compensation structure that can link the compensation to the performance of the company. As a consequence, the interests of the principal and the agent are becoming more equal (Datta, Musteen, & Herrmann, 2009; Fama & Jensen, 1983). In summary, the literature suggests that there is a strong link between board characteristics, managerial incentives, and strategic choices.

However, the agency conflict cannot be mitigated without making costs. According to Fama and Jensen (1983), the agency costs consist of costs for structuring, monitoring and bonding a set of contracts among agents with conflicting interests. Besides, agency costs also include the value of output lost because the cost of contracts exceeds the benefits. Jensen and Meckling (1976) are more specific and define the agency costs as the sum of the monitoring expenditures by the principal, the bonding expenditures by the agent and the residual loss. Because of these costs, firms try to minimize the chance that they suffer from agency problems.

According to Carter et al. (2010), the agency theory provides not the most evidence in supporting the relationship between board diversity and the financial performance of the company. However, the theory is not saying that a diverse board does not have a relationship with the financial performance of a company. The study suggests that a more diverse board is better in monitoring the activities. Board diversity increases the tendency of the board and when a board is more independent they are in general better in monitoring. Effective monitoring can lead to better firm performance because it reduces agency costs (Hillman & Dalziel, 2003). In addition, gender-diverse boards are more active in monitoring activities. When a board is more gender-diverse, the board requires more auditing and more accountability from the management (Adams & Ferreira, 2009; Gul, Srinidhi, & Tsui, 2008). Besides, governance quality is important. Well-governed firms may suffer a negative consequence when they have a gender diverse board. This is due to over-monitoring by the women on the board (Adams & Ferreira, 2009). However, Gul et al. (2011) and Adams and Ferreira (2009) state that when a firm has weak governance, adding women on the board can help to partially solve this problem. This is a result of the fact that women on boards are tougher monitors. When governance quality of a firm is high, there is less need for monitoring and adding women on board can lead to over-monitoring because women are on average tougher monitors. On the contrary, the opposite seem also be true, when a firm have weak governance quality, adding women on board can increase firm value by tougher monitoring (Adams & Ferreira, 2009). So, the agency theory does not give a clear prediction of the relationship between a gender-diverse board and a firm's financial performance, however, the theory also does not rule out this relationship.

2.3.3. Critical mass theory and tokenism

The third theory that can explain the relationship between board gender diversity and firm financial performance is the critical mass theory in combination with tokenism. One of the most influential studies in this subject is Kanter (1977). Kanter (1977) states that because of the rarity of women on boards, they can be referred to as ‘tokens’ and in extreme cases as ‘solos’. The meaning of this is that the woman on the board is the only representative of an entire demographic group, females. Because women are an underrepresented group on the board, the influence of women in the decision-making process and strategy is limited. The women on the board do fulfill the requirements for the job, however, the contribution of this woman is often limited. This is a consequence of the fact that the women are only on the board as a representation of their demographic group so that companies can show their social responsibility and counterclaims of discrimination (Low, Roberts, & Whiting, 2015; Zimmer, 1988). In the last years, many countries implemented a mandatory quota regarding the number of women on the board, for example, France who implemented a quota of 40%. This is one of the reasons why the number of women on the board increased in several

countries in the last years. However, this does not mean that the position of women on board has changed. Many companies have to fulfill mandatory quotas to prevent sanctions from the government. So, the mandatory quota requires companies to add more women on the board, not because they want to but because they have to.

When a woman on the board is a token, this can have three behavioral consequences. Kanter (1977) describes this type of behavior as visibility, polarization, and assimilation. Visibility can be described as the situation when the woman director feels that she is being watched at any moment, this can result in a feeling of performance pressure. The woman feels that she has to work harder to receive appreciation for the work that she is doing. In addition, the woman feels pressure to not out-perform male colleagues. This results in a situation that the woman director becomes invisible to not stand out too much. Polarization is the situation when the male colleagues feel threatened by the female director(s). The male directors exclude the tokens from their network by exaggerating the differences between women and men. This situation can result that women feel social isolation. The last form of behavioral consequences is assimilation. This is the situation when the men on the board are stereotyping the woman. As a result, the woman will behave in a way the men expect of her (Elstad & Ladegard, 2012).

The critical mass theory is an extension of tokenism. According to Granovetter (1978), the degree of influence of women on the board of directors depends on the number of women on the board. Torchia et al. (2011) state “when the size of subgroup reaches a certain threshold, or critical mass, the subgroup’s degree of influence increases”. According to this study, three women directors have to be present on the board to influence the decisions made by the board. One or two women can be seen as token while three or more women represent a critical mass. When there are three or more women on the board, they are no longer outsiders. Liu et al. (2014) add to this by stating that one woman is a token, two women is a presence and three or more women is a voice. Joecks et al. (2013) find no specific number of women but a percentage. According to the study the critical mass lies in the range of about 30% female representation on the board. However, the study also finds evidence that supports the previously mentioned studies regarding three women on the board. Liu et al. (2014) results show that the percent of women on the board has a positive impact on the financial performance of the firm. Low et al. (2015) confirms this by saying that increasing the number of women on the board has a positive influence on firm financial performance. So, according to tokenism and the critical mass theory, it is not only important if there is a woman on the board, but the number of women also matters.

2.4. Empirical findings impact of board gender diversity on financial performance

In this section, the impact of board gender diversity will be discussed. Diversity is a broad concept with a lot of definitions. According to Kang et al. (2007), board diversity can be defined as the difference that exists between members of the board of directors. Van der Walt & Ingley (2003) adds to this with the following statement; “diversity relates to board composition and the varied combination of attributes, characteristics, and expertise contributed to individual board members concerning board process and decision-making”. Herring's (2009) definition of diversity broadens this by saying that diversity refers to including directors who are different from the traditional directors, no matter in what area the differences are. However, none of the three definitions is clear about how diversity expresses itself. As mentioned in the introduction, Erhardt et al. (2003) state that there are two forms of diversity; observable diversity (demographic) and non-observable diversity (cognitive). Observable diversity is directly visible and consists of demographic characteristics such as gender, age, race, ethnicity, etc., whereas non-observable diversity is less visible and consists of knowledge, education, values, etc. In the range of this research diversity can be defined as the representation of women on the board of directors.

2.4.1. Impact of gender diversity on financial performance

Based on research on the past, it can be stated that firm performance might be affected by gender diversity on boards. However, as earlier mentioned, there is a lot of ambiguity among the results of the different studies. Below, these different relationships will be described more extensively, based on empirical evidence. Empirical evidence will be provided to support both the positive and negative effects of board gender diversity and firm performance. Besides, some studies show empirical evidence that there is no relationship or a reversed relationship between board gender diversity and firm performance. In addition, the results of studies that investigated the mandatory gender quota will be discussed.

2.4.1.1. Impact in France

Compared to the U.S., there is not as much evidence for the relationship between board gender diversity and firm performance. As a result of the Copé-Zimmermann Act, most of the evidence in France is from studies that are recently conducted. Sabatier (2015) is one of the view studies that is conducted before the implementation of the mandatory gender quota. The study focuses on gender diversity and searches for an explanation for the strong influence of women on boards. To do this, the study uses a sample of CAC 40 companies for five years (2008-2012). To measure performance, three measures are used; ROE, ROA and Tobin’s Q. The results of the study show that women on

boards have a significant positive effect on the performance of the company. However, this is not the case for all the performance measures. The study found a positive significant relationship between ROE and Tobin's Q and gender diversity. The relationship between ROA and gender diversity is not statistically significant. According to the study, gender diversity has a positive effect on firms' financial performance (Sabatier, 2015).

Another study that was conducted before the implementation of the mandatory gender quota is from Boubaker et al. (2014). The study focus on the effect of a gender diverse board on the financial performance with the help of a sample of 105 French firms listed on the SBF 120 stock market index during the 2009-2011 period. This study differs compared to other studies because it takes a simultaneous equation approach that helps to solve the endogeneity problem. To measure firm performance Tobin's Q was used. In contrast with the study of Sabatier (2015), the results of the study show a significant negative effect between the percentage of women on boards and firm performance. These results suggest that adding more women on boards can lead to lower firm performance because of over-monitoring. The study shows that addressing the endogeneity problem is important when investigating the relationship between women on boards and firm performance (Boubaker et al., 2014). The research of Dang & Nguyen (2016) is a follow-up study of Boubaker et al. (2014). The study uses both a market-based measure of firm performance (Tobin's Q) as an accounting-based measure (ROA) to measure firm performance. The results of the study confirm the result of the first study by Boubaker et al. (2014), there is evidence that board gender diversity has a significant negative effect on firm performance.

More recent studies are from Ahmadi et al. (2018) and Bennouri, Chtioui, Nagati and Nekhili (2018). Ahmadi et al. (2018) investigate board characteristics from a wider perspective. The study does not only investigate gender diversity, but also board size, independence, the length of the tenure of the CEO, and the duality function of the CEO and the chairman of the board. Even though the study investigates a wide range of characteristics, most parts of the article are focused on board gender diversity. The data for the study is based on CAC 40 companies in the sample period 2011-2013. Where the other three studies used both market-based and accounting-based measures, this study does not. This study has used only the accounting-based measures ROE and ROA. The results of the study show that the financial performances of the company increase when there is more gender diversity on the board. Bennouri et al. (2018), investigates the relationship between board gender diversity and firm performance while taking into account the environmental factors of the companies. The study has used an extensive sample of 394 French firms from the period 2001-2010. The researchers specially chose French companies because in France there is weak shareholder protection and there is a separation between ownership and control. As a benchmark the study analyzed both accounting-based (ROA and ROE) and market-based (Tobin's Q) performance

measures. The results of the study show that accounting-based performance measures (ROA and ROE) increase when there are more women on the board of directors. Contradicting with this, the market-based performance measure (Tobin's Q) decreases with the addition of women on boards. According to the study, the results suggest that corporate strategic decisions are sensitive to the different characteristics of women directors.

In summary, the limited evidence on France firms shows contradicting results. The study of Sabatier (2015) found a positive significant relationship between ROE and Tobin's Q and gender diversity. The relationship between ROA and gender diversity is not statistically significant. The results of Ahmadi et al. (2018) and Bennouri et al. (2018) show similar results. Both studies show a positive effect of a gender diverse board on accounting-based measures ROE and ROA. However, Bennouri et al. (2018) show in contrast with Sabatier (2015) that the market-based performance measure, Tobin's Q, decreases with the addition of women on boards. In addition, the study of Boubaker et al. (2014) and the follow up study of Dang & Nguyen (2016) show both significant and negative effect between the percentage of women and Tobin's Q. These results suggest that adding more women on boards can lead to lower firm performance because of over-monitoring.

2.4.1.2. Impact in the U.S.

Based on previous studies, there is a wide range of evidence for the relationship between board gender diversity and firm performance in the U.S. There is not only positive evidence but also evidence that there is a negative relationship or even no relationship. One of the first studies that show empirical evidence of this effect was the study of Carter et al. (2003). The study of Carter et al. (2003), investigates the relationship between corporate governance, board diversity, and firms' value for Fortune 1000 firms in 1997. The study used the agency theory as a theoretical framework. According to the researchers, a more diverse board is more activist because outside directors with a different background than the traditional director are the ultimate outsiders. The results of the study show a statistically significant positive relationship between women on boards and firm value, measured in Tobin's Q and ROA (Carter et al., 2003). A comparable study from the same period is from Erhardt et al. (2003), this study investigates the impact of diversity with the board of directors on firm performance for 112 large U.S. companies in various industries in the period from 1993 to 1998. The study takes not only gender diversity into account but also ethnic diversity. The study does not use an extensive theoretical framework, although, the researchers use facets of the resource dependency theory and human capital theory to support their statements. The results of the study show positive significant results between women and minorities on board and firm value, measured in ROI and ROA. However, the study has some limitations according to the researchers. The most interesting limitation is that the study suggests that there is a linear relationship, however, it is

possible that when there is more data available the relationship is more curvilinear. So, the benefits from diversity will increase with a decreasing rate or flatten out, this contradicts with the results that are presented in the study but make sense. Despite the limitations, the study has significant theoretical, practical and empirical implications

As earlier mentioned, Carter et al. (2003) find a positive relationship between board member diversity and firm performance. In 2010 a new study of the same researchers appeared, in contradiction with the first study, this study did not find any significant relationships between board gender diversity and the financial performance for 641 U.S. companies in the period between 1998 and 2002 (Carter et al., 2010). The purpose of the study was to explore the relationship between board gender diversity and firms' financial performance. To do this, the study has used four theoretical perspectives; the resource dependency theory, the human capital theory, the agency theory, and the social-psychological theory[1]. According to the article, corporate governance theory proposes that board structure is a strong influence on the actions of the board and top management that ultimately affect firm performance. However, there are theoretical arguments and empirical evidence that there is no relationship between board diversity and firm performance. The results of the study suggest that there is no relationship between board gender diversity and firm performance, measured in Tobin's Q. It is important to know that the study did find no evidence of both a positive and a negative link. As a result of this, this study does not support mandatory quotas of women on the board of directors based on the improvement of financial performance. In addition, Adams and Ferreira (2009) provide evidence that gender diversity in the boardroom affects governance in different ways. The study has used a sample of 1939 U.S. firms in the period from 1996 to 2003. The results show that gender diversity on boards has a positive impact on performance in companies that have otherwise weak governance. When a company has strong corporate governance, the effect decreases because of the possibility of over-monitoring by the board of directors in these companies. Besides, just like the study of Carter et al. (2010), the study states that women directors have an important impact on board structure. However, the evidence does not support mandatory gender quotas (Adams & Ferreira, 2009).

Compared to the previous study, a more recent study is from Perryman et al. (2016). The study examined how increases in gender diversity may influence the performance and the risk-taking behavior of companies. The study links risk-taking behavior to the gender diverse board of companies. According to the study, women, on average, are more risk-averse than men, this influences the decisions made by the board of directors and the risk-taking behavior of the company. As a result, the influence of increased gender diversity results in firms having less large returns while

[1] Social-psychological theory claims that the impact of minority groups depend on the social context and group dynamics. That is, diversity on the board may have positive or negative effects depending on the dynamics of the board (Isidro & Sobral, 2015).

at the same time having fewer huge losses. The company has a more stable character by taking less risk which leads to stable performance increases. The study has used an extensive sample of 2564 firms from the period 1992-2012. The results of the study suggest that increases in gender diversity reduces the firms' risk-taking behavior and improves the firm performance measured in Tobin's Q. The researchers state that "it is important to work towards an understanding of the boundaries of the differences between women and men and how that affects the firm, group, and individual level outcomes with regards to gender diversity" (Perryman et al., 2016).

The study of Conyon & He (2017) extends the literature by introducing another factor, namely firm performance. According to the researchers, the influence of board gender diversity is larger in better-performing companies compared to worse-performing firms. The unique perspectives and experiences of women will not be recognized in worse-performing firms, besides, the better-performing companies can select the women with the best capacities for their companies. The study has used an sample of over 3000 publicly traded U.S. firms from 2007 to 2014. Because the study used both market-based (Tobin's Q) and accounting-based measures (ROA), the study demonstrate that financial performance is positively correlated to measures of board gender diversity. When a company's performance is good, board gender diversity will have more influence than when a company is not performing well.

It can be concluded that there is a lot of evidence with regards to the impact of board gender diversity on the financial performance of companies. What becomes clear, is that there is no conclusive evidence of the relationship between board gender diversity and firm performance in the U.S. The evidence shows that there can be a positive, negative, no relationship and even curvilinear effect. However, most of the evidence shows that there is a positive relationship between board gender diversity and firms financial performance in the U.S. Besides, there are a lot of factors which have influence on the relationship, in this review some examples are given, but there are many more.

2.4.1.3. Impact in other countries

In addition to studies in France and the U.S., there are a lot of studies that test the impact of gender-diverse boards in other countries. This amount is too much to describe extensively, therefore this section show only shortly the results of some of these studies. One of these studies is from Francoeur, Labelle and Sinclair-Desgagné (2008), the study uses a sample of the 500 largest Canadian firms. Canada is just like the U.S. an Anglo-Saxon country which uses the common law system, this makes that Canada is comparable to the U.S. The results of the study show that companies with women directors get a positive significant higher return of 0,17% which can grow to 6%. The finding of the study justifies the current development of government and organizations to invest in more women on boards (Francoeur et al., 2008). Low et al. (2015) find also evidence of a positive

relationship between women on board and firm performance in the Asian countries Hong Kong, South Korea, Malaysia, and Singapore. The authors found that this enhances when there is a more supportive attitude towards women.

Rose (2007) studied Danish listed firms and find no significant relationship between board gender diversity and firm performance measured in Tobin's Q. Smith et al. (2006) also researched Danish firms, the study show contradicting results depending on the measurement of financial performance and the measure of the proportion of women in management. Lückerath-Rovers (2011), did a study on Dutch firms and conclude that they cannot say that board gender diversity impacts the financial performance of firms. Just as Smith et al. (2006), the results depend on the performance measure. Besides, the sample size of the study is quite small because of the underrepresentation of women on boards. Campbell and Mínguez-Vera (2008), find that the number of women on the board has a relation with the financial performance of the firm. The study concludes that "firms should focus on the balance between women and men rather than simply the presence of women" (Campbell & Mínguez-Vera, 2008). This is supported by Joecks, Pull and Vetter (2013), who find a U-shaped effect between gender diversity and the financial firm performance measured as return on equity (ROE) for German firms. According to the study, the board needs a critical mass of women to realize the advantages that a gender diverse board can offer. Torchia et al. (2011) present evidence that the critical mass is 'at least three' for Norwegian firms.

In summary, the studies concerning the effect of gender-diverse boards on financial performance have focused on a lot of countries. There are differences between the results across countries but also within countries. As mentioned in the introduction, authors mention different reasons of why the results differ across countries and within countries.

2.4.2. Impact of the mandatory gender quota on financial performance

At this moment, there are not many countries that implemented a mandatory gender quota for boards. Most of the countries implemented the mandatory gender quota in the period from 2014-2019, except Norway who implemented the quota in 2008 (Ahern & Ditmar, 2012). In the years after this, different countries start to follow the example of Norway and also implemented mandatory and non-binding gender quotas. According to Bohren and Staubo (2016), France, Germany, the Netherlands, Iceland, and Spain were implementing gender quotas in the period 2014-2016, and Australia, Belgium, Canada, Italy, and the European Commission have made similar proposals to implement mandatory gender quotas in the future. At the end of 2015, 14 countries implemented mandatory gender quotas. In addition, there were another 16 countries that implemented non-binding gender quotas or codes with regards to gender quotas (Adams, de Haan, Terjesen, & van Ees, 2015).

As a result of the fact that most of the countries implemented the quota recently, there is not much evidence of the effect of the quota on the financial performance of the company. The evidence with regards to the subject is mainly focused on Norway. The study of Ahern and Ditmar (2012) is one of the first which present evidence. According to the results, the mandatory gender quota led to a significant decline in financial performance. The results are consistent with the hypothesis that the board is chosen to maximize shareholder value and that the gender constraint on the choice of directors leads to a decline in value. Ferreira (2015) adds to this that it is possible that firm performance decrease when companies are forced to hire female directors. Bohren and Staubo (2016) show similar results and adds to this that board independence increase and performance declines in firms that are constrained by the mandatory gender quota. The study of Dale-Olsen, Schøne, & Verner (2013) show results that the short-term impact of the mandatory gender quota is negligible in Norway. This implies that new women directors do not bring different resources and perspectives than the men they replace.

Besides the evidence of the negative effect, there is also some evidence of a positive effect. Catalyst, a global nonprofit research organization, found already in 2007 evidence that indicates a positive effect of the gender quota. Fortune 500 Companies with three or more women on the board outperform companies that have less than three women on the board (Joy, Carter, Wagner, & Narayanan, 2007). In addition, Reguera-Alvarado, de Fuentes, and Laffarga (2017) provide evidence from Spain. The results of the study show that a mandatory law will increase the financial performance of firms in Spain.

In summary, there is limited evidence of the effect of the mandatory gender quota on the financial performance of firms. Most of the evidence is from Norway and shows a negative effect of the mandatory gender quota on financial performance (Ahern & Ditmar, 2012; Bohren & Staubo, 2016). Both studies indicate that constraints in the choice of directors are the most likely explanation of this negative effect. However, in contrast the study of Dale-Olsen et al. (2013) shows results that the mandatory gender quota does not affect firm performance in Norway. In addition, Reguera-Alvarado et al. (2017) indicate that mandatory gender quota increases the financial performance of firms in Spain. Furthermore, Catalyst (2007) finds that Fortune 500 companies with three or more women on the board outperform companies that have less than three women on the board. So, the evidence with regards to the mandatory gender quota is mixed.

2.5. Hypothesis development

In this section, the hypothesis is presented. The effect of gender diversity, the mandatory gender quota, and corporate governance on financial performance for companies from France and the U.S.

and the difference between the two countries are predicted based on existing theory and empirical evidence.

2.5.1. Gender diversity

According to the resource dependency theory, a gender diverse board has a positive effect on firms' financial performance. Hillman, Cannella and Paetzold (2000), states that when a board is more diverse, the different types of directors will provide more valuable resources to the firm. This will, in the end, result in better financial firm performance. In addition, Carter et al. (2010) show results that when the company adds more women on the board, the board can make decisions that are more creative, innovative and non-traditional because there are directors who look all from a different angle to the problem. Furthermore, women directors send positive signals to the workforce and the product market (Carter et al., 2010). Besides, gender-diverse boards can improve the use of available talent and enhance the relationship with stakeholders (V. Singh, 2007). Erhardt et al. (2003) add to this that women could have a symbolic value which can have a positive effect on the relationship with stakeholders.

According to Adams and Ferreira (2009) and Carter et al. (2010), the agency theory state that adding female directors to the board increases the quality of monitoring activities. Board diversity increases the tendency of the board, in the end, and when a board is more independent they are in general better in monitoring. Effective monitoring can lead to better firm performance because it reduces agency costs (Hillman & Dalziel, 2003). In addition, gender-diverse boards are more active in monitoring activities. When a board is more gender-diverse, the board requires more auditing and more accountability from the management (Adams & Ferreira, 2009; Gul et al., 2008).

In addition, as mentioned before, the empirical research with regards to the effect of a gender-diverse board on the firm financial performance is not conclusive. There is a lot of mixed evidence within and across countries. However, there is a significant number of recent studies who show a positive effect between a gender-diverse board and the financial performance of firms (Ahmadi et al., 2018; Conyon & He, 2017; Erhardt et al., 2003; Francoeur et al., 2008; Low et al., 2015; Sabatier, 2015). Looking at the combination of the arguments of the resource dependency theory and the agency theory and the empirical evidence from the past, it seems to be that a gender-diverse board has a positive effect on the financial performance of firms in both France and the U.S. Therefore, the next hypothesis will be tested:

Hypothesis 1: Gender-diverse boards are positively associated with financial firm performance of firms from both France and the U.S.

2.5.2. Mandatory gender quota

As earlier mentioned, one of the big differences between France and the U.S. is that the France government takes an active stand by implementing the mandatory gender quota whereas the government of the U.S. leaves the choice to the company (Deloitte, 2017). According to the critical mass theory and tokenism, three women directors have to be present on the board to influence the decisions made by the board. One or two women can be seen as token while three or more women represent a critical mass. When there are three or more women on the board, they are no longer outsiders (Torchia et al., 2011). Liu et al. (2014) add to this by stating that one woman is a token, two women is a presence and three or more women is a voice. Joecks et al. (2013) find no specific number of women but a percentage. According to the study the critical mass lies in the range of about 30% female representation on the board. Low et al. (2015) confirms this by saying that increasing the number of women on the board has a positive influence on firms' financial performance. Isidro and Sobral (2015) even go a step further and claim that their findings should encourage governments to implement mandatory gender quotas. According to the previous evidence it seems that there is a positive effect between the number of women on boards and the financial performance of firms. If this is the case, it seems logical that governments implement mandatory gender quotas to increase the number of women on boards. Firms in countries with mandatory gender quota have the highest percentage of women on the board (Deloitte, 2017). Because of this high percentage of women on board in French companies, the number of women directors reaches the critical mass which makes it possible for women directors to influence company decisions. Therefore, the positive effect of women directors on boards is stronger in French firms compared to U.S. firms.

However, there is also some contradicting evidence that the mandatory quota, and so the number of women on the board, does not have a positive, but a negative effect on firms' financial performance. According to Ferreira (2015), mandatory gender quota forces firms to do things that they do not want to do. Firms are forced to hire new female directors to fulfill the requirements of the law which impose some costs. There is no guarantee that the new women directors are as qualified as the incumbent ones. Directors are hired based on gender, not on quality. Ahern and Ditmar (2012) add to this that women directors have less experience and are younger compared to the men directors. In addition, the study shows also evidence that the mandatory women quota led to changes in multiple characteristics which are consistent with board of directors that are less effective in monitoring and advising. The evidence in the study shows that the limitation in choosing directors leads to economically large declines in firm performance (Ahern & Ditmar, 2012). Bohren and Staubo (2016) also find a negative effect of the mandatory gender quota on firm performance. The study states that the mandatory gender quota may have strong unintended side effects such as a

decrease in firm performance. Mandatory gender quotas achieve gender balance on boards, however, the regulators have to accept large, unintended side effects (Bohren & Staubo, 2016).

At first glance, it seems that the mandatory gender quota has a positive effect on the financial firm performance of firms. However, when taking in account the empirical evidence on this subject, the results show a negative effect of the mandatory gender quota on financial firm performance. The studies of Bohren and Staubo (2016) and Ahern and Ditmar (2012) show that constraints in the freedom to choose directors have a negative effect on the financial performance of firms. Both of the studies show that the limitation in choosing directors leads to economically large declines in firm performance. Firms in France have to fulfill the requirements of the mandatory gender quota while firms in the U.S. do not have these constraints. Therefore, the next hypothesis will be tested:

Hypothesis 2: The positive effect of gender-diverse boards on financial firm performance is stronger for U.S. firms than for France firms due to the mandatory gender quota implemented by the government of France

2.5.3. Board of directors

As earlier mentioned, companies from France and the U.S. use different corporate governance models. As earlier mentioned, U.S. companies use the one-tier board structure while French firms have a choice between the one-tier and two-tier board structure. Both of the board structures have their advantages and disadvantages. The one-tier board structure has as advantages that the information flow is efficient and effective, there are numerous meetings where all members are present, the board has a wide scale of knowledge and the decision making is fast (Jungmann, 2007). However, the biggest disadvantages are that the board is responsible for the day-to-day activities and the monitoring of these activities, there is combined CEO/chairman and personal relationships can disturb effective monitoring (Block & Gerstner, 2016). In summary, when firms are using the single-tier board structure, this can lead to agency problems between the shareholders and directors.

The two-tier board structure can solve the agency problem between directors and shareholders. The two-tier structure consists of a supervisory board, management board, and separate chairpersons. The supervisory board tasks are to monitor the management board which is responsible for the day-to-day activities (Millet-Reyes & Zhao, 2010). There is a clear border between the responsibility of the management board and the supervisory board. In general the assumption is that firm with a two-tier board structure are better governed and that is one of the reasons that this structure is favored by corporate governance reformers (Charreaux & Wirtz, 2007; Millet-Reyes & Zhao, 2010).

The impact of women directors on company decisions is partially dependent on how the

company is governed. One of the advantages of women on the board is that they, in general, have a higher quality of monitoring than men. According to Gul et al. (2011), increased gender diversity leads to a better monitoring process and can substitute for stronger corporate governance control. In addition Adams and Ferreira (2009) show evidence that well-governed firms may suffer negative consequences when they have a gender diverse board. This is due to over-monitoring by the women on the board. Gul et al. (2011) add to this that adding women on the board can help solve the agency problem caused by weak-governed companies. Looking at the previous it seems that firms that are well-governed, in other words with a two-tier board structure, will benefit not as much from women directors on their board compared to firms that are not as well-governed, in other words with a one-tier board structure. Therefore, the next hypothesis will be tested:

Hypothesis 3: The positive effect of a gender-diverse board on the financial performance is stronger for firms from the U.S. and France with a single-tier board structure is than for firms from France with a two-tier board structure

3. Methodology

This section describes the methodology that will be used in this research. Besides, the variables, robustness tests, and the sample are presented.

3.1. Method

The studied articles used different research methods when investigating the effect of a gender-diverse board on firms' financial performance. The most-used methods are OLS regression, fixed and random effects models, 2SLS, 3SLS, and DPS-GMM regression.

3.1.1. Methods used in studied articles

3.1.1.1. OLS regression

One of the most used research methods in studying board diversity effects on firms financial performance is the ordinary least square (OLS) regression (Adams & Ferreira, 2009; Ahern & Ditmar, 2012; Bennouri et al., 2018; Carter et al., 2010; Low et al., 2015; Rose, 2007). According to Liu et al. (2014), two methods are commonly used in the literature on board diversity and firm performance. One is the OLS regression, and the other is panel regression with fixed effects. The study of Marinova et al. (2015) which, just like this study, provided evidence for two countries, the Netherlands and Denmark, uses also the OLS regression in combination with the 2SLS regression method. OLS regression is an inferential and statistical technique, which can indicate the relationship between one or more independent variables and a dependent variable. (Hair, Black, Babin, & Anderson, 2014). More specifically, what this regression does is estimating the relationship by minimizing the sum of squares in the difference between the observed and predicted values of the dependent variable configured as a straight line (Tofallis, 2008). To see if the effect changes when other variables are included in the regression, control variables can be added.

The advantage of the OLS regression method is that the results are easy to interpret and to analyze. However, the major issue of OLS regression is that there could be an endogenous relationship between gender-diverse boards and firm performance, OLS regression does not account for this. The study of Wintoki, Linck, and Netter (2012) states that endogeneity can lead to parameter estimates that are biased and inconsistent which make a reliable conclusion impossible. According to Liu et al. (2014) and Adams and Ferreira (2009), firm performance can affect both the incentive of women joining the board and the motivation of boards hiring women. The literature agrees on the point that board characteristics are not exogenous random variables. Board characteristics of firms are based on multiple facets, for example, the size and complexity of the firm or the information asymmetry, which can lead to agency problems, between corporate insiders and outsiders (Coles, Daniel, & Naveen, 2008; Fama & Jensen, 1983; Linck, Netter, & Yang, 2008).

Before making use of OLS regression, some assumptions have to be met. The first assumption is that OLS regression is that is only possible to use when all the variables are metric or are made metric by using dummy variables (Hair et al., 2014). Most of the variables that will be used in this study are metric. However, the variables that are not metric can easily be made metric with the use of dummy variables. According to Henseler (2019), a second assumption that has to be fulfilled is that the sample size should be large enough. Henseler (2019) states than to maintain sufficient statistical power, in most multiple regression research situations the sample should be between 50 and 100 observations. This study will use 107 listed firms in the U.S. and France as sample over the sample periods 2010-2011 and 2016-2018. Therefore, the sample size assumption is fulfilled in this study.

In addition to the previous two assumptions, assumption with regards to linearity, normality, and homoscedasticity have to be fulfilled. According to Henseler (2019), these assumptions can be checked on the basis of the descriptive statistics. If it turns out that the assumptions are not fulfilled, it is possible to adjust the data. Possible ways of doing this is by for example by deleting or winsorizing the outliers and by using natural logarithms. The last assumptions that needs to be fulfilled is that there is no perfect multicollinearity between independent variables (Henseler, 2019). Multicollinearity can be checked in two ways. The first way is looking at correlations, correlations higher than 0.9 can indicate multicollinearity problems. The second way multicollinearity can be checked is with the help of VIF value. VIF values higher than 10 can indicate multicollinearity problems. If the correlations are lower than 0.9 and the VIF values lower than 10, it can be assumed that multicollinearity is no issue (Henseler, 2019).

It can be concluded that when all of the assumptions are fulfilled, OLS regression is an appropriate method to use in this study. If it turns out that not all the assumptions are fulfilled, necessary adjustment to the data will be made.

3.1.1.2. Fixed and random-effects model

As earlier mentioned, many studied articles also made use of the fixed and random effects application to their regression model (Adams & Ferreira, 2009; Campbell & Mínguez-Vera, 2008; Conyon & He, 2012; Liu et al., 2014; Sabatier, 2015; Smith et al., 2006). According to Mátyás and Sevestre (1996), studies that examine “panel data”, data of multiple firms in multiple years, can apply fixed and random effects to their regression model to control for individual and time differences. The fixed and random effects can help researchers to control for the presence of omitted/unobserved time- and firm-specific heterogeneity. When OLS regression is used, the presence of omitted/unobserved time- and firm-specific heterogeneity can lead to bias in the estimates. The model can control for a characteristic, observed or unobserved, that is constant over time and may

influence the firm performance (Sabatier, 2015). This means that because of changes that happened across firms or years, the residuals can be correlated between observations. As a result the errors are biased and this will lead to over- or underestimation of the true variability of the coefficient estimates. Because of this variability increase in firms, financial performance can be the result of the changes in firms or years and not because of gender-diverse boards.

The random-effects model is used in panel data analysis where an estimation between entities is the best fit (Park, 2011). The random effect model is very useful when there are reasons to believe that there are differences between entities that have an impact on dependent variables. A random-effects model assumes that individual (heterogeneity) is not correlated with any regressor and the estimates error variance specific to groups (or times). Hence, μi is an individual specific random heterogeneity or a component of the composite error term. This is why a random effect model is also called an error component model. The intercept and slopes of regressors are the same across individuals. The difference among individuals (or periods) lies in their specific errors, not in their intercepts (Park, 2011). According to Bell, Fairbrother, and Jones (2019) advantage of the random effect model is that it is possible to include time-invariant variables, for example gender. However, the random effects models do not allow correlation between the omitted variables and the independent variables that might be arbitrary (Mátyás & Sevestre, 1996). When there are variables in the model that are endogenous, the random-effects model creates biased results. Therefore, the fixed effects model is in this case a better model to use.

The fixed-effects model examines if intercepts vary across groups or time (Park, 2011). In the fixed-effect model, the individual-specific effect is a random variable that is allowed to be correlated with the explanatory variables. The core difference between fixed and random effects models lies in the role of dummy variables. A parameter estimate of a dummy is a part of the intercept in a fixed-effect model and an error component in a random effect model (Park, 2011). The fixed-effects model examines individual differences in intercepts, assuming the same slopes and constant variance across individuals (group and entity). Since an individual specific effect is time-invariant and considered a part of the intercept, μi is allowed to be correlated with other regressors (Park, 2011). An advantage of the fixed effects model compared with the random effect model is that the fixed effects model can be used when variables are endogenous. However, the fixed effects models have some disadvantages when using it. Mátyás and Sevestre (1996) state that one of the disadvantages is that the fixed effects models are not the right choice if there is unbalanced panel data. In addition, Bell, Fairbrother, and Jones (2019) show that fixed effects models do not allow that time-invariant independent variable are involved. This is a result of the fact that the effect of these independent variables will be removed when fixed effects models are used.

The choice between the use of the random effect models or the fixed-effects models can be

made with the help of the Hausman Test. This test examined the equality of the coefficients of the fixed effects models and the random effects models. The null hypothesis is that the coefficients of both models are similar. If this null hypothesis cannot be rejected, the random effects models should be applied. When the null hypothesis can be rejected, the coefficients will differ among themselves. In this case the fixed effects models should be applied (Park, 2011).

3.1.1.3. 2SLS regression

Another method that is used in studied articles is the two-stage least-squares (2SLS) regression (Campbell & Mínguez-Vera, 2008; Carter et al., 2003; Dang & Nguyen, 2016; Liu et al., 2014; Marinova et al., 2015). The 2SLS regression method is an extension of the OLS regression method mentioned before. The most important reason why the 2SLS regression method is useful is when there is an endogeneity problem. This means that the independent variable is correlated with the error term (Marinova et al., 2015). The causality between board gender diversity and firms financial performance can go both ways, meaning that it is possible that a gender-diverse board lead to higher financial performance of firms, or that high performing firms attract more women to their boards, this can imply joint endogeneity between the variables of the gender-diverse board and firms financial performance. In other words, there are factors that unobserved factors of firms' financial performance that might correlate with a gender-diverse board, for example type of industry. When this is happening, the coefficients of OLS regression are biased and cannot be used to interpret causal relations (Marinova et al., 2015). 2SLS regression solves this by using a predictor of the independent variable which is not correlated with the dependent variable

When using the 2SLS regression method there are two stages. In the first stage of the 2SLS regression method, a new variable for the representation of women on boards is created using the instrument variable. According to Angrist and Imbens (1995), “Instruments variables are variables related to the outcome of interest solely through the treatment of interest”. This makes it possible to create an estimate of the presence of women on boards that is unbiased and not correlated with the error term (Angrist & Imbens, 1995). In the second stage, the estimated values from stage one are used to replace the actual values of the independent variable to use OLS regression.

In the literature, different instrument variables are used. For example, Ahern and Ditmar (2012) have used a pre-quota variation in female board representation across firms. Another instrument variable that is more often used is that of Adams and Ferreira (2009), they use the fraction of male directors that have board connections to female directors. The study states that there are fewer women on boards because they have a lack of connections with the right people. When men and women have more connections with each other, it is more likely that there are more women on boards of directors (Adams & Ferreira, 2009). However, Adams and Ferreira (2009) also

state that it is hard to find the right instrument variable. This is because the factors that are most correlated with the endogenous variable are most of the time other characteristics that should be included in the regression, examples are board size and independence. Low et al. (2015) used the proportion of female managers as an instrument for the endogenous variable, the percentage of female directors. In contrast with the other studies, this study extensively tested the instrument variable.

Just like the other regression methods, the 2SLS regression method has some disadvantages. As earlier mentioned, according to Adams and Ferreira (2009) it is hard to find the right instrument variable. This is due to the fact that the factors that are most correlated with the endogenous variable are most of the time other characteristics that should be included in the regression, examples are board size and independence. Also, it is hard to identify the right number of instrument variables. In some cases, fewer instrumental variables than needed are selected. When researchers select not enough instrument variables, the problem of endogeneity is not solved. The number of equations is lower than the number of unknowns. However, it is also possible that researchers select too many instrument variables. In this case the number of instrument variables should be reduced to the right number (Wooldrigde, 2001).

3.1.1.4. 3SLS regression

Three-stage least-squares (3SLS) regression is an extension of the 2SLS regression. The studies of Carter et al. (2010) and Bhagat and Bolten (2008) have used this method to solve the problem of endogeneity. According to Jackling and Johl (2009), 3SLS regression is useful because it addresses potential endogeneity and cross-correlation between equations. The advantage of 3SLS regression compared with 2SLS regression is that it is more efficient because it allows cross-correlation across various equations (Bakhsh, Rose, Ali, Ahmad, & Shahbaz, 2017). According to Pindyck and Rubinfield (1998), 3SLS regression is a procedure of simultaneous equations that has the assumption that a gender-diverse board and firm's financial performance are endogenous and that the other variables in the model are predetermined. However, a significant number of variables of the interest of board diversity are not determined completely outside the model system. These variables are not exogenous, but endogenous (Carter et al., 2010). To solve this problem, lagged values of the endogenous variables can be used even though they are not determined completely outside of the system of equations (Pindyck & Rubinfield, 1998).

3.1.1.5. DPS-GMM regression

Another method that is used in studied articles is the system GMM method (Bennouri et al., 2018; Sila, Gonzalez, & Hagendorff, 2016). Just like the previously mentioned methods, this method mitigates endogeneity problems. According to Bennouri et al. (2018), the system GMM makes it

possible to estimate simultaneously the relationship between a gender-diverse board and firms financial performance in levels and first differences. The level equation presents performance as a function of its past value (lagged), firm characteristics and the error term are included as fixed effect components. The difference equation presents year-to-year differences in the level equation. Bennouri et al. (2018) have used this method to find the effect of a gender-diverse board on firm performance. By estimating the equations, studies can control for heterogeneous endogeneity and the dynamic structure of the relationship between board gender diversity and firms' financial performance. One major disadvantage of this method is that it is very complex to use.

3.1.2. Methods used in this study

In the previous section, the methods that can be used to investigate the relationship between board gender diversity and firm financial performance have been presented. The first described method, OLS regression, is an appropriate method to use in this study. This study will study a dependence relationship between dependent variables and independent variables, the data that will be used is metric or will be made metric, and the sample size will have a sufficient size. In addition, the assumptions as described in the previous section will be assessed. As it turns out that some assumptions are not met, the necessary adjustment will be made. Furthermore, OLS regression is the most-used and popular technique used in a large number of past studies (Adams & Ferreira, 2009; Ahern & Ditmar, 2012; Bennouri et al., 2018; Carter et al., 2010; Low et al., 2015; Rose, 2007). It seems that OLS regression is an adequate method to use to analyze the effect of board gender diversity on firms' financial performance.

According to the previous section, one of the main issues that this study needs to consider is endogeneity issues. This means that the causality between board gender diversity and firms' financial performance can go both ways, meaning that it is possible that a gender-diverse board lead to higher financial performance of firms, or that high performing firms attract more women to their boards. The results of this study can be biased if this issue is not taken into account. The previous section described three methods to control for endogeneity problems; 2SLS regression, 3SLS regression and DPS-GMM regression. One other way of mitigating the endogeneity issues is using lagged variables in an OLS regression (Bhagat & Bolten, 2008; Isidro & Sobral, 2015; Liu et al., 2014). This way of controlling for endogeneity issues is easier to use and there is only a need for a small amount of additional data. Therefore, to control for endogeneity issues, lagged variables will be used as a robustness check.

In summary, this study will use OLS regression because they are easy to interpret and analyze. Besides, OLS regression is the most-used method in previous literature about this subject. However, the major issue of OLS regression is that there could be an endogenous relationship

between gender-diverse boards and firm performance, OLS regression does not account for this. To overcome the problems of the OLS regression it is important that the assumptions, as mentioned in the previous section, are fulfilled. In addition, some robustness tests will be executed to see if the results of the OLS regression are robust. Which robustness test there will be used can be read in section 3.3.1. “robustness tests”.

To test hypothesis 1 and 2, the next model, which is also used by for example Carter et al. (2003), Liu et al. (2014) and Tao, Liu, Gao, and Xia (2017), will be used:

Financial performance$_{it}$ = β_0 + β_1(GDiversity) $_{it}$ + β_2 (Control variables) $_{it}$ + λ_t + α_j + ε_{it}

Where:

Financial performance$_{it}$ = Measure of firm performance.
β0 = constant, represents the expected value for the financial performance of firms when all the independent variables are zero.
β1(GDiversity) $_{it}$ = Measures of board gender diversity.
β2 (Control variables) $_{it}$ = Control variables that are expected to have a relationship with financial firm performance.
λt = Year fixed effects which control for yearly economic fluctuations on financial firm performance.
αj = Industry fixed effects which control for the impact of industrial-specific on financial firm. performance.
ε_{it} = Error term.

To test if the positive effect of gender-diverse boards on financial firm performance is stronger for U.S. firms than for French firms due to the mandatory gender quota in hypothesis 2, the samples of the French and U.S. firms are divided into two sub-samples based on the sample period. As mentioned before, the mandatory gender quota of 40% was implemented in 2017. However, in December 2011 the French Parliament voted for the ‘Zimmermann-Cope’ law which was the first law about the mandatory gender quota. This means that until the end of 2011, French firms were not forced to appoint women on the board of directors. Therefore, the first sub-sample is that of the sample period 2010-2011 and the second sub-sample that of the sample period 2016-2018. That French firms are not forced to increase the number of women on boards until the end of 2011 is supported by the fact that the mean value of the percentage of women directors is not significantly different for the French (13,9%) and U.S. sample (13,5%) in the sample period 2010-2011. To test whether the coefficients are the same across two regression models from different time periods, the method of Cumming (2009) is used. Cumming (2009) demonstrated that two coefficients are statistically significantly different from each other, when the corresponding 95% confidence interval overlap by not more than 50%. In order to test if the coefficients are statistically significantly different from each other, their corresponding 95% confidence intervals are estimated via

bootstrapping. When the confidence intervals overlap less than 50%, the coefficients would be considered statistically significantly different from each other.

To test hypothesis 3 an interaction term between board gender diversity and board structure will be included in the regression. Therefore, the next model will be used (Adams & Ferreira, 2009):

Financial performance$_{it}$ = β_0 + β_1(GDiversity) $_{it}$ + β_2 (Board Structure) $_{it}$ + β_3 (GDiveristy x Board Structure) $_{it}$ + β_4 (Control variables) $_{it}$ + λ_t + α_i + ε_{it}

Where:

Financial performance$_{it}$ = Measure of firm performance.
β0 = constant, represents the expected value for the financial performance of firms when all the independent variables are zero.
β1(GDiversity) $_{it}$ = Measures of board gender diversity.
β2 (Board Structure) $_{it}$ = Dummy variable of board structure.
β3 (GDiveristy x Board Structure) $_{it}$ = Interaction term of measures of board gender diversity and board structure.
β4 (Control variables) $_{it}$ = Control variables that are expected to have a relationship with financial firm performance.
λt = Year fixed effects which control for yearly economic fluctuations on financial firm performance.
αj = Industry fixed effects which control for the impact of industrial-specific on financial firm performance.
ε_{it} = Error term.

3.2. Variables

In this section, the dependent, independent, and control variables used in this study are explained. The summary of the description of these variables is presented in table 1.

3.2.1. Dependent variables

Looking at the models in the previous section, the financial performance of firms will be used as the dependent variable. Looking at previous researches, measures of financial performance can be divided into two groups: the account-based measures and the market-based measures. Accounting-based measures are measures that are based on the firms' self-reported (balance sheet, income statement, etc.) performance in the past. In contrast, market-based measures are forward-looking in such a way that it reflects the potential of firm performance (Pletzer et al., 2015). Examples of accounting-based measures used in previous studies are return on assets (ROA), return on investment (ROI), and return on sales (ROS) (Isidro & Sobral, 2015). In previous research, researchers only use one market-based measure; Tobin's Q (Campbell & Mínguez-Vera, 2008). According to Tobin (1978), Tobin's Q is a ratio measure that measures the market value of a company compared to the replacement value of the firms' assets. In past research, some studies only use accounting-based measures, others use market-based measures, and some use them interchangeably (Campbell & Mínguez-Vera, 2008). The use of different measures is one of the reasons why there are conflicting

results in past research.

One advantage of Tobin's Q compared with accounting-based measures is that Tobin's Q accounts for risk. Furthermore, Tobin's Q is not influenced by distortions due to tax, laws, and accounting conventions. In addition, Tobin's Q is a measure that results are not hard to interpret. When the ratio is higher than 1, firms can create more value by using the resources effectively, while firms with a ratio lower than 1 use resources in a wrong way (Campbell & Mínguez-Vera, 2008). Besides, accounting-based measures can be easily manipulated by changes in short-term earning activities (Gyapong, Monem, & Hu, 2016). According to Bhagat & Bolten (2008) a disadvantage of market-based measures is that they are susceptible to investors anticipation. Looking at the advantages of Tobin's Q compared with accounting-based measures, it seems that Tobin's Q is the right measure to use in this study. However, accounting-based measures have been used extensively in previous studies (Carter et al., 2010; Erhardt et al., 2003; Joecks et al., 2013; Miller & Triana, 2009). Besides, accounting-based measures offer a view on past performance, where Tobin's Q focuses on future performance (Campbell & Mínguez-Vera, 2008). Therefore, this study uses both accounting-based measures and Tobin's Q.

The most-used accounting-based measure used in previous studies is ROA (e.g. Adams & Ferreira, 2009; Erhardt et al., 2003; Liu et al., 2014). According to Carter et al. (2010), ROA is "an indication of the accounting income produced for the shareholders". In addition, the researchers state that ROA measures income. One advantage of ROA compared to ROE is that the ROE is often manipulated to satisfy a seasoned equity offering requirement (Liu et al., 2014). In previous research, ROA has been measured in the two ways: net income divided by the book value of total assets (Adams & Ferreira, 2009; Carter et al., 2010; Erhardt et al., 2003) and earnings before interest and taxation divided by the book value of total assets (Bhagat & Bolten, 2008). Almost all of the previous studies use the first method in their analysis (Adams & Ferreira, 2009; Carter et al., 2010; Erhardt et al., 2003; Liu et al., 2014), however, there are a couple of studies who use the second approach of measuring ROA (Bhagat & Bolten, 2008). In line with most of the previous studies, this study will use the following method to measure ROA: net income divided by the book value of total assets. It is important to take the net income before extraordinary items (Adams & Ferreira, 2009). If the net income after extraordinary items is used, the results do not present reality. In addition other accounting-based measures that are often used in the literature are ROE and ROS (Ahmadi et al., 2018; Lückerath-Rovers, 2011; Sabatier, 2015), this study will also use both ROE and ROS as an accounting-based measure. However, ROE and ROS will be used as robustness checks, see section 3.3.1.

As mentioned before, in previous studies only one market-based measure has been used; Tobin's Q. Together with the ROA, Tobin's Q is the most-used measure in previous studies (Adams &

Ferreira, 2009; Campbell & Mínguez-Vera, 2008; Miller & Triana, 2009; Rose, 2007). In theory, Tobin's Q is a more complex measure than ROA and ROE (Carter et al., 2010). According to Tobin (1978), Tobin's Q is a ratio measure that measures the market value of a company compared to the replacement value of the firm's assets. In previous studies, Tobin's Q has been measured in the following way: the market value of equity + book value of debt divided by the book value of total assets. This way of measuring will also be used in this study. A ratio below 1 means that it cost more to replace the assets of a firm is worth more than the firm in total while a ratio above 1 means that the firm in total is worth more than its assets. This means that when the ratio is higher, a firm is performing better. In addition, stock return (RET) will be used as a robustness test, see section 3.3.1.

In summary this study will use two dependent variables: ROA and Tobin's Q.

3.2.2. Independent variables

In this study, two alternative measures will be used. As a result of this, there are two types of independent variables, the ones concerning board gender diversity and the ones about board structure. As earlier mentioned, previous studies use different ways in how to measure gender diversity. Some studies first take a dummy variable if there is at least one woman on the board (Campbell & Mínguez-Vera, 2008; Low et al., 2015; Rose, 2007). In addition, studies take the percentage of women on the board of directors as a measure (Carter et al., 2003; Erhardt et al., 2003; Marinova et al., 2015; Sabatier, 2015). Furthermore, some studies use dummy variables to measure the number of women on boards (Carter et al., 2010; Liu et al., 2014; Torchia et al., 2011). This study will use all three of the measures to get a complete picture of the situation.

There are six measures to test the effect of the independent variable gender diversity on financial firm performance. The first till the third measure relates to the number of women on boards. The first measure, GD1, is a dummy variable that takes the value one if there is one woman on the board. The second independent measure, GD2, takes the value 1 if there are two women on the board. The third measure, GD3, takes the value 1 if there are three or more women on the board. The third variable uses three and more women as a measure because according to Liu et al. (2014) three is the critical mass. The fourth measure, %WOMEN, calculate the percentage of women on boards as the number of women directors divided by the total number of directors.

In addition, the fifth measure and sixth measure, %IndepW and %ExecW, calculate the percentage of independent and executive women directors as the number of independent and executive women directors divided by the total number of directors. This variable will be added to the regression to replace the percentage of women directors. It will be interesting to see if these types of directors have a different relationship with the financial performance of firms from the sample. According to Liu et al. (2014), independent women directors are likely to influence firm

performance through their monitoring channel due to their independence status. In addition, according to the resource dependency theory, executive women bring new human characteristics into the board that the traditional male directors do not have (Huse & Solberg, 2006; Liu et al., 2014). Therefore, it is possible that both type of women directors have a positive impact on firms financial performance. However, the effect can also differ.

Furthermore, with regards to board structure. A dummy variable will be used, BS2, which takes the value 1 if a firm has a two-tier board structure and remains 0 if the firm has a one-tier board structure.

3.2.3. Control variables

To control the results of this research, some control variables will be used which are known to affect firm performance. The most-used control variable in the literature is the firm size (Campbell & Mínguez-Vera, 2008; Carter et al., 2003; Lückerath-Rovers, 2011; Marinova et al., 2015; Smith et al., 2006). According to Smith et al. (2006), firm size is positively related to financial performance, because larger firms have more market power. Firms' size has been measured in different ways. Some studies take the natural logarithm of total assets at the end of the year (Ahmadi et al., 2018; Campbell & Mínguez-Vera, 2008; Lückerath-Rovers, 2011), while others take the natural logarithm of net sales (Marinova et al., 2015), or the number of employees working for the firm (Smith et al., 2006). This research will use the first method. The control variable firm size, LnFSIZE, will be measured as the natural logarithm of total assets at the end of the year. The natural logarithm is used to minimize the effect of outliers.

In addition, board size has also been widely used as control variables in previous studies (Conyon & He, 2017; Joecks et al., 2013; Liu et al., 2014; Marinova et al., 2015; Torchia et al., 2011). According to Marinova et al. (2015), there is a negative relationship between board size and firm performance. However, Yermack (1996) has found a positive relationship between board size and Tobin's Q. Board size as control variable has been measured in different ways. There are studies which take the total number of directors (Marinova et al., 2015; Torchia et al., 2011) while other studies take the natural logarithm of the board size (Liu et al., 2014). This research will use the method of the natural logarithm. The control variable board size, LnBSIZE, will be measured as the natural logarithm of the total board size. The percentage of independent directors will also be used as a board-level control variable. According to Marinova et al. (2015), it is dependent on the agency problem between owners and managers whether independent directors bring value to the company. The results concerning this subject are mixed. Adams & Ferreira (2009) state that independent directors are supposed to improve governance, the financial performance of firms will increase. The control variable independent directors, IND, will be measured as the percentage of non-executive

directors divided by the total number of directors.

Furthermore, two other firm-level control variables will be used in this study; firm age and leverage. According to Smith et al. (2006), there is a u-shape effect between firm age and performance. Younger firms have smaller earnings because they are relatively new in the market while older firms have become to the point of their life cycle that the earnings start declining. Just like Liu et al. (2014), the control variable firm age, LnAGE, will be measured as the natural logarithm of the number of years that a firm is listed on the exchange. In addition, the leverage ratio presents the financial risk of a firm. The expected relationship between leverage and firm performance is positive when debt efficiently reduces agency costs (Campbell & Mínguez-Vera, 2008). In this study, the control variable leverage, LEV, will be measured as total non-current liabilities at the end of each year divided by the book value of total assets at the end of each year.

Besides, just like almost all other studies, this study will control for year and industry effects (Adams & Ferreira, 2008; Liu et al., 2014; Low et al., 2015). Industry can be an important factor that can affect both the number of women board directors and firm performance. According to Hillman, Shropshire, and Cannella (2007), the number of women directors differs across industries The industry dummies will be based on NACE Rev. 2 classifications. The NACE Rev 2. is the standard classification system used in the European Union and consists of 21 different classifications. However, in this study the sample size is relatively small. This means that not all the specific industry classification will be present and some industry classifications contains only one or two observations. As a consequence, this study will use the three industry classifications that includes the most observations to control for industry effects. The three industry classification that represents the most firms are; manufacturing, information & communication and professional, scientific and technical activities (for further information see chapter 3.4.2). When a firm is operating in for example the manufacturing industry, the dummy variable equals 1 in this category and 0 in the others. Second, this study controls also for year effects. It is possible that specific events that happens during a year affect the regression results. This study will use data from the year 2010, 2011, 2016, 2017 and 2018. To control for the specific events that happens during one of these years, dummy year variables will be added to the model.

Table 1: Variable definitions

Variable	Code	Definition	Sources
Dependent variables			
Return on assets	ROA	Net income before extraordinary items divided by the book value of total assets	Adams & Ferreira, (2009); Carter et al., (2010); Erhardt et al., (2003); Liu et al., (2014)
Return on equity	ROE	Net income before extraordinary items divided by the total of shareholders equity	Joecks et al., (2013); Lückerath-Rovers, (2011); Shrader et al., (1997)
Return on sales	ROS	Net income before extraordinary items divided by the total of sales	Lückerath-Rovers, (2011); Miller & Triana, (2009); Shrader et al., (1997)
Tobin's Q	TobQ	Market value of equity + book value of debt divided by the book value of total assets	Adams & Ferreira, (2009); Campbell & Mínguez-Vera, (2008); Miller & Triana, (2009); Rose, (2007)
Stock return	RET	The stock price difference between the end and the beginning of the year plus dividend paid out, divided by the stock price at the beginning of the year	Bhagat & Bolten, (2008); Shrader et al., (1997)
Independent variables			
One woman on the board	GD1	Dummy code 1 when there is one woman director on the board	Campbell & Mínguez-Vera, (2008); Low et al., (2015); Rose, (2007)
Two women on the board	GD2	Dummy code 1 when there are two women directors on the board	Carter et al., (2010); Liu et al., (2014);
Three women on the board	GD3	Dummy code 1 when there are at least three women directors on the board	Carter et al., (2010); Liu et al., (2014);
Percentage of women on the board	%WOMEN	The number of women directors divided by the total number of directors	Carter et al., (2003); Erhardt et al., (2003); Marinova et al., (2015); Sabatier, (2015)
Percentage of women independent directors	%IndepW	Number of independent women directors on the board divided by the total number of directors	Ahern & Ditmar, (2012); Brammer et al., (2007)
Percentage of executive women directors	%ExecW	Number of executive women directors on the board divided by the total number of directors	Liu et al., (2014)
Board structure	BS2	Dummy code 1 if a firm has a two-tier board structure	Adams & Ferreira, (2009); Gul et al. (2011)
Control variables			
Firm size	LnFSIZE	Natural logarithm of total asstets at the end of the year	Campbell & Mínguez-Vera, (2008); Carter et al., (2003); Lückerath-Rovers, (2011); Marinova et al., (2015); Smith et al., (2006)
Firm age	LnAGE	Natural logarithm of the number of years that a firm is listed on the exchange	Carter et al., (2010); Isidro & Sobral, (2015); Liu et al., (2014)
Leverage	LEV	Total debt liabilities at the end of each year divided by the book value of total assets at the end of each year	Campbell & Mínguez-Vera, (2008)
Board size	LnBSIZE	Natural logarithm of the total board size	Carter et al., (2010); Conyon & He, (2017); Liu et al., (2014)
Independent directors	IND	Number of non-executive women directors on the board divided by the total number of directors	Adams & Ferreira, (2009); Carter et al., (2010); Marinova et al., (2015)

3.3. Robustness tests

To check if the results of the OLS regression as mentioned earlier are valid, several robustness tests will be conducted. Robustness tests are conducted to test if the results of the regression remain the same under different circumstances. It reduces the possibility that the results are created by chance.

3.3.1. Alternative measures

The first robustness test that will be used is changing the way how some variables are measured. First, ROA will be replaced by other proxies of accounting-based measures of firm performance. As mentioned before, another accounting-based measure that is used often in the literature is ROE (Ahmadi et al., 2018; Low et al., 2015; Lückerath-Rovers, 2011; Marinova et al., 2015; Sabatier, 2015). This study will also use ROE as a replacement for the accounting-based measure ROA. The ROE has been measured in the following way: net income before extraordinary items divided by the total of shareholders equity (Sabatier, 2015). The total shareholders' equity is the sum of all the capital available for the shareholders (common stock, preferred stock, reserves, etc.). In addition, ROS is the other accounting-based measure that is used in the literature as a proxy for ROA (Liu et al., 2014; Smith et al., 2006). ROS will be measured in the following way: net income before extraordinary items divided by total sales (Liu et al., 2014). Second, Tobin's Q will be replaced by another proxy of market-based measures of firm performance; stock return (RET). In the corporate governance literature and the literature with regards to board gender diversity, some studies have used RET as a proxy for financial performance (Adams & Ferreira, 2009; Bhagat & Bolten, 2008; Dobbin & Jung, 2011; Gul et al., 2011). RET will be calculated as the stock price difference between the end and the beginning of the year plus dividend paid out, divided by the stock price at the beginning of the year.

3.3.2. Lagged variables

As mentioned before, when using OLS regression there are endogeneity problems that have to be controlled for. The causality between board gender diversity and firms financial performance can go both ways, meaning that it is possible that a gender-diverse board lead to higher financial performance of firms, or that high performing firms attract more women to their boards, this can imply joint endogeneity between the variables of the gender-diverse board and firms financial performance. According to Liu et al. (2014), Carter et al. (2010), Gul et al. (2011), and Adams and Ferreira (2009) one way to solve this problem is by using one-year lagged variables. The effect of board gender diversity on firms' financial performance is not directly measurable, but this takes time (Carter et al., 2010; Liu et al., 2014). At this moment, no theory predicts the time required for an effect (Carter et al., 2010). Therefore, one-year lagged variables will be used to control for endogeneity issues. The following model will be used for the lagged board diversity measures:

Financial performance$_{it}$ = β_0+ β_1(GDiversity) $_{it-1}$ + β_2 (Control variables) $_{it}$ + λ_t + α_i + ε_{it}

3.4. Data and sample size

This section discusses the sample, the years of sampling, and the data sources that are used in this research.

3.4.1. Data

For this study, the years 2010, 2011, 2016, 2017 and 2018 are examined. There are two sample periods. The period 2010-2011 before the implementation of the mandatory gender quota and the period 2016-2018 during and after the implementation of the mandatory gender quota. As mentioned before, the mandatory gender quota of 40% was implemented in 2017. However, in December 2011 the French Parliament voted for the 'Zimmermann-Cope' law which was the first law about the mandatory gender quota. This means that until the end of 2011, French firms were not forced to appoint women on the board of directors. That French firms are not forced to increase the number of women on boards until the end of 2011 is supported by the fact that the mean value of the percentage of women directors is not significantly different for the French (13,9%) and U.S. sample (13,5%) in the sample period 2010-2011. Besides, the years 2016-2018 are selected because firms knew that the mandatory gender quota was going to be implemented in 2017. Firms cannot replace 40% of the directors at once, so, they had to adjust earlier to the situation. Therefore, in 2016, the effect of the mandatory gender quota was already visible. 2019 is not selected because not all the financial data is available at this time. The financial data from the organizations are gathered from Orbis, a database from the University of Twente. Orbis contains numerical and factual data. Information about the independent and some of the control variables is gathered from the annual reports and reference documents. The annual reports and reference documents are also used to search for missing values in the Orbis database.

3.4.2. Sample size

In this research data of French firms is gathered form the SBF 120 (Société des Bourses Françaises 120) index. This index is based on the 120 most actively traded stocks listed on Euronext Paris. The index includes all stocks of the CAC 40 and CAC next 20. In addition, 60 additional stocks that are listed on the Euronext Paris are taken into account in this index. CAC 40 is the French stock market index that tracks the 40 largest French stocks based on the Euronext Paris market capitalization. The CAC next 20 index tracks the stocks from number 41 till 60. The SBF 120 index is used because, as earlier mentioned, all the firms of this index adopt the AFEP MEDEF governance code. Besides, when companies like Deloitte do research they almost always take the SBF 120 companies as objective. For example, the research on the subject of board gender diversity of Deloitte from 2007 was also based on SBF 120 companies. Furthermore, previous studies have also used the SBF 120 companies as the

sample for the study (Boubaker et al., 2014; Dang & Nguyen, 2016).

The data from U.S. firms are gathered from the S&P (Standard and Poor's) 500 index. The S&P 500 is an American stock market index based on the market capitalization of 500 large companies, having common stock listed on the NSYE, NASDAQ or the Cboe BZX Exchange[2]. The S&P 500 index is one of the most followed and quoted indexes of America. This is because the index represents the largest public corporations in the U.S. market. To get comparable results, it is important to create matching samples of firms from the U.S. and France. Therefore not all the 500 firms of the S&P 500, but a number that is comparable to the firms of the SBF 120 are selected. The selection of firms from the S&P 500 is not a random process by for example selecting the 120 largest companies. The selection of firms from the S&P 500 companies is based on industry specified by the NACE codes. If there are multiple S&P 500 companies with the same NACE code, the company which has the most comparable firm size, measured as total assets, is selected.

Not all the firms of the SBF 120 are included in the sample. According to previous literature, financial and public utility are excluded from the sample (Dang & Nguyen, 2016; Hillman et al., 2000; Liu et al., 2014). This will be done because these companies are from regulated industries and have financial ratios that are not comparable to other firms. In addition, firms that have missing board information are also excluded from the sample. As a consequence, the sample size is reduced to 107 French and 107 U.S. companies that are used in this study and observed over the sample period. In table 2 the sample is specified per industry based on NACE codes. The table indicates that in terms of industry comparable samples of French and U.S. firms are used. Manufacturing is by far the largest industry (40.19%). The list of firms included in this study can be found in Appendix A.

Table 2: Sample specified by industry classification

	French sample		**U.S. sample**	
NACE main industry	**Number of firms**	**%**	**Number of firms**	**%**
Mining and quarrying	5	4.67	5	4.67
Manufacturing	43	40.19	43	40.19
Construction	4	3.74	4	3.74
Wholesale and retail trade	6	5.61	6	5.61
Transporation and storage	4	3.74	4	3.74
Accomodation and food service activities	3	2.80	3	2.80
Information and communication	15	14.02	15	14.02
Real estate activities	7	6.54	7	6.54
Professional. scientific and technical activities	11	10.28	11	10.28
Other	9	8.41	9	8.41
	107	100%	107	100%

[2] Chicago Board Options Exchange, is the world's largest option market with contracts focusing on individual equities, indexes and interest rates.

4. Results

This chapter will discuss the results of this study. First, the descriptive statistics will be presented. Second, the correlation matrices will be discussed. Third, the regression results are presented. Finally, robustness tests that will be used in this study are shown.

4.1. Descriptive statistics

The descriptive statistics of the data that will be used in this research are presented in table 3. The table gives a general overview of the data that is collected for the years 2010, 2011, 2016, 2017, and 2018 and will be used in this research. As mentioned in the method section, it is important to work with data which not contains extreme values. To reduce the influence of these outliers and the variance, the financial performance measures have been winsorized at the 2.5 and 97.5 percentile levels. Winsorizing is a method that is often used in finance literature (Henseler, 2019). Winsorizing can be done on different levels. For example, Gul et al. (2011) winsorize their data at the bottom and top 1% level. However, winsorizing can also be done on the 10% level. This study will winsorize at the 5% level. Winsorizing at the 10% level means that a large part of the data would have been adjusted, whereas winsorizing at the 2% means that only about 10 observations need to adjusted for each country. Therefore, this study will winsorize at the 5% level. Table 3 includes the number of observations (N), the mean, the first quartile (Q1), the median, the third quartile (Q3), the standard deviation (SD), the minimum (min) and the maximum (max).

Looking at the dependent variables that will be used in this research as a proxy for firm performance, on average U.S. firms have significantly higher means for all financial performance measures except for ROS. Based on this, it seems that U.S. firms perform financially better than their French counterparts. The first and most important accounting-based financial performance measure in this research, ROA, denotes a mean value of 6.62% for U.S. firms and 3.99% for French firms. The mean value of 6.62% for U.S. firms is higher compared to previous studies from Carter et al. (2010), Adams and Ferreira (2009) and Conyon and He (2017), who found means of 3.90%, 3.19%, and 2.23%. This difference can be caused by the difference between the samples and the years from which the data is collected. Just like this research, all three studies have used a sample of S&P 500 companies. However, Adams & Ferreira (2009) and Conyon and He (2017) have added S&P MidCaps, and S&P SmallCap firm to their sample while this research will only use a sample of 120, not randomly selected S&P 500 companies. Besides, the sample period differs between the studies, Carter et al. (2010) have used the sample period 1998-2002, Adams and Ferreira (2009) 1996-2003, Conyon and He (2017) 2007-2014, and this research will use 2010-2011 and 2016-2018. In contrast to the mean value of ROA for U.S. firms, the mean value of ROA (3.99%) for French firms is comparable to other studies. For example, Aubert, Kern, and Hollandts (2017) have used a sample of SFB 120

companies for the period 2001-2011 and found a mean of 4.00% for ROA.

The alternative accounting-based measures, ROE and ROS, show means of 18.70% and 10.67% for U.S. firms and 10.52% and 10.29% for French firms. There are large differences in the ROE of U.S. companies ranging from a minimum of -107.05% to a maximum of 138.66%. As a result of this, the SD (36.21) of the ROE for U.S. firms is the highest of all dependent variables. The mean value of 18.70% in this research is comparable to the mean value of 18.23% found by Shrader, Blackburn, and Iles (1997) for a sample of 200 U.S. firms collected for the years 1992-1993. The mean value of ROE for French firms is comparable with mean values of ROE that have been found in studies in other European countries. Miller and Triana (2009) have used a sample of 151 listed German firms for the period from 2002 to 2007 and reported a mean value of 9.58% while Lückerath-Rovers (2011) has used a sample of 99 listed Dutch companies from the sample period 2005-2007 and reported a mean of 14.51%. The mean values for the ROS of the U.S. and French firms do not differ a lot. Looking at table 3, ROS is the only dependent variable which is not significantly different between firm from the U.S. and France with a P-value of 0.679. As mentioned before, ROS is the only dependent variable with no significant difference between U.S. firms and French firms.

The most important market-based measure in this research is Tobin's Q. The mean value of Tobin's Q for U.S. firms is 2.24, for French firms this is lower with a value of 1.45. When the value of Tobin's Q is higher than 1, this indicates that the market value of equity and the book value of debt is higher than the book value of the assets, indicating that the firms' value is higher than the total book value of assets. The mean value of 2.24 for U.S. firms is somewhat higher compared to other studies. Comparable U.S. studies from Adams and Ferreira (2009) and Bhagat and Bolten (2008) have reported a mean of 2.09 and 2.07. There is a difference, however, the difference is not that high. The mean value of French firms is lower (1.45). Isidro & Sobral (2015) have conducted a study of the 500 largest European companies for the period 2010-2012 and have reported a mean value of 1.90 which is higher than the mean of the data that will be used in this study. However, just like with the U.S. difference, the difference is not that high. The alternative market-based measure that will be used is RET. The mean RET of U.S. firms is 11.58% and for French firms 5.09%. The mean value of 11.58% is lower than the mean values of 17.14% and 14.63% found by the studies of Bhagat and Bolten (2008) and Gul et al. (2011). However, the study of Bhagat and Bolten (2008) state that the stock return can significantly differ across years. Overall, it can be concluded that the mean values of the dependent variables that will be used as proxies for financial performance are significantly higher, except for ROS, for U.S. firms compared to French firms.

The independent variables are mainly focused on the number of women on board of firms from the U.S. and France. The mean value of the percentage of women on board of U.S. firms is 18.4%. The percentage has significantly increased from 13.5% in the period 2010-2011 to 21.4% in

the period 2016-2018 which is an increase from 7.9% (see Appendix B). This result is in line with the report of Deloitte regarding women in the boardroom. According to this report, 20.2% of the members of the board are women in Fortune 500 companies (Deloitte, 2017). The increase of women on boards in the U.S. has accelerated in recent years. Looking to for example Bhagat and Bolten (2008), which have used a sample of U.S. firms from 2002, the percentage of women on boards in the U.S. was 8.79%. So, the percentage of women on board has more than doubled in 16 years. In addition, the companies which do not have women on the board decreased from 20% in 2010-2011 to 3% in 2016 to 2018. This increase can also be seen in the dummy variables GD1, GD2 and GD3. In the period 2010-2011, 66% of the U.S. firms had only one or two women on the board of directors and only 14% of the firms had three women directors or more. In the period 2016-2018 still, 60% of the firms had only one or two women on the board, however, the companies with three or more women on the board increased from 14% to 37% (see Appendix B). In the U.S. a high percentage of women board members is independent. During the sample period, 18.4% of the board members were women and 17.1% of the board member were independent women. This means that 93% of the women on boards were independent. However, this is not a surprise because the rate of independent directors in the U.S. is high (Carter et al., 2010). On the contrary, the percentage of executive women directors does not significantly change over the period with a mean of 1.3%. In summary, the number of women on boards increased significantly during the sample period from 13.5% to 21.4% and almost all of the women directors are independent.

Looking at the independent variables of French firms, the percentage of women on the board of directors is 29.6%. This high percentage is mainly caused by the implementation of the mandatory gender quota of 40% in 2017. In 2010-2011, only 13.9% of the board members were women, compared with 13.5% of U.S. firms. However, in the period 2016-2018, this percentage significantly increased to 39.5%, which is an increase of 25.6% in 8 years (see Appendix B). As a result of this, the other independent variables with regards to women on the board also differ between the two sample periods. Looking at the mean percentages of the dummy variables, 12% of the French firms had one women director, 15% two, and 69% three or more. However, looking at the two sample periods, in the period 2010-2011 31% of the French firms had one women director on the board, 33% two and 29% three or more while in the period 2016-2018 94% of the French firms had three or more women on the board. At the beginning of this century, only 4.7% of the French companies had more than three women on their boards (Nekhili & Gatfaoui, 2013). Besides, the percentage of independent women on the board also increased from 8.1% to 27.2% and executive women directors on the board from 5.8% to 12.2%. The mean of 21% of BS2 remains stable across the sample periods. 21% of the French firms use the two-tier board structure and 79% the one-tier board structure. In summary, in 2010-2011 U.S. firms and French firms do not differ a lot with regards to women on the

board. However, because of the implementation of the mandatory gender quota in France in 2017, the number of women on French board increased rapidly.

Considering the control variables, firms size is measured as the natural logarithm of total assets at the end of the year. As earlier mentioned, to get comparable results it is important to create matching samples of firms from the U.S. and France. This statement is supported by the fact that there is no significant different between the mean values of firm size of French firms (27.555) and U.S. firms (24.494). In addition, there is also no significant different between leverage of both samples. The French firms are leveraged with debt liabilities that sum up to 60.5% of the total assets, while this is 61.1% of the total assets in U.S. firms. On the contrary, French firms are older compared to their U.S. counterparts. However, the difference in age between firms in France is higher than for the U.S. firms. This is the results of high outliers in the French sample, therefore, the natural logarithm of age will be used. Despite using the natural logarithm, there still is a significant difference in age between French firms and U.S. firms. Furthermore, the French sample firms have a significant lager board size compared with the U.S. sample firms. The mean board size of French firms is 13.11 and the mean of U.S. firms is 10.23. Both means are comparable with the means found by Terjesen, Couto, and Francisco (2016), who found means of 12.86 and 10.06. Lastly, as earlier mentioned, U.S. sample firms have a significant higher percentage of independent women director compared to French sample firms.

Table 3: Descriptive statistics

	France								U.S.								Difference
	N	Mean	Q1	Median	Q3	SD	Min	Max	N	Mean	Q1	Median	Q3	SD	Min	Max	P-value
Dependent variables																	
ROA (%)	511	3.989	1.933	3.831	5.907	3.960	-7.835	13.871	516	6.620	2.676	6.057	10.298	5.894	-6.505	31.154	0.000***
ROE (%)	507	10.515	6.423	10.389	15.096	8.513	-23.577	31.056	516	18.701	7.803	15.750	26.446	36.312	-107.052	138.657	0.000***
ROS (%)	508	10.288	2.908	6.247	10.735	16.733	-9.233	85.068	519	10.669	4.668	9.030	16.482	12.433	-22.883	41.197	0.679
Tobin's Q	492	1.449	1.011	1.201	1.613	0.696	0.794	3.958	483	2.238	1.404	1.826	2.705	1.167	0.988	5.387	0.000***
RET (%)	476	5.093	-16.434	4.895	23.054	0.293	-48.519	78.659	481	11.582	-6.973	10.435	29.783	26.852	-38.452	69.562	0.000***
Independent variables																	
GD1	501	0.120	0	0	0	0.323	0	1	503	0.300	0	0	1	0.458	0	1	0.000***
GD2	501	0.150	0	0	0	0.355	0	1	503	0.320	0	0	1	0.468	0	1	0.000***
GD3	501	0.690	0	1	1	0.213	0	1	503	0.280	0	0	1	0.450	0	1	0.000***
%Women	498	0.296	0.167	0.333	0.417	0.148	0.000	0.640	503	0.184	0.111	0.182	0.250	0.113	0.000	0.625	0.000***
%INDW	498	0.199	0.083	0.200	0.300	0.134	0.000	0.580	503	0.171	0.100	0.167	0.250	0.110	0.000	0.546	0.000***
%ExecW	498	0.098	0.000	0.077	0.176	0.099	0.000	0.400	503	0.013	0.000	0.000	0.000	0.036	0.000	0.200	0.000***
BS2	496	0.210	0	0	0	0.410	0	1	504	-	-	-	-	-	-	-	0.000***
Control variables																	
Fsize (€)	507	27.555	4.360	9.143	31.856	47.363	0.038	336.705	516	24.494	5.289	11.146	25.088	39.429	0.020	276.131	0.261
LnFsize	507	16.243	15.332	16.224	17.340	1.475	9.920	19.635	516	16.194	15.42	16.05	16.949	1.198	11.96	19.370	0.551
Leverage (%)	507	0.605	0.504	0.599	0.720	0.156	0.044	0.993	516	0.611	0.469	0.624	0.749	0.231	0.071	0.169	0.607
FirmAge	530	62.030	25.000	52.000	82.000	49.616	5.000	355.000	525	36.410	20.000	29.000	44.000	26.024	1.000	118.000	0.000***
LnFirmAge	530	3.846	3.219	3.951	4.407	0.781	1.609	5.872	525	3.322	2.906	3.367	3.784	0.817	0.000	4.771	0.000***
Bsize	503	13.110	11.000	13.000	15.000	3.344	3.000	24.000	503	10.230	9.000	10.000	12.000	1.992	5.000	16.000	0.000***
LnBsize	503	2.573	2.398	2.565	2.708	0.280	1.100	3.180	503	2.311	2.197	2.303	2.485	0.193	1.609	2.773	0.000***
%IND	499	0.499	0.389	0.4706	0.600	0.176	0.000	1.000	503	0.826	0.778	0.846	0.900	0.093	0.417	1.000	0.000***

Notes: This table presents the summary statistics of the variables used in this research. The statistics are presented seperately for the French and U.S. sample and are collected over the sample years 2010, 2011, 2016, 2017 and 2018. The financial performance variables have been winsorized at the 5% level. The last column present the t-test between the means of the French and U.S. firms. Variable definitions are described in table 2. The variable firm size (Fsize) is presented in millions of euros for presentation purposes.

4.2. Correlation

In table 4, Pearson's correlation matrix shows the correlation coefficients of the dependent, independent, and control variables that will be used in this research. There are two matrices, one for the U.S. sample, and one for the French sample. Both matrices indicate that there are multiple significant correlations between the variables.

First, the U.S. sample will be discussed. What is remarkable to see is that almost none of the variables that measure the attendance of women on boards have significant correlations with financial performance measures. It seems that there is no relationship between female board attendance and firm financial performance in the U.S. The only significant correlation is that of the dummy variable GD1 and RET (r=0.118) and %ExecW and ROS (r=0.089). This means that U.S. firms with only one board member have a higher RET than firms with none or two or more female board members. Besides, the independent variables that measure female board attendance are in some instances significant and highly correlated. This makes sense because all of these variables measure the attendance of women directors. The dummy variable GD1 is significantly negatively correlated to all the other variables that measure the attendance of women. This seems right because when the number of women on firms increases, there will be fewer firms with only one woman on the board. Furthermore, the variables GD3, % women, and %INDW are positively significant and highly correlated, especially the %INDW and %WOMEN (r=0.946). As mentioned in the descriptive statistics section, almost all of the women on boards in U.S. firms are independent. As a consequence of this, the two variables are highly correlated.

Looking at the control variables, firms size has a significant negative correlation with ROA (r=-0.203), Tobin's Q (r=-0.497), and RET(R=-0.195). This means that smaller firms have a higher ROA, Tobin's Q, and RET than larger firms. On the contrary, firms size is positively significantly correlated to all of the variables that measure female attendance on boards, except for GD1 (r=-0.195). So, larger U.S. firms have more women on the board of directors than smaller U.S. firms. Also, the control variable leverage has a significant negative correlation with ROA (r=-0.339), ROS (r=-0.335), and Tobin's Q (r=-0.108) but positive signs with ROE (r=0.140). U.S. firms with higher leverage have lower ROA, ROS and Tobin's q but a higher ROE compared to firms with lower leverage. This seems logical, firms with a lower ROA, ROS and Tobin's Q are probably generating not enough income and will have to borrow more compared to firms with higher ROA, ROS and Tobin's Q. Just like firm size, firms with higher leverage also have more women on boards compared to firms with lower leverage. Furthermore, firms with a larger board size have more women on the board compared to firms with smaller board sizes. When the board is larger, more places can be filled by women. Firms with more

independent directors also have more women on the board compared to firms with a smaller amount of independent directors.

Just like the U.S. sample, the French sample does not show any significant correlations between the variables of female board attendance and the accounting-based measures of financial performance. However, looking at the market-based measures, the female board attendance variables show some significant correlations. There is a negative significant correlation (r=-0.137) between GD1 and Tobin's Q. This means that French firms with only one woman on the board have a lower Tobin's Q than firms with two or more women board members. Besides, both GD3 (r=0.093) and %Women (r=0.143) are positively significantly correlated to Tobin's Q. This support the statement that French firms with a higher number of women on the board have a higher Tobin's Q than firms with a lower number of women on the board. Furthermore, compared with the U.S. sample, the variables GD3, % women and %INDW are positively significant and correlated. However, this correlation is not as high as with the U.S. sample.

The control variables of the French sample show similarities compared with that of the U.S. sample. Leverage has a significant negative correlation with ROA (r=-0.385), ROS (r=-0.296), and Tobin's Q (r=-0.392). French firms with higher leverage have lower ROA, ROS and Tobin's q compared with a firm with lower leverage. Also, firms with higher leverage have more women on boards compared to firms with lower leverage. Furthermore, firms with a larger board size have more women on the board compared to firms with a smaller board size, and firms with more independent directors also have more women on the board compared to firms with a smaller amount of independent directors. On the contrary, firm size does not show a significant correlation with ROA, and ROS but only for Tobin's Q.

To check for multicollinearity between the independent variables the results of the variance inflation factor (VIF) procedure have been analyzed. Multicollinearity occurs when there are high correlations between independent variables. VIF results of 1 indicate that no correlation between independent variables is found. VIF results of 10 or higher indicate multicollinearity and can cause problems in the process of data analysis. The VIF of the independent variables of the French sample are all lower than the threshold, this means that there is no multicollinearity problem for the French data. However, because of the high correlation between the percentage of women on U.S. boards and the percentage of independent women directors on U.S. boards, the VIF of these independent variables is higher than 10. This problem can be solved by separating the two variables in data analysis. When this is done, the VIF factor of both variables decreases to a much lower level.

Table 4: Pearson correlation matrices

Correlation matrix U.S.

	Variables	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1	ROA	1.000															
2	ROE	0.363**	1.000														
3	ROS	0.717**	0.266**	1.000													
4	Tobin's Q	0.478**	0.079	0.214**	1.000												
5	RET	0.011	-0.029	-0.022	0.247**	1.000											
6	GD1	-0.023	-0.050	0.023	0.041	0.118**	1.000										
7	GD2	-0.020	0.067	0.031	-0.057	-0.063	-0.440**	1.000									
8	GD3	-0.011	-0.011	-0.037	-0.027	-0.068	-0.408**	-0.429	1.000								
9	%Women	-0.270	0.120	0.210	-0.030	-0.083	-0.432**	0.062	0.745**	1.000							
10	%INDW	-0.026	0.006	-0.015	-0.034	-0.069	-0.435**	0.068	0.725**	0.946**	1.000						
11	LnFSIZE	-0.203**	0.044	-0.002	-0.497**	-0.195**	-0.145**	0.111*	0.257**	0.283**	0.253**	1.000					
12	Leverage	-0.339**	0.140**	-0.335**	-0.108**	-0.007	-0.109*	0.080	0.122**	0.184**	0.221**	0.217**	1.000				
13	LnAGE	0.105*	0.096*	0.098*	-0.086	0.030	-0.046	0.067	0.084	0.096*	0.105*	0.068	0.037	1.000			
14	LnBSIZE	-0.045	0.076	-0.052	-0.216**	-0.060	-0.193**	0.126**	0.222**	0.083	0.095*	0.481**	0.142**	0.220**	1.000		
15	%IND	-0.093*	0.070	-0.097*	-0.081	-0.026	-0.199**	0.077	0.232**	0.269**	0.365**	0.145**	0.253**	0.051	0.121**	1.000	
16	%ExecW	-0.012	0.018	0.089*	0.017	-0.056	-0.046	-0.006	0.131**	0.228**	-0.092*	0.116**	-0.090*	-0.015	-0.058	-0.271**	1.000

Correlation matrix France

	Variables	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
1	ROA	1.000																
2	ROE	0.837**	1.000															
3	ROS	0.432**	0.325**	1.000														
4	Tobin's Q	0.416**	0.309**	0.090*	1.000													
5	RET	0.289**	0.257**	0.074	0.316**	1.000												
6	GD1	-0.030	-0.037	0.023	-0.137**	0.015	1.000											
7	GD2	0.053	0.017	0.017	-0.003	0.055	-0.152**	1.000										
8	GD3	-0.036	0.010	-0.070	0.093*	-0.096*	-0.508**	-0.488**	1.000									
9	%Women	-0.063	-0.045	-0.022	0.143**	-0.064	-0.488**	-0.346**	0.724**	1.000								
10	%INDW	-0.064	-0.042	0.042	0.088	-0.071	-0.390**	-0.266**	0.563**	0.758**	1.000							
11	BS2	0.046	-0.020	0.046	0.031	0.014	0.027	0.022	-0.025	-0.110*	-0.093*	1.000						
12	LnFSIZE	-0.036	0.045	0.046	-0.413**	-0.088	-0.154**	-0.079	0.194**	0.073	0.115*	-0.047	1.000					
13	Leverage	-0.385**	0.014	-0.296**	-0.392**	-0.088	-0.045	-0.111*	0.138**	0.109*	0.088*	-0.119**	0.324**	1.000				
14	LnAGE	0.046	0.098*	-0.018	-0.099*	0.007	-0.030	-0.070	0.066	-0.002	-0.018	-0.035	0.262	0.152**	1.000			
15	LnBSIZE	-0.012	0.040	0.029	-0.171**	-0.030	-0.113*	-0.113**	0.256**	-0.034	-0.051	0.152**	0.495**	0.231**	0.291**	1.000		
16	%IND	-0.138**	-0.079	-0.021	-0.067	-0.065	-0.114*	-0.040	0.093*	0.161**	0.514**	-0.055	0.178**	0.057	-0.145	-0.096*	1.000	
17	%ExecW	-0.000	-0.004	-0.084	0.094*	-0.004	-0.210**	-0.153**	0.324**	0.473**	-0.217**	-0.052	-0.046	0.041	0.030	0.026	-0.452**	1.000

Notes: This table presents Pearson's correlation between variables used in this study. Ln are log transformed variables. Variable definitions are described in table 2

*. Correlation is significant at the 0.05 level (2-tailed) and **. Correlation is significant at the 0.01 level (2-tailed)

4.3. Regression analysis

4.3.1. Gender diversity

4.3.1.1. Number of women directors

Table 5 reports the results of the OLS regression between board gender diversity, measured as the total number of women directors divided by the total number of directors, ROA, and Tobin's Q for French and U.S. firms. With the help of table 5, hypothesis 1 has been tested. Hypothesis 1, which is presented in chapter 2.5.1, stated that the expected relationship between board gender diversity and the financial performance of firms from both France and the U.S. is positive. Because of the correlation between the control variables, the control variables are all tested separately and together in the full model.

First, the main results of the table will be analyzed. Overall, the results of panel A, in which ROA is the dependent variable, show in none of the models any significant relationship between the percentage of women directors (%Women) and ROA. This means that board gender diversity does not affect the financial performance of firms measured by ROA in both of the studied countries. Also, Panel B shows the results with regards to Tobin's Q. The results are comparable with that of ROA, only model 7 show a significant relationship (at the 10% level) between board gender diversity and the financial performance of firms measured by Tobin's Q. However, in the full model, there is no significant relationship indicating that the result is not robust. This implies that there is no relationship between board gender diversity and Tobin's Q in the U.S. and France. Both of these results are contrary to hypothesis 1, which expected a positive relationship between board gender diversity and financial performance. This means that board gender diversity has no effect on financial performance measured as the accounting-based measure ROA and the market-based measure Tobin's Q for both French and U.S. Firms.

The results of ROA are in contradiction with the studies of Carter et al. (2010), Erhardt et al. (2003) and Liu et al. (2014), who all found a positive and significant effect of women directors on firm performance measured by ROA. However, the research of Sabatier (2015), who also studied a sample of French firms, did not find any relationship between board gender diversity and firm performance measured by ROA. Comparable with this study, Carter et al. (2010) did not find any relationship between board gender diversity and Tobin's Q for U.S. firms. Besides, the studies of Sabatier (2015), Marinova et al. (2015), and Rose (2007) did also not find any relationship between board gender diversity and Tobin's with samples of French, Dutch and Danish companies. In summary, there is some support for the results presented in this research in previous studies.

Looking at the control variables, some variables have a significant positive and negative effect on the ROA and Tobin's Q of French and U.S. firms. First, firm size, measured by the natural

Table 5: Effect of women directors (%Women) on ROA and Tobin's Q

Panel A: ROA-Full sample

	France						U.S.					
	Model 1	**Model 2**	**Model 3**	**Model 4**	**Model 5**	**Model 6**	**Model 7**	**Model 8**	**Model 9**	**Model 10**	**Model 11**	**Model 12**
%Women	-0.056	-0.052	-0.001	-0.055	-0.037	0.010	-0.074	-0.021	-0.026	-0.068	-0.056	0.018
	(-0.685)	(-0.685)	(-0.011)	(-0.671)	(-0.463)	(0.133)	(-1.512)	(-0.437)	(-0.565)	(-1.384)	(-1.119)	(0.701)
LnFSIZE		-0.027				0.118**		-0.239***				-0.197***
		(-0.587)				(2.321)		(-5.139)				(-3.988)
LnAGE		0.070	0.120**		0.040	0.071		0.116**	0.109**		0.096**	0.111**
		(1.537)	(2.433)		(0.893)	(1.619)		(2.488)	(2.436)		(2.019)	(2.469)
Leverage			-0.371***			-0.392***			-0.350***			-0.315***
			(-5.139)			(-8.647)			(-8.232)			(-7.196)
LnBSIZE				0.005		0.005				-0.069		0.051
				(0.111)		(0.109)				(-1.541)		(1.054)
%IND					-0.156***	-0.139***					-0.098**	-0.017
					(-3.453)	(-3.151)					(-2.137)	(-0.379)
Constant	5.518***	5.276**	8.142***	5.341**	6.406***	5.565***	7.155***	22.449***	9.026***	9.026***	9.660***	20.716***
	(10.669)	(2.574)	(7.681)	(3.167)	(5.392)	(4.392)	(9.855)	(6.110)	(6.436)	(6.436)	(3.581)	(4.937)
Adjusted R^2	0.044	0.053	0.185	0.050	0.067	0,188	0.032	0.087	0.154	0.042	0.046	0.176
Industry dummy	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year dummy	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	499	499	499	499	499	499	503	503	503	503	503	503

Panel B: Tobin's Q-Full sample

	France						U.S.					
	Model 1	**Model 2**	**Model 3**	**Model 4**	**Model 5**	**Model 6**	**Model 7**	**Model 8**	**Model 9**	**Model 10**	**Model 11**	**Model 12**
%Women	-0.023	0.002	0.026	-0.048	-0.007	0.056	-0.093*	0.053	-0.072	-0.073	-0.074	0.060
	(-0.294)	(0.032)	(0.359)	(-0.608)	(-0.096)	(0.805)	(-1.950)	(1.297)	(-1.487)	(-1.562)	(-1.499)	(1.431)
LnFSIZE		-0.410***				-0.358***		-0.571***				-0.595***
		(-10.062)				(-7.701)		(-14.823)				(-13.291)
LnAGE		0.011	-0.033		-0.113***	0.006		-0.009	-0.047		-0.052	-0.019
		(0.262)	(-0.821)		(-2.617)	(0.152)		(-0.241)	(-1.007)		(-1.110)	(-0.466)
Leverage			-0.359***			-0.264***			-0.114			-0.002
			(-8.558)			(-6.388)			(-2.562)**			(-0.048)
LnBSIZE				-0.145***		0.084*				-0.232***		0.051
				(-3.380)		(1.882)				(-5.431)		(-1.187)
%IND					-0.163***	-0.049					-0.061	-0.018
					(-3.731)	(-1.231)					(-1.338)	(-0.462)
Constant	1.514***	4.584***	2.481***	2.429***	2.214***	4.395***	2.280***	10.927***	2.806***	5.532***	3.136***	10.803***
	(17.166)	(14.457)	(13.812)	(8.544)	(10.975)	(13.548)	(16.109)	(17.933)	(9.657)	(9.003)	(5.928)	(14.725)
Adjusted R^2	0.119	0.276	0.240	0.138	0.148	0.336	0.098	0.384	0.109	0.149	0.100	0.388
Industry dummy	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year dummy	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	499	499	499	499	499	499	503	503	503	503	503	503

Notes: This table presents the OLS regression results for ROA (panel A) and Tobin's Q (panel B). The table reports the standardized coefficients (t-values are presented in the parentheses). Variable definitions are described in table 2. *** Indicates significance at the 1% level; ** Indicates significance at the 5% level; * Indicates significance at the 10% level

the logarithm of total assets (LnFSIZE), shows except for the full model of the ROA for French firms a negative significant effect (at the 1% level) in all the models. This relationship was also found by Campbell and Mínguez-Vera (2008) and Carter et al (2003). It implies that larger firms have a lower ROA and Tobin's Q than smaller firms. This is a consequence of the fact that larger firms have higher costs of monitoring because of higher complexity and larger firms have more arm's length transactions (Adams & Ferreira, 2009; Carter et al., 2010; Isidro & Sobral, 2015).

Second, the results of the control variable firm age (LnAGE) shows only a positive significant (at the 5% level) effect on ROA for U.S. firms. In some other models, age show significant relationships, however, these are not robust. These results are in line with the results of Low et al. (2015). According to Low et al. (2015), older firms can perform better compared to younger firms because they have more experience, however, older firms can also perform worse than younger companies because of organizational rigidities.

Third, leverage has a significant negative effect on ROA for French and U.S. firms (both at the 1% level) and Tobin's Q for French firms (1% level). There is no relationship between leverage and Tobin's for U.S. firms. The negative significant relationship means that firms with higher levels of debt have lower financial performance. This is in line with the results of Isidro and Sobral (2015) and Liu et al. (2014). When there is a risk of default, agency conflicts can arise between equity and debt investors. When this happens, the amount of debt will have a negative impact on firm performance (Isidro & Sobral, 2015).

Fourth, it seems that board size is unrelated to ROA for French and U.S. firms and Tobin's Q of U.S. firms, but positive significant (at the 10% level) related to Tobin's Q of French firms. This is in line with Liu et al. (2014) who also did not consistent results. According to Ahern and Ditmar (2012) it is important to find the right board size, both too small and too large boards can have a negative impact on the boards ability to monitor and advise. Lastly, for the percentage of independent directors (%IND), only a negative effect on ROA of French firms was found. This is contrary to the expectation that independent directors improve governance (Adams & Ferreira, 2009).

4.3.1.2. Independent and executive women directors

In this part of the chapter, board gender diversity is separated into two groups: independent and executive women directors. Therefore, the variable percentage of women (%Women) is replaced by the percentage of independent women directors (%IndepW) and executive women directors (%ExecW). Table 6 reports the results of the OLS regression between the two variables of board gender diversity and the ROA and Tobin's Q of the French and U.S. samples.

Independent directors can influence the performance of the firm by decreasing the potential conflicts of interests between the shareholders, who delegate their control rights, and the

managers of the company (Bohren & Staubo, 2016). According to Liu et al. (2014), independent directors are likely to influence firm performance through their monitoring channel due to their independent status. This type of director reduces the agency problems between the shareholder and the manager/directors as explained by Jensen and Meckling (1976). On the contrary, executive women directors can increase firm performance by their executive power and management skills (Liu et al., 2014). In addition, according to the resource dependency theory, executive women bring new human characteristics into the board that the traditional male directors do not have (Huse & Solberg, 2006; Liu et al., 2014). Therefore, it is possible that both types of women directors can have a positive effect on firm performance and it can be interesting to see which type of director adds the most value to the company.

Table 6 panel A shows that none of the models shows any significant coefficients between percentage of independent women directors and the percentage of women executive directors and ROA in the U.S. and France. This means that there is no evidence that women executive directors or women independent directors influence firm performance positively or negatively measured by ROA. Panel B shows the same results for the French and U.S. samples. The coefficient of the percentage of independent women directors and the percentage of executive women directors show no significant impact on Tobin's Q. However, looking at the U.S. sample, the percentage of executive women directors is positive and significant (at the 5% level) in the full model (model 12). This means that executive women directors have a positive impact on Tobin's Q in U.S. firms. The coefficient of 0.083 implies that with a rise of 1 standard deviation in the percentage of executive women directors, Tobin's Q increases by 0.083 standard deviations keeping all other variables constant. Comparable with this, Liu et al. (2014) found also a positive effect and states that the beneficial effect of women directors on firm performance comes basically through executive women directors' executive effect and not the independent women directors monitoring effect. So, it can be concluded that there is no evidence for the French sample that women executive and independent directors increase firm performance. Concerning the U.S. sample, there is no evidence that executive women directors and independent women directors increase ROA. However, the table shows some evidence that executive women directors have a beneficial effect on Tobin's Q.

4.3.1.3. Critical mass theory and tokenism

As explained in chapter 2.3.3., critical mass theory and tokenism explain the relation between the number of women on the board and their influence. Kanter (1977) states that when women are an underrepresented group on the board, the influence of women in the decision-making process and strategy is limited. Therefore, when women are underrepresented on the board they will not have an

Table 6: The effect of independent (%IndepW) and executive (%ExecW) women directors on ROA and Tobin's

Panel A: ROA-Full sample

	France						U.S.					
	Model 1	**Model 2**	**Model 3**	**Model 4**	**Model 5**	**Model 6**	**Model 7**	**Model 8**	**Model 9**	**Model 10**	**Model 11**	**Model 12**
%IndepW	-0.044 (-0.532)	-0.023 (-0.281)	0.028 (0.356)	-0.043 (-0.509)	0.069 (0.783)	0.133 (1.590)	-0.078 (-1.589)	-0.025 (-0.507)	-0.022 (-0.470)	-0.071 (-1.443)	-0.051 (-0.980)	0.031 (0.633)
%ExecW	0.008 (0.134)	0.009 (0.142)	0.044 (0.748)	0.009 (0.143)	-0.060 (-0.925)	-0.030 (-0.233)	-0.023 (-0.511)	0.011 (0.250)	-0.044 (-1.049)	-0.027 (-0.601)	-0.049 (-1.081)	-0.018 (-0.414)
LnFSIZE		-0.114** (-2.453)				0.013 (0.252)		-0.261*** (-5.713)				-0.222*** (-4.332)
LnAGE		0.064 (1.406)	0.095** (2.250)		0.008 (0.171)	0.050 (1.125)		0.141** (3.105)	0.127*** (2.900)		0.118** (2.538)	0.132*** (2.998)
Leverage			-0.376*** (-8.676)			-0.380*** (-8.276)			-0.347*** (-8.110)			-0.306*** (-6.998)
LnBSIZE				0.008 (0.175)		0.067 (1.351)				-0.075* (-1.670)		0.055 (1.130)
%IND					-0.222*** (-3.876)	-0.174*** (-3.156)					-0.113** (-2.306)	-0.030 (-0.641)
Constant	5.545*** (11.127)	9.268*** (4.487)	8.761*** (8.508)	5.272*** (3.224)	7.658*** (6.272)	8.515*** (4.165)	7.060*** (9.721)	23.228*** (6.360)	8.297*** (5.768)	12.315*** (3.813)	9.518*** (3.379)	21.878*** (5.250)
Adjusted R^2	0.043	0.054	0.169	0.043	0.069	0,188	0.036	0.103	0.157	0.038	0.054	0.187
Industry dummy	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year dummy	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	496	496	496	496	496	496	500	500	500	500	500	500

Panel B: Tobin's Q-Full sample

	France						U.S.					
	Model 1	**Model 2**	**Model 3**	**Model 4**	**Model 5**	**Model 6**	**Model 7**	**Model 8**	**Model 9**	**Model 10**	**Model 11**	**Model 12**
%IndepW	-0.132 (-1.620)	-0.043 (-0.575)	-0.054 (-0.705)	-0.161** (-1.988)	-0.026 (-0.309)	0.049 (0.614)	-0.105** (-2.187)	0.043 (1.040)	-0.077 (-1.559)	-0.083* (-1.770)	-0.082 (-1.590)	0.045 (1.039)
%ExecW	-0.021 (-0.347)	-0.003 (-0.048)	0.017 (0.300)	-0.031 (-0.520)	-0.190 (-1.153)	0.004 (0.065)	0.004 (0.090)	0.076** (2.059)	0.002 (0.050)	-0.004 (-0.105)	-0.005 (-0.112)	0.083** (2.149)
LnFSIZE		-0.412*** (-10.056)				-0.350*** (-7.245)		-0.575*** (-14.884)				-0.606*** (-13.439)
LnAGE		0.024 (0.602)	-0.017 (-0.407)		-0.096** (-2.217)	0.014 (0.342)		0.015 (0.391)	-0.040 (-0.865)		-0.046 (-0.972)	0.005 (0.135)
Leverage			-0.398*** (-8.604)			-0.245*** (-5.811)			-0.107 (-2.370)**			0.007 (0.190)
LnBSIZE				-0.152*** (-3.550)		0.075* (1.660)				-0.229*** (-5.357)		0.057 (1.331)
%IND					-0.190*** (-3.423)	-0.073 (-1.445)					-0.052 (-1.064)	0.001 (0.014)
Constant	1.505*** (17.216)	4.675*** (14.080)	2.436*** (13.402)	2.470*** (8.662)	2.194*** (10.097)	4.469*** (13.070)	2.250*** (15.496)	10.812*** (17.616)	2.762*** (8.442)	5.474*** (8.854)	2.999*** (5.465)	10.643*** (14.293)
Adjusted R^2	0.126	0.281	0.244	0.147	0.148	0.332	0.101	0.388	0.110	0.151	0.101	0.401
Industry dummy	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year dummy	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	488	488	488	488	488	488	481	481	481	481	481	481

Notes: This table presents the OLS regression results for ROA (panel A) and Tobin's Q (panel B). The table reports the standardized coefficients (t-values are presented in the parentheses). Variable definitions are described in table 2. *** Indicates significance at the 1% level; ** Indicates significance at the 5% level; * Indicates significance at the 10% level

impact on the financial performance of the firm. According to Granovetter (1978), the degree of influence of women on the board of directors depends on the number of women on the board. The studies of Gyapong et al. (2016), Liu et al. (2014) and Torchia et al. (2011) all state that one woman is a token, two is a presence and three or more is a voice. As a consequence, the variable percentage of women (%Women) is replaced by three dummy variables. Dummy variable 1 (GD1) indicates one women directors on the board, dummy variable 2 (GD2) indicates two women directors on the board, and dummy variable 3 (GD3) indicates three or more women directors on the board. Appendix C presents the results of the OLS regression between the three dummy variables, ROA and Tobin's Q, and the alternative measures (ROE, ROS, and RET) for the French and U.S. sample firms.

First, the results of the French sample are analyzed. The first dummy variable, GD1, shows no significant impact on the financial performance proxies ROA, ROE, ROS and RET. However, the results show that when there is one women director on the board in French firms, this will have a negative effect on Tobin's Q compared to firms with none or more than one women director on the board. This result is in contradiction with the results found by Gyapong et al. (2016), who reported a significant positive relation between one women director and Tobin's Q. According to the research, the appointment of a women director may create legitimacy benefits (Carter et al., 2003). The second dummy variable (GD2) shows no significant relationship between two women directors on the board and any of the proxies of financial performance in French firms. This is also not in line with the research of Gyapong et al. (2016) and Liu et al. (2014). The last dummy variable, GD3, show, just like the previous dummy variable, no significant relationship between three or more women directors and the proxies of financial performance, except a negative relation between GD3 and ROS. This relation means that when there are three or more women on the board, this will have a negative impact on the ROS of the companies in the French sample. It can be concluded that the French sample does not provide evidence for the critical mass theory and tokenism. Most of the coefficients are insignificant and the significant ones show an effect that is in contradiction with the theory.

Almost all of the results are in contradiction to the studies of Gyapong et al. (2016) and Liu et al. (2014). One possible explanation of the difference in results between the results is that the studies of Gyapong et al. (2016) and Liu et al. (2014) investigate the countries South Africa and China. In contradiction with the U.S. and France, South Africa and China are developing countries. According to Gyapong et al. (2016), weak investor protection and weak external regulatory environments in developing countries make the extra monitoring from women directors' value relevant even in the better-governed firm. So, it seems that women directors in developing countries can have a different effect on firms' performance compared to women directors in developed countries. As a result of this, it could be interesting to investigate the difference in the effect of women directors on firm performance across developing and developed countries.

The results of the U.S. sample, show just like the results of the French sample, a lot of insignificant coefficients. Looking at the first dummy variable (GD1), there is only a positive significant relation with RET. In contrast with the results of the French sample, this result is in line with the study of Gyapong et al. (2016), who also reported a positive significant relationship because of legitimacy benefits. The results of the second dummy variable (GD2) are comparable to the results of the French sample. None of the models show any significant impact of two women directors on the board on the proxies of financial performance. In contradiction with the French sample, the U.S. sample shows a positive significant (at the 10% level) relation between three or more women on the board (GD3) and Tobin's Q. However, just like the French sample, the other coefficients are insignificant. The positive significant coefficient between GD3 and Tobin's Q means that firms from the U.S. sample with three or more women on the board have higher Tobin's Q compared to firms with less than three women on the board. This result is in line with the critical mass theory, which states that boards with three or more women directors should reach higher financial performance compared to firms with less than three women. So, the U.S. sample show some evidence for the critical mass theory and tokenism, however, this evidence is very limited.

4.3.1.4. The overall result of the effect of gender diversity

Looking at the different models, it can be concluded that in most of the analyses there is no effect of board gender diversity and firms' financial performance for both the French and the U.S. samples. Overall, it can be concluded that gender-diverse boards do not affect the financial performance of French and U.S. firms, thus rejecting hypothesis 1. So, it seems that not female board representation, but other firm characteristics, like firm size and leverage have a more important impact on the financial performance of firms.

4.3.2. Mandatory gender quota

As mentioned in chapter 2.5.2, the second hypothesis that is tested is that the positive effect of gender-diverse boards on financial firm performance is stronger for U.S. firms than for France firms due to the mandatory gender quota implemented by the government of France. To test this hypothesis, the samples of the French and U.S. firms are divided into two sub-samples based on the sample period. Table 7 (ROA) and table 8 (Tobin's Q) reports the results of the OLS regression between the two sub-samples and board gender diversity for both the French and the U.S. sample. To test whether the coefficients are the same across two regression models from different time periods, the method of Cumming (2009) is used. Cumming (2009) demonstrated that two coefficients are statistically significantly different from each other, when the corresponding 95% confidence interval overlap by not more than 50%. In order to test if the coefficients are statistically significantly different from each other, their corresponding 95% confidence intervals are estimated via

bootstrapping. When the confidence intervals overlap less than 50%, the coefficients would be considered statistically significantly different from each other. The results are presented in Appendix D.

Looking at the results of the French sample, none of the models show any significant impact of the percentage of women directors (%women) on ROA for both sub-samples. The results of the impact of the percentage of women on Tobin's Q for the sample period 2010-2011 are also insignificant. The coefficients of the sample period 2016-2018, as expected, all have a negative sign. However, only model 10 is significant and negative (at the 10% level) but the full model (model 12) shows that this result is not robust. It seems that there is no difference in the effect of women directors on ROA and Tobin's Q of the companies in the French sample between the sample periods 2010-2011 and 2016-2018. However, as mentioned before, even when coefficients are insignficant, the changes in coefficients can be signficant. To test this, the method of Cumming (2009) is used. The confidence intervals show that the effect of the percentage of women on ROA is not statistically different for the sample periods 2010-2011 and 2016-2018. The confidence intervals overlap by more than 50%. The difference between the coefficients of 0.072 (0.095-0.023) is not considered statistically significant. Furthermore, just like the results on ROA, The confidence intervals show that the effect of the percentage of women on Tobin's Q is not statistically different for the sample periods 2010-2011 and 2016-2018. The confidence intervals overlap by more than 50%. The difference between the coefficients of 0.071 (-0.009-0.062) is not considered statistically significant.

In summary, there is no difference in the effect of women directors on ROA and Tobin's Q of the companies in the French sample between the sample periods 2010-2011 and 2016-2018. These results show that the mandatory gender quota implemented in France does not change the relationship between the percentage of women directors and financial performance of firms measured as ROA and Tobin's Q. This is in contradiction with hypothesis 2. In summary, the mandatory gender quota implemented by the French government does not affect the financial performance of French firms.

The studies of Bohren and Staubo (2016) and Ahern and Ditmar (2012) found a negative relationship between a mandatory gender quota implemented by the government and the financial performance of firms in Norway. It is not easy to find an explanation for the difference in the effects of the mandatory gender quota in France and Norway. According to Bohren and Staubo (2016), the evidence from Norway suggests that a balanced board in terms of gender is hard to achieve by mandatory gender quotas. Large mandatory gender quotas can only be achieved when regulators accept large side effects. It is possible that these side effects are not as strong in France. However, further research is needed to investigate these differences.

Where the French government implemented a mandatory gender quota to increase the

number of women on the board, the U.S. government did not do this. Therefore, the effect of the percentage of women on the board on the financial performance of U.S. firms should stay stable. The results with regards to ROA, just like the French sample, show in none of the models any significant relation between the percentage of women on the board (%women) and ROA. Furthermore, the confidence intervals overlap by more than 50%. The difference between the coefficients of 0.037 (-0.001-0.036) is not considered statistically significant. Besides, the results of Tobin's Q show a negative significant relationship between the percentage of women on the board and Tobin's Q in the models 1, 3, 4, and 5 (model 1, 3 and 5 at the 1% level, model 4 at the 5% level). However, when firm size is added to the model in models 2 and 6 (the full model for sample period 2010-2011), the negative significant relationship disappears implying that the percentage of women directors does not affect Tobin's Q. The results of the model of the sample period 2016-2018 (model 7-12) show, just like the French sample, no significant impact of the percentage of women on Tobin's Q for U.S. firms. Also, the coefficients confidence intervals overlap by more than 50%. The difference between the coefficients of 0.036 (-0.001-0.036) is not considered statistically significant. So, in contrast with hypothesis 2, there is no difference in the effect of a gender-diverse board on firm performance between the French and U.S. samples. For both of the countries, the results show no significant relationships between female board representation and the financial performance of firms in both sample periods. Also, the coefficients of the percentage of women does not significantly change over time for both the French and the U.S. sample.

To see if there is a difference between the impact of executive and independent directors for the sample periods 2010-2011 and 2016-2018, the variable percentage of women (%Women) is replaced by the percentage of independent women directors (%IndepW) and executive women directors (%ExecW). Appendix E presents the results of the OLS regression between the two variables, ROA and Tobin's Q, and the alternative measures. The results of the French sample show no significant impact of independent women (%IndepW) and any of the measures of financial performance for both of the sample periods. However, the percentage of executive women directors (%ExecW) shows a significant positive impact (at the 10% level) on ROA for the sub-sample 2010-2011 but this effect disappears in the sample period 2016-2018. This means that in 2010-2011 a higher percentage of executive women directors had a positive impact on the ROA of French firms but in the period 2016-2018 this effect is no longer visible. This fact is supported by the confidence intervals. the coefficients confidence intervals overlap by less than 50%. This indicates that women executive directors do not increase the ROA of French firms but they also do not decrease ROA in the sample period 2016-2018. However, this result is not different compared with the U.S. sample result. The U.S. sample results show for both of the sample periods an insignificant relationship between the executive women directors and ROA contradicting hypothesis 2.

Table 7: The effect of women directors (%Women) on ROA for the sample periods 2010-2011 and 2016-2018

Panel A: ROA-French sample

	France 2010-2011						France 2016-2018					
	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7	Model 8	Model 9	Model 10	Model 11	Model 12
%Women	0.031	0.070	0.077	0.037	0.033	0.095	-0.032	-0.033	0.004	-0.031	-0.013	0.023
	(0.414)	(0.951)	(1.105)	(0.414)	(0.445)	(1.351)	(-0.531)	(-0.548)	(0.062)	(-0.501)	(-0.219)	(0.391)
LnFSIZE		-0.253***				-0.138*		-0.044				0.075
		(-3.446)				(1.705)		(-0.740)				(1.149)
LnAGE		0.132*	0.154**		0.070	0.129*		0.030	0.070		-0.012	0.019
		(1.831)	(2.229)		(0.959)	(1.788)		(0.515)	(1.302)		(-0.203)	(0.334)
Leverage			-0.376***			-0.332***			-0.386***			-0.393***
			(-5.406)			(-4.235)			(-6.624)			(-6.741)
LnBSIZE				0.007		0.126				0.012		0.026
				(0.090)		(1.557)				(0.209)		(0.391)
%IND					-0.115	-0.065					-0.180***	-0.137**
					(-1.561)	(-0.891)					(-3.181)	(-2.394)
Constant	5.291***	12.957**	6.984***	5.102**	5.166***	9.474***	4.936***	6.372**	8.789***	4.440*	7.995***	6.804**
	(9.064)	(4.269)	(4.697)	(2.190)	(2.989)	(3.162)	(4.079)	(2.214)	(5.481)	(1.666)	(4.066)	(2.252)
Adjusted R^2	0.045	0.101	0.176	0.040	0.067	0,184	0.032	0.041	0.161	0.031	0.060	0.177
Industry dummy	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year dummy	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	187	187	187	187	187	187	312	312	312	312	312	312

Panel B: ROA-U.S. sample

	U.S. 2010-2011						U.S. 2016-2018					
	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7	Model 8	Model 9	Model 10	Model 11	Model 12
%Women	-0.042	0.019	0.042	-0.034	-0.013	0.035	-0.080	-0.042	-0.060	-0.078	-0.076	-0.001
	(-0.556)	(0.238)	(0.624)	(-0.432)	(-0.172)	(0.473)	(-1.367)	(-0.753)	(-1.043)	(-1.347)	(-1.261)	(-0.014)
LnFSIZE		-0.184*				0.004		-0.325***				-0.321***
		(-1.894)				(0.046)		(-5.969)				(-5.373)
LnAGE		0.103	0.102		0.083	0.106		0.168***	0.148**		0.143**	0.164***
		(1.375)	(1.560)		(1.105)	(1.539)		(2.964)	(2.561)		(2.403)	(2.936)
Leverage			-0.508***			-0.517***			-0.257***			-0.214***
			(-7.900)			(-7.422)			(-4.671)			(-3.920)
LnBSIZE				-0.044		-0.007				-0.093		0.065
				(-0.600)		(-0.008)				(-1.646)		(1.091)
%IND					-0.107	0.033					-0.098*	-0.041
					(-1.449)	(0.496)					(-1.674)	(-0.733)
Constant	7.249***	14.403**	10.314***	9.906**	10.001***	8.988*	8.047***	32.199**	8.136***	15.119*	9.406***	32.377**
	(8.618)	(2.694)	(5.462)	(2.197)	(2.974)	(1.789)	(8.949)	(6.491)	(4.257)	(3.445)	(2.690)	(5.628)
Adjusted R^2	0.040	0.056	0.284	0.037	0.048	0.273	0.025	0.138	0.101	0.031	0.045	0.178
Industry dummy	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year dummy	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	188	188	188	188	188	188	315	315	315	315	315	315

Notes: This table presents the OLS regression results for ROA of the French sample (panel A) and the U.S. sample (panel B) for the sample periods 2010-2011 and 2016-2018. The table reports the standardized coefficients (t-values are presented in the parentheses). Variable definitions are described in table 2. *** Indicates significance at the 1% level; ** Indicates significance at the 5% level; * Indicates significance at the 10% level

Table 8: The effect of women directors (%Women) on Tobin's Q for the sample periods 2010-2011 and 2016-2018

Panel A: Tobin's Q-French sample

	France 2010-2011						France 2016-2018					
	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7	Model 8	Model 9	Model 10	Model 11	Model 12
%Women	0.008	0.054	0.045	0.007	0.005	0.062	-0.073	-0.049	-0.022	-0.103*	-0.045	-0.009
	(0.112)	(0.734)	(0.612)	(0.089)	(0.062)	(0.868)	(-1.214)	(-0.936)	(-0.411)	(-1.743)	(-0.761)	(-0.180)
LnFSIZE		-0.320***				-0.218***		-0.486***				-0.417***
		(-4.379)				(2.293)		(-9.538)				(-7.286)
LnAGE		0.092	0.092		0.011	0.067		0.023	-0.049		-0.132***	0.025
		(1.291)	(1.281)		(0.155)	(0.920)		(0.454)	(-0.963)		(-2.341)	(0.497)
Leverage			-0.311***			-0.217***			-0.425***			-0.313***
			(-4.311)			(-2.719)			(-7.984)			(-6.094)
LnBSIZE				-0.059		0.100				-0.216***		0.054
				(-0.792)		(1.227)				(-3.913)		(0.925)
%IND					-0.216***	-0.148**					-0.145**	-0.028
					(-2.959)	(-2.014)					(-2.603)	(-0.548)
Constant	1.392***	2.806***	1.646***	1.609***	1.647***	2.501***	2.086***	6.278***	3.364***	3.853***	2.853***	6.093**
	(18.597)	(7.159)	(8.140)	(5.662)	(7.337)	(6.312)	(8.947)	(13.055)	(11.273)	(7.619)	(8.468)	(11.829)
Adjusted R^2	0.057	0.142	0.140	0.055	0.093	0,187	0.077	0.297	0.244	0.119	0.102	0.374
Industry dummy	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year dummy	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	188	188	188	188	188	188	312	312	312	312	312	312

Panel B: Tobin's Q-U.S. sample

	U.S. 2010-2011						U.S. 2016-2018					
	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7	Model 8	Model 9	Model 10	Model 11	Model 12
%Women	-0.226***	0.020	-0.205***	-0.173**	-0.211***	0.019	-0.052	0.051	-0.025	-0.047	-0.032	0.061
	(-2.974)	(0.290)	(-2.633)	(-2.293)	(-2.676)	(0.261)	(-0.899)	(1.048)	(-0.418)	(-0.842)	(-0.526)	(1.214)
LnFSIZE		-0.593***				-0.649***		-0.577***				-0.586***
		(-8.700)				(-7.846)		(-12.384)				(-11.178)
LnAGE		0.048	-0.031		-0.041	0.031		0.013	-0.043		-0.046	0.011
		(0.751)	(-0.403)		(-0.533)	(0.458)		(0.269)	(-0.708)		(-0.763)	(0.214)
Leverage			-0.091			0.073			-0.122**			-0.038
			(-1.178)			(1.036)			(-2.171)			(-0.789)
LnBSIZE				-0.238***		0.066				-0.232***		0.034
				(-3.266)		(0.858)				(-4.295)		(0.658)
%IND					-0.049	-0.016					-0.050	-0.038
					(-0.642)	(-0.235)					(-0.763)	(-0.789)
Constant	2.345***	8.393***	2.648***	4.709***	2.897***	8.398***	2.611***	12.975**	3.253***	6.284*	3.423***	12.853**
	(16.671)	(11.193)	(6.504)	(6.392)	(4.119)	(9.116)	(14.275)	(14.780)	(7.491)	(7.195)	(4.678)	(12.292)
Adjusted R^2	0.081	0.362	0.079	0.131	0.074	0.357	0.068	0.381	0.078	0.119	0.066	0.377
Industry dummy	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year dummy	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	188	188	188	188	188	188	315	315	315	315	315	315

Notes: This table presents the OLS regression results for Tobin's Q of the French sample (panel A) and the U.S. sample (panel B) for the sample periods 2010-2011 and 2016-2018. The table reports the standardized coefficients (t-values are presented in the parentheses). Variable definitions are described in table 2. *** Indicates significance at the 1% level; ** Indicates significance at the 5% level; * Indicates significance at the 10% level

The other results show no significant relationship between executive women directors and the other financial performance measures for the France sample. Besides, as expected, the results of the U.S. sample remains the same if the two sample periods are compared. All results are insignificant except the positive significant (at the 10% level) impact of executive women directors on Tobin's Q for both of the sample periods.

Looking at the different models, it can be concluded that the results show no evidence that there is a stronger positive effect of gender-diverse boards on financial firm performance for U.S. firms compared with French firms due to the mandatory gender quota implemented by the French government, thus rejecting hypothesis 2. As mentioned in the descriptive statistics section, on average U.S. firms have significantly higher means for all financial performance measures except ROS. Based on this, it seems that U.S. firms perform financially better than their French counterparts. However, the results of table 7 and 8 show no significant effect between the percentage of women directors and the financial performance measures for both countries and sample periods. Also, the coefficients of the percentage of women do not significantly change over time. If the mandatory gender quota had a negative effect on financial firm performance, the results should have turned negative in the sample period 2016-2018 in the French sample. This is not the case and is in contradiction to the studies of Bohren and Staubo (2016) and Ahern and Ditmar (2012). Appendices D and E show some evidence in the form of the changing relationship between the percentage executive women directors and ROA in the French sample, however, this is very limited.

4.3.3. Board structure

The third and last hypothesis that is tested is that gender-diverse boards have a stronger effect on financial firm performance in U.S. and French firms if they have a single-tier board structure instead of a two-tier board structure. To test this hypothesis an interaction term between the percentage of women (%Women) and board structure (BS2) was used (%Women*BS2). Table 9 reports the results of the OLS regression between the interaction term and ROA and Tobin's Q.

The results in table 9 report the same results for ROA (Panel A) and Tobin's Q (Panel B). According to Charreaux and Wirtz (2013) and Millet-Reyes and Zhao (2010), the two-tier board structure can solve agency problems. The two-tier board structure has advantages compared to the one-tier board structure such as clear separation between supervisory board and management board and because of the small size of the management board decisions can be made quickly (Aste, 1999). The expectation is that the two-tier board structure is positively associated with firm performance. However, the coefficients of the board structure are not significantly different from zero. These results imply that board structure does not have an impact on the performance of firms.

In addition, the two-tier board structure is favored by corporate governance reformers in

France because these types of firms are better governed (Charreaux & Wirtz, 2007). However, according to the study of Adams and Ferreira (2009) which show evidence that well-governed firms may suffer negative consequences when they have a gender diverse board. This is due to over-monitoring by the women on the board. However, the coefficients of the interaction term are also insignificant. This provides no evidence that firms with women directors and a two-tier board structure perform worse compared to firms with a one-tier board structure.

In summary, hypothesis 3 is rejected. This means that there is no effect of a gender-diverse board on the financial performance of firms from France and the U.S. with a single-tier board structure or a two-tier board structure.

Table 9: The effect of women directors (%Women) and board structure (BS2) on ROA and Tobin's Q

	Panel A: ROA						Panel B: Tobin's Q					
	Model 1	**Model 2**	**Model 3**	**Model 4**	**Model 5**	**Model 6**	**Model 7**	**Model 8**	**Model 9**	**Model 10**	**Model 11**	**Model 12**
%Women	0.009	0.021	0.063	0.009	0.031	0.091	-0.059	0.005	0.006	-0.076	-0.024	0.058
	(0.104)	(0.238)	(0.760)	(0.107)	(0.353)	(1.090)	(-0.682)	(0.070)	(0.078)	(-0.892)	(-0.286)	(0.767)
BS2	0.088	0.086	0.032	0.087	0.127	0.045	0.095	0.063	0.024	0.115	0.121	0.026
	(0.874)	(0.857)	(0.338)	(0.869)	(1.273)	(0.476)	(0.956)	(0.700)	(0.261)	(1.175)	(1.242)	(0.295)
%Women*BS2	-0.059	-0.059	-0.036	-0.060	-0.114	-0.074	-0.109	-0.082	-0.064	-0.102	-0.153	-0.086
	(-0.593)	(-0.585)	(-0.383)	(-0.593)	(-1.137)	(-0.787)	(-1.095)	(-0.917)	(-0.701)	(-1.044)	(-1.553)	(-0.982)
LnFSIZE		-0.116**				0.013		-0.416***				-0.353***
		(-2.509)				(0.249)		(-10.207)				(-7.323)
LnAGE		0.055	0.082**		0.005	0.040		0.013	-0.053		-0.130***	-0.030
		(1.190)	(1.919)		(0.111)	(0.897)		(0.328)	(-1.292)		(-2.975)	(-0.737)
Leverage			-0.377***			-0.383***			-0.367***			-0.253***
			(-8.597)			(-8.237)			(-8.765)			(-5.980)
LnBSIZE				0.002		0.070				-0.155***		0.090*
				(0.046)		(1.364)				(-3.561)		(1.963)
%IND					-0.168***	-0.129***					-0.182***	-0.072*
					(-3.649)	(-2.846)					(-2.975)	(-1.768)
Constant	5.333***	9.299***	8.888***	5.260***	6.951***	8.126***	1.478***	4.828***	2.600***	2.453***	2.298***	4.585***
	(9.654)	(4.370)	(7.857)	(3.153)	(5.607)	(3.926)				(8.462)		
Adjusted R^2	0.041	0.051	0.167	0.039	0.064	0,182	0.123	0.288	0.252	0.145	0.160	0.345
Industry dummy	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year dummy	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	492	492	489	492	492	489	481	481	481	481	481	481

Notes: This table presents the OLS regression results for ROA (panel A) and Tobin's Q (panel B). The table reports the standardized coefficients (t-values are presented in the parentheses). Variable definitions are described in table 2. *** Indicates significance at the 1% level; ** Indicates significance at the 5% level; * Indicates significance at the 10% level

4.3.4. Robustness tests

To test the robustness of the results of this study, three robustness tests are performed. First, regression with alternative measures is performed. Second, a regression with one-year lagged independent variables is conducted.

4.3.4.1. Alternative measures

The first robustness test that is conducted is to check if the results of hypotheses 1, 2, and 3 holds for alternative measures. As mentioned before, the three proxies of financial performance that have been added to the regression analysis are the accounting-based measures ROE and ROS and the market-based measure RET. In Appendix F, the results of the regression analysis of the percentage of women directors and ROE (panel A), ROS (panel B) and RET (panel C) are presented. The analysis with

the alternative measures shows the same results as ROA and Tobin's Q do.

Board gender diversity is not only measured by the percentage of women on the board but also by the percentage of executive women directors and independent women directors. Appendix G reports the results of the OLS regression between the alternative measures and board gender diversity. Overall, the results of the alternative measures are in line with the results of ROA and Tobin's Q and contradict hypothesis 1.

To test hypothesis 2, the sample was divided into two sample periods: 2010-2011 and 2016-2018. This has also been done for the results of the alternative measures. Appendix H reports the results of the OLS regression between the alternative measures and the percentage of women on the board for the sample periods 2010-2011 and 2016-2018. In total, the results of the alternative measure are comparable to the results of ROA and Tobin's Q and are in contradiction with Tobin's Q.

Lastly, to test hypothesis 3, an interaction term between the percentage of women directors and a dummy variable of board structure was used. Appendix I reports the results of the OLS regression between the alternative measures and the interaction term between board structure and the percentage of women directors. None of the models shows a significant relationship between the interaction term and the alternative financial performance measures. This is in line with the results of Tobin's Q and ROA and in contradiction with hypothesis 3.

Overall, the results of the alternative measures are comparable to the results of ROA and Tobin's Q. Just like the results of ROA and Tobin's Q, all hypotheses are rejected.

4.3.4.2. Lagged variables

The second robustness test that is conducted is the replacement of the gender diversity variables with one-year lagged gender diversity variables. These one-year lagged variables are used to control for endogeneity between board gender diversity and financial firm performance. According to Carter et al. (2010) and Liu et al. (2014), the effect of gender diversity on financial firm performance is not directly measurable.

Appendix J reports the results of the regression analysis of the one-year lagged percentage of women directors and the financial performance measures for the French sample (panel A) and the U.S. sample (panel B). As can be observed in Appendix J, the outcomes are consistent with the results as earlier mentioned in this study. Just like the earlier results, none of the models reports a significant relationship between the percentage of women ($\%Women_{t-1}$) and the financial performance of French and U.S. firms. The coefficients in all the models are insignificant. This means that there is no relationship between the one-year lagged percentage of women on the board of directors and financial performance of French and U.S. firms. Besides, gender diversity is also measured as the percentage of independent and executive women directors. The results of the

regression between the one-year lagged percentage of executive and independent women directors and financial performance are reported in Appendix K. These results look as well similar to the results reported earlier in this study. All the results are insignificant, except for the relationship between the lagged percentage of executive women directors and ROS. In contradiction with hypothesis 1, this result reports a significant negative (at the 5% level) relationship.

To check the robustness of the sub-samples 2010-2011 and 2016-2018, a model with the lagged percentage of women directors is used. The results of the OLS regression are reported in Appendix L for the French (panel A) and the U.S. (panel B) sample. Just like the previous results, these results are similar to the result presented earlier in this study. None of the results shows a significant relationship between the percentage of women on boards and the financial performance of firms.

In summary, using lagged variables has no impact on the results of the regression. The results present the same results as when the normal variables are used. So, it seems that it can be concluded that endogeneity does not play a role in this study.

5. Conclusion

This chapter discusses the conclusion, limitations and recommendations for further researches. First, the conclusion based on the main results of this study are described. Second, the limitations of this research and the recommendations for future researches are given.

5.1. Main findings

This study examined the influence of the presence of women directors on the financial performance of French and U.S. firms. Recently, the subject of women directors on corporate board received a lot of attention in both academic and popular press during the last decades. According to Chen et al. (2016) women are just as capable as men in fulfilling a role on the board of directors. However, women directors are still underrepresented on corporate boards. Women directors bring different perspectives and experiences into the boardroom. As a result of this, diversity can increase the independence of the board because people with a different background might ask different questions that would not be asked by directors with a traditional background (Carter et al., 2003; Liu et al., 2014). Furthermore, women directors are considered as the ultimate outside directors and therefore diverse boards might be more activists in monitoring managers (Carter et al., 2003). However, adding women directors can slow down the decision-making process and lead to over-monitoring by the board (Adams & Ferreira, 2009; Rose, 2007). This study contributes to a better understanding of the effect of a diverse board on the financial performance of the company in the U.S. and France. To answer the hypotheses, OLS regression with year and industry fixed effects is used. The sample consists of 107 French (SFB 120) and U.S. (S&P 500) listed firms for the years 2010, 2011, 2016, 2017,2018. This results in a total of 1056 year observations.

To answer the research question, three hypotheses have been formulated. The first hypothesis stated that gender-diverse boards are positively associated with the financial performance of French and U.S. firms. However, the results show no evidence that the percentage of women directors influences firm performance. Therefore, it can be concluded that board gender diversity does not affect financial performance for both French and U.S. firms. There is no evidence found that women directors improve the functioning of the board, which does not support hypothesis 1.

In addition, board gender diversity is separated into two groups: independent and executive women directors. Previous studies showed evidence that the effect of both types of directors on firm performance can differ. The results show that there is no evidence for the French sample that women executive and independent directors increase firm performance. Concerning the U.S. sample, there is no evidence that executive women directors and independent women directors increase ROA. The results show some evidence that executive women directors have a beneficial effect on

Tobin's Q. However, this evidence is limited. These results show limited evidence that any type of women directors improve the functioning of the board, which also does not support hypothesis 1.

Besides, board gender diversity is used to examine the critical mass theory and tokenism. The studies of Gyapong et al. (2016), Liu et al. (2014) and Torchia et al. (2011) all state that one woman is a token, two is a presence and three or more is a voice. Therefore, three dummy variables are used to examine this statement. In contradiction with the critical mass theory, the French sample does not provide evidence that three or more women directors on the board improve firm performance. The results of the U.S. sample shows a positive significant (at the 10% level) relation between three or more women on the board and Tobin's Q. However, all other financial performance measures show insignificant results. Therefore, the U.S. sample shows some evidence that supports the critical mass theory. However, this is very limited. Overall, the results show very limited evidence of the critical mass theory, which partly supports hypothesis 1.

The second hypothesis stated that the positive effect of gender-diverse boards on financial firm performance is stronger for U.S. firms than for France firms due to the mandatory gender quota implemented by the government of France. Due to the mandatory gender quota implanted in France at the end of 2011, French firms are restricted in the freedom to choose directors. Because of these constraints, possibly French firms are not able to select the best directors on the board. Therefore, women directors in France may have a less positive effect on firm performance compare to women directors in the U.S. However, the results show that that the mandatory gender quota implemented in France does not change the relationship between the percentage of women directors and firm performance. The mandatory gender quota implemented by the French government does not affect the financial performance of French firms. There is no difference in the effect of a gender-diverse board on firm performance between the French and U.S. samples. For both of the countries, the results show no significant relationships between female board representation and the financial performance of firms in both sample periods. It can be concluded that hypothesis 2 is not supported.

The last hypothesis stated that the positive effect of a gender-diverse board on the financial performance is stronger for firms with a single-tier board structure is than for firms from France with a two-tier board structure. Firms with a two-tier board structure will benefit not as much from women directors on their board compared to firms with a one-tier board structure because of over-monitoring. The evidence shows that the coefficients of the board structure are not significantly different from zero. These results imply that board structure and the attendance of women board directors does not have an impact on the performance of firms, which does not support hypothesis 3.

In conclusion, the presence of women on the board of directors does not influence the financial performance of French and U.S. firms. It is important to notice that there is no evidence of

both a positive or a negative effect of women directors on corporate boards. This means that this study does not provide evidence that women should not be added to the board because they can have a negative impact on firm performance. However, this study does also not provide evidence that women directors increase firm performance. Therefore, firms can add women directors to their boards, however, firm performance should not be the reason. Other reasons, for example, equality between women and men should.

5.2. Limitations and future research

This section discusses the limitation of this study and the recommendations for future research. The first limitation is that this study does not take individual characteristics of board members into account. According to Torchia et al. (2011), it is dangerous to assume that women possess some sort of shared characteristics because they are from the same sex. No woman is the same and they have all different backgrounds. For example, women can differ based on education, race, age and experience. In studies on gender-diverse boards, these non-observable (cognitive) are often not taken into account. Besides, women directors often fulfill less powerful roles (Miller & Triana, 2009). As a consequence, it is hard for women to influence board decisions. Both of the arguments could be reasons why this study did not find evidence that women directors influence firm performance. Johnson, Schnatterly, and Hill (2013), show that the findings for many director characteristics are inconclusive and that there is no clear answer on the basic question what kinds of directors make the most effective board. To answer this question, both non-observable and observable diversity must be taken into account. Therefore, future research should not only be focused on diversity measured as observable (demographic) characteristics but also on diversity in a non-observable (cognitive) characteristics.

The second limitation of this study is that this study has used OLS regression as a research method. As earlier mentioned, there is a possible endogeneity problem between women board directors and firm performance. OLS regression does not take endogeneity into account. This study shows in contradiction to other studies a lot of non-significant results. The study of Low et al. (2015) also found a lot of non-significant results when OLS regression was used. According to the study the non-significant results may be due to the fact that gender diversity could be endogenous. This could be the reason why this study show non-significant results while studies which use techniques that account for endogeneity have found significant results. Therefore, future research should consider other research methods such as 2SLS regression with instrumental variables to control for endogeneity.

The third limitation is how the percentage of women is calculated in this study. This study calculated the percentage of women as the number of women directors in year x divided by the total

number of directors in year x. However, other studies calculate the percentage of women as the average proportion of female directors on the board of the sample firms during the research period. According to Erhardt et al. (2003), the use of a multi-period average measure allows better control of changes in board diversity, can increases the reliability and also makes the analysis more dynamic. This could also be a reason why this study show insignificant results that contradicts to other studies. However, a lot of studies has used the same method as this study (Carter et al., 2003; Marinova et al., 2015; Sabatier, 2015). Future research can use both methods and see if there is a difference in the results.

The fourth limitation is that the sample only consists of 107 French and 107 U.S. firms which, especially in the U.S., is a small proportion of the total of listed firms. It seems that that the sample size of more than 1000 firm-year observations is large enough. However, looking at the industry classifications, some industries are really underrepresented in the sample. According to Johnson et al. (2013), one reason why the evidence on board gender diversity is not conclusive are industrial differences. Also, it could be the case that because of the small size used in this study, the results show no significant results. When a larger sample size is used, it is possible that the results show more significant results. Furthermore, a larger sample size can also result in higher reliability and validity. It could be the case that the insignificant Future research should use larger sample sizes so that all industries are represented in the sample with a sufficient number of firm observations and to increase the reliability and validity of the results.

The fifth and last limitation is that the results cannot be generalized. The sample is limited to French and U.S. listed firms. As a consequence, the results may not generalize to smaller, non-listed firms. Also, cultural differences across countries put constraints on the generalizability of this study. Furthermore, this study tested only the effect of mandatory gender quota in France. Rules in countries who also have implemented the mandatory gender quota may differ compared to the France rules. Therefore, to improve generalizability, it can be recommended to use a more diverse sample that consists of a wider range of firms, from small private firms to large listed firms. Besides, future research that tests the differences in the influence of women directors on firm performance across countries should be conducted. Lastly, it will be interesting to further study the effect of the mandatory gender quota in both France as in other countries.

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Appendices:

Appendix A: Sample

Sample		
	French firms	U.S. Firms
1	TOTAL S.A.	OCCIDENTAL PETROLEUM CORPORATION
2	CARREFOUR SA	MCKESSON CORPORATION
3	ELECTRICITE DE FRANCE SA	SOUTHERN CO
4	PEUGEOT S.A.	GENERAL MOTORS COMPANY
5	ARCELORMITTAL S.A.	MEDTRONIC PUBLIC LIMITED COMPANY
6	ENGIE	KINDER MORGAN, INC.
7	AIRBUS SE	BOEING COMPANY (THE)
8	RENAULT	FORD MOTOR CO
9	LVMH MOET HENNESSY - LOUIS VUITTON SE	PVH CORPORATION
10	VINCI	LENNAR CORP
11	CASINO GUICHARD-PERRACHON SA	KROGER CO
12	ORANGE	COMCAST CORPORATION
13	COMPAGNIE DE SAINT GOBAIN SA	BAKER HUGHES COMPANY
14	BOUYGUES SA	D.R. HORTON, INC.
15	SANOFI	ALLERGAN PLC
16	L'OREAL SA	COTY INC.
17	AIR FRANCE - KLM	SOUTHWEST AIRLINES CO.
18	VEOLIA ENVIRONNEMENT	WASTE MANAGEMENT INC
19	SCHNEIDER ELECTRIC SE	EATON CORPORATION PLC
20	DANONE S.A.	MONDELEZ INTERNATIONAL, INC.
21	BOLLORE	AMERICAN AIRLINES GROUP INC.
22	COMPAGNIE GENERALE DES ETABLISSEMENTS MICHELIN (C.G.E.M.) SCA	INTERNATIONAL PAPER CO
23	SAFRAN S.A.	LOCKHEED MARTIN CORP
24	L'AIR LIQUIDE SOCIETE ANONYME POUR L'ETUDE	AIR PRODUCTS & CHEMICALS INC
25	SODEXO	HILTON WORLDWIDE HOLDINGS INC.
26	VALEO SA	APTIV PLC
27	FAURECIA	BORGWARNER INC
28	SUEZ S.A.	AMERICAN WATER WORKS COMPANY, INC.
29	EIFFAGE	JACOBS ENGINEERING GROUP INC
30	THALES SA	QUALCOMM INC
31	KERING	MACY'S INC.
32	VIVENDI	T-MOBILE US, INC.
33	REXEL S.A.	W.W. GRAINGER, INC.
34	SOLVAY SA	BIOGEN INC.
35	CAPGEMINI SE	FACEBOOK, INC.
36	ATOS SE	TWITTER, INC.
37	TECHNIPFMC PLC	DEVON ENERGY CORP
38	ESSILORLUXOTTICA	COOPER COMPANIES INC
39	PUBLICIS GROUPE SA	OMNICOM GROUP INC
40	PERNOD RICARD SA	CONSTELLATION BRANDS, INC.
41	ALD	ACCENTURE PLC
42	ARKEMA	ALBEMARLE CORP
43	STMICROELECTRONICS N.V.	AMPHENOL CORP
44	WENDEL	XYLEM INC.
45	ALSTOM S.A.	WESTINGHOUSE AIR BRAKE TECHNOLOGIES CORP
46	PLASTIC OMNIUM SA	NEWELL BRANDS INC.
47	FNAC DARTY	TE CONNECTIVITY LTD.
48	LAGARDERE SCA	S&P GLOBAL INC.
49	SEB S.A.	WHIRLPOOL CORP
50	SPIE SA	PAYCHEX INC
51	ELIOR GROUP	DARDEN RESTAURANTS INC
52	LEGRAND SA	NVIDIA CORP
53	HERMES INTERNATIONAL SA	CAPRI HOLDINGS LIMITED
54	IMERYS SA	CIMAREX ENERGY CO.
55	DASSAULT AVIATION SA	TEXTRON INC
56	BUREAU VERITAS SA	EQUIFAX INC
57	ILIAD	COPART INC
58	RUBIS	TIFFANY & CO
59	APERAM S.A.	SKYWORKS SOLUTIONS, INC.
60	AEROPORTS DE PARIS SA	NORWEGIAN CRUISE LINE HOLDINGS LTD.
61	TELEPERFORMANCE SE	EQUINIX INC
62	DASSAULT SYSTEMES SE	LEIDOS HOLDINGS, INC.

63	NEXITY SA	REGENCY CENTERS CORP
64	VALLOUREC S.A.	HANESBRANDS INC.
65	EUROFINS SCIENTIFIC SE	INCYTE CORPORATION
66	ERAMET	FREEPORT-MCMORAN INC.
67	ACCOR SA	WYNN RESORTS, LIMITED
68	ORPEA SA	LABORATORY CORP OF AMERICA HOLDINGS
69	SOPRA STERIA GROUP	CERNER CORP
70	KORIAN	QUEST DIAGNOSTICS INCORPORATED
71	JCDECAUX SA	XEROX HOLDINGS CORPORATION
72	ELIS S.A.	FLEETCOR TECHNOLOGIES, INC.
73	UNIBAIL-RODAMCO-WESTFIELD	PROLOGIS, INC.
74	EUROPCAR MOBILITY GROUP S.A.	UNITED RENTALS INC
75	TARKETT S.A.	NVR INC
76	INGENICO GROUP SA	ZEBRA TECHNOLOGIES CORP
77	VICAT	AVERY DENNISON CORPORATION
78	BIOMERIEUX SA	REGENERON PHARMACEUTICALS INC
79	TELEVISION FRANCAISE 1 SA	VIACOMCBS INC.
80	IPSEN SA	PERRIGO COMPANY PUBLIC LIMITED COMPANY
81	NEXANS	H&R BLOCK, INC.
82	TRIGANO	PACCAR INC
83	ALTEN SA	SBA COMMUNICATIONS CORPORATION
84	SES S.A.	CENTURYLINK, INC.
85	BIC SA	RESMED INC
86	ICADE	CBRE GROUP, INC.
87	UBISOFT ENTERTAINMENT SA	SERVICENOW, INC.
88	IPSOS SA	INTERPUBLIC GROUP OF COMPANIES INC
89	METROPOLE TELEVISION SA	FOX CORPORATION
90	COVIVIO S.A.	PUBLIC STORAGE INC
91	EUTELSAT COMMUNICATIONS SA	CROWN CASTLE INTERNATIONAL CORP
92	KLEPIERRE SA	UDR, INC.
93	VERALLIA S.A.	WESTERN UNION CO. (THE)
94	CGG S.A.	HELMERICH & PAYNE, INC.
95	MAISONS DU MONDE SA	AKAMAI TECHNOLOGIES INC
96	NEOPOST SA	VARIAN MEDICAL SYSTEMS INC
97	REMY COINTREAU SA	BROWN FORMAN CORP
98	GECINA SA	CINTAS CORP
99	GETLINK S.E.	KANSAS CITY SOUTHERN
100	VIRBAC SA	ZOETIS INC.
101	SOITEC S.A.	IPG PHOTONICS CORPORATION
102	SARTORIUS STEDIM BIOTECH	FEDERAL REALTY INVESTMENT TRUST
103	GAZTRANSPORT & TECHNIGAZ SA	MSCI INC.
104	MERCIALYS SA	APARTMENT INVESTMENT & MANAGEMENT CO
105	GENFIT SA	VERTEX PHARMACEUTICALS INCORPORATED
106	DBV TECHNOLOGIES SA	IDEXX LABORATORIES INC
107	GENFIT SA	METTLER TOLEDO INTERNATIONAL INC

Appendix B: Descriptive statistics

Panel A: U.S. sample

	U.S. 2010-2011								U.S. 2016-2018								Difference
	N	Mean	Q1	Median	Q3	SD	Min	Max	N	Mean	Q1	Median	Q3	SD	Min	Max	P-value
Dependent variables																	
ROA (%)	202	5.941	2.534	5.524	9.810	5.510	-6.505	19.574	314	7.057	2.828	6.305	10.734	6.097	-6.097	31.154	0.036**
ROE (%)	202	17.954	7.833	14.364	22.517	32.286	-107.051	138.657	314	19.181	7.763	17.075	28.890	38.723	-107.052	138.657	0.708
ROS (%)	204	8.478	3.401	7.380	14.868	12.159	-22.883	41.197	315	12.087	5.524	9.981	17.433	12.421	-22.883	41.197	0.001***
Tobin's Q	175	1.943	1.331	1.638	2.308	0.908	0.988	5.387	308	2.405	1.487	2.001	2.967	1.263	0.988	5.387	0.000***
RET (%)	173	15.951	-2.648	14.009	33.824	26.974	-38.452	69.563	308	9.129	-9.878	7.680	28.553	26.513	-36.453	63.493	0.007**
Independent variables																	
GD1	191	0.360	0	0	1	0.482	0	1	312	0.260	0.000	0.000	1.000	0.439	0.000	1.000	0.018***
GD2	191	0.300	0	0	1	0.459	0	1	312	0.340	0.000	0.000	1.000	0.473	0.000	1.000	0.376
GD3	191	0.140	0	0	0	0.344	0	1	312	0.370	0.000	0.000	1.000	0.484	0.000	1.000	0.000***
%Women	191	0.135	0.083	0.125	0.182	0.099	0.000	0.400	312	0.214	0.125	0.200	0.273	0.110	0.000	0.625	0.000***
%INDW	191	0.125	0.077	0.125	0.182	0.096	0.000	0.400	312	0.200	0.111	0.200	0.267	0.108	0.000	0.546	0.000***
%ExecW	191	0.010	0.000	0.000	0.000	0.031	0.000	0.125	311	0.0139	0.000	0.000	0.000	0.031	0.000	0.200	0.276
BS2	192	-	-	-	-	-	-	-	312	-	-	-	-	-	-	-	-
Control variables																	
Fsize (€)	202	20.355	3.818	7.649	22.450	36.662	0.020	276.131	314	27.167	6.473	12.693	28.081	40.986	0.197	258.496	0.051*
LnFsize	202	15.831	15.111	15.667	16,692	1.245	11.960	19.000	314	16.427	15.672	16.284	17.061	1.108	14.241	19.37	0.000***
Leverage (%)	202	0.593	0.442	0.601	0.731	0.241	0.072	1.690	314	0.623	0.481	0.628	0.781	0.224	0.071	1.468	0.149
FirmAge	210	36.410	20.000	29.000	45.000	26.061	1.000	118.000	315	36.410	20.000	29.000	45.000	26.061	1.000	118.000	1.000
LnFirmAge	210	3.322	2.983	3.367	3.806	0.818	0.000	4.771	315	3.322	2.983	3.367	3.806	0.818	0.000	4.771	1.000
Bsize	191	10.150	8.000	10.000	12.000	2.055	6,000	16.000	312	10.290	9.000	10.000	12.000	1.954	3.000	16.000	0.467
LnBsize	191	2.297	2.079	2.303	2.485	0.202	1.792	2.773	312	2.319	2.197	2.303	2.485	0.187	1.609	2.773	0.231
%IND	191	0.815	0.750	0.818	0.889	0.092	0.455	1.000	312	0.833	0.778	0.875	0.907	0.094	0.417	1.000	0.034**

Panel B: French Sample

	France 2010-2011								France 2016-2018								Difference
	N	Mean	Q1	Median	Q3	SD	Min	Max	N	Mean	Q1	Median	Q3	SD	Min	Max	P-value
Dependent variables																	
ROA (%)	194	4.117	1.836	3.861	6.456	3.861	-7.835	13.817	317	3.910	1.991	3.817	5.642	4.022	-7.835	13.817	0.567
ROE (%)	193	10.671	6.462	10.017	15.595	8.514	-11.125	31.056	314	10.420	6.356	10.512	14.454	8.524	-11.125	31.056	0.747
ROS (%)	194	9.943	2.456	5.972	10.649	16.918	-9.233	85.068	314	10.502	3.199	6.375	10.946	16.642	-9.233	85.068	0.715
Tobin's Q	184	1.241	0.963	1.085	1.395	0.462	0.794	3.958	308	1.573	1.058	1.320	0.721	0.778	0.794	3.958	0.000***
RET (%)	178	4.802	-19.087	0.808	23.221	31.160	-48.519	78.659	298	5.267	-15.626	6.261	22.915	28.194	-48.519	78.697	0.867
Independent variables																	
GD1	190	0.310	0	0	1	0.462	0	1	311	0.000	0	0	0	0.057	0	1	0.000***
GD2	190	0.330	0	0	1	0.472	0	1	311	0.040	0	0	0	0.185	0	1	0.000***
GD3	190	0.290	0	0	1	0.455	0	1	311	0.940	1	1	1	0.240	0	1	0.000***
%Women	188	0.139	0.074	0.140	0.200	0.089	0.000	0.430	311	0.395	0.353	0.400	0.438	0.075	0.200	0.640	0.000***
%INDW	190	0.081	0.000	0.071	0.133	0.073	0.000	0.290	310	0.272	0.143	0.267	0.267	0.109	0.000	0.580	0.000***
%ExecW	190	0.058	0.000	0.000	0.091	0.076	0.000	0.400	310	0.122	0.000	0.111	0.200	0.103	0.000	0.375	0.000***
BS2	188	0.230	0	0	0	0.421	0	1	308	0.200	0	0	0	0.404	0	1	0.525
Control variables																	
Fsize (€)	194	25.748	2.944	7.192	32.070	45.845	0.038	321.603	317	28.667	5.088	9.627	31.861	483.311	0.175	336.531	0.499
LnFsize	194	16.144	15.090	16,14	17.349	1.599	9.920	19.589	317	16.305	15.481	16.257	17.337	1.392	12.074	19.635	0.233
Leverage (%)	194	0.598	0.501	0.594	0.732	0.166	0.044	0.982	314	0.609	0.506	0.612	0.717	0.150	0.141	0.993	0.419
FirmAge	212	62.030	25.000	52.000	82.000	49.686	5.000	355.000	317	62.030	25.00	52.000	82.000	49.686	5.000	355.000	1.000
LnFirmAge	212	3.846	3.219	3.951	4.407	0.782	1.609	5.872	317	3.846	3.219	3.951	4.407	0.782	1.609	5.872	1.000
Bsize	190	13.160	11.000	13.000	16.000	3.672	3.000	24.000	313	13.080	11.000	13.000	15.000	3.134	5.000	20.000	0.787
LnBsize	190	2.532	2.398	2.565	2.773	0.318	1.100	3.180	313	2.540	2.398	2.565	2.708	0.255	1.610	3.000	0.760
%IND	188	0.460	0.250	0.333	0.441	0.178	0.000	0.900	311	0.522	0.412	0.500	0.636	0.171	0.110	1.000	0.000***

Notes: This table presents the summary statistics of the variables of U.S. (panel A) and French Firms (panel B) used in this research. The statistics are presented seperately for the French and U.S. sample and grouped by sample period (2010-2011 and 2016-2018). The last column present the t-test between means of the sample periods 2010-2011 and 2016-2018 for the French and U.S. sample. Variable definitions are described in table 2. The variable firm size (Fsize) is presented in millions of euros for presentation purposes.

Appendix C: Critical mass theory and tokenism

	Panel A: France					Panel B: U.S.				
	ROA	**Tobin's Q**	**ROE**	**ROS**	**RET**	**ROA**	**Tobin's Q**	**ROE**	**ROS**	**RET**
	Model 1	**Model 2**	**Model 3**	**Model 4**	**Model 5**	**Model 6**	**Model 7**	**Model 8**	**Model 9**	**Model 10**
GD1	-0.066	-0.093*	-0.044	-0.040	-0.022	-0.091	0.096	-0.068	0.001	0.140*
	(-1.049)	(-1.663)	(-0.641)	(-0.622)	(-0.383)	(-1.285)	(1.490)	(-0.873)	(0.009)	(1.916)
GD2	-0.006	0.011	0.013	-0.078	0.002	-0.070	0.106	-0.040	0.015	0.107
	(-0.090)	(0.186)	(0.175)	(-1.174)	(0.033)	(-0.906)	(1.505)	(-0.472)	(0.192)	(1.333)
GD3	0.036	0.023	0.072	-0.207**	-0.070	-0.058	0.141*	-0.108	-0.057	0.124
	(0.432)	(0.308)	(0.808)	(-2.480)	(-0.944)	(-0.714)	(1.909)	(-1.206)	(-0.681)	(1.483)
LnFSIZE	0.007	-0.359***	-0.065	0.107**	-0.031	-0.211***	-0.600***	-0.008	0.062	-0.208***
	(0.137)	(-7.458)	(-1.145)	(2.032)	(-0.603)	(-4.135)	(-13.238)	(-0.137)	(1.179)	(-4.056)
LnAGE	0.058	0.019	0.101**	-0.024	-0.002	0.138***	0.007	0.082*	0.116***	0.027
	(1.315)	(0.472)	(2.332)	(-0.547)	(-0.043)	(3.148)	(0.171)	(1.701)	(2.579)	(0.592)
Leverage	-0.379***	-0.244***	0.085*	-0.391***	-0.098*	-0.303***	0.007	2.518**	-0.371***	0.043
	(-8.263)	(-5.824)	(1.699)	(-8.543)	(-1.824)	(-6.967)	(0.178)	(1.701)	(-8.341)	(0.965)
LnBSIZE	0.047	0.062	0.035	0.072	0.016	0.055	0.027	0.055	-0.042	0.021
	(0.921)	(1.351)	(0.641)	(1.423)	(0.339)	(1.134)	(0.620)	(1.029)	(-0.847)	(0.463)
%IND	-0.119***	-0.055***	-0.078*	0.014	0.108**	-0.017	-0.024	0.055	-0.027	0.005
	(-2.697)	(-1.378)	(-1.705)	(0.311)	(2.232)	(-0.398)	(-0.613)	(0.769)	(-0.604)	(0.117)
Constant	9.202***	4.636***	12.754**	5.948**	0.452***	21.312***	10.961***	-37.997**	11.785	0.826***
	(4.205)	(12.769)	(2.527)	(2.433)	(2.901)	(4.810)	(13.755)	(2.336)	(1.225)	(3.945)
Adjusted R^2	0.183	0.337	0.090	0.169	0.323	0.188	0.382	0.097	0.150	0.207
Industry dummy	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year dummy	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	496	488	496	493	472	500	481	500	500	480

Notes: This table presents the OLS regression results for France (panel A) and the U.S. (panel B). In the table, all the financial performance measures are included for both countries. The table reports the standardized coefficients (t-values are presented in the parentheses). Variable definitions are described in table 2. *** Indicates significance at the 1% level; ** Indicates significance at the 5% level; * Indicates significance at the 10% level

Appendix D: Comparison of coefficients

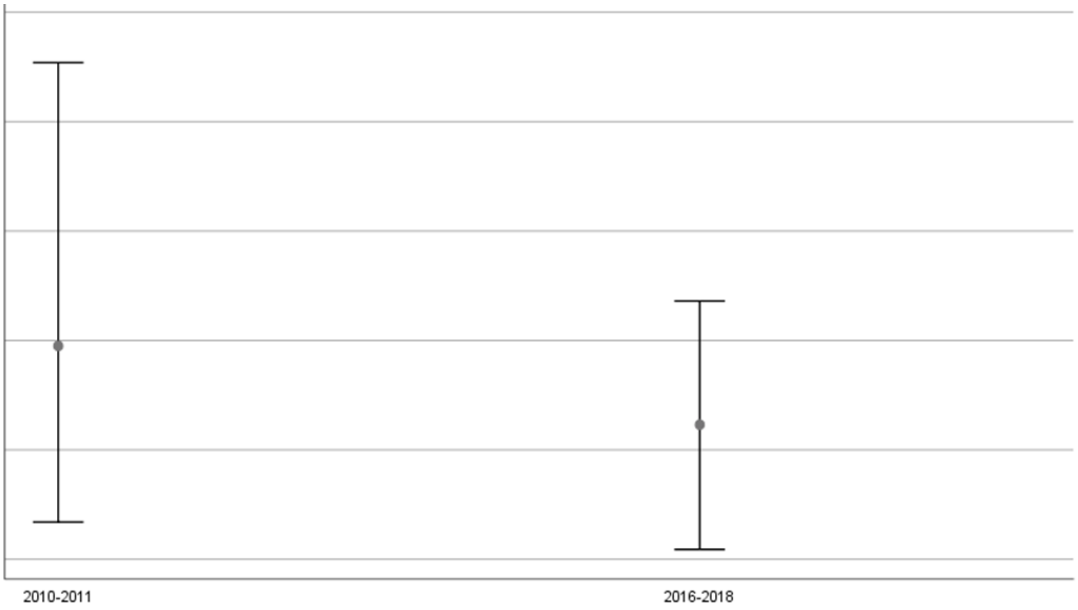

Figure 1: ROA French sample

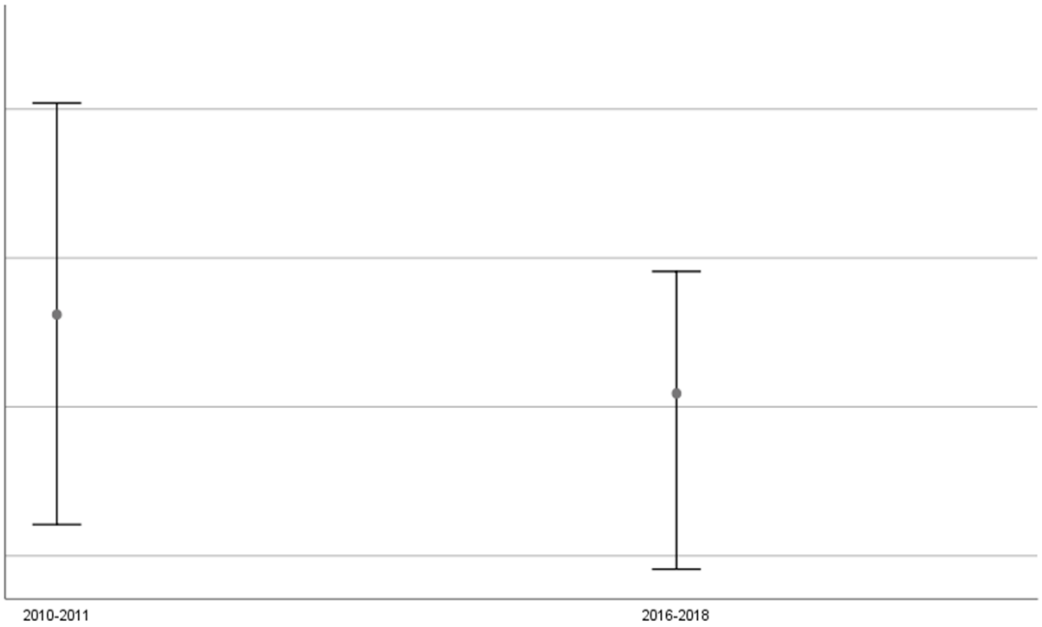

Figure 2: Tobin's Q French sample

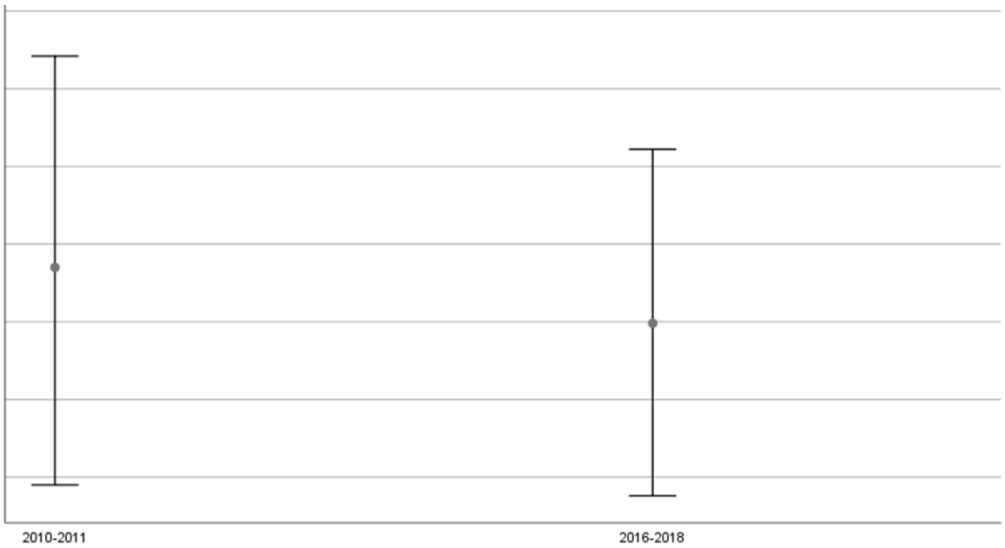

Figure 3: ROA U.S. sample

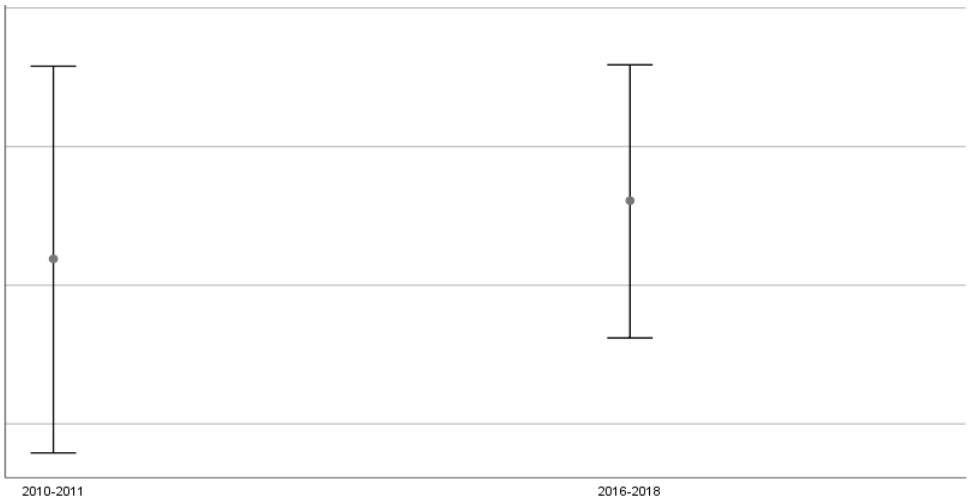

Figure 4: Tobin's Q U.S. sample

Appendix E: Mandatory gender quota

Panel A: French sample

	ROA		Tobin's Q		ROE		ROS		RET	
	2010-2011	2016-2018	2010-2011	2016-2018	2010-2011	2016-2018	2010-2011	2016-2018	2010-2011	2016-2018
%IndepW	0.018	0.148	0.061	0.012	0.018	0.059	-0.087	0.081	0.006	-0.113
	(0.244)	(1.579)	(0.797)	(0.149)	(0.234)	(0.573)	(-1.115)	(0.868)	(0.898)	(-1.201)
%ExecW	0.141*	-0.069	0.044	-0.040	0.124	-0.112	-0.007	-0.162	0.074	-0.116
	(1.846)	(-0.805)	(0.562)	(-0.530)	(1.542)	(-1.186)	(-0.090)	(-1.634)	(1.113)	(-1.360)
LnFSIZE	-0.152	0.064	-0.216**	-0.419***	-0.275***	0.028	0.051	-0.020	-0.222**	0.078
	(-1.614)	(0.989)	(-2.241)	(-7.304)	(-2.780)	(0.400)	(0.513)	(-0.311)	(-2.613)	(1.197)
LnAGE	0.128*	-0.002	0.066	0.020	0.179**	0.008	-0.048	0.108*	0.037	-0.026
	(1.783)	(-0.030)	(0.905)	(0.391)	(2.368)	(0.124)	(-0.644)	(1.717)	(0.583)	(-0.461)
Leverage	-0.328***	-0.381***	-0.218***	-0.310***	0.214***	0.046	-0.319***	-0.417***	0.005	-0.050
	(-4.187)	(-6.591)	(-2.791)	(-6.024)	(2.598)	(0.720)	(-3.809)	(-7.394)	(0.079)	(-0.887)
LnBSIZE	0.147*	0.041	0.096	0.057	0.134	0.025	0.157*	-0.029	0.098	-0.071
	(1.781)	(0.609)	(1.134)	(0.973)	(1.539)	(0.384)	(1.814)	(-0.442)	(1.333)	(-1.083)
%IND	-0.023	-0.280***	-0.155*	-0.063	0.035	0.218**	0.019	-0.146*	-0.033	-0.096
	(-0.293)	(-3.621)	(-1.918)	(-0.918)	(0.414)	(2.575)	(0.233)	(-1.898)	(-0.471)	(-1.259)
Constant	9.106***	8.227***	2.514***	6.168***	15.059**	10.363	1.809	28.433**	0.787***	0.350*
	(3.030)	(2.715)					(0.121)	(2.201)	(3.383)	
Adjusted R^2	0.187	0.194	0.182	0.373	0.098	0,037	0.109	0.213	0.412	0.276
Industry dummy	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year dummy	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	188	308	182	306	188	308	188	305	178	294

Panel B: U.S. sample

	ROA		Tobin's Q		ROE		ROS		RET	
	2010-2011	2016-2018	2010-2011	2016-2018	2010-2011	2016-2018	2010-2011	2016-2018	2010-2011	2016-2018
%IndepW	0.054	-0.010	-0.009	0.048	0.021	-0.097	0.058	-0.099	0.060	0.014
	(0.736)	(-0.167)	(-0.127)	(0.927)	(0.251)	(-1.490)	(0.802)	(-1.630)	(0.750)	(0.243)
%ExecW	-0.048	0.019	0.115*	0.091*	0.054	0.049	0.064	0.078	-0.004	-0.033
	(-0.718)	(0.329)	(1.754)	(1.822)	(0.708)	(0.790)	(0.974)	(1.343)	(-0.057)	(-0.574)
LnFSIZE	0.004	-0.323***	-0.648***	-0.605***	-0.055	-0.034	0.275***	-0.064	-0.172**	-0.189***
	(0.048)	(-5.278)	(-7.891)	(-11.347)	(-0.575)	(-0.508)	(3.300)	(-1.020)	(-1.882)	(-3.075)
LnAGE	0.098	0.165***	0.023	0.002	-0.011	0.142**	0.177**	0.114*	0.097	0.004
	(1.412)	(2.945)	(0.339)	(0.049)	(-0.144)	(2.306)	(2.590)	(1.967)	(1.312)	(0.066)
Leverage	-0.520***	-0.211***	0.074	-0.037	0.261***	0.060	-0.533***	-0.283***	-0.010	0.067
	(-7.454)	(-3.848)	(1.055)	(-0.775)	(3.297)	(0.995)	(-7.747)	(-5.004)	(-0.132)	(1.204)
LnBSIZE	-0.006	0.063	0.067	0.055	0.029	0.076	-0.135**	-0.055	0.012	0.011
	(-0.073)	(1.041)	(0.873)	(1.043)	(0.322)	(1.148)	(-1.720)	(-0.888)	(0.146)	(0.175)
%IND	0.010	-0.032	0.030	0.013	0.109	0.033	-0.030	0.039	-0.057	0.029
	(0.139)	(-0.531)	(0.422)	(0.254)	(1.338)	(0.504)	(-0.422)	(0.624)	(-0.726)	(0.479)
Constant	10.169*	32.126***	8.082***	12.633***	-22.532	-33.312	-8.055	31.639**	0.816***	0.705***
	(1.779)	(5.516)			(-0.566)	(-0.817)	(-0.635)	(2.586)	(3.233)	
Adjusted R^2	0.273	0.175	0.366	0.382	0.065	0,035	0.293	0.123	0.219	0.182
Industry dummy	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year dummy	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	189	311	174	307	189	311	189	311	173	307

Notes: This table presents the OLS regression results for France (panel A) and the U.S. (panel B) for the sample periods 2010-2011 and 2016-2018. In the table, all the financial performance measures are included for both countries. The table reports the standardized coefficients (t-values are presented in the parentheses). Variable definitions are described in table 2. *** Indicates significance at the 1% level; ** Indicates significance at the 5% level; * Indicates significance at the 10% level

Appendix F: Alternative measures and percentage of women directors

Panel A: ROE-Full sample

	France						U.S.					
	Model 1	**Model 2**	**Model 3**	**Model 4**	**Model 5**	**Model 6**	**Model 7**	**Model 8**	**Model 9**	**Model 10**	**Model 11**	**Model 12**
%Women	0.006	0.003	-0.013	0.020	0.015	0.015	-0.007	-0.025	-0.036	-0.013	-0.032	-0.043
	(0.073)	(0.034)	(-0.145)	(0.234)	(0.865)	(0.860)	(-0.131)	(-0.483)	(-0.728)	(-0.258)	(-0.621)	(-0.826)
LnFSIZE		-0.020				-0.049		0.040				-0.013
		(-0.422)				(-0.848)		(0.830)				(-0.228)
LnAGE		0.112**	0.097**		0.043	0.027		0.088*	0.087*		0.091*	0.080*
		(2.426)	(2.140)		(0.952)	(0.585)		(1.839)	(1.852)		(1.926)	(1.663)
Leverage			0.068			0.091*			0.135***			0.123***
			(1.460)			(1.460)			(2.971)			(2.577)
LnBSIZE				0.073		0.062				0.067*		0.046*
				(1.611)		(1.153)				(1.678)		(0.871)
%IND					-0.093**	-0.088*					0.068	0.036
					(-2.030)	(-1.847)					(1.455)	(0.754)
Constant	13.258***	10.509**	7.337***	7.383**	14.825***	12.197***	15.380***	-18.059	-10.195	-17.992	-20.568	-33.251
	(12.343)	(2.364)	(3.103)	(2.220)	(9.225)	(2.621)	(3.320)	(-0.749)	(-1.052)	(-0.881)	(-1.205)	(-1.166)
Adjusted R^2	0.028	0.036	0.039	0.031	0.035	0.044	0.002	0.007	0.023	0.008	0.010	0.025
Industry dummy	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year dummy	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	496	496	496	496	496	496	501	501	501	501	501	501

Panel B: ROS-Full sample

	France						U.S.					
	Model 1	**Model 2**	**Model 3**	**Model 4**	**Model 5**	**Model 6**	**Model 7**	**Model 8**	**Model 9**	**Model 10**	**Model 11**	**Model 12**
%Women	-0.153*	-0.150*	-0.076	-0.156*	-0.149*	-0.079	-0.056	-0.051	-0.003	-0.024	-0.034	-0.007
	(-1.791)	(-1.741)	(-0.936)	(-1.811)	(-1.740)	(-0.956)	(-1.127)	(-1.005)	(-0.074)	(-1.005)	(-0.663)	(-0.136)
LnFSIZE		-0.002				0.103**		-0.049				0.056
		(-0.040)				(-2.224)		(-1.036)				(1.079)
LnAGE		-0.048	0.003		-0.050	-0.018		0.104**	0.110**		0.099**	0.114**
		(-1.056)	(0.082)		(-1.096)	(-0.411)		(2.205)	(2.205)		(2.117)	(2.560)
Leverage			-0.349***			-0.390***			-0.374***			-0.370***
			(-7.985)			(-8.462)			(-8.810)			(-8.321)
LnBSIZE				-0.014		0.031				-0.060		-0.048
				(-0.320)		(0.627)				(-1.328)		(-0.979)
%IND					-0.006	0.018					-0.120***	0.056
					(-0.136)	(0.391)					(-2.620)	(1.079)
Constant	10.818***	15.242**	31.364**	7.383**	14.825***	9.996	8.739***	10.923	13.112***	17.623**	15.728***	14.517
	(4.955)	(2.433)	(6.804)	(2.220)	(9.225)	(1.091)	(5.614)	(1.349)	(4.928)	(2.566)	(2.757)	(1.620)
Adjusted R^2	0.044	0.048	0.154	0.049	0.052	0.162	0.012	0.020	0.152	0.018	0.031	0.164
Industry dummy	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year dummy	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	496	496	496	496	496	496	501	501	501	501	501	501

Panel C: RET-Full sample

	France						U.S.					
	Model 1	**Model 2**	**Model 3**	**Model 4**	**Model 5**	**Model 6**	**Model 7**	**Model 8**	**Model 9**	**Model 10**	**Model 11**	**Model 12**
%Women	-0.043	-0.033	-0.033	-0.045	-0.035	-0.024	-0.008	0.034	-0.013	-0.003	-0.011	0.030
	(-0.563)	(-0.685)	(-0.433)	(-0.595)	(-0.460)	(-0.312)	(-0.178)	(0.718)	(-0.269)	(-0.062)	(-0.240)	(0.612)
LnFSIZE		-0.067*				-0.034		-0.174***				-0.194***
		(-1.688)				(-0.667)		(-3.748)				(-3.821)
LnAGE		0.017	0.007		-0.012	0.003		0.040	0.020		0.018	0.035
		(0.422)	(0.184)		(-0.299)	(0.070)		(0.892)	(0.450)		(0.460)	(0.773)
Leverage			-0.065			-0.044			0.009			0.042
			(-1.614)			(-1.027)			(0.168)			(0.943)
LnBSIZE				-0.015		0.004				-0.056		0.021
				(-0.399)		(0.064)				(-1.334)		(0.434)
%IND					-0.083**	-0.073*					-0.003	-0.015
					(-2.118)	(-1.782)					(0.083)	(-0.089)
Constant	0.280***	0.477***	0.335***	0.322***	0.363***	0.484***	0.290***	0.844***	0.258***	0.471***	0.261**	0.822***
	(8.543)	(3.492)	(4.472)	(2.934)	(4.645)	(3.356)	(9.079)	(5.223)	(3.556)	(3.387)	(2.195)	(4.237)
Adjusted R^2	0.320	0.324	0.322	0.325	0.324	0,333	0.183	0.207	0.186	0.187	0.180	0.212
Industry dummy	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year dummy	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	474	474	474	474	474	474	481	481	481	481	481	481

Notes: This table presents the OLS regression results for ROE (panel A), ROS (panel B), and RET (Panel C). The table reports the standardized coefficients (t-values are presented in the parentheses). Variable definitions are described in table 2. *** Indicates significance at the 1% level; ** Indicates significance at the 5% level; * Indicates significance at the 10% level.

Appendix G: Alternative measures and independent and executive women directors

Panel A: ROE-Full sample

	France						U.S.					
	Model 1	**Model 2**	**Model 3**	**Model 4**	**Model 5**	**Model 6**	**Model 1**	**Model 2**	**Model 3**	**Model 4**	**Model 5**	**Model 6**
%IndepW	-0.009	-0.009	-0.026	0.007	0.051	0.056	-0.013	-0.032	-0.050	-0.021	-0.054	-0.067
	(-0.104)	(-0.104)	(-0.311)	(0.082)	(0.586)	(0.615)	(-0.266)	(-0.615)	(-0.987)	(-0.415)	(-1.014)	(-1.244)
%ExecW	0.012	0.007	-0.001	0.018	-0.029	-0.030	0.023	0.019	0.032	0.027	0.046	0.052
	(0.195)	(0.108)	(-0.010)	(0.290)	(-0.443)	(-0.457)	(0.503)	(0.410)	(0.724)	(0.597)	(0.981)	(1.106)
LnFSIZE		-0.018				-0.055		0.039				-0.023
		(-0.389)				(-0.968)		(0.801)				(-0.403)
LnAGE		0.111**	0.096**		0.091**	0.075		0.089*	0.089*		0.094*	0.083*
		(2.403)	(2.122)		(1.992)	(1.568)		(1.864)	(1.894)		(1.987)	(1.720)
Leverage			0.069			0.087*			0.142***			0.128***
			(1.486)			(1.755)			(3.085)			(2.667)
LnBSIZE				0.071		0.053				0.079*		0.052
				(1.577)		(0.984)				(1.738)		(0.979)
%IND					-0.120**	-0.118*					0.091*	0.063
					(-2.069)	(-1.976)					(1.823)	(1.227)
Constant	13.285***	10.441**	7.368***	7.971**	12.192***	11.444**	15.365***	-17.705	-11.079	-19.613	-28.320	-40.437
	(12.366)	(2.342)	(3.117)	(2.254)	(4.599)	(2.422)	(3.308)	(-0.732)	(-1.138)	(-0.950)	(-1.564)	(-1.397)
Adjusted R^2	0.028	0.034	0.040	0.032	0.042	0.051	0.002	0.006	0.023	0.005	0.011	0.023
Industry dummy	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year dummy	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	497	497	497	497	497	497	501	501	501	501	501	501

Panel B: ROS-Full sample

	France						U.S.					
	Model 1	**Model 2**	**Model 3**	**Model 4**	**Model 5**	**Model 6**	**Model 1**	**Model 2**	**Model 3**	**Model 4**	**Model 5**	**Model 6**
%IndepW	-0.078	-0.073	0.005	-0.079	-0.029	0.031	-0.088*	-0.086*	-0.028	-0.082*	-0.068	-0.033
	(-0.929)	(-0.870)	(0.066)	(-0.943)	(-0.326)	(0.369)	(-1.784)	(-1.686)	(-0.588)	(-1.660)	(-1.298)	(-0.652)
%ExecW	-0.151**	-0.147**	-0.108*	-0.151**	-0.175***	-0.123*	0.074	0.081*	0.051	0.070	0.053	0.059
	(-2.390)	(-2.333)	(-1.814)	(-2.393)	(-2.686)	(-1.982)	(1.641)	(1.797)	(1.229)	(1.565)	(1.140)	(1.127)
LnFSIZE		-0.011				0.103*		-0.052				0.059
		(-0.230)				(1.960)		(-1.090)				(1.127)
LnAGE		-0.044	0.007		-0.060	-0.029		0.112**	0.115**		0.106**	0.122***
		(-0.964)	(0.168)		(-1.316)	(-0.648)		(2.379)	(2.611)		(2.255)	(2.711)
Leverage			-0.354***			-0.388***			-0.365***			-0.365***
			(-8.129)			(-8.442)			(-8.498)			(-8.177)
LnBSIZE				-0.008		0.036				-0.063		-0.059
				(-0.182)		(0.729)				(-1.392)		(-1.190)
%IND					-0.092	-0.064					-0.089*	-0.015
					(-1.595)	(-1.145)					(-1.804)	(-0.305)
Constant	10.670***	16.465**	31.138***	11.621	19.801***	13.340	8.869***	10.996	12.658***	18.205***	12.279**	13.123*
	(4.897)	(2.451)	(6.794)	(1.649)	(3.656)	(1.446)	(5.735)	(1.368)	(4.150)	(2.645)	(2.040)	(1.449)
Adjusted R^2	0.049	0.047	0.162	0.047	0.052	0.170	0.020	0.029	0.152	0.022	0.033	0.157
Industry dummy	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year dummy	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	496	496	496	496	496	496	501	501	501	501	501	501

Panel C: RET-Full sample

	France						U.S.					
	Model 1	**Model 2**	**Model 3**	**Model 4**	**Model 5**	**Model 6**	**Model 1**	**Model 2**	**Model 3**	**Model 4**	**Model 5**	**Model 6**
%IndepW	-0.068	-0.054	-0.059	-0.072	-0.017	-0.009	-0.001	0.038	-0.006	0.004	-0.001	0.035
	(-0.919)	(-0.727)	(-0.782)	(-0.960)	(-0.209)	(-0.112)	(-0.032)	(0.810)	(-0.116)	(0.096)	(-0.018)	(0.708)
%ExecW	-0.006	-0.003	-0.001	-0.007	-0.034	-0.024	-0.034	-0.016	-0.036	-0.036	-0.040	-0.012
	(-0.106)	(-0.062)	(-0.032)	(-0.133)	(-0.590)	(-0.419)	(-0.813)	(-0.380)	(-0.815)	(-0.866)	(-0.909)	(-0.274)
LnFSIZE		-0.063				-0.034		-0.173***				-0.191***
		(-1.550)				(-0.665)		(-3.930)				(-3.706)
LnAGE		0.015	0.007		-0.014	-0.001		0.041	0.023		0.023	0.037
		(0.390)	(0.175)		(-0.357)	(-0.030)		(0.923)	(0.501)		(0.514)	(0.806)
Leverage			-0.062			-0.044			0.003			0.041
			(-1.557)			(-1.021)			(0.079)			(0.919)
LnBSIZE				-0.018		0.003				-0.059		0.018
				(-0.462)		(0.070)				(-1.418)		(0.364)
%IND					-0.096*	-0.083					-0.014	-0.006
					(-1.889)	(-1.607)					(0.308)	(-0.062)
Constant	0.281***	0.465***	0.334***	0.330***	0.367***	0.494***	0.291***	0.838***	0.258***	0.471***	0.292**	0.833***
	(8.560)	(3.397)	(4.462)	(2.994)	(4.465)	(3.353)	(9.080)	(5.168)	(3.547)	(3.389)	(2.340)	(4.256)
Adjusted R^2	0.319	0.322	0.322	0.318	0.322	0,327	0.182	0.205	0.185	0.186	0.179	0.208
Industry dummy	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year dummy	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	473	473	473	473	473	473	481	481	481	481	481	481

Notes: This table presents the OLS regression results for ROE (panel A), ROS (panel B), and RET (panel C). The table reports the standardized coefficients (t-values are presented in the parentheses). Variable definitions are described in table 2. *** Indicates significance at the 1% level; ** Indicates significance at the 5% level; * Indicates significance at the 10% level

Appendix H: Alternative measures and mandatory gender quota

	Panel A: France						Panel B: U.S.					
	ROE		ROS		RET		ROE		ROS		RET	
	2010-2011	2016-2018	2010-2011	2016-2018	2010-2011	2016-2018	2010-2011	2016-2018	2010-2011	2016-2018	2010-2011	2016-2018
%Women	0.085	-0.023	-0.056	-0.040	0.050	-0.080	0.020	-0.071	0.061	-0.049	0.032	0.007
	(1.149)	(-0.365)	(-0.756)	(-0.699)	(0.814)	(-1.431)	(0.248)	(-1.142)	(0.861)	(-0.827)	(0.413)	(0.129)
LnFSIZE	-0.263***	0.037	0.060	0.120*	-0.214***	0.078	0.026	-0.020	0.308***	-0.057	-0.187**	-0.195***
	(-2.679)	(0.519)	(0.614)	(1.881)	(-2.639)	(1.203)	(0.274)	(-0.311)	(3.731)	(-0.915)	(-2.086)	(-3.263)
LnAGE	0.179*	0.024	-0.048	-0.002	0.034	-0.025	-0.009	0.138**	0.170**	0.103*	0.101	-0.003
	(2.374)	(0.391)	(-0.639)	(-0.042)	(0.544)	(-0.449)	(-0.117)	(2.199)	(2.419)	(1.742)	(1.325)	(-0.056)
Leverage	0.211***	0.036	-0.322***	-0.431***	0.003	-0.050	0.214***	0.050	-0.512***	-0.300***	-0.001	0.062
	(2.557)	(0.570)	(-3.931)	(-7.552)	(0.038)	(-0.902)	(2.703)	(0.828)	(-7.450)	(-5.313)	(-0.016)	(1.143)
LnBSIZE	0.116	0.014	0.143*	-0.046	0.085	-0.071	-0.010	0.069	-0.156*	-0.044	0.029	0.021
	(1.360)	(0.193)	(1.683)	(-0.708)	(1.185)	(-1.092)	(-0.112)	(1.065)	(-1.975)	(-0.708)	(0.338)	(0.360)
%IND	-0.001	-0.104*	-0.009	0.017	-0.055	-0.089	0.097	0.006	-0.053	-0.006	-0.043	0.045
	(-0.012)	(-1.665)	(-0.121)	(0.299)	(-0.880)	(-1.610)	(1.272)	(0.099)	(-0.797)	(-0.111)	(-0.595)	(0.798)
Constant	15.766***	7.993	3.016	22.481*	0.814***	0.346*	-33.426	-25.541	-7.066	34.196***	0.814***	0.676***
	(7.041)	(1.165)	(0.203)	(1.734)	(3.542)	(1.670)	(-0.873)	(-0.633)	0.563)	(2.802)	(2.697)	(2.684)
Adjusted R^2	0.097	0.039	0.110	0.189	0.414	0,278	0.057	0.060	0.287	0.116	0.233	0.184
Industry dummy	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year dummy	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	188	308	188	305	178	294	189	311	189	311	173	307

Notes: This table presents the OLS regression results for the French and U.S. sample for the sample periods 2010-2011 and 2016-2018. In the table, ROE, ROS and RET are included for both countries. The table reports the standardized coefficients (t-values are presented in the parentheses). Variable definitions are described in table 2. *** Indicates significance at the 1% level; ** Indicates significance at the 5% level; * Indicates significance at the 10% level.

Appendix I: Alternative measures and board structure

	Board structure		
	ROE	**ROS**	**RET**
%Women	0.018	-0.082	-0.005
	(0.197)	(-0.966)	(-0.065)
BS2	0.015	-0.071	0.098
	(0.144)	(-0.735)	(1.090)
%Women*BS2	-0.065	0.104	-0.135
	(-0.636)	(1.083)	(-1.508)
LnFSIZE	-0.057	0.099*	-0.029
	(-0.995)	(1.849)	(-0.572)
LnAGE	0.061	-0.031	-0.020
	(1.247)	(-0.690)	(-0.470)
Leverage	0.081	-0.389***	-0.046
	(1.608)	(-8.343)	(-1.050)
LnBSIZE	0.062	0.029	0.005
	(1.122)	(0.566)	(0.109
%IND	-0.087*	0.025	-0.089**
	(-1.775)	(0.545)	(-2.106)
Constant	5.333***	12.461	0.501***
	(9.654)	(1.329)	(3.395)
Adjusted R^2	0.040	0.164	0.321
Industry dummy	Yes	Yes	Yes
Year dummy	Yes	Yes	Yes
Observations	489	486	465

Notes: This table presents the OLS regression results for ROA, ROS and RET. The table reports the standardized coefficients (t-values are presented in the parentheses). Variable definitions are described in table 2. *** Indicates significance at the 1% level; ** Indicates significance at the 5% level; * Indicates significance at the 10% level

Appendix J: Lagged variables and percentage of women directors

	Panel A: France					Panel B: U.S.				
	ROA	**Tobin's Q**	**ROE**	**ROS**	**RET**	**ROA**	**Tobin's Q**	**ROE**	**ROS**	**RET**
	Model 1	**Model 2**	**Model 3**	**Model 4**	**Model 5**	**Model 6**	**Model 7**	**Model 8**	**Model 9**	**Model 10**
%Women $_{t-1}$	0.007	-0.017	-0.052	-0.136	-0.073	0.021	-0.005	0.013	0.021	0.041
	(0.082)	(-0.213)	(-0.552)	(-1.545)	(-0.869)	(0.399)	(-0.103)	(0.229)	(0.382)	(0.756)
LnFSIZE	0.035	-0.342***	-0.001	0.134**	0.073	-0.291***	-0.578***	-0.036	-0.025	-0.206***
	(0.626)	(-6.357)	(-0.009)	(2.327)	(-0.869)	(-5.275)	(-11.892)	(-0.594)	(-0.439)	(-3.651)
LnAGE	0.053	0.009	0.068	-0.017	-0.047	0.132***	0.018	0.084*	0.090*	0.002
	(1.105)	(0.207)	(1.267)	(-0.351)	(-1.024)	(2.707)	(0.421)	(1.833)	(1.782)	(0.048)
Leverage	-0.430***	-0.245***	0.040	-0.427***	-0.090**	-0.270***	0.009	0.135**	-0.347***	0.033
	(-8.774)	(-5.201)	(0.722)	(-8.497)	(-2.005)	(-5.565)	(0.212)	(2.526)	(-6.902)	(0.653)
LnBSIZE	-0.011	0.068	-0.021	-0.020	-0.065	0.058	0.025	0.065	-0.048	-0.006
	(-0.208)	(1.319)	(-0.352)	(-0.367)	(-1.237)	(1.095)	(0.543)	(1.125)	(-0.871)	(-0.107)
%IND	-0.146***	-0.047	-0.117**	0.009	-0.108**	-0.024	-0.018	-0.009	-0.030	0.044
	(-3.010)	(-1.012)	(-2.147)	(0.183)	(-2.306)	(-0.483)	(-0.544)	(-0.161)	(-0.596)	(0.881)
Constant	10.225***	4.499***	12.392**	13.312	0.091***	28.113***	10.943***	-13.686	29.143***	0.658***
	(4.588)		(2.317)	(1.306)	(0.564)	(5.943)	(12.877)	(-0.412)	(2.879)	(3.041)
Adjusted R^2	0.235	0.312	0.042	0.186	0.320	0.188	0.383	0.016	0.130	0.197
Industry dummy	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year dummy	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	393	388	393	391	377	398	389	398	398	388

Notes: This table presents the OLS regression results for France (panel A) and the U.S. (panel B). In the table, all the financial performance measures are included for both countries. The table reports the standardized coefficients (t-values are presented in the parentheses). Variable definitions are described in table 2. *** Indicates significance at the 1% level; ** Indicates significance at the 5% level; * Indicates significance at the 10% level

Appendix K: Lagged variables and independent and executive women directors

	Panel A: France					Panel B: U.S.				
	ROA	**Tobin's Q**	**ROE**	**ROS**	**RET**	**ROA**	**Tobin's Q**	**ROE**	**ROS**	**RET**
	Model 1	**Model 2**	**Model 3**	**Model 4**	**Model 5**	**Model 6**	**Model 7**	**Model 8**	**Model 9**	**Model 10**
%IndepW $_{t-1}$	0.020	-0.034	-0.042	-0.053	-0.032	0.033	-0.019	-0.003	0.001	0.065
	(0.235)	(-0.429)	(-0.446)	(-0.618)	(-0.513)	(0.618)	(-0.414)	(-0.052)	(0.019)	(1.190)
%ExecW $_{t-1}$	-0.013	-0.001	-0.042	-0.143**	-0.083	-0.021	0.064	0.050	0.050	-0.067
	(-0.195)	(-0.009)	(-0.582)	(-2.159)	(-1.000)	(-0.443)	(1.534)	(0.970)	(1.035)	(-1.384)
LnFSIZE	0.035	-0.341***	-0.000	0.133**	0.073	-0.291***	-0.584***	-0.039	-0.026	-0.202***
	(0.629)	(-6.351)	(-0.006)	(2.328)	(1.316)	(-5.252)	(-12.015)	(-0.646)	(-0.456)	(-3.583)
LnAGE	0.051	0.011	0.068	-0.023	-0.046	0.130***	0.010	0.085	0.093*	0.010
	(1.066)	(0.247)	(1.255)	(-0.458)	(-0.979)	(2.652)	(0.222)	(1.589	(1.837)	(0.189)
Leverage	-0.429***	-0.246***	0.040	-0.422***	-0.090*	-0.273***	0.008	0.136**	-0.345***	0.031
	(-8.735)	(-5.219)	(0.731)	(-8.425)	(-1.908)	(-5.593)	(0.175)	(2.532)	(-6.824)	(0.612)
LnBSIZE	-0.012	0.069	-0.022	-0.021	-0.065	0.060	0.029	0.066	-0.050	-0.005
	(-0.228)	(1.332)	(-0.357)	(-0.373)	(-1.235)	(1.136)	(0.618)	(1.124)	(-0.915)	(-0.090)
%IND	-0.159***	-0.036	-0.122*	-0.039	-0.095*	-0.032	0.022	0.066	-0.017	0.018
	(-2.839)	(-0.665)	(-1.948)	(-0.675)	(-1.745)	(-0.623)	(0.497)	(1.124)	(-0.315)	(0.343)
Constant	10.402***	4.470***	12.525**	15.561	0.091***	28.421***	10.808***	-17.282	28.086***	0.692***
	(4.586)		(2.316)	(1.518)	(0.564)	(5.960)	(12.691)	(-0.517)	(2.754)	(3.189)
Adjusted R^2	0.233	0.310	0.040	0.190	0.319	0.187	0.387	0.016	0.129	0.174
Industry dummy	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year dummy	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	394	389	394	392	378	397	388	397	397	387

Notes: This table presents the OLS regression results for France (panel A) and the U.S. (panel B). In the table, all the financial performance measures are included for both countries. The table reports the standardized coefficients (t-values are presented in the parentheses). Variable definitions are described in table 2. *** Indicates significance at the 1% level; ** Indicates significance at the 5% level; * Indicates significance at the 10% level

Appendix L: Lagged variables and mandatory gender quota

Panel A: France

	ROA		Tobin's Q		ROE		ROS		RET	
	2010-2011	2016-2018	2010-2011	2016-2018	2010-2011	2016-2018	2010-2011	2016-2018	2010-2011	2016-2018
%Women$_{t-1}$	0.014	0.019	0.030	-0.031	-0.006	-0.039	-0.084	-0.123	0.075	-0.128
	(0.140)	(0.211)	(0.293)	(-0.371)	(-0.054)	(-0.387)	(-0.813)	(-1.338)	(0.704)	(-1.422)
LnFSIZE	-0.014	0.013	-0.149	-0.391***	-0.132	0.021	0.128	0.125**	0.165	0.068
	(-0.099)	(0.247)	(-1.022)	(-6.624)	(-0.918)	(0.298)	(0.887)	(1.982)	(1.068)	(1.071)
LnAGE	0.202*	0.013	0.049	0.018	0.222**	0.021	-0.044	-0.011	-0.108	-0.032
	(1.951)	(0.247)	(0.456)	(0.337)	(2.048)	(0.340)	(-0.401)	(-0.189)	(-0.961)	(1.742)
Leverage	-0.337***	-0.461***	-0.216*	-0.292***	0.202*	-0.008	-0.401***	-0.440***	-0.219**	-0.198**
	(-2.988)	(-8.333)	(-1.800)	(-5.333)	(1.711)	(-0.128)	(-3.375)	(-7.787)	(-1.988)	(-2.103)
LnBSIZE	-0.062	0.009	0.061*	0.057	-0.057	0.003	0.102	-0.053	-0.118	-0.062
	(-0.520)	(0.145)	(0.494)	(0.952)	(-0.457)	(0.043)	(0.816)	(-0.831)	(-0.904)	(-0.975)
%IND	-0.133	-0.135**	-0.151	-0.036	-0.085	-0.107	-0.024	0.010	-0.216*	-0.094*
	(-1.274)	(-2.414)	(-1.371)	(-0.672)	(-0.777)	(-1.684)	(-0.214)	(0.181)	(-1.914)	(-1.677)
Constant	8.756**	11.292***	2.230***	5.798***	15.046	12.218*	-0.839	24.063*	0.130	0.326
	(2.093)	(4.093)	(3.754)	(11.413)	(1.500)	(1.859)	(-0.044)	(1.908)	(0.455)	(1.614)
Adjusted R^2	0.169	0.249	0.098	0.329	0.087	0,024	0.076	0.204	0.061	0.285
Industry dummy	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year dummy	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	94	299	91	297	94	299	94	297	89	288

Panel B: U.S.

	ROA		Tobin's Q		ROE		ROS		RET	
	2010-2011	2016-2018	2010-2011	2016-2018	2010-2011	2016-2018	2010-2011	2016-2018	2010-2011	2016-2018
%Women$_{t-1}$	0.024	0.002	-0.037	-0.003	0.026	0.014	0.078	0.001	0.224*	-0.010
	(0.227)	(0.036)	(-0.373)	(-0.053)	(0.225)	(0.221)	(0.728)	(0.022)	(1.798)	(-0.171)
LnFSIZE	-0.060	-0.346***	-0.625***	-0.581***	-0.004	-0.053	0.207*	-0.092	-0.166	-0.220***
	(-0.520)	(-5.708)	(-5.525)	(-10.843)	(-0.029)	(-0.790)	(1.773)	(-1.454)	(-1.191)	(-3.649)
LnAGE	0.054	0.161***	0.040	0.018	-0.057	0.125**	0.119	0.092	0.057	-0.006
	(0.561)	(2.884)	(0.431)	(0.348)	(-0.534)	(2.032)	(1.213)	(1.578)	(0.495)	(-0.112)
Leverage	-0.533***	-0.198***	0.102	-0.019	0.435***	0.053	-0.528***	-0.293***	-0.113	0.073
	(-5.360)	(-3.586)	(1.026)	(-0.391)	(3.945)	(0.864)	(-5.253)	(-5.103)	(-0.922)	(1.320)
LnBSIZE	0.006	0.058	0.056	0.019	0.036	0.080	-0.117	-0.048	-0.111	0.017
	(0.052)	(0.973)	(0.526)	(0.367)	(0.293)	(1.216)	(-1.048)	(-0.772)	(-0.847)	(0.294)
%IND	0.072	-0.042	-0.036	0.010	-0.015	-0.018	-0.032	-0.021	0.017	0.057
	(-0.742)	(-0.751)	(-0.375)	(0.195)	(-0.136)	(-0.289)	(-0.321)	(-0.353)	(0.148)	(1.036)
Constant	13.418*	34.605***	8.143***	12.686***	-6.491	-8.343	4.538	42.020***	0.705	0.775***
	(1.669)	(5.995)	(6.475)	(11.908)	(-0.119)	(-0.203)	(0.264)	(3.414)	(1.634)	(3.039)
Adjusted R^2	0.282	0.186	0.349	0.375	0.116	0,038	0.265	0.118	0.028	0.207
Industry dummy	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year dummy	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	94	304	89	300	94	304	94	304	88	300

Notes: This table presents the OLS regression results for the French and U.S. sample for the sample periods 2010-2011 and 2016-2018. In the table, all financial performance measuresare included for both countries. The table reports the standardized coefficients (t-values are presented in the parentheses). Variable definitions are described in table 2. *** Indicates significance at the 1% level; ** Indicates significance at the 5% level; * Indicates significance at the 10% level.