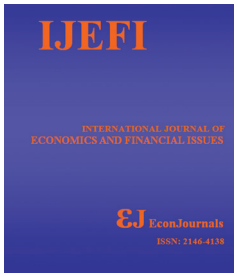

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Board of Directors, Ownership Structure, Regulation and Bank Performance: What Can Change After the Financial Crisis

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ABSTRACT

This study focuses on comparing the impact of governance on the performance of banks before and after the subprime crisis. The review of the empirical literature on this theme earlier helped to highlight that bank governance is characterized by the importance of external mechanisms (such as regulation) as well as internal (mainly the board of directors and ownership structure) and that the adoption of these mechanisms does not always affect the performance of banks. However, several failure of governance in banking may be behind the outbreak of crisis. Thus we were interested in comparing the contribution of governance mechanisms to performance before and after the subprime crisis. Empirical validation from a sample of Tunisian commercial banks quoted, observed over two different periods (1990–2006) and (2007–2010) shows that governance, in the period before the crisis, significantly influences both the operating and stock market performance and net banking income of these institutions and, this in different ways, through the regulatory solvency ratio, the size of the board of directors, its composition, its dual structure, and through the ownership structure. Similarly, the size, age and the number of bank branches show different a significant effect on the performance of banks. However, the crisis appears to weaken the effectiveness of governance in view of bank performance. Indeed, after the crisis, governance appears to have a negative effect on accounting performance (only through the liquidity ratio), a positive effect on stock market performance (only through the duality and the solvency ratio) and it is no effect on net banking income.

Keywords: Governance, Board of Directors, Ownership Structure, Subprime Crisis, Bank Performance, Regulation
JEL Classifications: G3, G32

1. INTRODUCTION

The last decades are marked by successive financial and banking crises (crises of external debt of Latin America in the 1980s, the Asian crises of the same type, the Scandinavian and Japanese banking crises of the 1990s, the Internet bubble and the stock market crisis of the 2000s). Mainly due to deflation of price bubbles, the subprime crisis (2007) considered the worst since the 1929 crisis, has been marked by unforeseen risks taken. Thus, several major banks had their bankruptcy, thereby disrupting the financial system of the most powerful countries of the world as the United States and European countries. From then, many researchers have been interested in the explanation of the causes and effects of this crisis (Chavigné and. Filoche, 2007; Abaoub et al., 2008; Cannata and Quagliariello, 2009, etc.). However, like any crisis, the subprime crisis is spreading at an unexpected rate of an economy to another through the financial and business exchanges between countries, Tunisia, rightly, does not escape the consequences of this crisis. Several authors have linked the attacks to failures in the system governance (Menkhoff and Suwanaporn, 2007; Currie, 2006) Mehram (2004) Icard (2002) and Cartapanis (2003) and, believe that banking crises resulting in Much of the bad governance of banks (Levine, 2004). Moreover, well-governed banks are more efficient in their jobs than poorly governed. Thus, in a context of crisis, it is important to test the contribution of governnance to the performance of banks to avoid having a governance system failed badly affecting bank performance. In fact, the specificities of banks (such as opacity, the strong asymmetry of information, strong regulation, etc.), make the study of governance in banks more complex compared to that in ordinary firms. Thus, governance mechanisms banks' deploy these features. This is justified by the state presence in this sector through the establishment of regulatory ratios. Regulations, is

indeed an external governance mechanism among many that distinguishes banks of ordinary companies.

However, regulation can have bad consequences. In fact, the presence of the state can generate additional information asymmetry and thwarting the effectiveness of the governance of banks (Macey and O'Hara, 2003). For this, we must confirm the importance of internal governance in banks. These mechanisms include the board of directors and ownership structure. These mechanisms have a crucial role in preserving the performance of banks.

Thus, given the inescapable relationship between the governance and bank performance and seen the shocking effects of the financial crisis on the latter, our problematic is: What is the effect of the financial crisis on the contribution of governance to the performance of Tunisian banks?

So, we focus our work on the two following points:

- First, the study of the effect of governance mechanisms on the performance level of the banks before the financial crisis in the Tunisian context
- Subsequently, the study of the effect of governance mechanisms on the performance level of the banks after the financial crisis in the Tunisian context.

Thus, we aim to compare these effects and subsequently we conclude the eventual impact of the financial crisis on the contribution of governance on the performance of Tunisian banks.

This article is structured as follows: In the second section we present a review of the theoretical and empirical literature regarding the characteristics of bank governance, and the impact of governance mechanisms on the performance of banks. In the third section we present our methodology. In the fourth section we show the results and the analysis of our estimates in Tunisian commercial banks before and after the financial crisis. The last section is reserved to the conclusion.

2. CHARACTERISTICS OF BANK GOVERNANCE AND ITS IMPACT ON PERFORMANCE

2.1. Regulation: A Mechanism of Governance in Banks

The banking business has many specifics. Thus, bank governance shows that banks are different from ordinary firms. In fact, the banking sector is characterized by: Asymmetric information, agency conflicts accentuated relative to other firms and excessive risk taking, which justifies the intervention of the state by the introduction of regulatory ratios in the banking channels (Adams and Mehran, 2003). In fact, from the financial market crisis in 1929 which is due to the deflation of debts, regulation of this sector becomes essential (Vittas, 1992; Hausmann and Gavin, 1996; Rojas and Weisbrod, 1997). Thus, regulation acts as a mechanism for solving agency problems. In addition, regulations discipline the behavior of the leader to act in the interests of shareholders, protect depositors and avoid risks. In this sense, Barth et al. (2004) provide three major malfunctions give an opportunity for the State to intervene to increase the efficiency of the banking market. This is the first with a case of asymmetric information and the existence of externalities at the macro and micro levels. However, we could detect the limits of this regulatory mechanism. Indeed, based on some studies, it may weaken market discipline and increase agency problems by introducing a third party is the government that may constrain the effectiveness of governance mechanisms (Macey and O'Hara, 2003). In total, we can conclude that the effects of external governance mechanisms on performance are controversial (Adams and Mehran, 2005). This is what justifies the importance of internal bank governance.

2.2. Importance of the Board of Directors and Ownership Structure in Banking Governance

Labelle and Raffournier (2000) suggest that the importance placed now to governance at the international level is that it is generally assumed that a relationship exists between the board and company performance. The board of directors may influence the performance of the company through its attributes are its composition, size, and structure. However, it is important to note that studies on the impact of internal governance mechanisms including board and ownership structure, the performance of banks are not abundant especially in emerging economies (Arun and Turner, 2004). The board is often regarded as a predominant mechanism of bank governance. In this context, some authors consider the board as responsible for the effectiveness of governance mechanisms and in particular internal control systems (Nam, 2004; Louizi, 2006). Indeed a major cause of the failure of several banks is related to characteristics of the latter. Factors such as the size of these boards, the percentage of outside directors in these and their duality are likely to affect the contribution of this Board to the performance of banks. From the literature review we found divergent results of different studies of the impact of board characteristics on bank performance. Indeed, some argue the positive effect of these characteristics on bank performance, others ensure through their studies the negative impact, while others deny the existence of a significant relationship between these characteristics and banking performance. Among these studies include: Adams and Mehran (2005), Capiro et al. (2007), Belkhir (2007; 2005) Agrawal and Knoeber, 1996. Thus, about the size of the Board, The impact of the size of the Board on the performance of banks presents divergent results. The contradiction of the results seems to depend on several factors related to the characteristics of banks (the board's role and the risk of bankruptcy) that vary between countries (Gilson and Roe, 1993; Roe, 1994). Thus, by studying the relationship between the size of the council and the performance of 35 banks and bank holding companies in the United States during the period 1986–1999, Adams and Mehran (2005) come to the conclusion that the large size of the Board does not reduce the performance of these banks (Tobin's Q). However, other authors argue that the large size of board may cause difficulties in coordinating efforts and monitoring and risk of pushing managers to pursue their individual interests (Lipton and Lorsch, 1992). Belkhir (2005), based on a sample of 260 commercial banks and savings banks, said meanwhile that the size of the board does not have a significant effect on the performance of banks. In 2007, this author reconfirms its finding (Belkhir, 2007).

Regarding the percentage of outside directors, Nam (2004) argues that outside directors are the most influential and they are the only ones who can ensure that banks apply the regulations and that leaders do not adopt opportunistic behavior detrimental to shareholder wealth. Godard and Schatt, (2000b), argue that outside directors have a key role in ensuring the board's effectiveness as a mechanism to control the behavior of leaders and rallying the interests of different stakeholders. As such, Byrd et al. (2001), examining U.S. banks in a crisis, state that banks that can survive are those who have more outside directors on their boards. In contrast, Adams and Mehran (2005) argue that the percentage of outside directors has no effect on the market performance of banks and their accounting performance. Similarly, Griffith et al. (2002) deny the existence of a relationship between performance and board composition. In addition, Prowse (1997) argues that outside directors are less effective in disciplining bank managers those regulatory mechanisms. As for duality, Simpson and Gleason (1999), working on a sample of 287 banks in 1989, showed that the presence of a leader also chairman of the board helps to reduce the risk of bank failures. Pi and Timme (1993), from a survey of large U.S. commercial banks during the years 1988–1990, find that the efficiency and return on assets of banks decreased in case of duality. Indeed, duality increases conflicts of principal/agent due to the strengthening of the process control and decision. Within the same framework of ideas, Gary and Gleason (1999) posit that duality significantly increases the power of the executive on the board of the bank. Finally for the ownership structure, we can see from previous studies that the latter is an important mechanism of governance that can influence the performance of banks. Indeed, the presence of majority shareholders, by their power and motivation seems to be an effective control of management. Work addressing the impact on bank performance are also limited and conflicting. Indeed, many studies have found a positive influence of the presence of shareholders on performance (Spong et al., 1996; and Caprio et al., 2004). Thus, Caprio et al. (2006) show from a sample of 244 banks from 44 countries, that the concentration of ownership has a positive effect on the performance of banks. However, other studies found a negative effect of the presence of the majority shareholder on Bank Performance (Capiro et al., 2007). Some others found no effect of the presence of shareholders on the performance of banks (Demestz and Villalonga, 2001; Belkhir, 2005 and 2007) Thus, according to Demsetz and Lehn (1985), most research using the share of stock held by major shareholders to measure their ability to control that informs managers more than the share held by the leader (which provides information on capacity rather leaders to ignore the interests of shareholders). According to La Porta et al. (1999) and La Porta et al. (2002), the majority shareholders are defined by shareholders holding 10% or more of the shares in the bank, allowing them to exercise the control function.

While, Laeven and Levine (2008) consider that the majority shareholders are those who own more than 5% of the shares. Similarly, these authors break down the banking sector according to their ownership structure into five categories namely: A family or an individual state, a financial institution, a non-financial institution and an organization (association). In general, the main shareholders of the bank belong to these five groups. Jensen (1990a) argues that the presence of controlling shareholders is an effective way to discipline management. Similarly, Shleifer and Vishney (1989) find that controlling shareholders have incentives to monitor managers and contribute to improved business performance. By cons, Demsetz and Lehn (1985) do not confirm this positive relationship between ownership structure and performance measured by return on equity. As for Holderness and Sheehan (1988) and Denis and Sarin (1999), they find no significant difference in performance between firms with a dispersed ownership structure and those with a concentrated structure (the majority of shareholders who have more than 5% capital). Belkhir (2007) found that ownership structure does not affect bank performance. Pinteris (2002) examine the relationship between ownership structure and performance of leading U.S. banks, they concluded that the relationship between these variables is not linear.

Levine (2004) argues that the concentration of ownership is a control mechanism that prevents managers to deviate from the protection of shareholder interests. Indeed, the majority shareholders are encouraged to acquire the necessary information and engage in control activities and surveillance officers. In addition, they can choose their representatives on the board and punish the leaders.

3. EMPIRICAL VALIDATION: THE IMPACT OF GOVERNANCE MECHANISMS ON THE PERFORMANCE OF TUNISIAN COMMERCIAL BANKS

3.1. Presentation of the Sample

For validating the link between governance and performance of banks before and after the crisis, we are based on a sample of ten commercial banks (or deposits) which are listed on the Tunisian stock exchange securities Tunis (Tunis stock exchange).

Data are collected from financial statements and market data published by the Financial Market Council (CMF) and the Professional Association of Banks of Tunisia (APBT), activity reports published by banks in the sample website: "www. BVMT. com. tn" and, failing that via direct contact and consultation services. The study period spans 21 years from 1990 until 2010. Our objective was to compare the regression results of our models on two different periods: The first period making the crisis (1990–2006) and the second following the crisis (2007–2010).

3.2. Models to Estimate

Governance variables (explanatory variables) that we analyze have emerged from the theoretical and empirical literature exploring the effectiveness of control mechanisms within banks to discipline managers and improving their performance (Adams and Mehran, 2002; Lang and So, 2002; Pinteris, 2002, Caprio et al., 2007; Belkhir, 2007, Lang and So, 2002, Adams and Mehran, 2002 and, Capiro et al., 2007). The variables chosen to governance in this study are well related to the board (size, percentage of outside directors, duality), the ownership structure and regulation (capital adequacy ratio, liquidity ratio). Moreover, we retain

three variables relating to the performance (dependent variable), namely: Accounting performance, stock performance and net banking income. Finally, we define three control variables (age, assets, number of branches) (Appendix Table 1) Our models are in the following form:

PERFORMANCE=f (BDSIZ, ADEXT, DUAL, MAJEXT, LIQUID, SOLVB, LASSET, AGE, NBRAG)

Our purpose is to examine the nature of the relationship between governance mechanisms namely regulations, the board of directors, ownership structure and performance of Tunisian commercial banks listed before and after the crisis. To achieve this goal, we adopted three specifications to test the impact of governance mechanisms on the performance of banks (the first specification is based on an accounting measure which is the return on assets, the second is based on a measure Financial which is the ratio of Tobin's Q, the third focuses on the net banking income which is an important measure of specific performance to banks). Thus, we developed three models constituting, respectively, a regression of governance variables namely: The size of the board (BDSIZ), the composition of the board including the corresponding proportion of outside directors (ADEXT), the duality of bank management and chair of its board (DUAL), ownership structure (percentage of shareholders holding more than 5% of the shares; MAJEXT), the solvency ratio (SOLVB) and liquidity ratio (LIQUID) on accounting performance (AP), on the market performance (SMV) and, on net banking income (NBI).

In addition to variables related to the board and ownership structure, we include control variables as is the size of the bank, the age of the bank, and the number of agencies.

Thus, all three models are as follows:

- Impact of the board, ownership structure and regulation on performance of Tunisian commercial banks accounting

The first model takes the performance measure return on assets (AP) as the dependent variable. The explanatory variables are the variables of the Board, the variable structure of ownership, regulatory variables and control variables.

$$AP_{it}=\alpha_{it}+\beta_1 BDSIZ+\beta_2 ADEXT_{+}\beta_3 DUAL+\beta_4 MAJEXT+\beta_5 SOLVAB+\beta_6 LIQUID+\beta_7 LASSET+\beta_8 AGE+\beta_9 NBRAGC+\varepsilon_{it} \quad (1)$$

- Impact of the board, ownership structure and regulation on the market performance of Tunisian commercial banks

In the second model, we adopt the measure of performance dividend yield (RB) as the dependent variable. We study the stock market performance based on the variables of the Board, the variable structure of ownership, regulatory variables and control variables.

$$SMV_{it}=\alpha_{it}+\beta_1 BDSIZ+\beta_2 ADEXT_{+}\beta_3 DUAL+\beta_4 MAJEXT+\beta_5 SOLVAB+\beta_6 LIQUID+\beta_7 LASSET+\beta_8 AGE+\beta_9 NBRAGC+\varepsilon_{it} \quad (2)$$

Impact of the board, ownership structure and regulation on net banking income of Tunisian commercial banks. In the third model, we adopt the measure of net banking income (NBI) as the dependent variable. Explains the net banking income by the variables of the Board and the variable of ownership structure, the regulatory variables and control variables.

$$NBI_{it}=\alpha_{it}+\beta_1 BDSIZ+\beta_2 ADEXT_{+}\beta_3 DUAL+\beta_4+MAJEXT+\beta_5 SOLVAB+\beta_6 LIQUID+\beta_7 LASSET+\beta_8 AGE+\beta_9 NBRAGC+\varepsilon_{it} \quad (3)$$

3.3. Measurement of Variables: (Appendix, Table 1)

3.3.1. Measurement of performance variables

Referring to several studies, including those of Adams and Mehran, 2002, Pinteris, 2002, Kwan, 2003 and Capiro et al., 2008, we use in our study, performance measures following bank: A measure of accounting performance (the variable AP) represented by the return on assets calculated by the following formula: (net income/total assets), a financial measure of performance (variable SMV) represented by Tobin's Q calculated by the following formula: (market value of equity + book value of debt)/book value of total assets. Moreover, we retain in our study, a third indicator of bank profitability, the net banking income (NBI variable) which is simply the difference between revenues and expenses from banking operations, even gross margin by all banking (bank operations and operations incidental to operations of the bank).

3.3.2. Measurement of governance variables and hypotheses to be tested:

In our study, we consider:

The size of the board as the total number of board of directors (BDSIZ).

The size of the board (BDSIZ) has a positive effect on banking performance of Tunisian commercial banks before the financial crisis H (I-1)

The size of the board (BDSIZ) has a negative effect on the banking performance of Tunisian commercial banks after the financial crisis H (II-1)

The composition of the board as the percentage of outside directors on the board (ADMEXT) measured by the ratio between the number of outside directors on the board and the total number of directors on the board.

The percentage of outside directors in the board (ADMEXT) has a positive effect on banking performance of Tunisian commercial banks before the financial crisis H (I-2)

The percentage of outside directors in the board (ADMEXT) has a negative effect on banking performance of Tunisian commercial banks after the financial crisis H (II-2)

Duality: We talk about duality (dual) when there are overlapping functions of CEO and Chairman of the Board, and the unitary structure when there is dissociation between the two functions. In our study, to examine the effect of board structure on the performance of Tunisian commercial banks, we consider the binary

variable (DUAL) which is equal to 1 if the CEO also serves the function of chairman and 0 otherwise.

Duality (DUAL) has a positive effect on banking performance of Tunisian commercial banks before the financial crisis H (I-3)

Duality (DUAL) has a negative effect on banking performance of Tunisian commercial banks after the financial crisis H (II-3)

3.3.3. Measurement of the ownership structure and hypotheses to be tested

In our study we represent the structure of ownership by the percentage of shares held by external majority shareholders and that is >5% (MAJEXT).

In our study addressing the Tunisian context, we propose to test the following hypotheses:

The majority shareholding external (MAJEXT) has a positive effect on banking performance of Tunisian commercial banks before the financial crisis H (I-4)

The majority shareholding external (MAJEXT) has a negative effect on banking performance of Tunisian commercial banks after the financial crisis H (II-4)

According to the Tunisian regulations, the solvency ratio, which allows us to describe the company's ability to meet its financial obligations in the long term and resist economic adversity, is defined as the ratio between the bottom and clean total assets weighted risks requires the bank to have a minimum amount of capital commensurate with their credit risk should be ≥8% which means that the bottom cover should own more than or equal to 8% of weighted assets and the liquidity ratio must be >100%. This ratio determines the ability of firms to meet its short term obligations that is to say the company's ability to settle its current liabilities. It is defined as the ratio between liquid assets and liquid liabilities, all banks must comply with these rules because it allows them greater security in funding its current liabilities. Previous studies show that these two variables affect the performance of banks listed on the Tunisian Stock Exchange. Thus, in our study, we propose to test the following hypotheses:

The relationship between the solvency ratio (SOLVAB) and accounting performance of Tunisian commercial banks is positive before the crisis H (I-5)

The relationship between the solvency ratio (SOLVAB) and banking performance of Tunisian commercial banks is negative after the financial crisis. H (II-5)

The relationship between the ratio of liquidity (LIQUID) and banking performance of Tunisian commercial banks is positive before the financial crisis. H (I-6)

The relationship between the ratio of liquidity (LIQUID) and banking performance of Tunisian commercial banks is negative after the crisis. H (II-6)

3.3.4. Measurement of control variables

We included in the models constructed, three control variables namely the size of the bank measured by the natural logarithm of book value of total assets at the end of the accounting period (LASSET), the age of bank (AGE), number of branches (NBRAGC). Indeed, several authors show that the increasing size of the bank is associated with improved performance (Boyd and Runkle, 1993), Adams and Mehran, 2002). The age of the bank also reflects maturity and can influence its performance. Similarly, by consulting several financial managers in the banks studied, the latter provide a crucial variable in the number of agencies in explaining the degree of success of the bank's activities.

3.4. Results of the Regression Models

3.4.1. Descriptive statistics (before and after the crisis)

Based on Tables 2 and 3 (Appendix), we note the following:

Before the crisis, commercial banks studied Tunisian recorded an average rate of return on assets of 0.84. After the crisis, this average rate is 1%. Despite an increase, the rate is still below European standards, which is 2% (IMF, 1998). Moreover, this variable has a low variability before (0.075) and after the crisis (0.025) which shows that the observations are consistent, it deviates slightly from the average.

Before the crisis, the market value of banks, measured by Tobin's Q is equal on average to 0.92. After the crisis, it is equal to 1.19. This indicates that the stock market performance of banks studied is relatively high before and after the crisis. In other words, these banks are well received in the stock market for all investors. Similarly, we notice a small dispersion of variables before and after the crisis, therefore, homogeneous observations.

On NBI, the average pre-crisis is 0.042. Against by the average value of NBI after the crisis recorded an increase (11.878). This leads us to question the contribution of governance to such an increase. The low standard deviation is seen before and after the crisis means that our sample is always homogeneous.

Concerning the board of directors; we find that the ten Tunisian commercial banks quoted recorded between 1990 and 2006 an average size of the board of 11 members. This average value remains the same after the crisis (2007–2010). This result converges with that of Louizi (2006) who found an average size of 11 directors for Tunisian listed commercial banks during the period 1990–2004. Thus, several studies have found average sizes close in other countries such as Vafeas 12 (1999) and 11 administrators for Shivdasani and Yermack (1999). Adams and Mehran (2002) found an average of 18 directors. While for firms belonging to other sectors (food processing, tourism, trade... etc.), the average size in 2002 is 7 members according to the study of Zghal (2005) on 47 non-financial firms in Tunisia. Moreover, several authors conclude that banks have larger boards than industrial companies such as Adams and Mehran (2003). They have observed, in 1986–1999, 35 bank holding companies and 35 industrial companies among the 200 larger United States and found that the boards in industrial firms have six members in less than holdings banking.

The percentage of outside directors is equal to 90.34% on average. This relatively high rate shows that Tunisian banks listed are dominated by outside directors because of the important role of the latter in the governance of banks. Because they can control managerial policies and ensure that these standards and apply the standard rules specific to the banking system and restrict their abusive power so they do not engage in activities that are against interests of shareholders and subsequently affecting the performance of banks. Our result is similar to that found by Adams and Mehran (2002). Both authors are a percentage of outside directors by 69%. They show that the percentage of outside directors in banks is higher than in non-financial institutions. Vafeas (1999) found a percentage of 55.6% in British banks. However, we note that after the crisis, the average percentage of outside directors tends to decrease to 38.54%. This can be explained by the fact that banks are starting to see that outside directors are unable to integrate into the bank and come to solve their specific problems. Our results thus approaches that of Shivdasani and Yermack (1999) who found an average percentage of 46%.

Subsequently, we notice that before the crisis, the duality of management has been adopted by banks studied in 75.29% cases. It is found that 7 of the 10 banks should combine the functions of chairman and CEO. But after the crisis, we find that only 42.50% of banks surveyed adopt this dual function.

Concerning the concentration of ownership, banks studied are characterized by relatively concentrated ownership structure since external shareholders hold an average 49.35% of the shares. Similarly, after the financial crisis the majority shareholders hold 48.75%. Therefore, the effect of the financial crisis on this variable is almost nil.

As regards the application of prudential rules in the Tunisian banking sector, we see that before the crisis, most banks comply with new regulatory ratios established by public authorities. Indeed, the solvency ratio, which must be ≥8%, according to the standards, is on average equal to 13.17% with a minimum value equal to 1.5% and a maximum value of 25.87%. However, after the crisis, we note that the regulatory solvency ratio is on average equal to 11.37% with a minimum value equal to 0.26% and a maximum value equal to 23.83%.

In addition, we note that before the crisis, the liquidity ratio of banks is equal to 112.27% on average. This ratio varies between 198% and 47%. It can be seen as well as most banks meet the minimum liquidity ratio of 100% required by regulators. But after the crisis, this ratio is on average equal à166.29%, with a minimum of 79.7% and a maximum value of 192.8%, this shows that most banks do not meet the liquidity ratio imposed by the public authorities, which means that Tunisian banks are in difficult conditions that affect their liquidity. These banks are not immune to the liquidity crisis.

About the size of banks, it is on average equal to 14 320 120 thousand dinars, which means that the Tunisian commercial banks are small relative to foreign commercial banks (IMF, 1998). For example, in France, the average total assets of 15 larger commercial banks calculated from 1997 to 2002 amounted to 199,213,780 Euros Miller. Regarding age, we notice that the average age of the banks in our sample is 30 years with a maximum age of 48ans and a minimum age of 3 years, this means that the Tunisian commercial banks have some degree of maturity and have amassed a wealth of experience approvable. Finally, we note that the average number of branches is 77 with a minimum DE19 up to 147 and the network of banks in our sample is quite low compared to foreign banks and European banks in particular.

3.4.2. Analysis of the correlation matrix

Table 4 (Appendix) show that the correlation between the variable "LASSET" and the variable "NBRAG" is high (0.78) then there is a problem of multicollinearity between these two variables. Thus, we must eliminate one of these variables in our analysis. (We choose to eliminate the variable number of branches) For other variables, the correlations are low (below 0.6) so this problem of multicollinearity does not exist. After the crisis: From Table. 5 (Appendix) shows that the correlations are low (below 0.6) so the problem of multicollinearity does not exist.

3.4.3. Results and analysis

3.4.3.1. Regression results before the crisis

The regression of governance variables on the accounting performance of Tunisian commercial banks before the crisis, has allowed us to obtain the following results (Table I-1):

Thus, referring to the results shown in the table below, we can see that the regression model has an explanatory power of 17.48%. The results of this table we also confirm the significant and positive effect on the size of the Board on the performance bank accountant at the 10% and this during the period before the crisis. This contradicts the finding of Gary and Gleason (1999) and Belkhir (2007) who note that board size has no significant effect on the probability of bank failures. Similarly, our results diverge from those of Lipton and Lorsch (1992); Montandrau (2006) who find a negative relationship between board size and performance. Furthermore, we find that duality (chairman of the board-management of the bank) has a significant and positive at the 1% on accounting performance of banks during the period preceding the crisis. Our result is consistent with that found by Godard and Schatt (2000a) and Sridharan and Marsinko (1997) who argue that the combination of functions results in better business performance because it provides a good vision of the leader of its strategies and better leadership in contrast to the Chairman who is independent of the managers (Boyd (1995), Baliga et al. (1996), and Gary and Gleason (1999)). Thus, according Charreaux (1996), the practice of duality is not necessarily harmful to shareholders because it allows an increase in performance. In fact, the combination of these two functions allows a better understanding of the activities and environment of the bank, in addition to the skill and commitment of leaders to improve the performance of banks. Indeed, they are better motivated to develop a good reputation in the labor market for executives of banks.

As for variables of regulation, it appears that the solvency ratio has a significant and positive at the 5% performance bank accountant before the crisis.

This result is consistent with that of Angkinand (2007) who showed from a study on a panel of 35 countries, an adequate bank supervision can weaken the banking crises. Menkhoff and Suwanaporn (2007), state that a financial liberalization pursued in an institutional environment undeveloped promotes the spread of banking crises, and inefficient banking governance mechanisms can be a source that can exacerbate banking crises (Abaoub et al., 2008). As such, Minsky (1996) argues that low institutional environment is a favorable climate for the development of a crisis.

Our result is divergent from that of the work of Booth et al. (2002) who, in their study of one hundred firms in several sectors including the regulated banking sector, show that regulation as a governance mechanism allows external force decisions made by the leader. Regulation reduces the impact of managerial decisions on shareholder wealth, leading to a substitution of regulation to internal control mechanisms become less effective in minimizing agency conflicts. Indeed, the presence of regulatory authorities may intervene in the discipline of the manager can limit the discretionary latitude of it. However, the regression results allow us to see that the percentage of outside directors on the board of directors, has an insignificant effect on the accounting performance of banks during this period before the crisis.

These results are consistent with the results of the work of MacAvoy et al. (1983), and Baysiger and Bulter (1985), Hermalin and Weisbach (1991), Mehran (1995), Klein (1998), Bhagat and Black (2002) and Adams and Mehran (2003) show that all non-significant relationship between accounting measures of performance and the percentage of outside directors. These results are explained by the fact that outside directors are incapable of understanding the complexity of bank activities, resolve agency conflicts between all agents and fulfill their primary role ie control officers (Gary and Gleason, 1999). As such, Adams and Mehran (2002; 2005) find that board composition does not significantly affect the profitability of banks' assets in their sample and that outside directors may have interests with those of managers which results in the accentuation of conflicts of interest between the board and management. In fact, this result can be explained by the fact that the role of control and supervision of the leaders of Tunisian banks is entrusted to regulators who enact several prudential rules to be observed by all banks and can override the presence of outside directors on the board of directors. The regression results also allow us to see that the share of shares held by outside shareholders has an insignificant effect on the accounting performance of banks during this period before the crisis.

These results differ from those found by Demsetz and Lehn (1985) which confirm a negative relationship between ownership structure and performance measured by return on equity. Holderness (2003) asserts that the concentration of ownership may harm the minority shareholders who may be subject to expropriation of their wealth as a result of strategic alliances between shareholders and managers. This has the effect of accentuating the divergence of interests between them. Similarly, Faccio and Lang (2000) find that expropriation is likely to occur in societies or large shareholders are present because it accentuates the agency conflict and affects the performance of the company. However, the regression results allow us to see that the liquidity ratio has an insignificant effect on the accounting performance of banks during this period before the crisis. Similarly, this table allows us to state that age has a significant and positive at the 10% performance bank accountant in the period before the crisis. Thus, the maturity of the bank and experience seem to help improve its accounting performance. Furthermore, we find that total assets has a significant but negative at the 10% performance of banks during the accounting period before the crisis.

From the Table I-2 we find that the regression model has an explanatory power of nearly 35%. Moreover, we note that the size of the board, has no significant effect on the market performance of banks during this period. This result agrees with those of Belkhir (2007) who notes that the size of the board does not have a significant effect on the probability of bank failures. But this result is opposite to the findings of several studies such as Yermack (1996) and Eisenberg et al. (1998) which suggest that increasing the number of directors has a negative effect on bank performance because a large size creates problems of coordination between members on the allocation and exercise of functions. Our results contradict those of the same Louizi (2006) on Tunisian banks during the period 1990-2004. This table allows us to see that the same percentage of outside directors on the board of directors has a significant but negative on the market performance of banks at the 5% and this period before the crisis. This result is consistent with the work of Yermack (1996) and Agrawal and Knoeber (1996) who find that firms that have a large fraction of outside directors have a lower market value. However, this result is opposed to those of Weisbach, 1988, Boeker and Goodstein, 1993; Charreaux and Pitol-Belin (1997) which indicate a strong association between the change of leader the least efficient and independence the board of the bank which is an increasing function of the presence of outside directors. However, we note from this table that duality has no significant effect on the market performance of banks during this period. This result corroborates those of Griffith et al. (2002) and Belkhir (2004; 2007) who find no significant relationship between the plurality of functions and performance of banks and this by using different measures of profitability. However, we note from this table that the proportion of shares held by outside shareholders has no significant effect on the market performance of banks during this period.

This result is not consistent with that of Kapopoulos and Lazaretou. (2007), using two performance measures namely, Tobin's Q and the rate of return, trying to assess the impact of ownership structure on company performance and using data for 175 Greek companies listed, suggest that more concentrated ownership structure is positively related to firm value. They also find that the profitability of the firm requires a less diffused ownership. Similarly, the work of Lemmon and Lins (2003) suggest that ownership concentration is positively related to firm performance in Thailand and Asia. However, we note from this table that the two regulatory variables (liquidity ratio and solvency ratio have no significant effect on the market performance of banks during this period. These results do not meet the expected signs by regulatory authorities. Indeed, regulatory ratios established by the government's main objective limit risk-taking (following the granting of credit) and

bank supervision to ensure the robustness and performance of the banking sector. Indeed, regulatory requirements are considered positive effect and resulting in an increase in market capitalization of banks. The result of our test does not conform to that of Barth et al. (2001) who found that bank nationalization was negatively correlated with banking sector development and positively associated with measures of bank inefficiency.

However, we note from this table that the size of the bank (total assets), has no significant effect on the market performance of banks during this period. In addition, we also find that age has a significant and positive effect on the market performance of banks at the 1%, and this throughout the period preceding the crisis.

The regression of governance variables on the NBI of Tunisian commercial banks before the crisis, has allowed us to obtain the following results Appendices (Tables I-3):

The table above shows a goodness of fit of near 24% of our model. Moreover, this table allows us to see the significant and positive effect on the size of the board on the Net banking income during the period before a crisis and this at the 5%.

These results corroborate those of Adams and Mehran (2003) which show that banks with larger boards have higher performance than banks with small board. Similarly, for Gary and Gleason (1999), a board of directors of small size can be easily controlled and influenced by the leaders. By cons, a council has a large variety of experiences belonging to different board members may well help managers to pursue their own interests. However, our results diverge from those of Montandrau (2006) which states that a high number of directors to the board has the effect of the increasing expertise and increased conflicts strengthening opportunities for disagreement and lack of coordination in decisions management. We conclude as well, from this table that the percentage of outside directors on the board of directors has a significant and positive effect on GNP during this period and this at 10%. This result is inconsistent with that of Adams and Mehran (2003; 2005) who note that the percentage of outside directors has no effect on the performance of banks, because they are unable to comprehend the complexity and specificities of the bank and resolve conflicts of interest. Also, from this table, we can save the insignificant effect of duality on NBI during this period.

This contradicts that of Simpson and Gleason (1999) working on a sample of 287 banks in 1989, show that the presence of a leader also chairman of the board helps to reduce the risk of bank failure. Also, from this table, we can save the insignificant effect on the part of shares held by outsider shareholders on the NBI during this period.

Our results thus differ from those of Holderness and Sheehan (1998), Barelay and Holderness (1989), Beiner et al. (2004) and Thomsen (2004) who find a negative relationship between ownership structure and performance. Indeed, these authors consider that at a certain level of participation, majority shareholders can ally with entrenched leaders and which would lead to a loss of business value. They do not take and the role expected of their massive presence ie control officers and they use their voting power to expropriate or consume significant share of the wealth of the company or other benefits that will not be shared with other minority shareholders. Regarding regulation variables, there is the significant and positive impact of the solvency ratio to PNB before the crisis at the 5%.

However, from this table, there was insignificant effect of the liquidity ratio to PNB during this period. On the other hand, age seems to have a significant and positive effect on PNB at the 1% during this period. However, the total active but seems to significantly affect adversely the PNB at the 1% before the crisis began.

3.4.3.2. Regression results after the crisis

From this Appendix Table II-1 we see that the regression model is explained near 59%. Similarly, from the results presented in this table, we see that only the liquidity ratio has a significant but negative effect on the accounting performance of Tunisian commercial banks during the period after the crisis and this at the 10%. This can be explained by the need for revision or relaxation of regulations for its continuous support to the banking accounting performance after the crisis. As such, we may recall that some authors as Alfaro and Hammel (2007), Kim and Kenny (2006), Hao (2006) and Menzie and Hiro (2006) suggested that countries developing countries must liberalize the financial system to ensure proper operation. Our result converges with those of Icard (2002), and Cartapanis (2003) who stated that prudential regulation does not improve the security of the financial system. However, our result differs from that of Booth et al. (2002) who, in their study of one hundred firms of various regulated sectors including banking, argue that the regulation can constrain the decisions taken by the leader and this has limited the discretionary latitude of it. On the other governance variables and the same control variables, their regression on the period after the crisis shows no significant effect on the accounting performance of banks. These results corroborate some work such than Belkhir (2007), Adams and Mehran (2003; 2005). This suggests we need a challenge and an adaptation of governance mechanisms to maintain their contribution to the accounting performance of banks.

The regression of governance variables on the market performance of Tunisian commercial banks after the crisis, has allowed us to obtain the following results Appendix (Table II-2).

From this table, we notice that the regression model has an explanatory power of more than 45%. Moreover, the regression results allow us to see the significant and positive impact of duality on the bank stock returns at the 10%. This result converges with that of Godard and Schatt (2000a) who consider that combine the functions of chairman of the board and the CEO promotes knowledge of the activities and environment of the firm. What is likely to lead to better performance due to the commitment of leaders who are more motivated to develop a good reputation in the labor market. Similarly, we see from this table the significant and positive effect of the variable regulation (solvency ratio) on the stock performance of these banks at the 1%. Our results converge with those of Menkhoff and Suwanaporn (2007),

Currie (2006), Booth et al. (2002). Similarly, Mehram (2004) have shown that good governance bank (apprehended through prudential regulation) may be considered as a factor of sustainable economic growth. For his part, Caprio et al. (2004) show that good governance (from the perspective of prudential regulation) is the guarantor of the efficient allocation of savings.

From this same regression table, we can also note the lack of impact of each of the following variables on the market performance of these banks after the crisis: The size of the board, the percentage of outside directors in the board, from shares held by outside shareholders, liquidity ratio, assets and age of the bank.

These results confirm those of Belkhir (2004; 2007), Adams and Mehran (2003; 2005), and Gary and Gleason (1999), Spong et al. (2001), Griffith et al. (2002) about the lack of significant effect of governance mechanisms on bank performance.

The regression of governance variables on the NBI of Tunisian commercial banks after the crisis, has allowed us to obtain the following results (Table II-3): The regression results allow us to see that this model provides a good fit of near 42%. However, we note that the regression results reveal the absence of a significant impact of all governance variables (board size, percentage of outside directors, duality, the ownership structure, capital adequacy ratio, ratio liquidity) on net banking income of Tunisian banks after the crisis. Our results thus converge with those of some studies, including those of Belkhir (2004; 2007), Griffith et al. (2002) and Gary and Gleason (1999), who note that board size and duality do not significantly affect the probability of bank failures. For their part, Adams and Mehran (2003; 2005) reported no relationship between the percentage of outside directors and performance of banks. Similarly, we note that the regression results reveal the absence of a significant impact of all control variables (age, size, number of branches) on net banking income of Tunisian banks after the crisis.

4. DISCUSSION OF RESULTS

By comparing the effect of internal and external governance mechanisms on accounting performance before and after the crisis, we see that after the crisis, governance has a negative effect on bank performance and this was through the liquidity ratio. Other governance mechanisms that had a significant and positive effect no longer contribute to on accounting performance the after crisis. It thus seems that the crisis negatively affects the relationship between governance and performance in banks. This shows the failure of the system of governance after the crisis through its various channels has no significant effect on accounting performance and sometimes it affects it negatively through the liquidity ratio. This suggests that regulatory liberalization is necessary to improve the contribution of this ratio to the banks accounting performance. These results are consistent with some authors as Menkhoff and Suwanaporn (2007), Currie (2006); Mehram (2004), Alfaro and Hammel (2007), Kim and Kenny (2006) Hao (2006); Menzie and Hiro (2006), Bekaert et al.(2005) who suggest that developing countries should liberalize the financial system to ensure proper operation, and that prudential regulation does not improve the security of the financial system (of Icard, 2002), and Cartapanis, 2003). As for the effect of the crisis on the contribution of governance mechanisms in the stock market performance, we find that after the crisis, duality and the solvency ratio contribute positively to the stock market performance when they were without effect on this type of performance. Thus, we see the positive impact of the crisis on the contribution of governance mechanisms in the stock market performance. Thus, the governance system contributes to the market performance of banks and can be considered as an important means to overcome the crisis. These results are consistent with those of Levine (2004) who believes that well-governed banks are more efficient than poorly governed. Finally, we note that the governance system does appear to have any significant effect on NBI after the crisis. Whereas before the crisis, governance positively and significantly influenced the NBI and this through the board's size, the percentage of outside directors on the board, and the solvability ratio. These results confirm those of Belkhir (2004; 2007), Adams and Mehran (2003; 2005), and Gary and Gleason (1999), Spong et al. (2001), Griffith et al. (2002) about the lack of significant effect of governance mechanisms on bank performance.

This leaves us to rethink the effectiveness of the governance system and the need for a questioning of the characteristics of the different mechanisms that contribute to the performance bank and its role as guarantor of crises.

5. CONCLUSION

This article is an attempt to study the variation of the effect of governance on bank performance following the outbreak of the subprime financial crisis from 2007 and a contribution to debates on specific models of governance of banks institutions and their contribution to bank performance. Upon completion of this work, and drawing on various works forming part of this research, we sought to test the validity of our proposed hypotheses regarding the effect of each governance mechanism (board of directors, the ownership structure, and regulation) on the performance of banks measured respectively by the book yield, stock market value and net banking income, and this in the context of Tunisian commercial banks' listed on two separate periods: The first from the year 1990 until 2006 while the second runs from 2007 until 2010. Our empirical study allowed us to advance, before the crisis, the banks' studied accounting performance positively depends on the size of the board of directors, combine the positions of chairman and CEO, the ratio and solvency, age of the bank. However, it depends negatively on the size of the bank (total assets). Moreover, their market performance depends negatively on the percentage of outside directors and, positively the age of the bank. As for the net banking income, it appears from our study that depends positively on both the board size, percentage of outside directors, the solvency ratio and age of the bank. However, it is negatively influenced by the size of the bank (total assets).

Overall, it appears that the performance (through its various measures) depends differently on different governance mechanisms studied: Performance=f (solvency ratio, board size, outside

directors, duality, ownership structure, size of the bank, the bank's age, number of branches). As for the post-crisis period, we were able to retain the accounting performance depends negatively on the liquidity ratio. As for the stock market performance, it is positively dependent on the dual functions of chairman of the board and senior management in the bank and the solvency ratio, but negatively in the number of agencies. Net banking income seems independent from governance mechanisms both internal and external from this comparison between the effect of governance on the performance of banks in both periods, we were able to say the crisis has contributed to change the governance contribution on bank performance that this contribution seems less important during the period after the crisis. Overall, our empirical findings show that the impact of controls on the performance of Tunisian commercial banks listed this divergent results compared to the theoretical and empirical literature. This allows us to support the idea that governance models implemented in banks mainly depend on the characteristics of banking systems in each country (Gilson and Roe, 1993; Roe, 1994) and that the optimal governance differs across industries (Gertner and Kaplan (1996) (20). However, our work has some limitations in effect, governance mechanisms are beyond those chosen for our study (executive compensation, institutional administrators, etc.). Moreover, the determinants of bank performance are far from limited in the governance system. Rightly, partnership strategies and bank mergers, are all factors that can influence the performance of the bank and it is for future research to take a keen look. In total, if the theme of governance of banks is a real hot topic, it is because the performance of banks inevitably depends on the system of governance.

REFERENCES

Abaoub, E, Rachdi, H., Elgaied, M. (2008), L'apport de la Gouvernance à L'explication des Crises Bancaires: Une Analyse en Données de Panel, Working Paper.

Adams, R., Mebran H. (2005), Corporate Performance, Board Structure and its Determinants in the Banking Industry, Working Paper No. 1-42.

Adams, R., Mehran, H. (2002), Is corporate governance different for bank holding companies? Economic Policy Review, Federal Reserve Bank of New York, 9(1), 123-142.

Adams, R., Mehran, H. (2003), Board Structure, Banking firm Performance and the Bank Holding Company organizational form. Federal Reserve Bank of Chicago Proceedings, Issue May. p408-422.

Agrawal, A., Knoeber, C.R. (1996), Firm performance and mechanisms to control agency problems beteen managers and shareholders. Journal of Financial and Quantitive Analysis, 31(3), 377-397.

Alfaro, L., Hammel, E. (2007), Capital flows and capital goods. Journal of International Economics, 64(1), 1-23.

Angkinand, A.P. (2007), Banking, regulation and the output cost of banking crises. Journal of International Markets, Institutions and Money, 19, 1-17.

Arun, T.G., Turner, J.D. (2004), Corporate governance of banks in devoloping economics concepts and issues. Corporate Governance, 12(3), 90-133.

Barclay, M., Holderness, C. (1989), Private benefits from control of public corporations. Journal of Financial Economics, 25, 371-395.

Baliga, B.R., Moyer, C., Rao, R.S. (1996), CEO duatity and firm performance: What's the fuss. Strategic Management Journal, 17(1), 41-53.

Barth, J., Capiro, G.J., Levine, R. (2004), Bank regulation and supervision: What works best? Journal of Financial Intermediation, 13, 205-248.

Barth, J.R., Capiro, G.J., Levine, R. (2001), Banking System Around the Globe: Do Regulation and Ownership Affect Performance and Stability? National Bureau of Economic Research. Available from: http://www.nber.org/chapters/c10757.

Baysiger, B.D., Bulter, H.N. (1985), Corporate governance and the board of directors. Performance effects of changes in board composition. Journal of Law, Economics, and Organisation, 1, 101-123.

Beiner, S., Drobetz, W., Shmid, F., Zimmermann, H. (2004), Is board size an independent corporate governance mechanism? Kyklos, 57(3), 327-356.

Belkhir M. (2004), Board Structure, Ownership Structure, and Firm Performance: Evidence from Banking, Working Paper of Univer Sity of Orléans.

Belkhir, M. (2005), Board Structure, Ownership Structure, and Firm Performance: Evidence from Banking", Working Paper of Univer Sity of Orléans.

Belkhir, M. (2007), 'La Gouvernance Bancaire: Analyses Théoriques et Etudes Empiriques', Thèse de Doctorat en Sciences de Gestion. Paris: Université de L'orleans.

Bhagat, S., Black, B.S. (2002), The non-correlation between board independence and long-term firm performance. Journal of Corporation Law, 27, 231-273.

Boeker, W., Goodstein, J. (1993), Performance and successor choice: The moderationg effects of governance and ownership. Academy of Management Journal, 36(1), 172-186.

Booth, J.R., Cornett, M.M., Tehranaian, H. (2002), Boards of directors, ownership, and regulation. Journal of Banking and Finance, 26, 1973-1996.

Boyd, J.H., Runkle, D.E. (1993), Size and performance of banking firms. Journal of Monetary Economics, 31(1), 47-67.

Byrd, J., Fraser, D., Scott, S.L.D., Williams, T.G.E. (2001), Financial Crisis, Natural Selection, and Board Structure: Evidence from the Thrift Crisis. SSRN Electronic Journal. DOI: 10.2139/ssrn.276713.

Cannata, F., Quagliariello, M. (2009), The role of Basel II in the Subprime Financial Crisis: Gguilty or Not Guilty? CAREFIN Research Paper No. 3/09. p24.

Caprio, G., Laeven, L., Levine, R. (2004), Governance and Bank Valuation. World Bank, Policy Research, WP No. 3202, Fevrier, pp1-47.

Caprio, G., Laeven, L., Levine, R. (2007), Governance and bank valuation. Journal of Financial Intermediation, 16(4), 584-617.

Cartapanis, A. (2003), Vers une prévension macro-prudentielle des crises financières internationales. Revue D'économie Financière 70, 89-100.

Charreaux, G (1996), Vers une Théorie du Gouvernement des Entreprises. Paris: Economica. p59.

Charreaux, G., Pitol-Belin, J.P. (1997), La Théorie Contractuelle des Organisations: Une Application au Conseil D'administration, Le Gouvernement des Entreprises: Théories et Faits. 2ème Partie, Ch. 6, Ed Economica. p165-191.

Chavigné, J.J., Gérard, F. (2007), La Crise Financière et ses Enseignements. Working Paper.

Currie, C. (2006), A new theory of financial regulation: Predicting, measuring and preventing financial crisis. Journal of Socio Economics, 35(1), 41-71.

Demestz, H., Villalonga, B. (2001), Ownership structure and corporate performance. Journal of Corporate Finance, 7, 209-233. Available from: http://www.ssrn.com/abstract_id=304181.

Demsetz, H., Lehn, K. (1985), The structure of corporate ownership: Causes and consequences. The Journal of Political Economy, 93, 1155-1177.

Denis, D., Sarin, A. (1999), Ownership and board structures in publicly traded corporations. Journal of Financial Economics, 52, 187-223.
Eisenberg, T., Sundgren, S., Wells, M.T. (1998), Larger board size and decreasing firm value in small firms. Journal of Financial Economics, 48, 35-54.
Faccio, M., Lang, L.H.P. (2000), The ultimate ownership of Western European corporatons. Journal of Financial Economics, 65(3), 365-395.
Gary, S.W., Gleason, A. (1999), Board structure, ownership and financial distress in banking firms. International Review of Economics and Finance, 8(3), 281-292.
Gertner, R., Kaplan, S.N. (1996), The Value-maximizing Board. Working Paper, University of Chicago and NBER. p25.
Gilson, R., Roe, M. (1993), Understanding the Japanese financial keiretsu: Overlaps between corporate governance and industrial organization. The Yale Law Journal, 102(4), 871-906.
Godard, L., Schatt, A. (2000a), Faut-il Séparer les Fonctions de Décisions et de Contrôle? Paris: Papier de Recherche Présenté Aux Journaux Internationaux De l'AFFI, ESC Paris.
Godard, L., Schatt, A. (2000b), Quelles sont les caractéristiques optimal du conseil d'administration. Revue du Financier, 17, 20.
Griffith, J.M., Fogelberg, L., Weeks, H.S. (2002), CEO ownership, corporate control, and bank performance. Journal of Econoics and Finance, 26(2), 170-121.
Hao, C. (2006), Development of financial intermediation and economic growth: The Chinese experience. China Economic Review, 17(4), 347-362.
Hausmann, R., Gavin, M. (1996), Securing stability and growth in a shock prone region: The policy challenge for Latin America. Inter-American Development Bank, O□ce of the Chief Economist. Working Paper No. 315.
Hermalin, B.E., Weisbach, M. (1991), The effect of board composition and direct incentives on firm performance. Financial Management, 20(4), 101-112.
Holderness, C., Sheehan, D. (1988), What constrains managers who own large blocks of stock? Managerial Economics Research Center Working Paper No. 88-07, University of Rochester.
Holderness, C.G. (2003), A survey of block holders and corporate control. Federal Reserve Bank of New York, Economic Policy Review, 9(1), 51-63.
Holderness, C.G., Sheehan, D.P. (1998), The role of majority shareholders in publicy held corporations: An exploratory analysis. Journal of Majority Economics, 20, 317-346.
Icard, A. (2002), Stabilité Financière et Control Prudentiel; Colloque BEAC, Rôle et fonction D'une Banque Centrale à L'ère de la Globalisation. Libreville, Novembre, 1-11.
International Monetary Fund. (1998). Annual Reports. p244.
Jensen, M.C., Murphy, K.J. (1990a), Performance pay and top management incentives. Journal of Political Economy, 98, 225-264.
Kapopoulos, P., Lazaretou, S. (2007), Corporate ownership structure and fir performance: Evidence from Greek firms. Corporate Governance: An International Review, 15(2), 144-158.
Kim, B., Kenny, L.W. (2006), Explaining when developing countries liberalize their financial equaty markets. Journal of International Financial Markets, Institutions and Money, 17(4), 387-402.
Klein, A. (1998), Firm performance and board committee structure. The Journal of Law and Economics, 41(1), 275-304.
Kwan, S.H. (2003), Operating performance of banks among Asian economies: An international and time series comparaison. Journal of Banking and Finance, 27(3), 471-489.
La Porta, R., Lopez-de-Silanes, F., Shleifer, A. (2002), Government ownership of commercial banks. Journal of Finance, 57, 265-301.
La Porta, R., Lopez-de-Silanes, F., Shleifer, A., Vishny, R., (1999), Investor protect investor protection and corporate valuation. Journal of Finance, 57(3), 1147-1170.
Labelle, R., Raffournier, B. (2000), Conseil d'administration et gouvernement d'entreprise: Une comparaison internationale. La Revue du Financier, 127, 18-28.
Laeven, L., Levine, R. (2008), Bank governance, regulation and risk taking. Journal of Financial Econoics, 93(2), 259-275.
Lang, L.H.P., So, R.W. (2002), Ownership Structure and Economic Performance. Working Paper. Chinese University of Hong Kong Mimeo.
Lemmon, M., Lins, K.V. (2003), Ownership structure, corporate governance, and fir value: Evidence from East Asian financial crisis. The Journal of Finance, 58(4), 1445-1468.
Levine, R. (2004), The Corporate Governance of Banks: A Concise Discussion of Concepts and Evidence, The World Bank Policy Research Working Paper Series, No. 3404.
Lipton, M., Lorsch, J.W. (1992), A modest proposal for improved corporate governance. The Business Lawer, 48(1), 59-77.
Louizi, G. (2006), Les Mécanismes Internes de Gouvernance Bancaire: Importance et Interactions, Application Aux Banques Tunisiennes. Working Paper.
MacAvoy, P., WCantor., S., Dana, J., Peck, S. (1983), ALI Proposals for Increased Control of the Corporation by the Board of Directors: An Economic Analysis. In Statement of the Business Roundtable on the American Law Institute's Proposed "Principles of Corporate Governance and Structure: Restatement and Recommendations, Exhibit C-1.
Macey, J.R., O'Hara, M. (2003), The corporate governance of banks. Economic Policy Review, Federal Reserve Bank of New York, 9(1), 91-108.
Mehram, H. (2004), Corporate governance in the banking and financial services industries. Journal of Financial Intermediation, 13, 1-5.
Mehran, H. (1995), Executive compensation structure, ownership, and firm performance. Journal of Financial Economics, 38(2), 163-184.
Menkhoff, C., Suwanaporn, L. (2007), 10 years after the crisis: Tailand's financial system reform. Journal of Asian Economics, 18(1), 4-20.
Menzie, D.C., Hiro, I. (2005), What matters for financial development? Capital control, and interactions. Journal of Development Economics, 81(1), 163-192.
Minsky, H.P. (1996), Uncertainty and the Institutional Structure of Capitalist Economies, Working Paper 155. Annandale-on-Hudson, NY: The Levy Economics Institute of Bard College.
Montandrau, S. (2006), Activisme des Investisseurs Institutionnels et Performance Boursière: Les Caractéristiques du Conseil D'administration qui Permettent la Confiance. d'Aix-Marseille III: CEROG-IAE d'Aix en Provence Université d'Aix-Marseille III.
Nam, S. (2004), Corporate Governance of Banks: Review of Issues, Asian Development Bank Institute (ADBI), Tokyo Research Paper.
Pi, L., Timme, G. (1993), Corporate control and bank efficiency. Journal of Banking and Finance, 20(2), 515-530.
Pinteris, G. (2002), Ownership Structure, Board Characteristics and Performance of Argentine Banks. Memeo: Department of Economics, University of Ilinois.
Prowse, S.D. (1997), Alternative methods of corporate control in commercial banks. Economic Review Federal Reserve Bank of Dallas, 24, 24-36.
Roe, M. (1994), Strong Managers Weak Owners: The Political Roots of American Corporate, Finance. Princeton, N.J: University Press.
Rojas, S.L., Weisbrod, S.R. (1997), Towards an Effective Regulatory and Supervisory Framework for Latin America. IDB Working Paper No 277.
Shivdasani, A., Yermack, D. (1999), CEO involvement in the selection of new board members: An empirical analysis. The Journal of Finance,

54(5), 1829-1853.
Shleifer, A., Vishny, R.W. (1989), Management entrenchment: The case of manager-specific investments. Journal of Financial Economics, 25, 123-139.
Simpson, W.G., Gleason, A.E. (1999), Board structure, ownership, and financial distress in banking firms. International Review of Econoics and Finance, 8(3), 281-292.
Spong, K., Deyoung, R., Sullivan, R.J. (1996), What makes a bank efficient? A look at financial characteristics and bank management and ownership structure. Financial Industry Perspectives. Kansas City: Federal Reserve Bank of Kansas City. p1-19.
Spong, K., De Young, R., Sullivan, R.J. (2001), Who's minding the store? Motivating and monitoring hired managers at small, closely held commercial banks. Journal of Banking and Finance, 25, 1209-1243.
Taktak, S. (2010), Gouvernance et efficience des banques tunisiennes: Etude par l'approche de frontière stochastique. Revue Libanaise de Gestion et d'Economie, 3(5), 143-178.
Thomsen, S. (2004), Foundation ownership and financial performance: Do companies need owners? European Journal of Law and Economics, 18(3), 343-364.
Vafeas, N. (1999), Board meeting frequency and firm performance. Journal of Financial Economics, 53, 113-142.
Vittas, D. (1992), Financial Regulation: Changing the Rules of game. Washington, DC: World Bank Publication. p449.
Yermack, D. (1996), Higher market valuation of companies with small board of directors. Journal of Financial Economics, 40, 185-211.
Zeghal, D.M., Chtourou, S., Fourati, Y.M. (2006), Impact de la Structure de Propriété et de L'endettement sur Les Caractéristiques du Conseil D'administration: Etude Empirique Dans le Contexte Tunisien. Compabilité, Contrôle, Audit et Institutions. Available from: https://www.halshs.archives-ouvertes.fr/halshs-00558225.
Zeghal, D.M., Sonda, C., Yosra, M.F. (2005), Impact de la Structure de Propriété et de L'endettement sur les Caractéristiques du Conseil D'administration: Etude Empirique dans le Contexte Tunisien, Papier de recherche, 3ème Conférence de Finance Internationale, IFC3, Association Française de Finance (AFFI).

APPENDICES

Table 1: Description of variables

Nature of the variables	Variables	Meaning	Measure
Endogenous variables (performance)	AP	Performance accounting evaluation	Net income/total assets
	SMV	Stock market value	Tobin's Q= (market value of equity+book value of debt)/ book value of total assets
	NBI	Net banking income	Bank operating income- expense on banking operations
Exogenous variables (governance)	BDSIZ	Size of Board	Total number of administrators
	ADEXT	Percentage of administrators external	Number of outside directors/total number of directors
	DUAL	Chairmanship of the duality	Binary variable equals 1 if duality exists and 0 otherwise
	MAJEXT	action held by external shareholders and is>5%	Percentage of shares held by outside shareholders and is>5%
	SOLVAB	Solvency ratio	own background/total weighted assets
	LIQUID	Liquidity ratio	Liquid assets ratio/liquid liabilities
Control variables	LASSET	Size of bank	Natural logarithm of book value of total assets of the bank
	AGE	Age of bank	Age of the bank
	NBRAGC	Number of bank branches	Number of bank branches

Table 2: Descriptive statistics (after the crisis)

Variable	Obs	Mean	Min	Max
SMV	40	1.194371	0.9547647	2.587624
AP	40	0101946	−0.1035052	0.0846888
NBI	40	11.87874	10.98444	12.62464
SOLVAB	40	11.37821	0.26	23.83
LIQUID	40	166.2995	79.7	192.8
BDSIZ	40	11.05	6	14
ADEXT	40	38.54416	0.1111111	0.9090909
DUAL	40	0.425	0	1
MAJEXT	40	48.75441	28.54	66.61
LASSET	40	3890226.25	1 505 303	6 254 042
AGE	40	38.9	25	53
NBRGC	40	113.2	80	158

Table 3: Descriptive statistics (before the crisis)

Variable	Obs	Mean	Min	Max
SMV	170	9216885	0.3064408	1.458675
AP	170	0.0084573	−0.0485562	0.0517559
NBI	170	0.0429262	0.0100343	0.0978215
SOLVAB	170	0.1317802	0.015	0.2587
LIQUID	170	1.122721	0.4700449	1.985489
BDSIZ	170	11.06471	7	18
ADEXT	170	0.9034595	0.8333333	0.9285714
DUAL	170	0.7529412	0	1
MAJEXT	170	49.35996	18	72.73
LASSET	170	14.20837	12.62887	15.40841
AGE	170	30.5	3	48
NBRGC	170	77.94667	19	147

Table 4: Correlation matrix of pre-crisis

Variable	SMV	AP	NBI	SOLVAB	LIQUID	BDSIZ	ADEXT	DUAL	MAJEXT	LASSET	AGE	NBRAG
SMV	1.0000											
AP	0.1239	1.0000										
NBI	0.3215	0.4276	1.0000									
SOLVAB	−0.1083	0.2061	0.0966	1.0000								
LIQUID	−0.0403	−0.0925	−0.1670	0.2558	1.0000							
BDSIZ	0.0556	0.0279	0.1599	−0.0500	0.0561	1.0000						
ADEXT	0.0008	−0.1163	0.1557	−0.1054	0.0627	0.4589	1.0000					
DUAL	−0.2070	0.2291	0.1086	0.2120	−0.1638	−0.0934	−0.2357	1.0000				
MAJEXT	0.2685	−0.0618	−0.0169	−0.3622	−0.0209	−0.2695	−0.0479	−0.1889	1.0000			
LASSET	0.0668	−0.1959	−0.2548	0.0774	0.2286	0.1457	0.1287	−0.0207	−0.3906	1.0000		
AGE	0.0556	−0.0540	0.1700	0.0704	0.0451	−0.0762	0.0996	0.0300	−0.2680	0.4290	1.0000	
NBRAG	−0.2176	−0.2705	−0.3378	0.0878	0.2072	0.0941	0.1100	0.0784	−0.5795	0.7815	0.5855	1.0000

Table 5: Correlation matrix of post-crisis

Variable	LIQUID	SOLVAB	BDSIZ	ADEXT	DUAL	MAJEXT	LASSET	AGE	NBRAG
LIQUID	1.0000								
SOLVAB	−0.1078	1.0000							
BDSIZ	−0.2082	−0.2440	1.0000						
ADEXT	−0.2441	−0.3118	−0.2440	1.0000					
DUAL	−0.1134	0.2898	−0.3118	0.3552	1.0000				
MAJEXT	−0.0076	0.1576	0.2898	−0.2518	−0.4637	1.0000			
LASSET	−0.5670	0.0602	0.1576	−0.2048	−0.0977	0.1420	1.0000		
AGE	−0.0702	0.3708	0.1590	0.25430	−0.0983	0.2700	0.4700	1.0000	
NBRAG	−0.1943	−0.2915	−0.0669	0.3954	−0.4504	0.1361	0.3645	0.2100	1.0000

Table I-1: Regression of governance on accounting performance (before the crisis)

Variable	Coef	Standard error	t	P>|t|	(95% confidence interval)
BDSIZ	0.0009964	0.0005386	1.85	0.066	−0.0000678–0.0020606
ADEXT	−0.0164535	0.0332822	−0.49	0.622	−0.0822195–0.0493125
DUAL	0.0055622	0.0017906	3.11	0.002	0.0020241–0.0091004
MAJEXT	−0.0001783	0.0001519	−1.17	0.242	−0.0004784–0.0001218
SOLVAB	0.0248377	0.0121483	2.04	0.043	0.0008326–0.0488429
LIQUID	−0.0024507	0.0018979	−1.29	0.199	−0.0062011–0.0012996
AGE	0.0005264	0.0002831	1.86	0.065	−0.000033–0.0010858
LASSET	−0.0057098	0.0032998	−1.73	0.086	−0.0122302–0.0008106
Constante	0.0814366	0.0489051	1.67	0.098	−0.0152006–0.1780737

Within=0.1748

Table I-2: Regression of governance on stock market performance before the crisis

Variable	Coef	Standard error	t	P>|t|	(95% confidence interval)
BDSIZ	0.0086412	0.0081933	1.05	0.293	−0.0075488–0.0248313
ADEXT	−1.173687	0.5063315	−2.32	0.022	−2.174205–−0.1731694
DUAL	0.001795	0.0272404	0.07	0.948	−0.0520324–0.0556224
MAJEXT	0.0021002	0.0023105	0.91	0.365	−0.0024653–0.0066657
SOLVAB	0.016403	0.1848156	0.09	0.929	−0.348795–0.3816011
LIQUID	−0.0112182	0.0288739	−0.39	0.698	−0.0682735–0.0458371
AGE	0.0174404	0.0043068	4.05	0.000	0.0089302–0.0259506
LASSET	−0.0536745	0.0502004	−1.07	0.287	−0.1528712–0.0455221
Constante	2.022508	0.7440083	2.72	0.007	0.5523375–3.492678

Within=0.3499

Table I-3: regression of governance on net banking income before the crisis

Variable	Coef	Standard error	t	P>|t|	(95% confidence interval)
BDSIZ	0.0014544	0.0005725	2.54	0.011	0003323–0.0025765
ADEXT	0.0819057	0.0434173	1.89	0.059	−0.0031906–0.167002
DUAL	0.0026533	0.0019714	1.35	0.178	−0.0012106–0.0065171
MAJEXT	0.0001172	0.0000829	1.41	0.157	−0.0000453–0.0002797
SOLVAB	0.0313869	0.0154649	2.03	0.042	0.0010762–0.0616976
LIQUID	−0.0037999	0.0024499	−1.55	0.121	−0.0086016–0.0010018
AGE	0.0005252	0.0001149	4.57	0.000	0.0003–0.0007503
LASSET	−0.0065766	0.0018652	−3.53	0.000	−0.0102323–−0.0029208
Constante	0.0226335	0.0442044	0.51	0.609	−0.0640055–0.1092724

Within=0.2395

Table II-1: Regression of governance on accounting performance after the crisis

Variable	Coef	Standard error	t	P>|t|	(95% confidence interval)
BDSIZ	−0.0039336	0.0072682	−0.54	0.594	−0.0190949–0.0112277
ADEXT	−0.0425389	0.07253	−0.59	0.564	−0.1938339–0.1087561
DUAL	0.0202726	0.0229219	0.88	0.387	−0.0275418–0.0680869
MAJEXT	−0.0000611	0.0002878	−0.21	0.834	−0.0006614–0.0005392
SOLVAB	−0.0000919	0.0039614	−0.02	0.982	−0.0083551–0.0081714
LIQUID	−0.0000749	0.0000402	−1.86	0.077	−0.0001588–8.92e-06
LASSET	0.1453928	0.0884372	1.64	0.116	−0.0390839–0.3298695
AGE	−0.0163599	0.0096027	−1.70	0.104	−0.0363908–0.003671
Constante	−1.502476	0.9750297	−1.54	0.139	−3.536352–0.5314003

Within=0.5861

Table II-2: regression of governance on stock market performance after the crisis

Variable	Coef	Standard error	t	P>|t|	(95% confidence interval)
BDSIZ	−0.0185066	0.0161797	−1.14	0.266	−0.0522567–0.0152436
ADEXT	−0.0896858	0.1614574	−0.56	0.585	−0.4264799–0.2471083
DUAL	0.1065905	0.051026	2.09	0.050	0.0001522–0.2130289
MAJEXT	−0.0002413	0.0006406	−0.38	0.710	−0.0015776–0.001095
SOLVAB	0.026908	0.0088183	3.05	0.006	0.0085134–0.0453027
LIQUID	6.08e-06	0.0000895	0.07	0.946	−0.0001805–0.0001927
LASSET	−0.0435669	0.1968679	−0.22	0.827	−0.4542261–0.3670924
AGE	0.0358121	0.0213764	1.68	0.109	−0.0087782–0.0804024
Constante	1.00614	2.170491	0.46	0.648	−3.521424–5.533704

Within=0.4527

Table II-3: Regression of governance on the net banking income after crisis

Variable	Coef	Standard error	t	P>|t|	(95% confidence interval)
BDSIZ	−0.0547539	0.0726938	−0.75	0.460	−0.2063905–0.0968827
ADEXT	0.0581147	0.725414	0.08	0.937	−1.455072–1.571302
DUAL	0.2328034	0.2292553	1.02	0.322	−0.2454148–0.7110216
MAJEXT	0.0017383	0.0028782	0.60	0.553	−0.0042655–0.0077422
SOLVAB	0.0029675	0.0396199	0.07	0.941	−0.0796781–0.0856131
LIQUID	−0.0000693	0.000402	−0.17	0.865	−0.0009078–0.0007692
LASSET	−0.1242073	0.8845106	−0.14	0.890	−1.969264–1.720849
AGE	−0.0523838	0.0960421	−0.55	0.591	−0.2527242–0.1479565
Constante	14.94985	9.751827	1.53	0.141	−5.392101–35.29181

Within=0.4186