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# Governance and performance of Tunisian banks

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## Abstract

Developing banking standards is an important process for a country's financial and economic well being. Their importance incites governments to insure the stability and the good performance of their banking systems. Accordingly, several researchers pay a particular attention to banking governance. Specifically, shareholders-managers' convergence of interests and the possible repercussions of these on the performance of banks can be avoided only by implementing a solid system of governance. The main purpose of this article is to determine the impact of governance on the performance of banks, through an empirical study of a sample of 10 Tunisian banks during the period 1997-2007. Our empirical investigation shows a positive association between external administrators and performance. It is worth noting that a high number of administrators results in a negative effect on performance. The results also reveal that managers lack control while the board of directors seems to exert a lot of power. This state of affairs results from the fact of associating the role of the manager with that of the board of directors. Finally, our results reveal a negative association between the presence of a group of dominant shareholders and performance, a phenomenon which might be explained in terms of private appropriation of benefits.

**Keywords:** Banks, Corporate governance, Board of directors, Ownership structure, Performance, Shareholders, Managers.

**JEL classification:** G32, G34

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## Introduction

The literature on corporate governance is abundant. The recent interest in this topic is centred on financial governance, in which a group of shareholders try to identify an economical control system. Not only are these shareholders a "majority", rather the rationale for an economical control system remains distinct and different and is detached from the pure political and legal requirements that associate power and majority. Hence, a control system is conducive to suppressing the agency conflict that was historically privileged in the agency theory literature. Agency theory primarily focused on the relationship between managers and shareholders. Although the corporate governance theme is continuously attracting the attention of several researchers, the structure of banking governance has been discussed only recently. Discussing this issue is very important for many reasons, particularly in relation to developing countries. Indeed, King and Levine [1993] and Levine [1997] show that banks play a dominant role in financial systems and are like economic growth engines. In this line of thinking, several researchers, including Hermes [1994], Levine and zervos [1998], Rajan and zingales [1998], Levine [1999], Beck et al. [2000], Wurgler [2000] and Caprio, Laeven and Levine [2007]) conclude that the stability of a banking system leads to the good functioning of the financial system which, in its turn, promotes economic growth.

On the other hand, with regard to developing countries and their under-developed financial markets, banks are an essential source of financing for firms. Berger et al. [2005] note that liberalizing bank systems through privatization, the reduction of the role of regulating authorities, foreign capital interventions, acquisitions and mergers have resulted in private and foreign control at the expense of governments and domestic authorities. These latter have granted bank managers more managerial and decision-making freedom. Consequently, the problem of "agency" becomes steeper within baking industry. Thus, banking governance systems may rest on some fundamentals, namely; regulations, external mechanisms and internal mechanisms. Moreover, financial literature has always considered ownership structure as an essential mechanism of governance allowing the resolution of conflicts between managers and shareholders and improving the value of the firm. Several researchers have shown a particular interest in the study of the relationship between ownership structure and banking performance, including among others La Porta et al. [2002], Hasan and Marton [2003], Omrane [2003], Berger et al. [2005] and Bonin et al. [2005].

The purpose of this article is to determine the impact of governance on the performance of banks, through an empirical study of a sample of 10 Tunisian banks during the period 1997-2007. This choice is informed, on the one hand, by the role of the banking sector in the country's development, and on the other hand by the absence of exploratory studies on the Tunisian stock market.

This article is structured as follows. Section 2 presents a review of the theories and empirical studies conducted so far on governance. More specifically, it presents the different mechanisms on which bank governance structure is grounded. Section 3 empirically investigates the impact of governance on the performance of Tunisian banks through a study of a sample of 10 Tunisian banks during the period (1997-2007).

## **2. Theory and review of previous empirical studies**

Since the beginning of the 1990s, and with the financial scandals and/or the bankruptcies which ravaged some firms in the US and Europe, like those of Enron (2001), Vivendis Universal (2002), Ahold (2003) and Parmalat (2003), governance of firms became the hot topic of the media and the financial literature. Several reports have been published on the subject; Principles of Corporate Governance in the US in 1992, Cadbury and Greenbury in the United Kingdom in 1992, 1995 and 1998, Vienot in 1995 and 1999 and Bouton in 2002 in France. These reports have been translated into new laws and regulations showing the limitations of the existing mechanisms, and thus provoking scholarly controversies on the definition of governance as well as on the models which are able to secure shareholders' interests. This brought to the fore the impact of the relevant structures and mechanisms on performance.

We should mention that the discussions, the reports and the laws relative to firms governance are dominated by the "shareholder" model in which all conflicts are reduced to the manager-shareholder relationship.

### *2.1. The manager-shareholder traditional agency conflict*

Since the publication of Berle and Means' [1932] book « The modern corporation and private property », conflicts between shareholders and managers have been the subject of many studies aiming at explaining the nature of the objectives pursued by managers and whether these latter differ from those of the shareholders (Williamson [1963]). To explain the convergence of interests between managers and shareholders, Jensen and Meckling [1976] suggest three motives. The first source of conflict stems from the fact that investors have a perception of incurring risks different from that of the shareholders. The second source of conflict originates in the difference in the respective expectations of managers and shareholders. Finally, the third source is represented by managers' reduction of incentives at the detriment of shareholders' interests. According to Jensen and Meckling, these conflicts resulted in what these authors call "agency costs". In this context, La Bruslerie [2003] note that this conflict remains the most persistent due to the impossibility of disciplining managers. Charreaux [1997] invokes the concept of deep-rootedness. More specifically, according to the deep-rootedness thesis, members of the board who hold the majority of the shares cannot be controlled and consequently they can manage the firm at the expense of its value maximisation principle. According to La Bruslerie [2003], incentive theory proposes the analysis of this conflict with a long-term dynamic that recognizes the existence of an asymmetrical situation of information flow between managers and shareholders. In Canada, André and Schiehl [2004] show that the decrease in firms' value is due to the convergence of interests between minority shareholders and managers who allow themselves to extract individual benefits from the firm.

### *2.2. Role of indebtedness*

Indebtedness is one of the principal mechanisms of financial structure as it calls upon creditors to more supervise managers. Several studies have shown the positive role of indebtedness in the resolution of agency conflicts. Jensen [1986] shows that efficiently increasing debts acts on the conflicts. In the same vein, Stulz [1988] notes that indebtedness allows the reduction of agency costs. Similarly, La Bruslerie [2003], subscribing to an appropriation of individual benefits thesis, reveals that indebtedness fosters the power of the dominant shareholder. It allows a better control of the resources and a better investment without power dilution. La Bruslerie adds that indebtedness decision is linked to investment policies which are supposed to be profitable. It allows monitors the access to profit opportunities, earnings and wealth in the form of private benefits packages. Financing through debts is, within this perspective, an efficient appropriation method practiced by monitors who "load" the company with debts. Nevertheless, La Bruslerie reveals a negative relationship between monitors' and shareholders' participation and the level of indebtedness.

### *2.3. Mechanisms relative to governance and performance of banks*

Association of governance structure and performance has been extensively reported in the financial and accounting literature. Indeed, investors tend to associate specific governance mechanisms, such as ownership structure, board of directors structure and managers' severance packages, with an optimal allocation of company's resources and with agency cost reduction which might improve the company's value. Accordingly,

Charreaux [2002] points out that those efficient governance mechanisms are likely to reduce costs relative to conflicts and, thus, maximise on shareholders' wealth.

### 2.3.1. Governance mechanisms

The examined governance mechanisms are the board of directors (structure, size, function), the level of CEO ownership and the presence of a dominant shareholder as well as the type of this dominant shareholder.

#### 2.3.1.1. Board of directors

The separation between ownership and control made it possible for the board of directors to legally exert important levels of power. Fama and Jensen [1983] point out to the importance of the board of directors in the monitoring process, namely within large firms. Indeed, for them, the board must act as a mechanism of motivation and discipline for managers in order to resolve any agency conflicts and to maximise the value of the firm. However, the enacted laws do not specifically elaborate on the size and structure of the board. In this context, Yermack [1996] shows that the board is not any more efficient with a larger size. The works of Adams and Mehran [2003] on American banks point to the existence of a positive relationship between performance and banks having multi-member boards of directors.

#### 2.3.1.2. Managerial ownership

With reference to the agency theory, convergence of interests between managers and shareholders might be reduced through increasing managers' capital share. Adam Smith [1776] has noted that in cases where owners are not managers of the firm, the latter would not act for the best interests of the owner. Byrd, Parrino and Pritsch [1998] noted that conflicts result from differences between job expectations, the assumed risk and the level of remuneration wished for by managers and shareholders. Asking managers to participate in the ownership of the firm might reduce these conflicts. Indeed, Fama [1980], Demsetz and Lehn [1985] and Barnhart and Rosenstein [1998] explain this by the fact that managers who possess stakes in the firm assume the consequences of the harmful decisions to the firm and profit from those which increase its value. It follows then that managers with important stakes in the firm provide more efforts and take better investment decisions. In this context, Morck, Shleifer and Vishny [1988] show that performance, estimated by Tobin's O-ratio, is linked to the percentage of the shares held by managers. In their study of North American firms, they show that if the percentage of the managers' shares moves from 0 to 5%, performance goes up from 5 to 25%. If the percentage exceeds 25%, performance improves but very slowly.

#### 2.3.1.3. Remuneration packages

Bushman, Indjejikian and Smith [1996], Barkema and Gomez-mejia [1998] and Core, Holthausen and Larcker [1999] suggest that the use of motivating contracts is an essential mechanism for firms where managers take many decisions which cannot be easily controlled by the board of directors or by the investors. This result is a consequence of the agency theory which suggests that convergence of interests might be reduced in so far as remuneration packages are tightly linked to performance. Likewise, Bauer and al [2008] have shown that in Japan incentive remuneration has a positive impact on performance. Studying the Canadian market, André and Schiehl [2004] reveal a positive impact of independent board members and incentive remuneration over performance.

#### 2.3.1.4. Majority shareholders

According to Jensen and Meckling [1976], the more the ownership structure is dispersed, the more the agency costs are higher. This would mean that the presence of important shareholders is beneficial, because they tend to actively involve themselves in more tighter monitoring activities, which would result in a more efficient governance structure leading to an important value for shareholders. This hypothesis has been empirically tested by Demsetz and Lehn [1985], Agrawal and Knoeber [1996] and Barnhart and Rosenstein [1998].

### 2.3.2. Governance and performance of banks

Most studies conducted on governance focus on firms in a general and uniform way and it was not until 2003 that an important number of studies have treated banking governance structure in depth. The fact of examining the case of banks did not come by chance. In fact, according to King and Levine [1993] and Levine [1997], banks play a dominant role in financial systems and they represent economic growth engines. Other researchers like Hermes [1994], Levine and Zervos [1998], Rajan and Zingales [1998], Levine [1999], Beck, Levine and Loayza. [2000] and Wurgler [2000] have shown that stability of banking systems leads to the well functioning of the financial system and consequently contributes to the country's economic development. Recently, we notice several studies lending a special focus to the relationship between ownership structure and bank performance (like those of La Porta, Lopez-de-Silanes and Shleifer [2002], Hasan and Marton [2003], Berger, Clarke, Cull, Klapper and Udell [2004] and Bonin, Hasan and Wachtel [2005]).

### 2.3.2.1. Ownership structure and bank performance

Ownership structure is considered as a means which allows the resolution of agency problems arising from the separation between ownership functions and decision-making. To this effect, a large theoretical and empirical literature devoted itself to examining the impact of shares' distribution among the different shareholders on the financial performance of firms.

In a majority of developing countries, the state contributes in the ownership of banks, which would prevent economic growth. Omrane [2003] reveals that the state is inefficient in managing firms. Levine and Zervos [1998] note that financial systems are more performing when activities are directed by the private sector. In a similar context, Barth, Caprio and Levine [2004] have shown that countries having highly state-owned structures tend to have underdeveloped financial systems and consequently weak performance levels. Recently, Bonin, Hasan and Wachtel [2005] have confirmed the existence of a negative correlation between state ownership and cost efficiency, and this over a sample of 225 banks of 11 East European countries during the period 1996-2000. In Hungary, Hasan and Marton [2003] find out that state-owned banks privatization and increase of foreign contributions in Hungarian banks are associated with improvement in profitability and profit efficiency.

Other studies focused on foreign stakes in banks. More specifically, Weill [2006] has shown that foreign ownership of banks is associated with an increase in bank efficiency. Through a study of 289 banks of 15 countries, Fries and Taci [2005] note that costs are lower in foreign-owned banking sectors. Similarly, Bonin, Hasan and Wachtel [2005] investigated the impact of foreign ownership on performance. They showed that foreign ownership has a significant positive effect on costs as well as on banks' profit efficiency.

### 2.3.2.2. State ownership and bank performance

Several authors have focused on state-owned banks. La Porta, Lopez-de-Silanes and Shleifer [2002], Barth, Caprio and Levine [2004], Beck, Demirgüç-Kunt and Maksimovic [2004] and Berger, Clarke, Cull, Klapper and Udell [2004] show that state-owned banks are characterized by a weak level of efficiency, non-performing credits and restricted access to credits and consequently state ownership leads to slowing down the development of the financial system and economic growth. The work of Barth et al. [2004] over state-owned banks in 66 countries revealed a significant positive correlation between state ownership and bank inefficiency and a significant negative correlation between state ownership and financial development. Moreover, these authors stress that countries with higher state ownership tend to have under developed banking systems. In Argentina, Berger et al. [2005] have tested effects of governance structure on a sample of 18 Argentinean banks from 1993 till 1999. These authors reached the conclusion that state ownership is linked with a weak level of performance compared to private ownership. This level of performance includes low returns on equity (ROE) and high ratio of non-performing credits. Recently, Bonin et al. [2005] reveal that state-owned banks are less efficient than privately-owned banks. The study shows the existence of a statistically non-significant negative relationship between state ownership and cost efficiency of banks. The authors have based themselves on a sample of 225 banks during the period 1996-2000. Similarly, Barth et al. [2004] note a negative impact of state ownership on the efficiency and development of the banking system. Indeed, a high state ownership is linked to several non-performing credits and restrictive policies likely to diminish bank competitiveness. Finally, Bonin et al. [2005] conclude that state-owned banks are less efficient than privately-owned banks.

### 2.3.2.3. Private ownership and bank performance

Several studies on banks' privatization in developed and developing countries point to the efficiency and good performance of privately-owned structures. Several studies examined the effects of bank privatization in developed countries. Otchere and Chan [2003] point to an improvement in the efficiency of Australian banks after their privatization. Similarly, Barros [2003], Gulamhussen and Guerreiro [2009] show that efficiency of Portuguese banks has increased with privatization. Other studies examined privatization in developing countries. In the majority of these countries, control structure of several privatized banks has been transformed from state-owned to privately-owned. Other studies on the Brazilian context by Beck, Crivelli and Summerhill [2005] and Nakane and Bauhmol-Weintraub [2005], on Mexico by Haber [2005], on Nigéria by Beck, Cull and Jerome [2005] and on Pakistan by Bonaccorsi Di Patt and Hardy [2005] revealed an improvement in banking performance after privatization. Other studies like those of Beck, Cull and Jerome [2005] and Haber [2005] signalled signs of cautiousness in granting credits after privatization and this in view of reducing non-performing credits. Similarly and on the basis of 18 Argentinean banks, Berger et al. [2005] have attempted to test the effects of governance structure on banks' performance during the period 1993-1999. This study shows that banks which opted for privatization witnessed a decrease in non-performing credits ratios.

### 3. The empirical investigation

Our study focuses on banking governance in Tunisia. This choice is dictated by the role banks play in the development of the country, and more specifically in the development of this financial market, which has been classified as an emerging market. Moreover, banks are considered as special institutions for many reasons. First, the structure of the balance sheet of banks is different from those of other institutions. In fact, they are characterized by a high debts/equity ratio, as they largely depend on deposits received from customers. Likewise, the stability of the banking sector is the key to the stability of the country's financial system, and the economy in general because failure of a bank might lead to serious economic problems. This is why governments pay a special attention to the stability of the financial system. Several studies have been conducted in order to measure the performance of the firms (Charreaux [1998], Berger et Patti [2006]). The used performance measures are distinguished into three categories.

The accounting measures, the stock measures or a combination of the two measures. Accounting measures use the return on assets rate or the return on equity rate. Nevertheless, these measures fall short in considering the essential element in the evaluation of any return, i.e. the risk. Stock measures use classic performance measures, which are the measures of Sharpe, of Jensen, of Treynor and of Fama. Finally, Marris ratio [1964] (which is a report on market capitalization by equity) and Tobin's Q [1958] (which is a report on the firm's market value by the value of the assets) which are two measures that call upon accounting and stock values.

#### 3.1. The Tunisian context: A brief description

Tunisia has established several reforms on its financial system during the 1990s in order to respond to the technological as well as to the economic mutations the country is undergoing. Three management systems are invoked; the market-oriented system (Anglo-Saxon model), the network-oriented system (German Nippon model) and the intermediary system (French-Italian model). The management system adopted by Tunisia is the intermediary system which is a combination of the Anglo-Saxon model and the French-Italian model. This system has been introduced in the new trade code in November 2000.

#### 3.2. Data and variable specification

The study investigates a number of 10 Tunisian clearing banks during a period of ten years (1997-2007), totalling 110 observations. The data have been collected with reference to the financial statements published by these banks and stock information delivered by the board of the financial market. The choice of the period represents the beginning of the electronic quotation system put in place in October 1996.

In order to study the impact of financial structure mechanisms on bank performance, we proceed with a panel-based multiple linear regression, in which the dependent variable is performance and the financial structure mechanisms as explanatory variables.

The dependent variable that we are examining is the future anticipated performance as assessed by Tobin's Q. This ratio is the most used ratio to integrate accounting and stocks measures. It helps give an idea about value creation by directly confronting market value calculated over future anticipated returns and assets substitution value.

Future performance  $Q_{it}$  is measured at the end of the financial term that follows the period in which information about governance is obtained. Setting Tobin's Q measure at this date allows ensuring that the market is recognizable of all the mechanisms, knowing that the mechanisms might take time to be better reflected in the given value and preventing in part endogeneity problems related to measuring the set of variables in a contemporaneous fashion.

The choice of the explanatory variables is inspired by different studies like those of Morck, Shleifer and Vishny (1988), Agrawal and Knoeber (1996), Barnhart and Rosenstein (1998) and Core et al. [1999].

#### 3.3. The model

Our aim is to examine the following relationship,

$$Q_{it} = f(\text{PMI}_{it}, \text{PMA}_{it}, \text{AD}_{it}, \text{CD}_{it}, \text{ED}_{it}, \text{TCA}_{it}, \text{PAE}_{it}, \text{RE}_{it}, \text{DPC}_{it}, \text{TBit}, \text{SP}_{it})$$

where

$Q_{it}$  : Tobin's Q of a bank  $i$  at the end of a year  $t$  measured by the value of the market's total assets + the accounting value of debts + the value of privileged shares' buyout divided by the asset's accounting value.

$\text{PMI}_{it}$  : Presence of minorities. It takes the value of 1 when one or more shareholders hold a maximum of 5% of the capital. It takes 0 otherwise.

PMA<sub>it</sub> : Presence of majorities. It takes the value of 1 when one or more shareholders hold a maximum of 20% of the capital. It takes 0 otherwise.

AD<sub>it</sub> : length of service of managers in the bank. It represents the number of years in the position of a manager. It is measured through a logarithm.

CD<sub>it</sub> : substitution of the bank's manager. It takes the value of 1 if the manager has been substituted during the period of study. Otherwise, it takes 0.

ED<sub>it</sub> : experience of the manager defined by the number of years in a similar position. It is measured through a logarithm.

TCA<sub>it</sub> : number of administrators who are members of the board. It is measured through a logarithm.

PAE<sub>it</sub> : percentage of external administrators.

RE<sub>it</sub> : debt ratio defined by the total of long and mid term debts over the total of the assets.

DPC<sub>it</sub> : the control of the manager by the board of directors. It takes the value of 1 when there is no control. In other words, the manager preside the board. Otherwise it takes the value of 0.

TB<sub>it</sub> : size of the bank measured by the logarithm of the total assets.

SP<sub>it</sub> : ownership structure. It takes the value of 1 if the bank is state-owned (or partly owned), and 0 if it is private.

### 3.4. Descriptive analysis of data

In a first part and through a statistical analysis, we will assess the main characteristics of financial structure on banks' performance.

Table 1 shows the descriptive statistics for the whole sample. The first observation reveals the redundancy of the variable PMI with a mean of 1 showing thus the presence of minorities in all the banks. This is expected since the sample includes quoted banks. Moreover, the presence of this variable in the model created a multicollinearity problem and consequently it has to be eliminated. The mean of the managers' years of service in a bank is approximately 3 years. This shows the rotative principle that managers undergo. This might be due to state intervention in appointing managers. The variable ED, which represents managers' experience in others similar positions is, on average, equal to 7. This might foresee the inexperience of managers. Equally, we might note the intervention of the state since the manager has to have the endorsement of the Central Bank of Tunisia and consequently the endorsement of the state since the position is political rather than administrative. The variable CD reveals that on average 60% of managers changed position during the period of study. The variable TCA shows that on average the board of directors is composed of 10 members. The variable PAE indicates that on average 86.38 % of administrators are externals. The debt ratio RE is on average of 8.16 % and in the worst case it did not exceed 25% (initial data). We note that 82.5 % of managers preside the board of directors hence the absence of their control. Moreover, we notice that 48.75 % of banks are state-owned or partly so. Nevertheless, during these years there was the privatization of the BS and UIB banks which reduced the rate from 48.75 % to 30 % since, according to our sample, only three banks out of ten remained partly state-owned; the BNA, STB and BH. Finally, performance standard deviation is relatively high (58.94). This may be explained by banks' performance which ranges from 24.94 to 288.68.

### 3.5. Econometric analysis

As we have mention above, the aim of this study is to examine the impact of governance over banking performance, as measured by Tobin's Q. To this effect, we suggest to use a panel-based linear regression model.

$$Q_{it} = \alpha + \beta_1 PMI_{it} + \beta_2 PMA_{it} + \beta_3 AD_{it} + \beta_4 CD_{it} + \beta_5 ED_{it} + \beta_6 TCA_{it} + \beta_7 PAE_{it} + \beta_8 RE_{it} + \beta_9 DPC_{it} + \beta_{10} TB_{it} + \beta_{11} SP_{it} + \varepsilon_{it} \quad [1]$$

In this model, the index i denotes the bank (i =1,....., 10), whereas the index (t) denotes the year under consideration (t=1997,....., 2007).

Our main question is: do we use a fixed-effect model or a random-effect model. To sort this out, we will use Hausmann test. In the context of our sample, the P-value of the Hausmann test is equal to 0.7239, neatly superior to 5%. This result allows us to conclude that assessing the models' parameters through a random effect approach is the most adequate.

Assessing the model gave us the following result (the values between parentheses represent the P-value)\*:

$$\begin{aligned}
Q_{it} = & 1932.983 - 31.813PMA_{it} + 2.137AD_{it} - 19.132CD_{it} + 2.152ED_{it} - 151.442TCA_{it} + 64.129PAE_{it} + \\
& (0.000)^* \quad (0.000)^* \quad (0.520)^* \quad (0.104)^* \quad (0.474)^* \quad (0.005)^* \quad (0.492)^* \\
& 102.889RE_{it} - 22.057DPC_{it} - 103.768TB_{it} + 5.749SP_{it} \quad [2] \\
& (0.000)^* \quad (0.000)^* \quad (0.000)^* \quad (0.783)^* \\
& \text{with } R^2 = 0.901 \text{ and } F = 63.053.
\end{aligned}$$

The P-value for the estimated parameters shows that the variables SP, AD, PAE and ED are the most insignificant for this model. This observation led us to analyse the correlation matrix of the different explanatory variables. The matrix shows us that the variable AD correlates with the variables CD, ED and SP. Similarly, it shows a correlation between the variable SP with the variables AD, CD, ED, PAE and TB (the correlation coefficients vary between 0.72 and 0.81).

More specifically, the variables AD and SP represent a colinearity problem with the other variables. We can explain the irrelevance of these variables, whether the bank is state-owned, partly-owned or private, as they have no effect on its performance since the variable PS represents ownership structure. Years of service have no effect on banking performance since AD represents the manager's years of service within the bank. This might be explained by the fact that managers are appointed by the state and even private banks have to consult with trusteeship, represented by the central bank, in order to appoint a manager.

Moreover, we should note as well the size of the constant as well as the parameters to estimate. This result is expected since the variables of governance, except the size of the bank (TB) and the number of administrators (TCA), approximate the value of 1 which is very small compared to the dependent variable (Q) which is on average equal to 104.88 (see table 1). These results lead us to reject the two variables mentioned above (i.e. SP and AD). The correlation matrix confirms the independence of these variables.

The model becomes as follows:

$$Q_{it} = \alpha + \beta_1 PMA_{it} + \beta_2 ED_{it} + \beta_3 CD_{it} + \beta_4 TCA_{it} + \beta_5 PAE_{it} + \beta_6 RE_{it} + \beta_7 DPC_{it} + \beta_8 TB_{it} + \varepsilon_{it} \quad [3]$$

The estimation of this model with a random-effect approach leads to:

$$\begin{aligned}
Q_{it} = & 1933.3 - 34.012PMA_{it} - 16.87CD_{it} + 3.438ED_{it} - 163.296TCA_{it} + 85.349PAE_{it} + 95.601RE_{it} - \\
& (0.000)^* \quad (0.000)^* \quad (0.003)^* \quad (0.019)^* \quad (0.000)^* \quad (0.009)^* \quad (0.001)^* \\
& 21.241DPC_{it} - 102.859TB_{it} \quad [4] \\
& (0.000)^* \quad (0.000)^*
\end{aligned}$$

with  $R^2 = 0.907$  and  $F = 87.049$ .

The regression analysis revealed the following results; a statistically significant positive relation between the proportion of external administrators (PAE) and performance (Q), consistent with several studies (Mace, 1986 and Kamran et al., 2006). This might be explained by the fact that the presence of external administrators strongly contributes to banks' performance. The coefficients of the model [4] do not confirm the effect expected by the agency theory, i.e. the effect of dominant shareholders (PMA) on banking performance. Instead of a positive effect, the estimated coefficient presents a negative association (-34.012). This opens up the way for an explanation in terms of a private appropriation of benefits. The board of directors' inability to control managers (DPC) has as well a negative effect over performance. The model [4] yields a coefficient equal to (-21.241). The high number of the board's members (TCA) has a very negative effect over performance with a coefficient equal to (-163.296). This is explained by the fact that this board has no role in managers' decisions and consequently this role is negative. Substituting the manager (CD) negatively influences performance (a coefficient equal to (-16.87)). In line with agency theory, the association between the function of the president of the board and the role of the manager (DPC) negatively influences performance.

#### 4. Summary and some concluding remarks

The aim of this article was the study of ownership structure, the system and mechanisms of governance within Tunisian banks and the analysis of their performance as well as the examination of the nature of the link between them and the factors mentioned above. Through an econometric model and a sample of 10 banks quoted in the Tunis Stock Exchange, this study allowed establishing associations between banks' performance and three main attributes of governance structure: the structure of the board, contribution of managers and contribution of dominant shareholders.



The results of this study revealed a positive relationship between external administrators and performance. This is explained by the fact that the presence of external administrators strongly contributes to banks' performance. We should mention that a high number of administrators may create a negative effect on performance. In other words, the presence of external administrators is necessary, but on the other hand reducing the number of administrators is needed. These results revealed as well a lack of managers' control by the board of directors. This observation streams from the fact of associating the role of manager with that of the president of the board. In as far as the monitoring role of important shareholders, our results yield to a negative association giving room to an explanation in terms of private appropriation of benefits. Accordingly, we suggest increasing the number of external administrators at the expense of other administrators. This mechanism would play a moderating role in banks and generally in companies tightly controlled. Besides, it is preferable to separate the function of manager from that of president of the board. Finally, the hasty substitution of managers should be avoided to ensure more stability.

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Table 1. Descriptive Statistics

	Mean	Median	Maximum	Minimum	Standard Deviation
Q	104.8810	85.5475	288.6793	24.9364	58.9447
PMI	1	1	1	1	0
PMA	0.6	1	1	0	0.4898
AD	1.1771	1.0986	2.4849	0	0.8167
CD	0.6	1	1	0	0.4898
ED	1.7862	1.7917	2.7080	0	0.5746
TCA	2.3913	2.4849	2.4849	2.1972	0.1049
PAE	0.8638	0.9	0.9167	0.6667	0.0733
RE	0.0816	0.0503	0.2510	0.0041	0.0684
DPC	0.825	1	1	0	0.3799
TB	14.3830	14.3252	15.2712	13.5879	0.4533
SP	0.4875	0	1	0	0.4998