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The Influence of the Board of Directors on the Executive Compensation in the Banking Industry

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Abstract
Purpose: The objective of this study is to examine the effect of the attributes of the board of directors on the compensation of the CEO of thirty European commercial banks.
Design/methodology/approach: This research uses a technique of static panel data over the period 2004-2009. The study was conducted on a sample of thirty banks in four European countries.
Findings: The results of our study suggest that the relationship between the size of the Board and the CEO’s compensation is positive and statistically significant. Similarly, our results show that the presence of a proportion of independent directors in the Board improves the compensation of the CEO. They also indicate that improving the compensation of the CEO is also due to his power in the Board since he is its chairman.
Originality/value: This study shows that the Board of directors acts as the primary mechanism of internal control designed to align the shareholders and managers’ conflicting interests. However, the Board has an important role in defining the executives’ compensation; therefore, its power depends on the members that compose it. This study also indicates that the independence quality of the board’s members affects the compensation policy to improve the CEO’s compensation depending on the banking performance. Moreover, this study suggests that the banking performance is related to the CEO’s compensation through the attributes of the board. It therefore gives an overview of the impact of a complementary relationship between the board mechanism and that of the CEO’s compensation. This study provides an overview on the complementary between the mechanism of the board and the CEO’s compensation.
Keywords: Board of Directors; Executive Compensation; Corporate Governance; Banks; Europe.
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1 Introduction

It is important to understand corporate governance and the degree of alignment of the manager’s interests with those of the stakeholders.

In recent years, researchers have attached particular importance to the framework of corporate governance as well as to the executive's compensation (John and Senbet, 1998; Shleifer and Vishny, 1997). The governance of the banking industry and financial institutions has not been a subject of debate, although literature is increasingly focusing on the aspects of the corporate governance industry in the United States and elsewhere.

The mechanism of corporate governance coincides with the alignment of the executives' interests with those of the shareholders, (Murphy, 1999; Shleifer and Vishny, 1997). Banks differ from industrial companies on several points. Indeed, they are institutions regulated to a greater degree than industrial companies. More precisely, in the case of the Bank, several studies described its specificity (Macey and O'Hara, 2003; Adams and Mehran, 2003; Levine, 2003; Caprio and Levine 2002) claim than some of its features, such as regulation, supervision, capital structure, risk, trust relationships, property, deposit insurance, make the banking business specific and its corporate governance problem unique compared to other industries.

As a result, the boards of Directors in banks are larger and more independent. They meet more often and tend to have more committees than their counterparts in the industrial sector (Adams and Mehran, 2003). In addition, and contrary to the key results for other industries, this large-sized Board of Directors is likely to have a positive effect on the remuneration of the CEO (Holthausen and larder, 2005). However, despite being more independent and busier, the Board of Directors seems to have a lower disciplinary role and its independence has a positive effect on the remuneration of the CEO (Lambert et al., 1993; Cordeiro and Veliyath, 2003; Ozkan, 2007; Mishra and Nielsen, 2000). However, the accumulation of the executive functions (Chief Executive Officer : CEO) and control (Chairman) proves that the Director has more authority to review the decisions of the Council by raising the remuneration of the CEO (Cyert et al, 2002; David et al., 1998; Core et al., 1999; St Onge et al., 2001). However, the activity of the Board seems to have an unexpected impact on the remuneration of the CEO (Vafea, 1999).

The Executive compensation research started as soon as the 1990s. Pioneers have focused on the study of the sensitivity of the CEO's remuneration to the performance of the firm (Coughlan and Schmidt, 1985; Murphy, 1985, 1986; Jensen and Murphy, 1990).

The objective of this paper is to identify the effect of the attributes of the Board on the compensation of the CEO in the European banking sector and verify the pay-performance relationship. To achieve this, a study was conducted on a sample of thirty banks in four European countries.

This research suggests studying the contribution of the Board of Directors' attributes and Bank performance in the remuneration of the Bank's CEO. It focuses, in particular, on the European context and therefore complements the other studies that dealt with the study of other countries, of which we can cite that of Doucouliagos et al (2007) for the Australian context, Chen et al. (2006) for the USA and Broye and Moulin (2010) for the French one.

In fact, we study the impact of size, independence and activity of the Board and leadership structure on the remuneration of the banks' CEO on a sample of European banks in the euro zone.

To achieve these objectives, we have used a newly built database containing financial information and variables from the Board of Directors and from the cash remuneration of the CEO on 30 banks in four European countries (France, Germany, Belgium, Finland) covering the period from 2004 to 2009. The data are extracted from annual reports downloaded through the AMF site and through the banks' private sites.

The rest of the paper is organized as follows. The second section presents the theoretical framework and the research hypotheses. The third section deals with the methodological issues. The analyses and discussions of our results are the subject of the fourth section. The conclusion summarizes the main results of this research and reminds us of the limits and opens ups of other areas of investigation.

2 Theoretical Framework and Research Hypothesis

Separation between ownership and corporate control leads to agency conflicts between managers and shareholders (Berle and Means, 1932). Among these mechanisms, there is the Board of Directors which plays a central role in controlling managers (Fama, 1980). The size, composition, leadership structure (CEO holds the position of Chairman of the Board or not), are important characteristics that affect the efficiency of the board in monitoring the CEOs' activity (Jensen, 1993). This study aims to explain the various aspects of the agency theory and explore the previous studies examining the role of the Board in improving the compensation of the CEOs of deposit banks. It examines the main researches carried out about the size, structure, activity of the board and the power of the CEO and the impact of performance on the compensation of the CEO.

2.1 Impact of the attributes of the Board on the CEO's Compensation

The Board is the main internal controlling mechanism. It is required to make decisions on behalf of the shareholders and ensure the compatibility of interests of the owners with those of the managers. We will study the effect of the size, structure, activity of the board and the power of the CEO on the CEO's on compensation.

2.1.1 Impact of the size and structure of the Board on the CEO's Compensation

- **The size of the Board**

Jensen (1993) believes that a board of directors composed of a large number of members, more than seven or eight, does not work effectively and can lead to the dominance by the CEOs. Mak and Li (2001), notes that a small board dominated by outside directors improves the efficiency in controlling the officers.

On his side, Yermack (1997) found that the leaders' remuneration is high in companies with a board consisting of a reduced number of administrators. In this study, the size of the board shall be calculated according to the number of directors serving in the board or in the supervisory council and in the executive board of dual companies.

In contrast to the theories focusing on the competence of the administrators, a large-sized board of directors is preferred.

Holthausen and Larcker (1993) studied the relationship between the level of the CEO's compensation and the board variables. They found that these variables account for much of the variations in this compensation. They also showed that the CEO's compensation varies with the size of the board. It is then possible to advance the following hypothesis:

H_1: CEO's Compensation is positively related with the size of the board.

- **Independence of the Board of Directors**

According to the agency theory, the efficiency of the board grows with the presence of a high proportion of outside directors in it in order to ensure a better control of the managers (Fama, 1980). It also assumes that independent directors are experienced in the internal control and in the supervision of the management teams (Fama and Jensen, 1983).

The disciplinary role exercised by the board is likely to be more effective especially if the administrators re completely independent from the management team (Jensen, 1993). According to the theory of the managerial power, the outside directors are likely to counterpart the CEOs more freely (Bebchuk and Fried, 2006; Malette, Middlemist, and Hopkins, 1995).

Fama (1980) and Fama and Jensen (1983), find a positive relationship between the supervising efficiency of the board and the reputation of the outside directors. Li (1994) notes that the outside directors can help both in terms of expertise and objectivity when it comes to the evaluation of the manager' decisions. Their interest comes to value their human capital tightly linked with their reputation as independent experts on the managers' market. The term "outsiders" (non-executive directors) is used by the Anglo-Saxons to refer to the independent directors.

The researchers used the proportion of the independent administrators as a measurement of the board's capacity of controlling the remuneration of the top leaders. However, the results of their studies are mitigated.

Basu et al. (2007) point out that in Japan the presence of external managers is linked significantly to weaker wage levels of remuneration for the ruling team. Similarly, Firth, Fung, and Rui (2007) show that in China firms which count a bigger proportion of external managers pay remunerations very adequate with the operational performance of the firm.

On the other hand, Mishra and Nielsen (2000) underline the existence of a positive relation between the independent external administrators and the sensitivity of pay-performance.

In the same way, Lambert, Larcker, and Weigelt (1993) and Cordeiro and Veliyath (2003) and Ozkan (2007), find a positive relation between the compensation of the CEO and the proportion of external administrators. Moreover, Conyon and Peck (1998), Crystal (1991), Boyd (1994) and Hallock (1997) find that the compensation of the CEO is positively correlated with the percentage of external administrators.

However, the results of the Anglo-Saxon studies are often contradictory to the preceding results. Indeed, Conyon and Peck (1998) and Westphal and Zajac (1995) do not find a significant incidence of the proportion of external administrators on the compensation of the CEO. In the same way, Hermalin and Weisbach (1991) conclude to the neutrality of the board with respect to its structure on the level of remunerations. It is then possible to advance the following assumption:

> ***H_2: CEO's Compensation is positively related with the proportion of independent directors.***

2.1.2. Impact of the activity of the board of directors on the Compensation of the CEO

- **Presence of a compensation committee within the board of directors**

The decisions of recruitment, remuneration and dismissal of senior executives are allocated to the board of directors, (Fama and Jensen, 1983). According to Core, Holthausen, and Larcker (1999), the board of directors may seek various opinions (opinions of the consultants) in order to determine the level of appropriate remuneration to its leaders. The contract of remuneration is optimized for the leader to the detriment of the company to prevent him from seeking his own interests. Thus, the presence of a committee of remuneration can contribute to limiting a potential risk of collusion. These mechanisms of governance can thus represent an important method of control even of mediation, in the establishment of the remuneration of the senior managers.

As for Piot (2006), he actually meets the need for supervising the CEOs in the agency relationship between managers and shareholders. In the absence of such committees, the CEOs would have a more managerial power to be given remuneration higher than that they could claim in terms of their performance, and this is to the detriment of the shareholders' interests.

In Britain, Conyon and Peck (1998) and Main and Johnston (1993), show that the executives' remuneration is higher in companies having a committee.

We assume that the existence of a committee should help in avoiding excessive remuneration policies and to force managers to increase the performance of the company by granting a more important flexible pay. It is then possible to advance the following hypothesis:

H*$_3$*: CEO's Compensation is positively related with the presence of a Compensation Committee within the board.

- **The number of meetings of the Board of Directors**

The analysis of the relationship between the value and composition of the board remains inadequate once we do not consider the internal working of the board. Other studies note that there are several factors that can affect the way boards operate, particularly about the frequency of the board meetings (Vafeas, 1999). Indeed, meetings give the Board members the opportunity to meet, discuss and exchange ideas about the strategy of banks and look for a way to supervise the managers. Therefore, the more frequent the meetings are the narrower controlling of the managers is, and the more appropriate the advisory role is. In addition, both the complexity of the banking business and the importance of information increase the relevance of the advisory board. Thus, an increase in the frequency of the board meetings would be a response to the seeking of strategic decisions to improve the value rather than a response leading to poor results (Vafeas, 1999).
It is then possible to advance the following hypothesis:

H*$_4$*: There is a positive or a negative relationship between the number of the board meetings and the Compensation of the CEO.

2.1.3 Impact of the CEO's power on the compensation of the CEO.

Another way of examining the impact of the attributes of the board of directors on the CEO's compensation is the structure of the board leadership with which, one can at the same time perform the function of the « Chief Executive Officer : CEO » and that of the president of the board « Chairman ». In the same direction, Boyd (1994) defines the duality of the CEO where it exists when the CEO of a company also serves as Chairman of the Board of Directors. Duality corresponds to the situation where the manager also serves as a Chairman of the Board of Directors. Yet according to agency theory, the functions of control and decision making should be separated in order to improve the level of control.
According to Jensen (1993), the cumulative functions of Chairman and Chief Executive Officer are likely to influence the effectiveness of the Board in exercising an objective control at the level of executive remuneration. When accumulating the functions, the CEO has more authority to review the Board's decisions as to his level of remuneration.
According to Jensen (1993), for a board to be effective, it has to separate the functions of the chairman from those of the managing director. The missions a Chairman has are: organizing the meetings of the Board and lead, hire, fire, evaluate and compensate the manager.
The empirical results of (Yermack, 1996) showed that the cumulative functions of a company director and chairman of the board were a source of amplification of the agency problems.
Regarding the structure of the board in the French system, companies are allowed to maintain a traditional board, or opt for a supervisory board (made up of non-executive directors) and an Executive Board (composed of directors executives). Finkelstein and D'Aveni (1994) show that duality fosters the Officer's protection by reducing the level of control of the board. Daily, Johnson, and Dalton (1999) report that choosing a separate leadership structure of the board is largely based on the problems of the agency theory, considering the potential domination of the managerial board.

Malette, Middlemist, and Hopkins (1995) and Bebchuk and Fried (2006) believe that the separation of functions should instead allow the board to act independently, namely to organize the policy of the executive remuneration.

In France, companies may opt for a dual structure comprising a supervisory board and an executive board, and may also choose, in accordance with the NRE Act of 2001, to separate the roles of the CEO and Chairman of the Board of directors (Firth, Fung, and Rui, 2007). According to these writes, the separation of functions is associated with remunerations that based more on the firm's performance.

Boyd (1994) observed a negative impact of duality on the level of the administrative control. While Core, Holthausen, and Larcker (1999) and Cyert, Kang, and Kumar (2002) and David, Kochhar, and Levitas (1998) and St-Onge, Magnan, and Calloc'h (2001), show a positive and significant relationship between the cumulative functions of the CEO and the Chairman and executive remuneration. However, other researchers find no significant relationships (Conyon and Peck, 1998; Cordeiro and Veliyath, 2003).

Thus, if two different individuals occupy both functions separately, one can expect the president to be more diligent and more equitable and to have considerations regarding the setting of the levels of executives' remuneration.

It is then possible to advance the following hypothesis:

H_5: The CEO's compensation is positively related with the cumulative functions of the CEO and the Chairman of the Board of Directors.

2.2 Impact of performance on the CEO's Compensation

The agency theory assumes that the board has a vital role in corporate governance. In a disciplinary perspective, its role is to ensure that the decisions taken by the management team are consistent with the interests of shareholders. Therefore, it should prevent the CEO from having an opportunistic behavior because his remuneration would lead to his misappropriation of the wealth of the company at the expense of the shareholders and other stakeholders. The board should be particularly careful that the level of executive remuneration won't be excessive in relation to the particular performance of the company (Charreaux, 2000).

Barro and Barro (1990) examined the relationship between the changes in the bank remuneration and performance in the period 1982-1987. They studied the impact of performance related to the CEO remuneration by assigning their sample of 83 banks to one of seven regional definitions. The study defines remuneration as salary and bonus. They found that executive remuneration varies depending on the selected performance measures (accounting performance and market value of securities). However, the sensitivity of pay to performance decreases as long as the CEO accumulates experience within the bank.

Tripp and Kenny (1995) examined the issue of the relation of pay to performance in the banking sector in the United States by reproducing the work of (Barro and Barro, 1990). A study on a sample of 96 banks confirms the studies by Barro and Barro (1990), which was carried out over the period 1982-1987, shows that the increase of the executive pay in the largest American banks is extremely sensitive to performance as it was confirmed by the measurements taken from the shareholder wealth. This result should alleviate the criticism of the CEO remuneration in the banking sector which requested that the CEOs are overpaid and the shareholders are not getting value for their money. In addition, this study indicates that the performance has no significant relationship with the change in remuneration.

Ely (1991) examined a study of four banking industries during the period 1978-1982 and found a link between pay and performance in the banking sector having accounting variables and much higher explanatory power than the dividend variable. The dependent variable used in this study is the change in cash remuneration, the change in short-term bonus and long term components such as stock options. The study of Ely concluded that these results are lower than those of the previous studies, but not particularly different, suggesting that the inclusion of long term components won't add anything significant to the analysis and then can be misleading. Therefore, the bias error, which exists in the measurement of the long-term remuneration components could be higher than the benefits of their inclusion. Therefore, compensation in the study of Ely is defined as salary and bonus.

Adopting the same approach as their predecessors, Hubbard and Palia (1995), Crawford, Ezzell, and Miles (1995) and John and Qian (2003) found a positive relationship between the executive remuneration and the performance of the bank, with some minor differences. It is the same for Ang, Cole, and Lin (2000) who wonder not only about the executive remuneration, but also about that of the management team. Thus, the sensitivity of the executive remuneration to the firm performance is defined by Jensen and Murphy (1990a) as the increase of the executive remuneration per dollar units when the shareholders wealth changes. The authors thus measure the alignment of the increase of the payment of the CEO with the increase of the wealth of the shareholders.

In the same way, St Onge and Magnan (1997) wonder about the relationship between the level of payment of the CEO and the banking performance. The authors show that the more the payment of a bank's CEO is connected to its performance the more the power of its manager is important.

Akhigbe, Madura, and Huldah (1997) have developed a perfect model to assess the relationship between the CEO's remuneration and bank performance.

Their study evaluates this relationship for commercial banks, while the conditions specific to industry can make the pay-performance relationship vary from the banking sector to the industrial companies. The study also found a positive and statistically significant relationship between the accounting measures of performance of banks (Return on assets and Earnings Per Share) and the level of the CEO's remuneration. In short, a significant and positive relationship was found between the measures of performance in banks based on the market (Return on equity) and the CEO's remuneration.

Walls (1999) analyzed the distribution of the remuneration of the manager in the commercial banking sector. He found that the distribution of CEO's remuneration to financial managers in the commercial banking sector is in conformity with the amplification of the managerial capabilities. The explanation of the executive remuneration in terms of firm-specific variables was observed in commercial banks. It is distributed in a way that confirms the hypothesis of small differences in the capacity that can be amplified with huge variation in salary.

According to Betzold and Berg (1997), one of the most common measures of performance is to compare the performance of the portfolio in relation to the total return. In the short term, this measure can lead to excessive risks in the order of an increase in the state of results. The output is uncertain while the total profitability is favoured. Performance-based remuneration is perceived as a key to the increase of productivity and performance in most industries and banks. Compensation should not be based on short-term results. The managers' salary portfolio should continue to be specified by means of a salary. Some long-term results could have been rewarded through a formula-based bonus performance.

Sigler and Porterfield (2001) found a significant relationship between the increase of the CEO's global remuneration and the firm's performance for a sample of 31 listed commercial banks. Their study includes an industry model that uses variables specific to the banking sector and to the analysis using data from a testing period between 1988 and 1997. The dependent variable is the overall remuneration. It is thought that a change through increase or decrease in the salaries of the banks' CEOs every year is due to an increase or a decrease in the banks' returns on assets by 1%. This variation in the CEO's remuneration, due to bank performance, is high compared to an average overall remuneration of two million dollars each year of the CEO in the sample during the considered period. According to the study, none of following three variables, holding, beta, and the change in income, is statistically significant for the explanation of the salary variation in each year.

Joyce (2001) studied a sample of quoted banks and found a relationship between the effectiveness of the CEO and the corporate performance in the banking sector. However, this study is considered to be a weak backing of the agency theory regarding the relationship between corporate performance and the CEO's remuneration (salary and bonus). The low correlation between the return on assets (ROA) and the CEO's remuneration confirms the results of other authors. Therefore, one way to avoid the agency problems in the short term would be the reward of the executives on the basis of financial returns to shareholders. One of the ways to align long-term interests of CEOs with those of shareholders is the stock option.

However, the more the executives' pay increases, the more the shareholders seem to be convinced that there is no link between the executive's salary and the performance of the company.

A study conducted by Gregoriou and Rouach (2003) found that CEO's remuneration increases with the increase in return on assets (net income on total assets). These authors found that, in banks and savings institutions in the United States, remuneration increases with the ratio of share price to the total assets, indicating the tendency of the CEOs to carry out options when the share prices reach a certain level thus increasing their pay.

A study by Vafeas, Waegelain, and Papamichael (2003) analyzed the changes in the remuneration policy of the executives of 94 commercial banks. After the remuneration reform, banks have substituted other rewards by cash remuneration, and presented a stronger salary-performance relationship. Their analysis suggests that the pay reform, rather than deregulation or corporate control, conducted lead banks to change their governance and provided little evidence that the changes have strengthened the incentive effects of payment contract.

It is then possible to advance the following hypothesis:

H6: There is a positive relationship between performance of banks and compensation of the CEO.

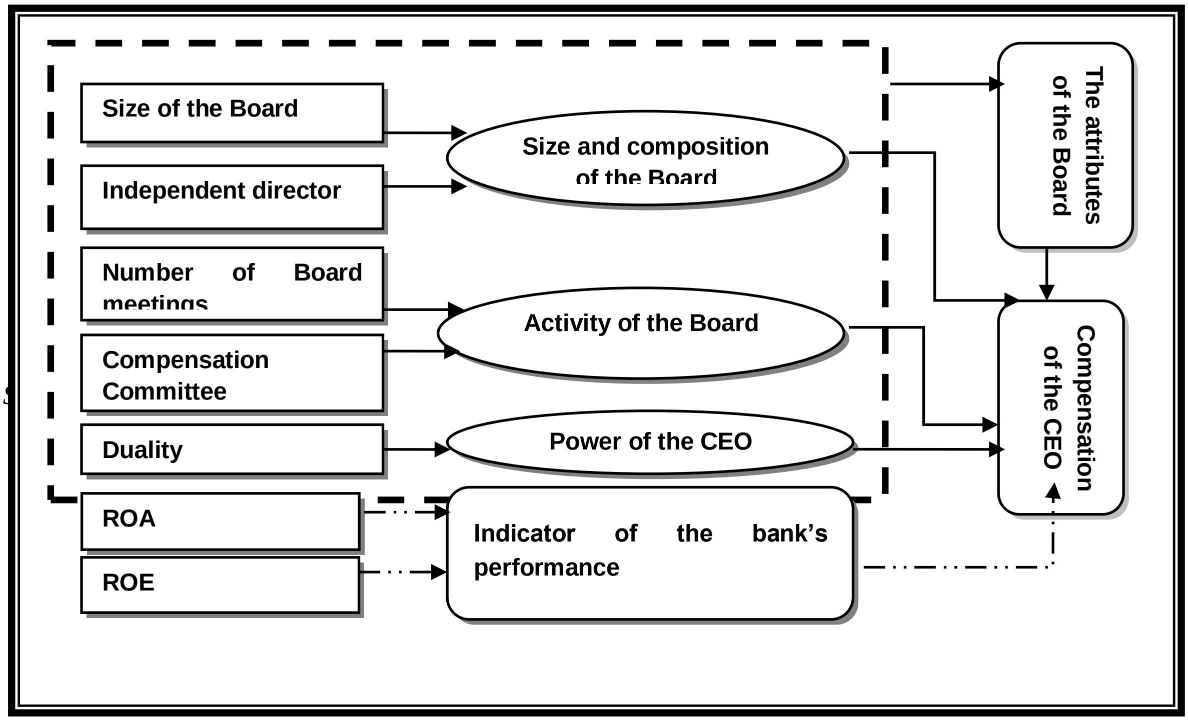


Figure 1: The influence of the attributes of the Board on the compensation of the CEO
Source: carried out by the author

3 Data and Econometric Methods

3.1 Sample and data

In this paper, we use a sample of thirty European banks. This sample was selected from savings banks in four European countries: France, Germany, Belgium, and Finland. The banks listed in our sample are drawn from a list of the European Central Bank published on the site: www.ecb.int.

According to the recommendations of the FMA, the annual reports of banks listed on the Paris Stock Market. The annual reports of banks unlisted on the Paris Stock Exchange were downloaded from their proper sites.

The data collected cover the period 2004-2009. Our database consists of 30 banks during a six-year analysis period, which means 180 observations. The choice of the panel data is made in order to make use of the individual and temporal double dimension of the available information (Ayadi and Boujelbene, 2012).

Table 1: Determination of the sample

Banks	Number of bank
French banks	19
German banks	5
Belgian banks	4
Finnish banks	2
Total number of banks	30

Source: carried out by the author

3.2 Empirical model

In order to examine the board attributes affecting the remuneration of the CEO of the thirty European banks, the following model was developed:

$$COMPENSATION_{i,t} = \alpha_0 + \alpha_1 * (\text{Size-Board})_{i,t} + \alpha_2 * (\%\ \text{Indépendent-Director})_{i,t} + \alpha_3 * (\text{Comp-Committee})_{i,t} + \alpha_4 * (\text{Number-Meetings})_{i,t} + \alpha_5 * (\text{Cumul})_{i,t} + \alpha_6 * (\text{Return-on-Asset})_{i,t}$$

Panel model estimation provides an opportunity for the use of a model with fixed effects or a model with random effects (Hausman, 1978). In a fixed effect model (FE), the parameters to be estimated are considered fixed parameters, whereas in a random effect model (RE) they are random and the estimation method is the generalized least square (GLS) (Ayadi and Boujelbene, 2012).

3.4 Measures of variables

3.4.1 Measure of the CEO Compensation

The overall cash remuneration is defined as the fixed annual salary in cash beside a cash bonus (Barro and Barro, 1990). The salary component (cash compensation) does not encourage managers to exert more effort (Brindisi, 1984; Hoskisson et al., 1989). Therefore, the risks and agency costs are the responsibility of managers (Eisenhardt, 1989). On the other hand, the variable component of compensation (bonus) encourages more effort from the manager, thus facilitating a greater sharing of risks and costs between managers and shareholders.

Risk sharing is contingent on the performance indicators that is related to the remuneration of the manager. Data on the CEO's remuneration (salary and bonus) was collected for every CEO of every bank for a period ranging from 2004 to 2009. We collected the compensation of the CEO based on information published in the annual report of commercial banks. Thus, the remuneration of the CEO is unique data of the CEO compensation was provided for the entire period. Table 2 contains a list of variables that were measured.

3.4.2 Measures of explanatory variables

- **Characteristic of the Board**

We examine whether the size of the board has an effect on the level of compensation of the CEO. The size of the board is measured by the number of directors on the board at the annual meeting of the board (Belkhir, 2009).

We test the influence of the independence of members of the Board on the level of executive compensation. The variable proportion of independent directors is the percentage of independent directors on the board. It is calculated as the number of outside directors divided by the total number of directors (Belkhir, 2009). With the number of external independent director is the difference between the total number of directors and the number of inside director.

We also examine whether the cumulative of the functions of Chairman and Chief Executive Officer has an impact on the compensation of the CEO. Duality (Cumul) is measured dichotomously. We coded 1 when both functions are occupied by the same person (that CEO is itself Chairman of the Board of Director) and 0 when the two functions are separated, when the structure adopted is that of executive with the supervisory board, we code 0, since the structure implies a separation of functions (Belkhir, 2009).

We test the impact of the existence of a compensation committee on the compensation of the CEO. (Comp-Committee) variable takes the value 1 if the firm has a compensation committee and 0 otherwise (Broye and Moulin, 2010).
We examine whether the number of meeting of the Board of Directors has an impact on the level of compensation of the CEO. The number of meetings of the board is measured by the number of meetings held each year (Andres and Vallelado, 2008).

- **Measures of bank performance**

To the extent that compensation is an incentive mechanism to align the interests of executives with those of shareholders, the relationship between executive pay and performance of banks should be positive (Fama and Jensen, 1983; Jensen and Meckling, 1976).
The performance of banks accounting is based on financial information. Some studies use accounting measures of performance ratios namely return on equity and return on assets. We cite (Brown and Caylorb, 2009; Bowen, Rajgopal, and Venkatachalam, 2008; Pi and Timme, 1993).
The variable (Return-on-Asset) is defined as net profit divided by total assets. This ratio is a measure of profitability commonly used and has been used by many authors (eg, Barro and Barro, 1990; Gedajlovic and Shapiro, 2002; Prowse, 1992). Prowse (1992) note that since stock returns are expected to adjust the differences between shareholders and managers based on accounting measures such as (Return-on-Asset), which is preferable to study the relationship between the board of directors and financial performance. The return on assets expressed in general economic profitability. Its advantage is that it covers all activities of the bank. Its disadvantage is that it places all of the assets on the same level of risk as the risks associated with components of the total assets are different. In addition, it neglects the off-balance sheet activities are being scaled up in banking (Demsetz and Saidenberg, 1999).
The variable (Return-on-Equity) is defined as net profit divided by book value of equity. This ratio is a measure of financial profitability or the rate of return on shareholders. It has been used by many authors (eg, Ang and Lauterbach, 2002; Brown and Marcus, 2009). It measures the efficiency with which the bank uses equity entrusted by shareholders. The disadvantage of this ratio is that it can give a biased picture of profitability since a high ratio may be from a low level of equity.

3.4.3 Control variables

The literature shows that the size factor is decisive in explaining levels of executive compensation (Jensen and Murphy, 1990; Tosi et al., 2000). Running a large bank in fact implies a higher level of responsibility, more hierarchical levels to coach, more experience and skill required. We therefore expect that the largest banks grant more high salaries to their managers. To control the size we use the logarithm of total assets of the bank.
We test the influence of leverage on the level of remuneration of the CEO. The leverage is measured by the ratio of long-term debt on the equity value at year end.

Table 2: Definition, notation and expected effect of dependent and independent variables

Notation	Definition of Variables	expected sign
Dependent variables		
COMPENSATION	The total cash compensation of the CEO is defined as annual salary plus bonus **(Barro and Barro, 1990**; **Ayadi and Boujelbene, 2012).**	
Independent variables		
Size and composition of the Board		
Size-Board	The number of directors sitting to Board of Directors at the annual meeting **(Belkhir, 2009; Ayadi and Boujelbene, 2012).**	(+)
% Indépendent-Director	The proportion of independent directors is determined by the number of independent directors divided by the total number of directors **(Belkhir, 2009; Ayadi and Boujelbene, 2012).**	(-)
Activity Board		
Comp-Committee	This is a dummy variable that takes the value 1 if the bank has a compensation committee and 0 otherwise **(Broye and Moulin, 2010; Ayadi and Boujelbene, 2012).**	(+)
Number-Meetings	The number of meetings held each year **(Andres and Vallelado, 2008; Ayadi and Boujelbene, 2012).**	(+/-)
Power of the CEO		
Cumul	This is a dichotomous measure of duality that takes value 1 when both the Chief executive officer (CEO) and Chairman of the board of directors functions are carried out by the same person and 0 otherwise **(Belkhir, 2009; Ayadi and Boujelbene, 2012)**.	(+)
Performance measurement		
Return-on-Asset	The return on assets is defined as the report of Net Profit to Total Assets. (**Barro and Barro, 1990; Gedajlovic and Shapiro, 2002).**	(+)
Return-on-Equity	The return on assets is defined as the report of Net Profit to Total Equity (**Ang and Lauterbach, 2002).**	(+)
Control variables		
Log Size	Log (book value of total assets). **(Belkhir, 2009; Ayadi and Boujelbene, 2012).**	
Debt/Equity	The report Total Debt to Total Equity **(Hoshi et al., 1990; Ayadi and Boujelbene, 2012).**	

3.5 Descriptive Statistics

Table 3 presents descriptive statistics for our sample of variables used in this empirical study.

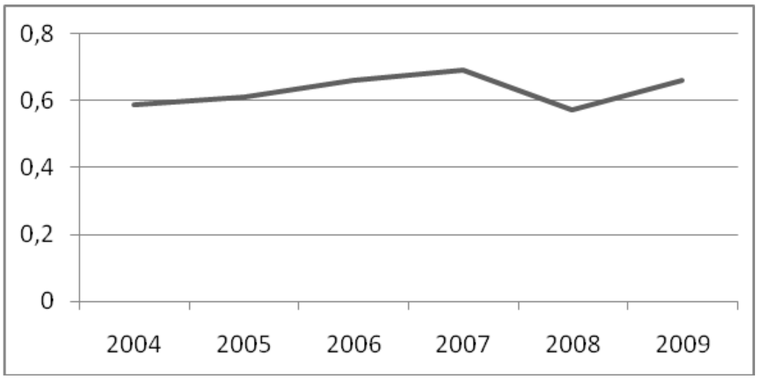
Table 3: Descriptive Statistics

VARIABLE	OBS	MEAN	MEDIAN	STD. DEV.	MIN	MAX	Skewness	Kurtosis
Size-Board	171	15.33333	15,550	3.97788	6	22	-0,333	-0,611
% Indépendent-Director	157	0.4502659	0,5157	0.3193314	0	1	0,054	-1,066
Comp-Committee	171	0.7134503	0,7135	0.4534772	0	1	-0,953	-1,106
Number-Meetings	161	8.658385	7,6000	4.599056	3	26	1,335	1,931
Cumul	172	0.2151163	0,2151	0.4121027	0	1	1,399	-0,044
Return-on-Asset	180	0.0146211	0,0045	0.0483516	-0.2325053	0.3146225	2,975	20,105
Return-on-Equity	180	0.1007961	0,1059	0.1207414	-0.3342599	0.774663	0,438	6,839
Debt/Equity	180	23.43345	19,707	17.41248	0.0021186	106.4714	1,713	5,064
Log Size	180	11.2686	11,691	2.171542	4.738281	14.62674	-0,935	0,646
COMPENSATION	180	0.6291604	0,5326	0.3687787	0.000045	1.779555	0,671	0,064

Source: carried out by the author

On average, Fixed salary compensation of the CEO (chief executive officer) of a bank in the sample is equal to 629 K € and the maximum value is equal to 1779 K €.

GRAPH N°1: COMPENSATION OF THE CEO



Source: carried out by the author

This graph shows the shape of the average pay of CEO cash commercial banks of four countries (France, Germany, Belgium and Finland) during the period 2004 to 2009. In 2004 the average pay of CEOs is 600 K €. Next, we note that the CEO's compensation has increased over time and is around 700 K €, but it produced a fall in 2008 and then it is around 500 K € and following the year 2009 it became 700 K € on average. Thus, we can deduce that the sharp drop may be due to the financial crisis.

4 Empirical Results

4.1 Unvaried Analysis

In what follows, we present the correlation coefficients between the variables of the empirical model. The correlations are presented in Table 4.

Examination of the Pearson correlation coefficients, allows us to study the null hypothesis of no correlation between explanatory variables. We must therefore set the limit value of the correlation coefficient to specify our models. We set this limit to 0.75 (Kennedy, 2003): that is to say whether the correlation between two variables is equal or exceeds 0.8, these two variables should not be in the same model to ensure the effectiveness of the interpretation of results. As shown in the table above, all correlation coefficients are smaller than 0.75 at which the phenomenon of colinearity is becoming more pronounced. It follows that the correlation between the explanatory variables in our models may be acceptable. So there is no problem of multicollinearity.

Table 4: Pearson correlation matrix

Variable	COMPENSATION	Size-Board	% Indépendent-Director	Comp-Committee	Number-Meetings	Cumul	Return-on-Asset	Return-on-Equity	Log Size	Debt/Equity
COMPENSATION	1.0000									
Size-Board	0,199***	1.0000								
% Indépendent-Director	0,214***	-0.3982***	1.0000							
Comp-Committee	-0,097	-0.1195*	-0.1280*	1.0000						
Number-Meetings	0,077	-0.1913***	0.3561***	0.2275***	1.0000					
Cumul	0,008	-0.1215*	-0.1963***	0.1719**	-0.0379	1.0000				
Return-on-Asset	-0,059	-0.2159***	0.2521***	0.0630	0.0446	-0.0515	1.0000			
Return-on-Equity	0,033	-0.1182*	0.0219	0.0938	-0.1478**	0.1375**	0.4016***	1.0000		
Log Size	0,289***	0.3919***	-0.1271*	-0.1524**	-0.2419***	-0.0174	-0.2727***	0.0155	1.0000	
Debt/Equity	0,372***	0.4878***	-0.3160***	-0.0649	0.0628	0.1319*	-0.2640***	-0.2102***	0.4782***	1.0000

(*) (**) and (***) indicate significance respectively at 10%, 5% and 1%.
Source: carried out by the author

4.2 Results of the regression

Table 5 presents the results of the regression model for which the endogenous variable is the compensation of the CEO.

In equations 1 and 5, we find that board size (Size-Board) is positively related to cash compensation. Thus, our results confirm our hypothesis on a regular basis and the results of Yermack (1997) and Ghosh and Sirmans (2005). Thus, this result contradicts the hypothesis that larger boards are more effective in monitoring activities. Thus a board of directors is appointed to act as the first internal control mechanism designed to align the interests of shareholders and managers. The Board has a role important in determining executive compensation and its power depends on its members.

The presence of the proportion of independent directors on the board of directors (INDDIR) has a positive and statistically significant impact on the fixed compensation of the CEO (COMPENSATION) in equation (5). This confirms the hypothesis of our research and the results of Mishra and Nielson (2000) and Ozkan (2007). We can therefore conclude that the quality of independent members of the Board influences the fixed remuneration, to minimize, or to increase the share of variable compensation based on the performance of the bank. Thus, banks with a greater proportion of independent directors paid a higher salary to the manager.

In equation 2 of the operating variables of the board are the presence of the compensation committee (Comp-Committee) and the number of meeting of the board of directors (Number-Meetings). Contrary to our expectations, we find that the existence of a compensation committee (Comp-Committee) has no impact on the level of compensation of the CEO. This result is not coherent with the results observed in Britain (Conyon and Peck, 1998; Main and Johnston, 1993) and invalidates the hypothesis of the disciplinary role played by the committee. It seems instead that the presence of a committee allows the CEO to better impose its requirements for compensation. Following, we have no link between frequency of meetings of directors (Number-Meetings) and compensation of the CEO. This result is not coherent with the results of Vafeas (1999) and invalidates the hypothesis of our research. Thus, none of these two variables appears to be statistically significant.

In equation 3 the variable power of the CEO in the board of directors is the CEO duality (Cumul). So concerning the power of the CEO, we find a positive relationship between the CEO sitting as chairman of the board and the fixed compensation of the CEO. This is consistent with the hypothesis of our research and with the idea that as the CEO has more power on the board, it is able to extract additional compensation, this is coherent with the results of (Core, Holthausen, and Larcker, 1999; Cyert, Kang, and Kumar, 2002; David, Kochhar and Levitas, 1998; Noguera, Highfield, and Nagel, 2007), who find that duality has an upward effect on executive pay.

In equations 4 and 5 variables of performance bank are the return on assets (Return-on-Asset) and return on equity (Return-on-Equity). We found in column 5 a positive and statistically significant relationship between the returns on equity and the CEO's remuneration through the attributes of the board. Thus, this result makes us validate hypothesis 6. No relationship was found between the return of the asset and the compensation of the CEO.

About the control variables, the size is a determinant preponderant of executive compensation. The larger banks grant salary levels significantly higher with their CEO. Thus, our findings show that the impact of size on the compensation of the CEO is positive and statistically significant at 1%. This result is consistent with the agency theory which states that banks grant a higher remuneration their managers to alleviate their agency conflicts.

About the debt ratio, we find that the sign of the debt ratio coefficient is negative and statistically significant at 10%. Thus banks that affect a higher debt ratio should have a motivation to reduce the proportion of incentive compensation in the total compensation of executives.

Table 5: Attributes of the Board and CEO Compensation

COMPENSATION	**1**	**2**	**3**	**4**	**5**
Size-Board	0.0337861*** (0.0093612)				0.0145898* (0.0085586)
% Indépendent-Director	0.2344242 0.1725529)				0.5271565*** (0.1019191)
Comp-Committee		-0.0372848 (0.0607616)			0.0090163 (0.0614666)
Number-Meetings		0.0076555 (0.0062108)			-0.003755 (0.0065688)
Cumul			0.212911*** (0.0707625)		0.0304666 (0.0701859)
Return-on-Asset				0.4919167 (0.6019072)	-0.5821333 (0.6747886)
Return-on-Equity				0.2571877 (0.2307774)	0.4323023* (0.2337735)
Log Size	0.0505584 (0.0559047)	0.057834*** (0.014967)	0.060196 (0.0496822)	0.0699599*** (0.0132053)	0.0761483*** (0.016588)
Debt/Equity	-0.0034823* (0.0019042)	0.0037142** (0.0018116)	-0.002029 (0.0018932)	0.0028727* (0.0016326)	0.001068 (0.0017806)
Constant	-0.4564584 (0.6194381)	-0.1368867 (0.1596676)	-0.0370831 (0.5440669)	-0.2596237* (0.1456562)	-0.7061727*** (0.2049868)
R^2	0.1289	0.1438	0.0838	0.1824	0.1858
Observation	157	161	172	180	153
F–statistics	17,9***	21,26***	23,34***	23,34***	20,27***
Hausman test					
X^2	7,79	5,99	8,45	4,76	9,16
Prob	0,0996	0,2003	0,0375	0,3124	0,4224

(*) (**) and (***) indicate significance respectively at 10%, 5% and 1%.

Source: carried out by the author

Table 6: Results of the search

	Expected sign	signs found
Size-Board	(+)	(+)
% Indépendent-Director	(+)	(+)
Comp-Committee	(+)	No Link
Number-Meetings	(+/-)	No Link
Cumul	(+)	(+)
Return-on-Asset	(+)	No Link
Return-on-Equity	(+)	(+)

5 Conclusion

The aim of this study was_to determine the impact of the attributes of the board of directors and the bank performance on the compensation of the CEO. We offered an estimate on a sample of thirty European banks over the period 2004 to 2009. This estimate was based on a model of panel data. We also related the internal banking governance (the attributes of the board and the CEO's compensation).

We also examined the effects of the Board of Directors' attributes (BD's size, presence of independent directors in the Board, functioning of the Board, authority of the manager) on the CEO's remuneration and the sensitivity of the latter to the Bank performance (return on assets and return on equity).

Our empirical findings show that the impact of the attributes of the Board on the compensation of the CEO of European banks has different results from the empirical literature. This allows us to confirm that the governance model at the banks mainly depend on the characteristics of banking systems in each country.

As for the remuneration of the CEO, the empirical results of our research show that the improvement of the CEO's compensation is not linked to the activity of the board, since the presence of the compensation committee and the frequency of meeting directors have a relationship not significant on the remuneration of the CEO.

The results also suggest that the size of the board of directors of banks in our sample is large, since the relationship between the size of the board of directors and the CEO's remuneration is positive and statistically significant. Similarly, our results show that the presence of the proportion of independent directors on the board improves the compensation of the CEO. In addition the improvement of the remuneration is also due to the power of the CEO, Board of Directors, as CEO sitting in the board of directors as chairman of the board. We can conclude that these results illustrate the complementarity between the attributes of the board and CEO compensation which seems to serve to the mastery of conflict of interest between manager and shareholder.

This study has some shortcomings. One limitation is the difficulty to collect information including the governance variables on the banking sector. Indeed, for example, variables to measure forms of incentive compensation related to its CEO as the granting of stock options or shares of the bank can not be used in our analysis because it is simply impossible to collect enough information. This lack of information may also explain the weak explanatory power of the theory of governance in resolving our problem. Indeed, during the statistical processing, it appears that the number of observations used in the analysis decreases with respect to financial analysis incorporating variables reflecting the difficulty in obtaining information.

However, this work can be considered as a starting point for further research. Specifically, our main research perspective is to study the impact of internal governance mechanisms of control of the manager (the CEO's compensation and attributes of the board) on bank performance.

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