

# Market Discipline by Bank Governance in Managing Credit Risk

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## ABSTRACT

The present paper aims to study the various forms of the market discipline by bank governance in managing the credit risk. The first form refers to the agency relationship between shareholders and managers in which we find a concentrated structure and an average involvement of the manager in the capital which can guarantee a good regulation of the credit risk. The second form reflects the agency relationship between depositors and shareholders. The former exert a control over both shareholders and managers so as to reduce the risk. The third form, on the other hand, examines the agency relationship between managers and creditors; the latter party exerts an effective control over the former in case they are not well protected against the risk of bankruptcy. The fourth discipline is performed by the Board of Directors and mainly by outsiders. All these forms can be stranded by the strong involvement of managers in the capital and the high interest rates granted to creditors and to depositors.

These four discipline forms of bank governance have been studied in a Tunisian setting. Results indicate that market discipline is checked only by the concentration of institutional outsider ownership, the nationalization of ownership and by depositors but remains untested by both the Board of directors and the creditors.

**Keywords:** *market discipline, bank governance, credit risk, agency relationship*

## 1. INTRODUCTION

"The banking governance is a field of the banking market discipline which represents the forces exerted on the bank by external agents."(Berger, 1991)[1]. Such a discipline that may be established to regulate the credit risk, is governed either by the agency relationship between shareholders and managers, managers and creditors, or else among the board of directors.

The new trend in international banking regulation aims to integrate the market discipline as a mechanism of indirect regulation of the credit market. This view was reinforced by the tendency of the Basel Committee to establish a disciplinary mechanism for managing credit risk under the new Basel II regulations in its third pillar "transparency and market discipline". The instruments of market discipline are numerous; they are usually extracted from different agency conflicts:

The regulation of credit risk by market discipline governed by the agency relationship between managers and shareholders can be checked when the former are not involved in the bank capital so that they do not lead the interests of the majority shareholders towards excessive risk. This relationship is also checked when these managers are well controlled by shareholders so as to limit their opportunistic behaviors.

The discipline adopted by depositors or creditors aims to prevent managers from taking the risk. Such a deviation may exist, when managers motivate depositors by offering compensations based on higher interest rates or by introducing deposit insurance (in case depositors exist).

## 2. LITERATURE REVIEW OF THE CREDIT RISK MANAGEMENT BY THE BANKING GOVERNANCE

### 2.1 Market Discipline by the agency Relationship: Shareholder-Manager

The consensus of interests between shareholders and managers is established when the leaders' contributions to the capital increases. This causes an alignment of interests and increases the risk. Conflicts are usually resolved by raising the leaders' parts in the capital which can align the interests between shareholders and managers, and can also facilitate the leaders' entrenchment (Charreaux 1991)[2].

This alignment of interests corresponds to the choice of a minimal risk the leader undertakes to maximize the bank profit. This minimal risk is positively related to the stake of the leader in the capital. In other words, a greater part of the leader increases his salary and results in adopting such risky strategies as granting risky credits. (John, 1998)[3].

Brewer and Saldenberg (1996)[4], Demsetz et al (1996)[5], Demsetz and Strahan (1997)[6], Knopf and Teal (1996)[7], Sullivan and Spong (2007)[8] claimed that the relationship between taking risk and managerial property is convex (U shape): at the beginning it is negative, but becomes positive after a certain threshold. The factors contributing to this form are the regulatory system, the franchise value of the bank and other economic circumstances. By contrast, Gorton and Rosen (1992)[9] showed that the relationship between the managers' properties and the risk is not linear (concave). At first, the risk increases with the rise of the managerial

ownership, it then depreciates when the interests of shareholders and managers are aligned.

On the other hand, shareholders who want to take risk are the majority insider shareholders belonging to the board of directors or running the bank itself. However, the minority shareholders, regardless of their status, are risk averse. Accordingly, a certain discipline will be established and guided either by a diluted structure or a structure of concentrated outsider ownership in order to regulate the credit risk.

Godlowski (2004)[10] showed that the majority shareholders are the primary source of risk incentive. Indeed, if the ownership structure is diluted, minority shareholders have no reason to supervise managers. By contrast, if the ownership structure is concentrated, the majority shareholders become more motivated to take the risk and therefore there will be an excessive risk. Ianotta et al (2007)[11], for example, measured the concentration index by the number of shareholders possessing more than 24% of the capital. When the concentration increases, the loan quality will be better and the risk decreases. This is due to the low cost paid by the majority shareholders so as to control the managers. When the concentration decreases, agency costs decrease and therefore the quality of loans deteriorates and the non-performing loans increase. This results in an excessive credit risk.

Gorten and Rosen (1995)[9] studied the concentration of the insider managers and suggested that if their participation gives them a status of minority shareholders, it is preferable to increase the risk from which they make profit. By contrast, if the manager becomes a majority shareholder he can lose his human capital and his shares. In this respect, Knopf and Teall (1996)[7] confirmed that the risk comes essentially from the majority insider shareholders. Parrino et al (2002)[12] showed (from a cash flow model) that leaders take risk if the outsiders have a striking effect on the quality of investment. If an outsider has a concentrated ownership in a bank (important part) he will be interested in controlling managers to reduce the risk. But if the insider shareholders ownership is diluted, they become interested in exercising no control over managers and therefore there will be an increase in the credit risk.

Institutional shareholders can exercise control over leaders at lower costs. Their presence in the board of directors allows them a more effective control over the risk. (Agrawal and Mandelker, 1992[13], Li and Simerly, 2002)[14]. Other authors contradicted the last result and stressed that the presence of institutional shareholders promotes the deterioration of the bank performance. These shareholders are generally the majority shareholders with important information which they can sell and earn private benefits. The transfer of information about the leaders and the bank is done through the sales of the shares they hold to new shareholders. This bank redemption may cause a deterioration of the bank image in the market which leads to an excessive credit risk.

Sullivan and Spong (2007)[7] studied the effect of the managerial structure on risk-taking by U.S. banks during the period 1985-1994. The credit risk was measured by the share of non-performing loans in the total credits. They distinguished between two types of leaders: the managers and the directors. Indeed, the role of the directors (monitors) is to control the managers. They found out that the increase in the part of both directors and managers results in the fluctuation of more important gains and in an increase in the credit risk. As a matter of fact, the managers' properties are more important than those of the directors in the risk rise. In other words, the managers play a determining role in risk taking.

This discipline may also be performed by both private and public banks. The latter often suffer from a problem of governance, given that the leaders exercise little power over the shareholders (the State) and that the policy of transfer of wealth is addressed to politicians in countries where the judicial and legislative powers are not independent from the executive (Dinç, 2005)[15].

The credit relationship within public and private banks is distinct. The first party finances projects that have social goals while the latter only finances projects that increase their profitability without seeking the interests of the national economy. Ianotta et al (2007)[11] studied the relationship between ownership structure and risk-taking in European banks during the period of 1999-2004. She found that it is composed of the concentration index and the nature of the owners measured by dummy variables (public bank, mutual bank, private bank). She proved that private banks are more efficient than public and mutual banks (higher performance despite the increasing costs). The public banks, on the other hand, have a poor quality of loans and a higher risk level than the other banks. Godlowski (2005)[16] argued that the presence of a shareholder who belongs to emerging country qualified as a STATE encourages excessive risk. Indeed, governments in developing countries do not impose any strict regulations on risk.

## 2.2 Market discipline by the Agency Relationship: Manager-Depositor

Such a discipline is designed to involve depositors in controlling risk-taking in the bank by reducing the insurance premium, the maximum amount of guaranteed deposits or the interest rates. The reduction of the guaranteed amounts deposited makes the depositors feel unsecured thus encourages them to monitor the banking activities and therefore reduce the risk. However, this is a little bit difficult to be done because of the high agency costs and the lack of the information required.

There are two types of insurance: explicit and implicit. The difference between the two is that the second provides depositors with an ad-hoc protection. In other words, if there is no insurance system that protects

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depositors in case of the bank's failure to repay deposits, the state intervenes and refunds them.

Merton (1977)[17] showed that there is a positive relationship between the insurance premium and risk. Deposit insurance encourages bank managers to maximize the value of the Put when they engage in risky activities. The deposit insurance gives managers more security, which leads to grant risky loans.

In order to reduce the probability of bankruptcy the insurance premium has been adjusted to risk. Chan et al (1992)[18], however, argued that the introduction of the insurance system by risk-adjusted premium is not effective because of asymmetric information.

The purpose of deposit insurance is to reduce the credit risk, but the bank can divert the role of market discipline by raising the deposit interest rates to satisfy the depositors therefore the bank adopt risky strategies. In case of large banks, the insurance reform plays the role of market discipline; it aims at minimizing the risk and the interest rates decrease accordingly.

The relationship between the amount deposited and the risk is negative. When the reform is introduced, risky banks will increase the interest rate in order to maintain their opportunistic behavior that encourages clients to deposit their money in these banks and therefore deposits increase. The increase of interest rates is considered as a risk premium to compensate depositors for losses of the insurance premium and the risk initiated by the bank.

The theory of options suggests that shareholders of an indebted firm have an incentive to increase the risk and to be engaged in risky activities. Creditors, however, are interested in lowering the risk and controlling the investment strategies in order to ensure their repayments. (Galai and Masulis, 1976)[19].

In the case of banks, the creditors are the depositors who behave the same way as in non-banking company, but the existence of deposit insurance makes them risk-averse. Within the frame of deposits insurance, depositors are not encouraged to reduce the risk and take an extra interest rate on the risk premium but shareholders are encouraged to take risks and engage in risky activities.

Merton (1977)[17] showed that the value of equity increases with the risk while the value of deposits decreases with the risk increase. Accordingly, shareholders and depositors will not have the same preferences. The former make a profit each time the bank takes high risks while the latter suffer from losses when the assets become riskier.

### 2.3 Market Discipline by the Agency Relationship: Creditors of Subordinated Debt- Managers

Subordinated debts are guaranteed neither by the deposit insurance system nor by the special law of bank

assets. They have a subordinate status compared to all kinds of debts, which means that in case of bankruptcy, the subordinated debt holders have a priority only over shareholders. In fact, they control the bank so as to lessen the credit risk. Their interests are aligned with those of the regulators and this leads to reducing the monitoring costs.

In the same respect, the issuance cost plays an important role in risk-taking. If the bank is taking a risk in order to allocate credits, it will be obliged to pay a higher issuance cost for such risk degradation. Indeed, the holders of subordinated securities charge a high issuance cost in case the bank takes the risk. This constraint leads the bank to reduce the credit risk. Issuance costs can be considered the same as the interest rate assigned to subordinate creditors. There exists a threshold of the interest rates paid to investors. Risky banks cannot fix their rates below this limit due to market requirements. By contrast, less risky banks impose a lower interest rate. Calomiris (1999)[20].

With reference to a policy of long-term subordinated debts characterized by the absence of debts regularity issuance and by the reputation effects of the primary market, Blum (2003)[21] claimed that the bank may change its risk profile immediately after the issuance date. Only the regularity and the frequency of issuance may maintain the same level of risk.

### 2.4 Market Discipline by the Board of Directors

The Board of Directors defines the responsibilities of the different partners of the bank. It also determines the investment strategies as well as the medium and long term risk-taking strategies. It ensures the implementation of the regulations imposed by the authorities, controls leaders and fixes the ownership structure and the managers remuneration.

The primary role of the Board is the control exercised by its members on leaders and on the activity of the bank in general. The more effective and strict the control is, the more optimal the capital allocation becomes. Accordingly, the investment in risky assets becomes more advantageous.

The agency theory shows that the large size of the board leads to conflicts between the shareholders and leaders. In effect, the larger the size of the bank is, the more powers the leader gains in decision making. In this case, the leader refuses to take risks so as to maintain his human capital and thus the risk decreases in the absence of managerial involvement (Jensen, 1993)[22].

The small-sized Board, on the other hand, promotes an effective control over the leaders and can influence investment decisions. Some authors such as Hermalin and Weisbach,(2003)[23] contradicted the positive effect of the board size on risk and argued that large Boards generate financial problems and therefore an excessive risk.

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The Board of Directors is composed of insider directors who work in the bank itself, independent outsider directors, foreign directors and shareholders. A director is called internal if he works for the bank (Adam and Mehran, 2003)[24]. The outsider director is an independent person who works for his own account or for another organization to which he belongs. Fogelberg and Griffith (2000)[25] argued that the involvement of outsider directors in the capital does not exceed more than 5%. These directors are more able to control the leaders than the insiders who can hardly contest the leaders' choice on whom they depend hierarchically. Outsider directors must monitor and review practices for risk taking and make the right choice between profitability and risk taking. Both insider and outsider directors are encouraged to control leaders so as to protect both the shareholders and the depositors. As a matter of fact, shareholders opt for the risk to maximize profitability, depositors and leaders, by contrast, are risk averse in order to protect their human capital.

Byrd, Fraser, Lee and Williams (2000)[26] showed that U.S. banks that survive after crises are those that have more outsider directors. Griffith (2000)[27], Pi and Timme (1993)[28] confirmed that the number, the age and the experience of the insider directors have no significant relationship with performance and risk.

The presence of foreign directors in the Board gives a good impression to investors given that these foreign directors are independent of the bank and can better control the leaders with advanced banking practices. Indeed, the foreign administrator can better manage the bank and increase its value. However, Oxelheim and Randoy (2003)[29], Khalid Hanif (2004)[30], Kohn and Soon (2004)[31] stressed that the presence of directors representing the government and public institutions in Taiwan led to financial deterioration of the bank because of excessive credit risk due to financing projects with low financial returns and strong financial urge.

In another context, the duality direction is the delegation of the same person in two posts: Managing director and Chief executive officer (C.E.O). Indeed, the CEO is both a judge and a member which means that the control over leaders cannot be effective because the CEO himself has the complete information about the bank and therefore can reduce the risk to protect his human capital and stagnate the bank performance.

Gary and Gleason (1999)[32] studied the impact of managerial involvement in the capital: the number of directors, number of insider and outsider directors and the duality of direction on risk. They found out that the only variable that has a significant impact on the financial troubles is the duality of direction. In this case, the CEO protects his human capital by not taking risks in order to avoid the financial crisis at the expense of the bank performance. Thus, duality is not an effective control

mechanism. Fogelberg and Griffith (2000)[25], however, noted that risk-taking and performance have no significant relationship with the duality, it varies only with leader ownership.

### 3. METHODOLOGY

In this section, we will study the effect of the different governance mechanisms between managers, shareholders, directors, depositors and creditors on the credit risk in the Tunisian banking system.

#### 3.1 Sample

The sample comprises 10 Tunisian banks studied over the period from 1997 to 2006, which gives us a sample of 100 observations. The financial data are collected from the monitoring direction of the Central Bank of Tunisia and from the annual reports of the Professional Association of Tunisian Banks (PATB). Data governance is collected from guides of the Tunisian stock exchange and the Tunisian Financial Market Council prospectus.

#### 3.2 Model Specification

Our model is derived from John (1998) [3] and Sullivan and Spong (2007)[8]. To see the fundamental role of market discipline in managing credit risk, we regressed the ownership structure, the composition of the Board, subordinated debts and deposits on the credit risk.

$$\begin{aligned} RISK_{it} = & \alpha_0 + \alpha_1 S\_LEADER_{it} + \alpha_2 S\_STATE_{it} \\ & + \alpha_3 S\_FOREIGN_{it} + \alpha_4 BLOCK_{it} \\ & + \alpha_5 DUALITY_{it} + \alpha_6 OUT\_DIRECTOR \\ & + \alpha_7 LEVERAGE + \alpha_8 DS \\ & + \alpha_9 DEPOSIT \end{aligned}$$

**a. Credit risk (RISK):** This is the part of losses in the total of loans granted to customers measured by the following formula: non performing loans / Total customer loans.

**b. The part of leaders' contribution (S\_leaders):** This is the percentage of equity held by the bank leaders and directors at the beginning of each financial year.

**c. The share of public shareholders (S\_public):** This is the percentage of capital held by the State at the beginning of each financial year.

**d. The foreign shareholders contribution (S\_FOREIGN):** This is the percentage of capital held by foreign shareholders in the bank.

**e. The participation of the majority shareholders (BLOCK):** This is the percentage of bank capital held by the majority shareholders (holding more than 5%).

**f. Financial Leverage (LEVERAGE):** This is the ratio between total liabilities and total assets.

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**g. Percentage of outsider directors (OUT\_DIR):**

This is the ratio between the number of outsider directors and the total number of directors.

**h. The duality (DUALITY)** exists when the bank charges a single person to hold both the position of the managing director and the CEO. This is a binary variable "Dummy" which equals 1 if the duality exists and 0 otherwise.

**i. Subordinate debt adjusted to risk (DS):** This is the ratio between subordinated debts and risk-adjusted assets.

**j. Deposits (Deposits):** This is the share of deposits collected from customers in the total resources.

### 3.3 Study Results

Before estimating the model, we needed to ensure the stationarity and the co-integration of the variables included in it using panel data from the unit root test. We chose the stationarity test of Levin and Lin that is the most frequently used. It showed that all the variables are stationary except two namely; the Public (S\_PUBLIC) and the participation of the majority shareholders (BLOCKS) which have both a unit root. To make them stationary, we performed the test of Levin and Lin for the first difference of the variables and noted that after the first difference, the two variables became stationary. The variables that we include in the model must be stationary, so in what follows we used the variables that are stationary in terms of level and the variables that are different in first order as a result of their stationarity.

The chosen model is a simple linear model in panel data. We distinguish between two types of models: fixed effects models and random-effects models. The choice between them was based on the Hausman specification test. First, we proceeded to estimate the random effects model by E-Views 6, then we applied the Hausman test to see the acceptance or rejection of the random effect. The summary of the results of the Hausman specification test is presented in the following table:

Correlations of random-effects Hausman Test				
Test Summary		Chi-square	DL. Khi-deux	Probabilité
Random	cross-section	590.39	9	0.0000

With reference to the Hausman specification test of correlation between the specific effects and the exogenous variables, we noted that the statistics calculated chi-square degrees of liberty 9 equal 590.397 and its probability is less than 0.05. In this case, we accept the random effect and reject the fixed one. As a second step, we estimated the random effects model by the method of generalized least squares (GLS). The estimation results are summarized in the table below:

**Dependent variable: RISQUE** **Method : Panel**  
**GLS** **R<sup>2</sup> : 30.88%**  
**R<sup>2</sup> adjusted : 22.81%** **F-Statistics: 3.823**  
**Cross-sections : 10 Banks** **Pb (F-Statistics) :**  
**0.000**  
**Total observations : 100** **Durbin-Watson :**  
**0.513**

Variables	Coefficients	T-Student	Probability
C	-0.774	-6.810	0.000
OUT_DIRECTOR	0.017	9.372	0.000
DUALITY	-0.082	-8.023	0.000
S_LEADER	1.107	4.488	0.000
S_STATE	-0.124	-2.917	0.004
S_FOREIGN	0.194	10.067	0.000
BLOCKS	-0.376	-6.097	0.000
LEVERAGE	0.741	6.440	0.000
DEPOTSIT	-0.245	7.528	0.000
DS	0.031	2.158	0.034

#### 3.3.1 The Board of Directors Market Discipline

The market discipline performed by the outsider directors in the board is not checked because their presence promotes an excessive credit risk. Most of these directors are shareholders at the bank and this allows them to encourage the leaders to increase credit risk. This result differs from what Adam and Mehran (2003)[24], Byrd, Fraser, Lee and Wilams (2001)[26], Griffith and Fogelberg (2000)[25] found. They conducted their studies in European and Japanese settings and asserted that the outsider directors exercise an effective control over the leaders to minimize credit risk. These authors define outsider directors as independent directors of the bank; they work for their own accounts or for the accounts of other organization to which they belong. Fogelberg and Griffith (2000)[25] added that the involvement of outsider directors in the capital does not exceed 5% which does not allow them to engage in risky strategies. In Tunisian banks, however, outsider directors are generally shareholders holding more than 5% of the bank seeking to increase the risk in order to make more profits.

As a matter of fact, the outsider directors will not exercise any effective control over the leaders of the bank and in this case they converge to the shareholders. This type of shareholder directors in Tunisian banks is generally public and institutional having a supervisor function and trying to revise banking practices and their compliance with the banking standards.

Still within Tunisian banks boundaries, institutional shareholders are generally outsider directors. This can generate a deterioration in the bank performance and increase the non-performing loans which result in a credit risk excess. Thanks to their powerful position in the interbank market, this type of shareholders has an informational productive capacity which allows them to reveal internal information about external agents or future

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shareholders. This informational leak, however, may negatively affect the market value of the bank (Li and Simerly (1998)[12]).

The duality discipline is not verified as well. It has a negative impact on the credit risk, the duality between the direction of the management and that of the Board of directors promotes a reduction in the credit risk. The separation of these two functions in Tunisian banks generates conflicts of interest between the leaders and the board of directors. This conflict of interest, in turn, generates an excess of credit risk. In the present work, the CEOs of the Tunisian banks are risk averse by holding only the information without sharing it with the direction of the bank. Their sole concern is to entrench and protect their human capital by adopting specific investments based on their own knowledge without falling into financial troubles.

### 3.3.2 Market Discipline by the Agency Relationship: Shareholder-Manager

The involvement of managers in the capital has been studied by several authors. Sullivan and Spong (2007)[8], for example, found a positive relationship between credit risk and the part owned by managers. We followed the same approach as the preceding researchers but we approximated the ownership of the managers by that of the directors because of the non-availability of information. We concluded that their implications lead to adopt risky strategies as has been proven by John (1998)[3]. In our case, we can refer to the work of Saunders, Strock and Travlos (1990)[33] who studied the involvement of the leaders owners who belong to the board. These authors came to the conclusion that the majority insider shareholders are behind the risk excess.

It is worth noting that the majority shareholders negatively affect the credit risk. In fact, the more the capital is concentrated the more the risk decreases because these shareholders do not want to invest their money in granting risky loans. Studies conducted by Kohn and Santomero (1980)[34] and Shleifer and Vishny (1986)[35]; Gorten and Rosen (1995)[9] showed that the concentration of shareholders leads to better control the leaders by pushing them to be more careful in risk-taking.

The majority shareholders of Tunisian banks are generally outsiders holding a moral status. They have the ability to attract more information thanks to the low cost of control over the leaders. This result lends strong support to the findings of Connel and Servaes (1995)[36] and Iannotta et al (2007)[11]. In addition, these shareholders have a strategic effect on the investment qualities of Tunisian banks to the point that any strategic decision comes from shareholders who become interested in exercising their powers on leaders. Parrino et al (2002)[37] analyzed the role of diversified and concentrated outsiders and came to the same result.

Additionally, the intervention of the Tunisian State in banks reduces credit risk. Indeed, the State acts as

a supervisor of the bank. Therefore, it contributes to the reduction of credit risk although it seeks social pension. The presence of the state in the Tunisian banks confers a sense of prudence and risk-averse as it seeks to protect the stability of the financial system. Accordingly, its intervention in the capital of Tunisian banks seems to be necessary as it contributes to granting loans that maximize the social welfare as opposed to the outsider directors who can cause excessive risk. Although these investments supported by the state have a social objective, they have a weak financial profitability. This causes neither an increase in non-performing loans nor a borrower's difficulty in repayment. This result is consistent with that of Dinç (2005)[15].

Comparing the participation of the Tunisian State in banks to that of the foreigners, we noted that the entry of foreign banks in Tunisia maximizes the credit risk. The Tunisian state-owned banks may charge lower interest rates for projects designed to achieve social objectives than those imposed by private banks that are seeking efficiency and visibility in order to entrench in the banking market. This policy is due to the competitive advantages enjoyed by the state-owned banks in terms of costs. Such advantages allow them to compete with foreign banks. Altunbas et al (2001)[38] conducted a research that compares the German cooperative banks to private banks and found the same result.

The market discipline is therefore verified by the nationalization that can reduce credit risk. The intervention of the state in the banking capital has proven its efficiency in terms of credit risk thanks to its comparative advantage over the foreign banks in the information production about the optimal allocation of credits for social projects. This creates a financial welfare and may reduce the credit risk. It can be said, in this respect, that the financial liberalization contributes to the transfer of risk from foreign countries facing financial crisis to Tunisian banks, thus contributing to excessive credit risk. This gives a paramount advantage to nationalization as opposed to globalization. In effect, the Tunisian experience with foreign privatization has generated an increase in credit risk. Here emerges the need to reduce foreign shares in favor of the State's in order to ensure financial stability.

### 3.3.3 Market discipline by Creditors and Depositors

The financial Leverage indicates the indebtedness level of the bank i.e. the more the Tunisian banks are leveraged, the more they engage in granting risky credits. The bank leaders generally use external resources to finance risky projects. In fact, the increase in the external resources leads to an increase in funding risky project which, in turn, results in excessive credit risk. The same results were highlighted by Jensen (1993)[22].

On the other hand, the shareholders of the indebted Tunisian banks are interested in increasing the risk and initiating risky projects contrary to the wishes of

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the creditors who seek to reduce risk and ensure their repayments. This shows that Tunisian bank creditors do not have enough power to exert on the leaders or on the shareholders so as to monitor the strategic investments and make them less risky.

In Tunisian banks, issuing such type of debts does not allow to mitigate the risk. In order to escape the control exerted by the holders of subordinated debts, the Tunisian banks offer them high interest rates. Calomiris (1999)[20] stated that the least risky banks are those that impose low interest rates. This situation worsens the information asymmetry between creditors and the bank. Therefore, holders of subordinated securities do not have full information about the situation of the bank so as to protect their repayment.

Within the context of information asymmetry, the Tunisian banks can change their risk profiles immediately after the issuance date and become risk takers. Such rationing of subordinated debts can be used to attract risky borrowers who do not seek to control managers. Blum (2003)[21] dealt with this phenomenon on a sample of subordinate securities characterized by the lack of issuance regularity.

The subordinated debts, in Tunisian banks, are not issued regularly and continuously. This does not allow their holders to intervene and solve the problems as soon as the risk rises. Jagtiani and Lemieux (2001)[38] confirmed the same result by testing the effect of the cost of subordinated debts issued regularly on credit risk in European banks.

The subordinated debts have almost no refinancing cost and their issuance is meant to replace the capital increase which is expensive. The increase in risk caused by the issuance of subordinated debts is mainly attributed to the inadequate consideration of the latter in the regulatory capital. Basel II has not introduced new rules to adjust the proportion of subordinated debts in relation to the amount of the capital. By contrast, Basel I has limited the issuance of such type of debts.

The issuance of subordinated debts cannot be considered as a mechanism for market discipline to manage the credit risk as recommended by Basel II. Thus, the Tunisian banks must reveal the information about the situation of the banks to the holders of subordinated debts to lower the credit risk and ensure the role of market discipline for the preparation of Basel II.

A significant proportion of deposits in the total balance sheet of the bank leads to an excess in the credit risk. The opposite is also true as in the latter case banks do not have enough resources to grant risky loans. Even though the Tunisian depositors are not covered by deposit insurance, they are unable to control the leaders when granting risky credits. This shows that these depositors do not have clear, transparent and complete information about the bank situation to better exert a pressure on the

leaders. This is attributed to high agency costs and higher information costs about the leaders of the bank.

In order to protect themselves from the credit risk and push the leaders to be risk averse, the Tunisian depositors must require the external rating agencies to provide them with all the necessary information. However, this is not possible in Tunisia because such rating agencies are poorly developed. In addition to the absence of the rating agencies, depositors are weakly supervised by the state regulator. This situation tends to increase the credit risk. Klingbiel and Honohan (2003)[39] came to the same result in case of the combination of deposit insurance and the presence of the state regulator.

The Tunisian banks must provide the depositors with deposit insurance and offer them a preferential interest rate so as to escape their supervision. With the lack of the insurance system in Tunisian banks, the latter are obliged to increase the interest rate to feel free to take risks. Imai (2006)[40] showed this result by balancing between deposit insurance and interest rates.

#### 4. CONCLUSION

In the literature review, we discussed the conflict of interests between managers, shareholders, depositors and creditors. This kind of conflict is met in the disciplinary role of shareholders, depositors, creditors and directors in their internal control over managers. This helps to mitigate credit risk. These controls exerted may be limited by leaders when establishing a deposit insurance system, diluting the capital ownership, borrowing from unsecured creditors, creating conflicts within the Board and by the involvement of managers in the capital to satisfy the shareholders.

The empirical study conducted in Tunisian banks showed that the application of the market discipline through the governance mechanisms remains ineffective:

The control exercised by external directors is not verified. The latter are the shareholders of the bank which encourages the leaders to increase credit risk. This is due to the information asymmetry that can be observed between the directors and leaders and gives more freedom to the latter to adopt risky strategies.

On the other hand, the disciplinary role performed by the ownership concentration is verified. The majority shareholders do not want to invest their money in granting risky loans and they want to mitigate the risk by monitoring and exercising pressure on the leaders. The involvement of directors in the capital maximizes the credit risk because their banking ownership gives them a character of risk takers.

Market discipline by nationalization is also verified. By contrast, the internationalization and globalization do not fulfill their function. The presence of the state in Tunisian banks can play the role of the financial system stabilizer hence it reduces the risk. The

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presence of foreign shareholders, on the other hand, plays the opposite role as they transfer the risk from foreign countries to Tunisian banks.

Creditors as depositors or holders of subordinated securities do not undertake their disciplinary function to control directors. Both parties do not exercise effective control over the leaders which gives them the freedom to take the risk. This is attributed to the lack of informational transparency between creditors and leaders.

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