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The Mutual Impacts of Corporate Governance Dimensions and Legal Protection Systems on the Performance of European Banks: A Post-Crisis Study

Hani El-Chaarani[1]

Abstract:

The paper provides new evidence on the relation between corporate governance practices, legal rights and European banks' performance during the post-crisis period. Using a sample of 935 banks in 30 European countries, the results reveal that at a high level of legal protection European banks are more able to follow the international recommendations and codes of corporate governance practices and vice-versa.

Additional analysis shows that all the corporate governance variables have the same impacts on the banks' performance. At low, middle and high levels of legal protection, the results reveal positive impacts of committees' number (such as remuneration, nomination and audit committee) and independent members of banks' boards.

The other dimensions of corporate governance (ownership concentration, executive pay and CEO duality) do not have any impact on bank performance. Only at the low level of legal protection the results show a negative impact on board size on European banks' performance.

Keywords: *banks, corporate governance, legal rights, financial crisis, financial sector regulations, performance.*

[1] *Beirut Arab University, Lebanon h.shaarani@bau.edu.lb*

1. **Introduction**

The waves of the financial crisis and corporate governance scandals within the last decade have established the answering waves of re-adjustments and re-regulations of the banking sector in Europe. At the beginning, the economists and financial analysts ascribed the financial crisis of 2008 to the credit conditions and housing policy. The governance policies of the banking sector were not understood to be the origin. The reviewing of the crisis in Europe and US took the view that governance practices were the major cause that allowed the crisis to develop worldwide. Some financial specialists (Sir Christopher Hogg, 2009; Kirkpatrick, 2009; Lloyd, 2009; Peni and Vähämää, 2012; Allegret *et al.*, 2016; Thalassinos *et al.*, 2015; Suryanto, 2016), and international reports (US Financial crisis inquiry commission, 2010; International financial corporation and European bank, 2012) argue that the governance was a major cause of the banking sector allowing a bad situation to get worse. Even the financial service Authority asserted in 2009 that the poor corporate governance practices had contributed to the latest financial crisis.

The newest report of the Basel Committee (July, 2015) overhauled the report of Basel II through 14 principles concerning bank structure, disclosure, transparency, compensation, internal control, risk management, senior management and board structure. The OCED reports, the green papers of the European commission, the walker review, the European Central Bank reports and many other law reforms and reports were spread over the European Union member states to support the central role of the banking sector. Even at the worldwide level, the IMF (International monetary funds) and the World Bank have developed a set of corporate governance recommendations urging all countries to use them.

However, legal origin and the protection level are as important as the actual legal adjustments. Beck *et al.* (2003a and 2003b) reveal that legal origin matters in financial development because legal traditions differ in their ability to adapt. Bebchuk and Roe’s (1999), La Porta *et al.* (1998, 1999, 2000), and Claessens *et al.* (2000) shed light on the legal origin as the main element explaining the ownership structure and performance differences across countries. Stiglitz (1985), Shleifer and Vishny (1997), Claessens *et al.* (2000), Giannarakis (2016) and many other authors have examined the impact of alternative legal origins regarding investor rights on firm valuation. For the authors a strong legal protection limits the expropriation of minority shareholders and promotes performance while a weak legal protection can lead the blockholders and the inside owners to abuse their positions.

The European banking authority (EBA) stated in 2011 that the banking financial crisis and internal corporate governance weaknesses are caused by insufficient implementation of existing guidelines, especially in European countries characterized by a low level of protection and regulations. This is why our focus on

legal protection and origin becomes crucial for studying the performance and the governance structure of European banks.
In Europe, protection levels vary a lot across countries due to differences in legal origins. Nowadays, five legal origins and three legal protection levels exist in Europe. The first one is the French civil law countries, characterized by the lowest level of legal protection (La Porta *et al.*, 1998) and identified after the French revolution in the 19th century before being developed with the French colonial era in many nations such as Spain and Belgium.

The second legal origin is the Ex-Socialist law countries. It is emerged as a part of Europe after the dissolution of the Former Soviet Union in December 1991. This legal origin exists in many European countries such as Lithuania and Estonia and it is characterized by low level of legal protection (Caprio *et al.*, 2007).

The German and Scandinavian civil law countries appeared in many European countries such as Germany, Denmark, Norway and Sweden. These legal origins are derived from Roman legal traditions and they are characterized by middle level of legal protection (La Porta *et al.*, 1998).

The final legal origin in Europe is the English common law countries, considered as the highest level of legal protection in Europe (La Porta *et al.*, 1998; Caprio *et al.*, 2007), frequently referred to the British Empire and evolved during the middle ages in some European countries such as Ireland[2].

The evidence generally indicates that legal origins and regulations might explain, at least in part, differences in banks valuation and governance structures in different countries. Previous research reveal that weak legal protection does lead to poor governance structure (Bayer and Burshop, 2009; Campbell and Turner, 2011; Thalassinos and Liapis 2014). Other researchers contend that it is impossible to separate legal protection level and firms' valuation (La Porta *et al.*, 1998, 1999, 2000), while in the literature little attention has been paid to the impact of corporate governance on banks' valuation when considering the legal protection level.

In the light of different European legal origins, the aim of this research is to provide evidence by addressing the following questions: What is the impact of legal protection level on the corporate governance structures of European banks? And to which extent does the legal origin have an impact on the relationship between corporate governance structure and European banks' valuation? Corporate governance and banks' valuation have been the main concerns of researchers,

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[2] For La Porta et al. (1998, 2002), three levels of legal protection are identified in European countries: the weak level of protection in French civil law countries, the stronger level of legal regulation in common law countries and finally the middle level of protection in German and Scandinavian civil law countries. Caprio et al. (2007) added the former socialist countries to the classification of La Porta et al. (1998, 2002)

economists, financial analysts and managers during the last decade. The stance taken in this research goes beyond the usual impact of corporate governance on banks' valuation by considering legal regulations and the origins of European countries.

The first objective of this research is to empirically investigate the governance policies and structures of European banks in three different levels of regulations: the lower level of protection (former socialist law and French civil law countries), the Middle level of protection (Scandinavian and German civil law countries) and the higher level of protection (common law countries). This first objective provides an opportunity to investigate if the regulation system in each country is considered as an important determinant of corporate governance practices and structures of the banking sector.

The second objective is to capture in depth the impact of corporate governance on banks' performance in different European regulations origins (former socialist law, French, Scandinavian, German and common law). Indeed, this second objective contributes to the existing literature by detecting the mutual impacts of governance practices and country regulation level on banks' performance during the post-crisis period (2012-2013). For this reason, we consider it a relevant issue to investigate if the crisis outcomes have different impacts within the European countries.

The rest of the paper is organized in seven sections. The next section will be devoted to presenting the literature review, and mainly the corporate governance mechanism and banking regulations in Europe. The third section will present the theoretical and the practical aspects concerning the corporate governance of the European banking sector. Section four will describe the used methodology, the variable definitions and the sample selection process. Section five will show the map of corporate governance tendency and financial capacity concerning the banking sector in European countries. The last two sections report the findings and conclude the research.

2. Corporate Governance Mechanisms and the Wave of Banking Regulations in Europe

During the last decade, three stages of financial movements and regulations have been witnessed: The pre-crisis period (before 2007), the crisis period (between 2007 and 2010) and the post-crisis period (after 2010).

Several important features of the pre-crisis period have proved to be crucial for the banking sector and themselves were considered to be the main causes of the financial crisis. The pre-crisis period was characterized by a high level of uniformity in loan notes designs (Benmelech and Dlugosz, 2009), high credit growth and high levels of liquidity and financial innovation. A lot of people contracted housing loans larger than their capacities could afford. The credits were supplied liberally without securitization and went out of control. The money of credits was used to push up houses prices. The banks' managers were pushed to maximize shareholders returns (Aebi *et al.,* 2012). The existing of independent board members, including the university professors, was correlated positively to risk-taking (Minton *et al.,* 2010). The rating agencies assigned the highest rate level based on the principle that house prices would not fall. The majority of corporate governance studies were concentrated on the conflict of interests between managers, owners and board members. The attention was not well focused on the qualification of corporate governance practices. A lot of board members were not capable of dealing with the complexity of modern banking. Hau and Thumb (2009) found in the years before the financial crisis a significant positive correlation between low board members' qualification and bank loss. At the end of 2006, the banking sector and the European banks had reached the turning point.

The stability of the European banking sector came under the spotlight at the beginning of 2007 as a result of the international financial crisis which originated in the US and spread to worldwide. For Standard and Poor's, the house prices began to decline around 20% towards the end of 2006. The homeowners found that their mortgage values were greater than the fair value of their houses. In September 2008, Lehaman and Brothers' had reported a loss of 2.8 billion[3] in the US mortgage market, which affected the risk premium level across the whole market. The investors' fear turned to panic, which caused a high contracting economy in the US and Europe. Beltratti and Stulz (2012) and Erkens *et al.* (2012) found during the crisis period a positive correlation between bank risk-taking and ownership concentration. Fahlenbrach and Stulz (2011) revealed a positive correlation between CEOs' incentives and bank performance. In response, many European countries such as the UK, Italy, Sweden, France and Germany tried to review their corporate governance policies and their banking regulations, especially after the worldwide banks' failures such as the German State Bank, the Royal bank of Scotland, Merrill Lynch and Citigroup. The majority of reforms were focused on the financial institutions, considered as the main source of the financial crisis.

Over the crisis period the European banks were likely to be dominated by the legacy of the financial crisis. The financial service Authority asserted the immediate call for a revision of corporate governance practices in the banking industry. David Walker (2009), the person responsible for reviewing the corporate governance in the UK, stated the need to review corporate governance policies and financial regulations. Even Mr. De Larosière (2009), the Chairman of the European system of financial supervision declared that the corporate governance in banking sector must be re-adjusted because it was one of the most important causes of the financial failure.

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[3] *Source: New York Times, 26 February 2009.*

According to the most recently published report of the Basel committee on banking supervision (2015), enhancing corporate governance is critical to the proper functioning of the banking sector and the economy as a whole. The last Basel committee guidance drew thirteen principles of corporate governance in the following areas: board responsibilities (1), board qualifications and board composition (2), board structure and practices (3), senior management (4), governance of group structures (5), risk management function (6), risk identification, monitoring and controlling (7), risk communication (8), compliance (9), Internal audit (10), compensation (11), disclosure and transparency (12), and finally the role of supervisors (13). The governance principles reflect a key lesson from the global financial crises to enhance the protection level of shareholders' interest in conformity with depositors' interest. They are recommended to be implemented in the banking sector by considering the bank characteristics such as bank size, complexity, economic significance and structure.

Consistent with the Basel Committee, the OECD (Organization for Economic Cooperation and Development) report was focused on the enhancing of the banking industry through four corporate governance dimensions: Board practices, risk management, remuneration policies and owner rights. The recent OECD report has reinforced the board responsibilities in controlling the risk management function and setting remuneration. It also made many proposals to promote the board competencies and skills by identifying the appropriate members to protect the shareholders' rights. The OECD document suggests the existence of independent members of management to carry out the board responsibilities. In addition, the corporate governance framework recommends the transmission of accurate information to shareholders, including the performance, financial situation, capital ownership and governance structure of the bank.

Subsequently, the European Union commission published the Green paper focusing on the corporate governance of the banking sector. After summarizing the corporate governance failures in the banking sector, it indicated that the lack of effective control had contributed to the last financial crisis. In response, the commission made many directives, such as the increasing of independent board members at the financial institutions to ensure effective controlling system. The green paper has recommended the improvement of risk management, enhancement of banking supervision, the controlling of senior remunerations, implementation of a risk supervision committee, and the introduction of certain requirements for the auditing system.

For the European banking authority (EBA-2011) the insufficient implementation of corporate governance contributed to banks' insolvency in Europe. The EBA suggested a standardized set of items to improve internal corporate governance efficiency. The first set of recommendations is related to the development of specialized committees' roles, such as a risk committee, an audit committee and a remuneration committee to increase banks' performance and improve risk control. The second sets are related to banks' transparency, risk management, corporate structure and internal control frameworks to prevent banks financial risk. EBA guidelines cover the duties and responsibilities of the management body. It also includes the required qualifications and independence level for members of the management body.

The World Bank group published in 2015 a guide to corporate governance practices in the European Union. This recent guide covers a wider range of topics related to owners' engagement, ethics and responsibilities. The diversity of board structures, directors' duties, board size, board evaluation, the board nomination process, the director induction process, the remuneration of the management team, the external auditing process, risk management and internal control are well developed, analyzed and recommended to provide equivalent protection for owners and other parties concerned with European banks[4]. The importance of this recent report is that it examines the governance issues from all dimensions to generate a complete picture of European corporate governance.

3. Corporate Governance in the Banking Sector: Theoretical and Practical Perspectives

Corporate governance theory and agency theory deal with the problems of shareholders-managers that arise after the separation between ownership and management. For Jensen and Meckeling (1976) there is no problem when a manager owns the whole capital, but when his participation drops down, a conflict of interests appears due to the opposite sets of objectives within the same firm. Given the information asymmetries, such a problem also arises when the owner (principal) delegates a part of his responsibility and decision-making authority to the manager (agent) who has the intention of increasing his personal utility instead of the shareholders' utility (Shleifer and Vishny, 1987). The interests of the manager can lead him to invest in risky projects to serve his personal objectives (Shleifer and Vishny, 1987). For this reason, the shareholders should control the managerial behavior by inducing a set of three corporate governance mechanisms (board of directors, ownership structure and incentive system) that align the interests of the agent with the interests of the principal.

a. Board of Directors

Firstly, the firm should have an effective board of directors characterized by a high independent level, a limited number of members and CEO duality. The board of

[4] As for deposit insurance, on October 2008 the European Union council agreement pushed the membership states to have a coverage of at least 50 000 euros for each depositor. The non-European Union countries also followed the guides of the European Union council and raised the coverage on deposits.

directors is the main important instrument used by shareholders to monitor the management and solve conflicts within the firm (Jensen, 1993).
Agency theory predicted that a smaller board size should be more effective because it is more capable of reducing the waste of time and conflicts within the board. On the contrary, a large board size is associated with less effective control. Jensen (1993) suggested seven or eight board members play an important role in the firm's performance. In the banking sector, numerous studies revealed neutral, negative, positive or U-shaped relations between board size and banking performance. Using a sample of 58 European banks, Staikouras *et al.* (2007) reported a negative relation between board size and bank performance. Rowe, Shi and Wang (2011) also found a similar negative impact of the board size on 41 banks' performance in China. The same negative relation between bank performance and board size also were revealed in Lebanon by El-Chaarani (2014), in Thailand by Pathan *el al.* (2007) and in Japan by Sakawa *et al.* (2009). Andres and Vallelado (2008) found a U-shaped relation between board size and a banks' Tobin's q in six OECD countries (Italy, France, UK, Spain, US and Canada). At the beginning, they detected a positive relation between board size and banks' performance, but when the board members exceed 19 members the relation becomes negative. Grove *el al.* (2011) found the same results in US banks. Belkhir (2009) found a positive relation between bank performance and board size in the US banking sector between 1995 and 2002. The same results were revealed in the banking sector by Adams and Mehran (2012) by using a sample of 35 US banks over the period of 1986-1999.

As for board independence, the increasing of independent members leads to reduce the agency problems between managers and shareholders (Jensen, 1993). Due to their experience they also can improve efficiency, play a role in risk assessment (Wearing and Li, 2010) and bring a critical viewpoint (Eilon, 1980). The empirical findings of board independence in bank performance are ambiguous. Pan (2013) found a negative impact of board independence on bank performance during the financial crisis. For Pan, independent board members are more professional in the decision-making and controlling functions. The same results were revealed in the banking sector by Adam and Ferraira (2009b), and Erkens *et al.* (2012). On the contrary, Krivogorsky (2006) showed a positive impact of independent members on banks' performance in several European countries (France, Italy, Germany, Spain and the UK). Ferreira and Kirchmaier (2013) also reported a positive impact of board independence in European countries. For the authors, the existence of independents improves the operating system. In emerging countries such as Lebanon, El-Chaarani (2014) found a positive impact of independent members on bank performance. Belkhir (2009) does not show any significant impact of board independence on bank performance. The same results were reported by Aebi *et al.* (2011) from US banks, by Sakawa and Watanabel (2010) for Japanese banks and by Tandelilin *et al.* (2007) with Indonesian banks.

For the theory, the separation between the chairman of the board and the chief executive officer (CEO) leads to more independence and an effective control. Therefore, the CEO duality is associated with lack of control and greater CEO control over the board's decision-making process. The CEO duality makes the assessment of managers more difficult and leads to an increase in the risk of rooting and agency costs (Jensen, 1993; Fama and Jensen, 1983). The empirical studies revealed a managerial entrenchment in the form of CEO duality. Mishra and Nielsen (2000) found a negative relation between CEO duality and bank performance.

The same results were revealed in US banks by Grove et al. (2011), in Turkish banks by Kayman and Bektas (2008), in Pakistani banks by Mahmood and Abbas (2011) and in Lebanese banks by El-Chaarani (2014). Agoraki *et al.* (2010) have confirmed the negative impact of CEO duality on the banks' performance. The authors indicated that CEO duality is considered a harmful situation which decreases the monitoring system of the board and amplifies the CEO's power. Faleye and Krishnan (2010) showed a positive relation between CEO duality and lending to high-risk borrowers. On the other hand, other empirical works are not consistent with the theoretical view. Pathan et al. (2010) showed that CEO duality is negatively related to bank risk-taking; and Belkhir (2009) found a positive impact of CEO duality on savings banks' performance.

Regarding the controlling activities, the last financial crisis and the corporate governance scandals have triggered the publishing of new recommendations to overhaul the poor corporate governance practices in the banking sector. Nowadays, many committees appear in European banks such as a risk management committee, an audit committee, a nominating committee and a compensation committee. The number of committees and their roles are not the same in the different European banks even within the same country.

b. Ownership Structure

Another dimension of corporate governance studied before and after the financial crisis is the ownership structure. The issue of ownership concentration is salient for European Union commissions and organizations as a vast percentage of European banks are controlled by a few number of shareholders. The agency theory stated that the separation between ownership and control increases the conflict of interests between managers and shareholders (Jensen and Meckling, 1976). In widely held companies, a new type of conflict can appear between large and small shareholders, especially in countries with weak protection practices (Bebchuck *el al.*, 2000). For Faccio *et al.* (2002) the risk of expropriation is at the highest level when the ultimate shareholders use the deviation from one share-one vote devices (dual class voting shares and pyramid structures). Bebchuck *et al.* (2000) pointed out that the excess of voting rights over cash-flows rights could reduce the overall performance and distort corporate decision with respect to investment projects choice. To sum up, from a theoretical viewpoint, a concentrated ownership structure and a low level of deviation between ownership rights and voting rights can limit the power of the

manager or outside block-holder in a way to prevent entrenchment behavior and the expropriation of private benefits.
The empirical results showed that the ownership structures of European banks vary with the protection level of investors (EL-Chaarani, 2015). Caprio *et al.* (2007) and Busta (2008) revealed a mutual impact of ownership concentration and regulation on bank performance. For the authors it is not possible to study the impact of banks' ownership without considering their legal protection practices. They found that ownership concentration has a positive impact on bank performance in countries with a weak protection level of investors. Westman (2011) found that European banks with high managerial ownership concentration perform better than banks with dispersed ownership structure. He argued that the management-ownership concentration can be used as a monitoring tool in banks that are difficult for outsiders to control. Grove el al. (2009) pointed out a positive impact of ownership concentration on the performance of US banks. Kobeissi and Sun (2010) also showed a positive association between ownership structure and private bank performance. Antoniades et al. (2010) for Greek banks and Magalhaes *et al.* (2010) for 795 banks worldwide showed a nonlinear relationship between ownership concentration and bank performance.

However, many empirical studies confirmed that the ownership concentration come with some costs. It can be used by shareholders to extract the private benefits and expropriate the minority shareholders, especially in countries characterized by a weak protection level of minority investors. Laeven and Levine (2009) showed that a larger shareholder tends to maximize bank risk when his power is based on a high deviation level between cash-flows and voting rights. Kiruri (2013) found a negative effect of ownership concentration on bank performance in Kenya. Lanotta et al. (2007) did not find any relationship between ownership concentration and bank performance.

c. Executive Compensation

The final dimension of corporate governance is the adopting of appropriate incentive systems for CEOs and board members. After the last financial crisis the compensation practices became more treated in corporate governance reports, Basel recommendations and all the European Union commissions. Agency theory considers remuneration as a relevant tool to minimize the conflicts between principal (shareholder) and agent (manager). Accordingly, a professional incentive pay in terms of structure and level will lead the CEO of a bank to create value for shareholders and stakeholders (Larker and Tayan, 2011). Also it will lead him to make the right decision because he will be rewarded for good performance and punished for bad performance.

This theoretical principle is consistent with some empirical findings. Sun (2014) and Sierra et al. (2006) showed a positive relationship between bank performance and CEO compensation. Accordingly, Amess and Drake (2003) proved that executive pay is positively associated with the US bank performance. John et al. (2010) confirmed the positive impact of CEO compensation on bank performance. They documented a positive association between CEO compensation and monitoring intensity.

Other studies showed a negative or non-significant relationship between CEO compensation and bank performance. For many specialists the used compensation practices (bonus, stock-option) were considered as a contributing factor to the last financial crisis in the banking sector. For example Suntheim (2010) found no evidence that banks with higher incentives were aligned with shareholders' interests. Girma *et al.* (2007) pointed out a weak association between pay and performance. Guo *et al.* (2014) confirmed this weak association between CEO remuneration and US bank performance during the financial crisis period (2007-2008). Based on a sample of 306 financial institutions in 31 countries, Hung and Matos (2012) found that financial institutions that used compensation contracts (bonuses) took more risk and performed worse during the crisis period. Fahlenbrach and Stulz (2011) found a negative association between bank performance and CEO compensation. For this reason corporate governance and bank regulators tried to protect the shareholders by giving more attention to the remuneration committee that must work closely with the other banking committees in evaluating the different types of incentives. Sun el al. (2009) confirmed that high compensation committee quality has a positive impact on the association between CEO compensation and firm performance.

4. Methodology, Variable Definition and Sample

The target population of this study consists of investment, commercial, cooperative and saving banks in Europe. The initial sample consists of 8,532 listed and non-listed European banks distributed in 49 European countries. From the initial sample of banks, a large number has been excluded due to missing data of ownership structure, financial data, board of directors and executive compensation. All the European banks that are controlled by other banks in other countries are removed from the sample to eliminate the risk of multiple counting. The final sample includes 935 European banks in 30 European countries[5] and 1,590 bank-year observations extracted from the years 2012 and 2013. This study takes the end of the years 2012 and 2013 to reflect the corporate governance practices and banks' valuations after the financial crisis period.

[5] *France, Germany, Spain, Portugal, Sweden, Greece, Finland, Denmark, Belgium, Italy, Ireland, Norway, UK, Switzerland, Cyprus, Austria, Malta, Netherlands and Luxemburg from Western Europe. Croatia, Bulgaria, Poland, Czech Republic, Hungary, Latvia, Lithuania, Romania, Slovakia and Slovenia from Eastern Europe. Estonia from the Former Soviet states.*

The banks' data are obtained based on the incorporation of various information channels. Financial and non-financial data are retrieved from the published annual reports and the international bank database (BankScope). The legal data concerning protection rights and legal origins respectively were extracted from the index of economic freedom and La Porta et al. (1998, 1999, 2002) studies. The board of directors' data is also obtained from BankScope database and updated from the published annual reports.

As a first step for the empirical analysis, the European countries are divided into many sub-samples of countries with a similar protection level of investors based on the Moral Hazard Index[6] (Demirguc-Kunt and Detragiache; 2002) and La Porta *et al.* (1998) classification. In the second step, the 935 European banks are grouped into sub-samples of banks with similar regulatory environment. In the last step, each sub-sample of European banks is studied to examine the corporate governance behavior and its impact on bank valuation by considering the regulatory environment. To this end a quantitative method was applied in which both described and multivariable statistical analyses are involved based on a set of variables to provide an accurate picture of the corporate governance situation of the European banking sector.

As for the variables definitions, bank valuation is measured by the year-end returns on assets $(ROA)_{it}$ and the year-end return on equity $(ROE)_{it}$. Both return on assets (ROA) and return on equity (ROE) are widely used in previous researches on the banking sector. The accounting-based measures are considered in this study because both unlisted and listed banks are included in the sample.

The first corporate governance dimension is the ownership concentration $(OC)_{it}$. This variable is measured by the direct and indirect ownership concentration of the ultimate bank owners at the year-end with 10% as a cutoff rate.

The second dimension of corporate governance is the board of directors. This dimension is measured through three sub-variables: firstly, the board of directors independence $(BOI)_{it}$, representing the number of independent (non-executive) members on the board at the year-end; secondly, the board of directors size $(BOS)_{it}$, representing the number of board members at the year-end; thirdly, the CEO duality $(CEOD)_{it}$, representing a dummy variable that is coded to one if the board chairman has the title of CEO and zero otherwise.

The third dimension of corporate governance in the banking sector is the controlling of banks' activities $(CA)_{it}$. This variable is incorporated as a new dimension to

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[6] *The index includes many variables such as: Coinsurance, deposit insurance limit per person, legal action in case of violation and deposit insurance premium.*

capture the number of existing committees such as the Compensation, Risk, Nomination and Audit committees.

The final dimension of corporate governance is executive compensation $(\text{ExCO})_{it}$. This variation is one of the active fields of debate and it is measured by the natural logarithm of the three highest executive pay at the year-end. The executive pay consists of basic salary, bonus, shares, stock-option and long-incentive plans.
The control variables are represented by the natural logarithm of the average total assets of the bank $(\text{Bsize})_{it}$, the ratio of debt over the total assets $(\text{LEV})_{it}$ and the non-performance loan to gross loan $(\text{NPEL})_{it}$ at year-end. All the variables are summarized in Table 1.

Table 1: *Variables Definition*

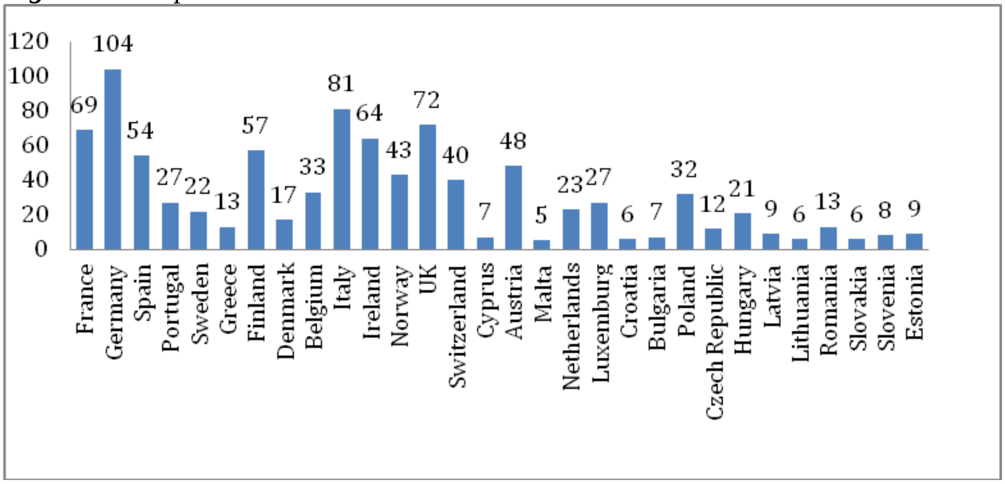
Variable	Variable Definition
ROA_{it}	Net profit over total assets at year-end
ROE_{it}	Net income over total equity at year-end
OC_{it}	Direct and indirect percentage of ownership concentration with 10% cutoff at year-end
BOI_{it}	Number of non-executive members at year-end
BOS_{it}	Number of board members at year-end
$CEOD_{it}$	Dummy variable that is coded to one if the board chairman has the title of CEO at year-end
CA_{it}	Number of existing committees at year-end
$ExCO_{it}$	Natural logarithm of the highest three executive pay at year-end
$Bsize_{it}$	Natural logarithm of the average total assets at year-end
LEV_{it}	Ratio of debt over the total assets at year-end
$NPEL_{it}$	Non-performance loan to gross loan at year-end

5. Legal Protection Map and Corporate Governance Behavior of the European Banking Sector

The sample consists of 935 banks in 30 European countries (Figure 1). The descriptive statistics in Figure 1 indicate that 806 (86%) banks of the study's sample are located in Western Europe, while 129 (14%) are located in Eastern Europe. This distribution indicates the greater development of the banking sector in Western Europe than Eastern Europe, especially in Germany, France, Italy, Spain, the UK and Finland. Based on the European Banking Federation Report (2012) the total number of banks in Eastern Europe is 6,446 (81.5%) while the total number in Western Europe and the Former Soviet states is 1,446 banks (18.5%). For 2012 the total assets of the whole population are around 49,069,243.1 million EUR while the total assets of the study's sample are around 12,998,474.87 million EUR.

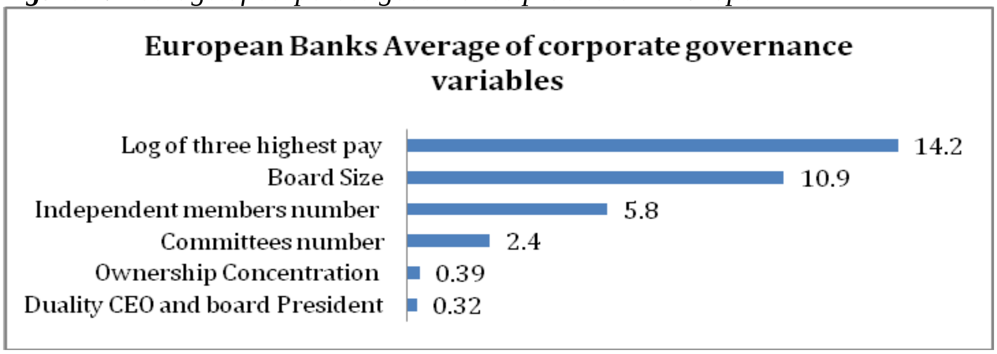
The amount of total loans is 24,263,298.8 million EUR for the population, while the amount of total loans for the sample is 4,846,451.69 million EUR. As for bank deposits, the amount is 22,575,049.74 million EUR for the population and 4,767,927.23 million EUR for the sample. To sum up, these values show that the study's sample represents around 20% of the European banks in 30 European countries.

Figure 1: *Sample Distribution*



The result of Figure 2 indicates that the average of ownership concentration in European banks is 39%, the average number of committees is around 2.4, the number of controllers in banks' board is around 11 and the independent members are around 6. The CEO Duality exists in 32% of European banks and the average log for the three highest pay is 14.2.

Figure 2: *Average of corporate governance practices in Europe*



The situation of ROE in European banks is largely different (Figure 3). The maximum mean of ROE is detected in Sweden, Norway, Czech Republic and Estonia. The value of ROE is negative in many European countries such as Greece, Ireland, Slovenia, Romania, Hungary and Italy due to the country's financial difficulties and the financial restructuring of the banking sector.

Figure 3: *Bank's Return on equity (2012-2013): Mean Per country*

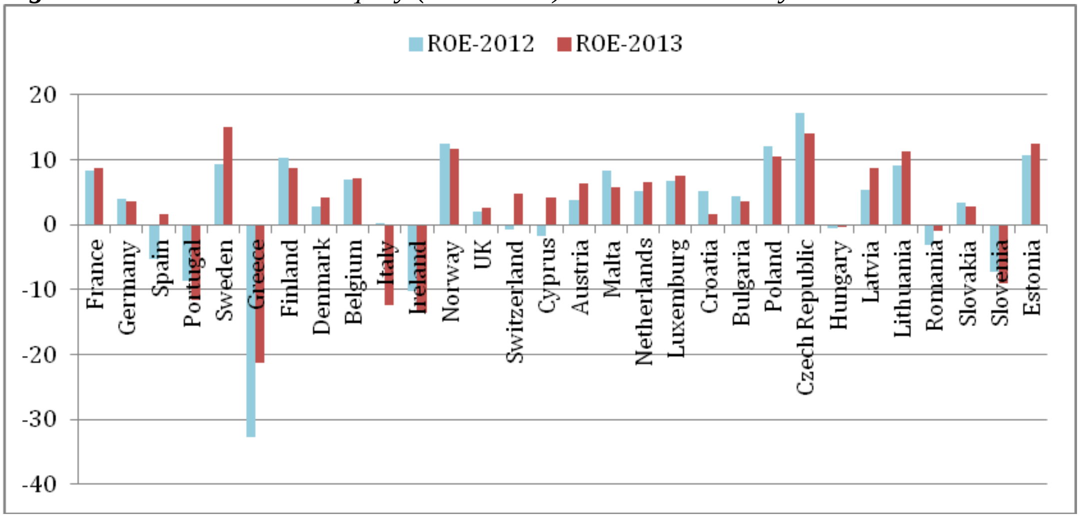


Figure 4 quantifies the ROA values of European banks during 2012 and 2013. Spain, UK, Germany, Switzerland and Latvia have improved their ROA values during 2013. The highest level of ROA is registered in Estonia, Czech Republic, Malta, Poland and Lithuania. After the recovery of the European banking sector in 2010, Figure 3 indicates that this sector fell back into recession during 2012 and 2013 in many European countries such as Greece, Portugal, Ireland, Slovenia, Romania, Hungary and Italy.

Figure 4: *Bank's Return on Assets (2012-2013): Mean Per country*

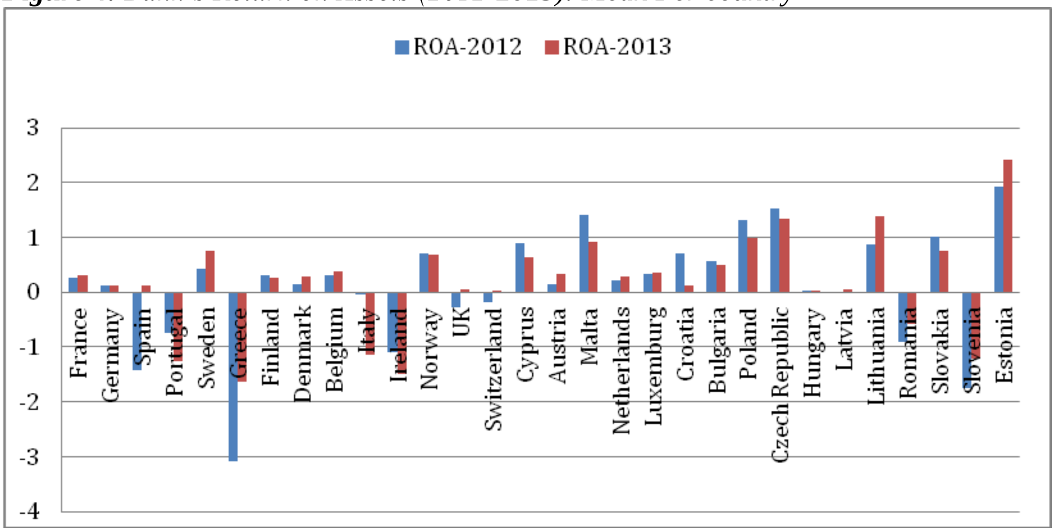
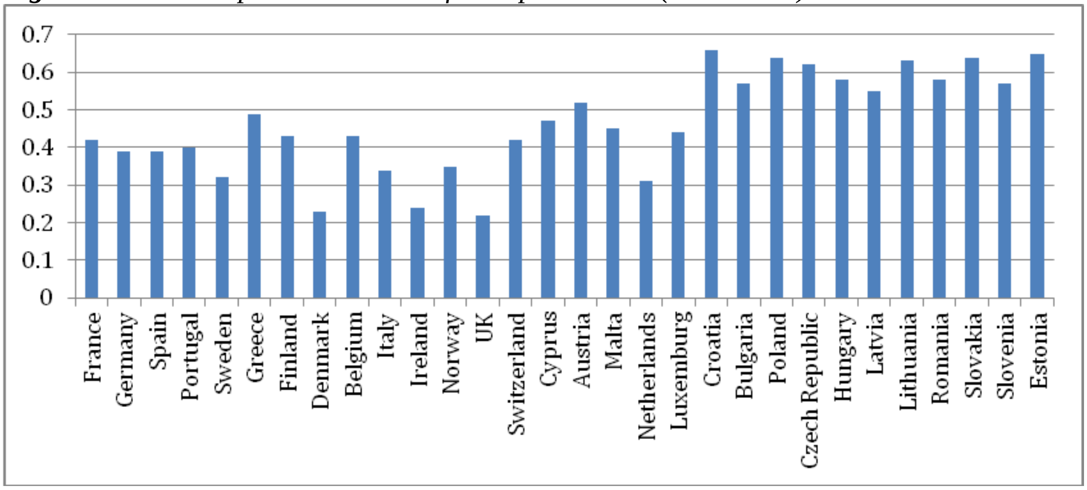


Figure 5 illustrates the average of ultimate ownership concentration in European banks. The minimum concentration averages exist in the UK (22.34%) and Ireland (24.03%). The maximum ownership concentrations of European banks appear in Poland (64.23%), Lithuania (63.42%), Croatia (66.01%) and Estonia (65.29%). In these former socialist countries, the highest percentage of bank assets is owned by foreign investors.

Figure 5: *Ownership concentration of European banks (2012-2013)*



In Figure 6 the results indicate the highest average size of the board of directors exists in Germany, with 17 members and 9 independent members. The lowest average size of the board of directors exists in Croatia with 6 members and 2 independent members. Moreover, Figure 5 shows that the maximum average of controlling committees exists in the UK, with 5 committees, and the minimum average exists in Hungary, with 2 committees.

Figure 6: *Controlling characteristics of European banks (2012-2013)*

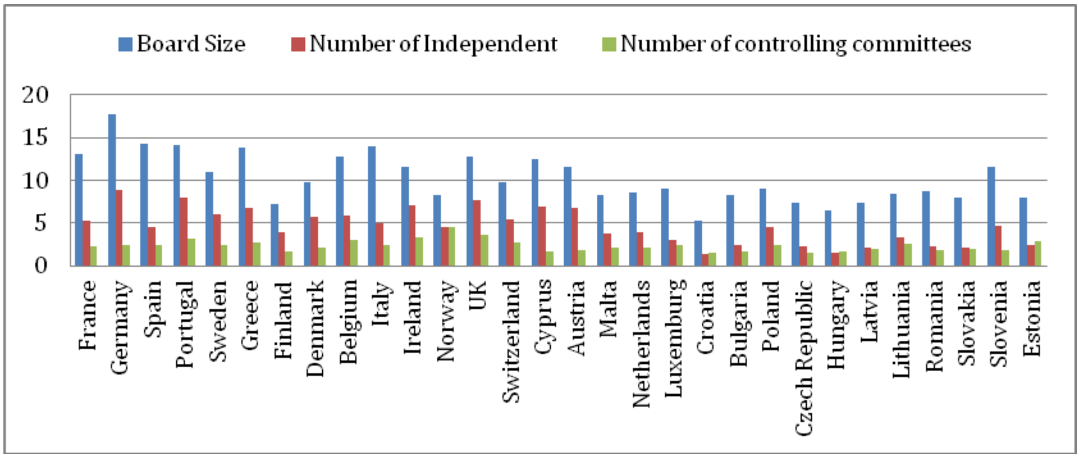
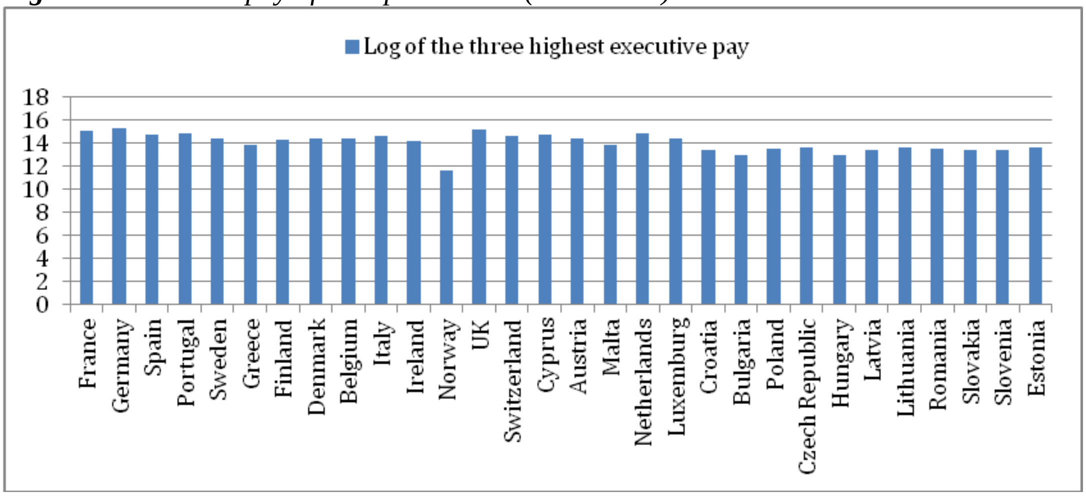


Figure 7 quantifies the natural logarithm of the three highest executive pay at year-end. The highest values of natural logarithm exist in Germany, France and UK, which indicate that these three countries are characterized by a high level of executive compensation. The lowest values are shown in the former Soviet Union countries such as Lithuania and Estonia. The banking sector and the bank size in these countries are very small and the banks' financial capacities cannot afford the same capacity as that of the biggest banks in Europe.

Figure 7: *Executive pay of European banks (2012-2013)*



a. Legal Protection System and Corporate Governance Tendency

In light of the different European legal systems and origins, three classification stages are used in this study to capture the impact of the legal protection level on the corporate governance structures of European banks.

Firstly, the 30 European countries of the study's sample are divided into five sub-samples based on legal origin: French civil law countries, former socialist law countries, English common law countries, German civil law countries and Scandinavian civil law countries.

Secondly, these five sub-samples of European countries are classified into three levels of protection based on Moral Hazard Index: low legal rights, middle legal rights and high legal rights. Thirdly, the banks in each country are placed in each group of Law Level – Law Origin (see Table 2 for the different classifications and the total number of banks in each group)[7].

Table 2: *Sample classification*

	French civil law countries	**Ex-Socialist law countries**	**English common law countries**	**German civil law countries**	**Scandinavian civil law countries**
Low legal rights	France, Spain Belgium, Italy Malta, Netherlands, Luxemburg. **(292 banks)**	Croatia, Bulgaria, Poland,Czech-Republic, Hungary, Latvia, Lithuania, Romania, Slovakia, Slovenia. **(129 banks)**			
Middle legal rights				Germany, Portugal, Greece, Switzerland, Cyprus, Austria. **(239 banks)**	Sweden, Finland, Denmark, Norway. **(139 banks)**
High legal rights			UK, Ireland. **(136 banks)**		

The study's sample presented in Table 2 indicates that 421 banks (45%) are considered as a part of low legal rights countries; 378 (40%) are considered as a part of middle law rights countries; and 139 banks (15%) belong to high legal rights countries.

[7] These classifications are based on the classifications of La Porta et al. (1998; 2002) and Caprio et al. (2007).

Table 3: *Descriptive statistics of corporate governance tendency based on legal origins*

Panel A: *Descriptive statistics per legal origin*

Variable \ Legal system	French civil law countries	Former socialist law countries	English common law countries	German civil law countries	Scandinavian civil law countries
OC_{it}	0.421	0.607	0.243	0.442	0.332
BOI_{it}	5.34	2.68	7.35	7.11	5.04
BOS_{it}	11.38	8.04	12.15	13.23	9.05
$CEOD_{it}$	0.39	0.43	0.21	0.36	0.32
CA_{it}	2	2.2	3.5	2.2	2.4
$ExCO_{it}$	14.56	13.38	14.6	14.61	13.69

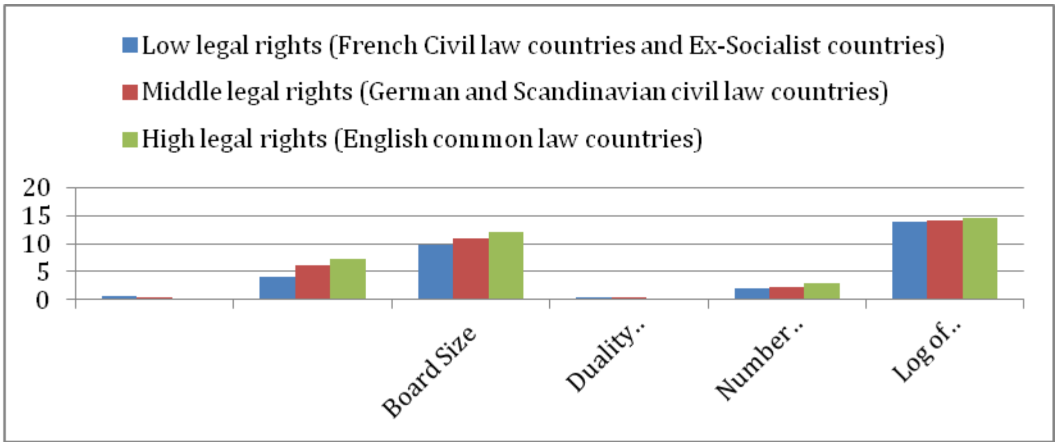
Panel B: *Descriptive statistics per law rights level*

Variable \ Legal system	Low legal rights (French Civil law countries and Former Socialist countries)	Middle legal rights (German and Scandinavian civil law countries)	High legal rights (English common law countries)
OC_{it}	0.54	0.387	0.243
BOI_{it}	4.01	6.075	7.35
BOS_{it}	9.71	11.04	12.15
$CEOD_{it}$	0.41	0.34	0.21
CA_{it}	2.1	2.2	2.9
$ExCO_{it}$	13.97	14.05	14.6

Table 3 (Panel B) and Figure 8 indicate that the level of law rights has a correlation with all the corporate governance variables of European banks. In high legal rights countries, the ownership is widely dispersed (24.3%) while large blockholdings is dominated in middle legal rights countries (38.7%) and low legal rights countries (54%).

It follows that in case of concentrated ownership in countries with low legal protection level, large shareholders have the incentive to expropriate the minority shareholders and agency problems appear between minority and large shareholders instead of the well-known agency problem between managers and shareholders. On the other hand, dispersed ownership (such as the UK and Ireland) needs additional control through more controlling committees and a higher number of independents.

Figure 8: *Corporate governance tendency in different European law rights levels*



The results of board size and independent members of the bank's board converge with the level of legal practices of European countries (Table 3 and Figure 8). The analyses of board characteristics show that board size and independent members are larger in countries with a higher level of legal protection. For example the average number of board members is around 12 while the average number of independents is 7 (60%) in common law countries. In countries with a middle level of legal practices the average number of board members is 11 and the number of independents is 6 (55%). The total number of board members is 9 in countries with low legal protection and the number of independents is 4 (45%).

The average number of committees comes in line with the recommendations of the European banking commission and converges with the results of board characteristics. The maximum average number exists in common law countries with 2.9 committees; the middle average number exists in Scandinavian and German civil law countries with 2.2 committees; and the minimum average number is 2.1 in civil law and former socialist countries. The existence of a higher number of committees is expected to improve risk management and remuneration control in the European banking sector.

The results of CEO duality are correlated with the other corporate governance variables. Maximum duality exists in countries characterized by low legal protection, and the minimum duality exists in countries characterized by a high level of legal protection.

These results of the number of committees and CEO duality indicate that countries with high legal practices are more likely to follow the international recommendations for corporate governance mechanisms in the banking sector.

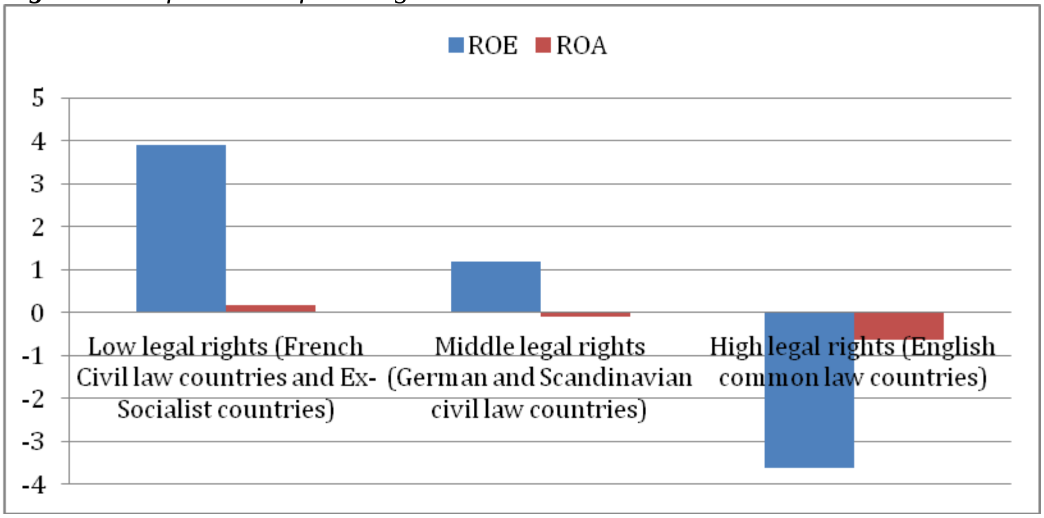
For the remuneration practices of European banks the averages of *ExCO* (Natural logarithm of the three highest executive pay) are very close between different

European countries with 14.6 as a maximum value in English common law countries and 13.96 as a minimum value in French civil law countries and Ex-Socialist countries.

b. Empirical Results of Corporate Governance Mechanisms and European Banking Performance

Descriptive statistical results of banking performance in European countries (Figure 9) indicate that both ROA and ROE are positive in countries with low legal rights while ROA and ROE are negative in countries with high legal rights. In countries with a middle level of legal protection, the results indicate that ROE has a positive value while ROA has a negative value. These results contradict expectations and deep analyses should be developed.

Figure 9: *Performance of banking sector*



To examine the impact of corporate governance variables on the performance of European banks and to understand the results presented in Figure 9, the following regression is conducted by considering the level of legal protection:

$$(\text{Bank Performance})_{it} = \beta_0 + \beta_1 OC_{it} + \beta_2 BOI_{it} + \beta_3 BOS_{it} + \beta_4 CEOD_{it} + \beta_5 CA_{it} + \beta_6 ExCO_{it} + \beta_7 Bsize_{it} + \beta_8 LEV_{it} + \beta_9 NPEL_{it} + \varepsilon_{it}$$

Where the dependent variables are measured by ROA and ROE and the independent variables are measured by all the corporate governance variables and the control variables presented in Table 1. (ε_{it}) is the error term and β parameters are the estimated coefficients for each of the explanatory variables in the regression.

Before running the regression, two tests were applied. Both (χ^2) and (F) values indicate no evidence of heteroscedasticity. Also, Hausman's test was conducted to differentiate between random effects and fixed effects model in panel data. In this study random effects model is preferred under the null hypothesis due to its efficiency.

Table 4: *Regression results*

	Dependent variable ROE %			Dependent variable ROA %		
Independent variable	A_1	B_1	C_1	A_2	B_2	C_2
Ownership concentration (OC_{it})	0.002 (0.684)	-0.034*** (0.003)	-0.007 (0.511)	-0.276 (2.341)	-0.194 (0.383)	-0.152 (0.451)
Independent members in Board (BOI_{it})	1.443* (0.076)	1.425* (0.068)	1.344* (0.071)	1.631*** (0.022)	1.952*** (0.042)	2.027*** (0.034)
Board size (BOS_{it})	-0.025** (-2.455)	-0.027 (-1.151)	-0.021 (-1.035)	-0.326** (-2.545)	-0.372 (-0.968)	-0.459 (-1.369)
CEO Duality ($CEOD_{it}$)	-0.005 (-0.064)	-0.004 (-0.087)	-0.003 (-0.072)	-0.012 (-0.069)	-0.023 (-0.082)	-0.018 (-0.093)
Number of controlling committees (CA_{it})	1.722* (0.061)	1.625* (0.058)	1.534* (0.042)	1.351** (0.022)	1.299** (0.052)	1.227* (0.039)
Executive pay ($ExCO_{it}$)	1.729 (0.212)	1.265 (0.285)	1.076 (0.199)	1.321 (0.214)	1.551 (0.141)	1.342 (0.154)
Bank Size ($Bsize_{it}$)	1.518 (0.131)	1.351 (0.146)	1.234 (0.162)	1.041 (0.134)	1.036 (0.171)	1.022 (0.154)
Leverage (LEV_{it})	0.165** (2.832)	0.147** (2.451)	0.138* (2.318)	0.261*** (0.004)	0.272*** (0.005)	0.241** (2.104)
Non-performance loan ($NPEL_{it}$)	1.231 (0.282)	1.345 (0.285)	1.476 (0.196)	1.381 (0.194)	1.251 (0.217)	1.452 (0.254)
Constant	1.102**** (23.43)	1.154*** (24.2)	1.140*** (22.83)	2.921*** (3.10)	3.031*** (3.25)	3.216*** (3.08)
Number of observations	723	621	246	723	621	246
R-Square	0.276	0.295	0.326	0.343	0.386	0.423
Fisher-ratio	5.73***	4.24***	3.35***	4.63***	4.32***	3.64***

Note: *This table shows the coefficients and t-statistics (in parentheses) from ordinary least squares regressions with robust standard errors. Significance levels: (***) <1%; (**) <5%; (*) <10%;*
A1 and A2 represent the regressions in countries with low legal rights;
B1 and B2 represent the regressions in countries with middle legal rights;
C1 and C2 represent the regressions in countries with high legal rights.

Table 4 presents the regression results which reveal the impact of corporate governance variables on the performance of European banks during the post-crisis period 2012-2013. Regressions A1 and A2 represent the results of corporate governance variables in countries characterized by low level of legal rights, regressions B1 and B2 represent the results of corporate governance variables in countries characterized by middle level of legal rights and finally regressions C1 and C2 represent the results of corporate governance variables in countries characterized by high level of legal rights.

The main results of regressions refer to the presence of significant relationships between the number of committees (CA) and bank performance in all European countries. If the number of committees increases, bank performance (ROA and ROE) increases in regressions A1, A2, B1, B2, C1 and C2. The presence of special committees represents an important tool to monitor corporate practices and protect shareholder value in the banking sector. For example, the presence of a remuneration committee can reduce the agency problem by designing incentive plans to align the interest of the CEO with those of the owners. Moreover, the presence of an audit committee can reduce the risk of expropriation by blockholders. These results come in line with the findings of Adams and Mehran (2003) in which they stated that the number of committees is one of the important tools to improve the performance of US banks.

The results of regressions A1, A2, B1, B2, C1 and C2 indicate that the presence of independent members on the board of directors (BOI) has a positive impact on the bank performance. Due to their independence and qualification they provide the needed expertise for banking performance and viability by setting the basic strategy and direction. They represent a line of protection for shareholders against any expropriation and entrenchment behaviors of a CEO and blockholders. These results confirm the studies of El-Chaarani (2014), De Andres and Vallelado (2008) and Busta (2008) in which they found a positive impact of independent members on a bank's profitability.

From the results of regressions A1 and A2, it is observed that board size (BOS) has a negative impact on bank performance in countries characterized by a low level of legal rights. The impact of board size becomes non-significant in countries characterized by middle and high levels of legal rights. A large board size increases the decision-making time and reduces the capacity to monitor bank performance. In French civil law and former socialist countries, the banks' CEO and blockholders may expropriate the minorities (outsiders) through the development of non-effective board of directors.

Finally, Table 4 indicates the absence of any significant and consistent impact of the other corporate governance variables (OC, CEOD and ExCO) on European banks' performance, only the Leverage variable (LEV) has a consistent and significant positive impact on bank performance. To sum up, there is no consistent evidence that corporate governance variables and legal protection level have a mutual impact on banks' performance.

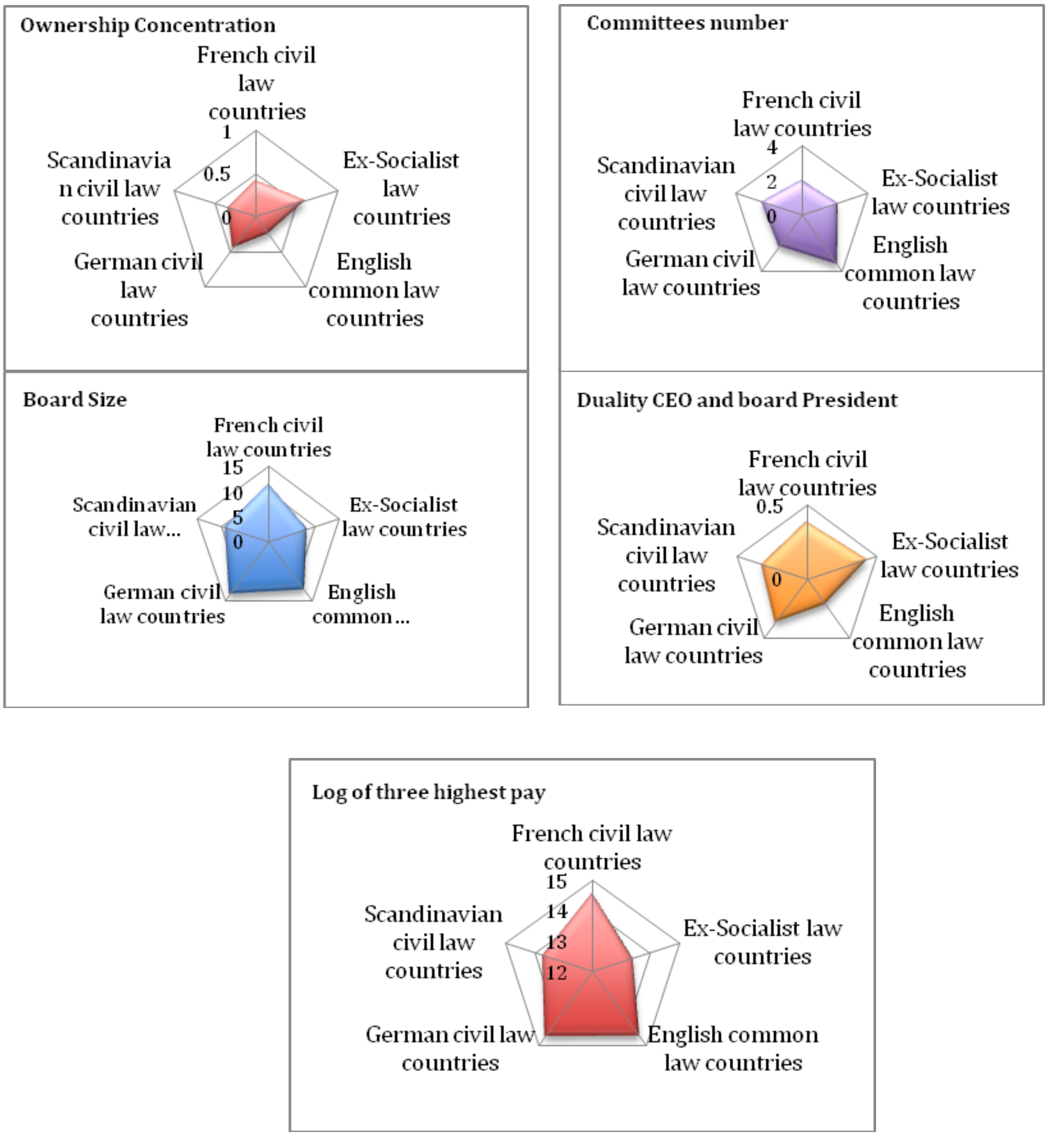
6. Conclusion

Over the last ten years, and after the recommendations of the international organizations and banks federations, many European countries have substantially reformed their banks' regulations. Based on the analysis of 935 European banks in 30 European countries, it appears that certain European countries have reformed their regulations to empower the performance and the monitoring system of the banking sector consistently with the international recommendation of corporate governance mechanisms.
It is found that the implementation of corporate governance mechanisms is affected by the level of legal rights in European countries (Figure 10). In common law countries such as the UK and Ireland, the international recommendations on corporate governance are well respected and applied. For example, in these countries the level of independents in bank boards and the number of committees, such as audit, remuneration, nomination and risk committees, have the maximum average in Europe. Alternatively, the ownership concentration and the duality level between the board president and CEO have the minimum average in Europe. Finally, the average board size and the remuneration level are considered the highest in common law countries.

In low legal rights countries such as French civil law and former socialist countries, the results indicate that the following of the international corporate governance codes is less respected and the risk of expropriation is very high. The number of committees and independents of bank boards have the minimum average in Europe, while the ownership concentration and the CEO duality have the maximum average in Europe. In this group of European countries, the remuneration average and the board size also have the minimum average.

In middle legal rights countries such as German and Scandinavian civil law countries all the corporate governance variables are quantified in the middle average of European countries. These results beside the results of low and high legal rights countries lead us to conclude a direct correlation between the implementation of corporate governance codes and legal rights level.

Figure 10: *Corporate governance practices in European banking sector*



Furthermore, the existing research has focused on the mutual impacts of legal rights and corporate governance practices on the performance of European banks. Results reveal that there is no evidence that certain European countries have reformed their corporate governance practices for the better. Even the existence of different levels of legal rights, all European countries are influenced by corporate governance variables in the same manner and level. The independent members of bank boards and the number of committees have a positive impact on bank performance whatever the level of legal rights. Only in countries characterized by a low level of legal rights the results reveal a negative impact on board size on banks' performance.

This study has several limitations and it can be extended in various dimensions. Firstly, the performance variables (ROE and ROA) are not sufficient to reflect the different dimensions of bank performance. Other variables can be used, such as liquidity, deposit and risk levels.

Secondly, the number of committees cannot efficiently reflect their performance and contribution in term of monitoring and organization. This variable must be studied by considering the composition of committees and the number of meetings each year. Thirdly, the study period is very limited so it should be developed over a longer period of time.

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