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The impact of Bank Governance on risk taking and Bank performance: Listed Banks in the MENA REGION

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Abstract: This study aims at examining the Corporate Governance Mechanisms and their impact on Risk taking and Performance of listed Banks in the MENA REGION. The study assessed the relationship between selected internal corporate governance mechanisms, risk taking and bank performance using specially CAMELS APPROACH. The database of our sample (141 banks/ 19 countries, covering a period from 2015 to 2019) was collected from S&P Capital IQ.

Using multiple regression analysis, we deduce that, several variables such as: ”State and Sovereign Wealth Fund ownership (SWF), Institutional investors, Employee stock Ownership Plan (ESOP), Presence of women on the board committee, Independent Directors, Independent chairman, a large number of committees, in particular the Audit and Nomination Committee”, have a significant impact on the Bank performance.

Keywords: Board Members, Ownership Structure, Corporate Governance Mechanisms, Bank Performance, Agency theory, Camels approach, State owned structure, Sovereign wealth funds (K>5%), Independant directors, ESOP ownership.

1. Introduction

Corporate governance is a set of mechanisms that help stakeholders to effectively manage corporate resources Zingales (1998). Before the outbreak of the Subprime financial crisis, little attention was paid to the particularities of banking governance. The studies carried out between 1990 and 2006, focused mainly on the corporate governance of listed companies, aim to strengthen the power of shareholders against that of manager in order to mitigate conflicts of interest. At the same time, studies on bank governance (Ciancanelli and Reyes, 2001; Levine, 2004; Macey and O'Hara, 2003; Prowse, 1997) recognize the existence of difficulties, such as opacity or complexity and regulation, in banking governance.

The banking sector has been severely criticized for its role in the last financial crisis. The weak governance of banking establishments is frequently identified as being a major cause of this crisis. In the other hand, Banks are an indispensable engine of economic growth in most countries (Beck et al.,

2000; Beck and Levine, 2004). Banks tend to take risks, the greatest challenge faced by banks is a good risk taking. As well mentioned (Scialom, 2011, p. 182) "The preservation of financial stability is a public good". The prevention of banking crises has become a priority for academics and political decision-makers since bank failures generate financial losses for economic agents, but also a destabilization of the entire financial system through contagion mechanisms.

As Bernanke (1983), Calomiris and Mason (1997, 2003a, b), Keeley (1990) point out, the risk-taking behavior of banks impacts their financial and economic sensitivity and in particular their performance. In turn, international and national agencies come up with a set of regulations to analyze banking risk. Yet the researchers were unable to assess how bank governance mechanisms, such as the ownership structure, interact with national regulations to impact banks' risk-taking behavior.

Recall that classical agency theories suggest that the structure of ownership influences risk taking (Jensen and Meckling, 1976; John, Litov and Yeung, 2008).Also, various research concludes that failing banks are those that have accumulated non-performing credits and that credit risk is the main cause of bank failure (Thomson, 1991; Wallen, 1991; Cole and Gunther, 1995; Barnhill et al., 2002 Vazquez et al., 2012). This important literature was motivated by the considerable costs generated by banking crises on the various economic actors such as shareholders, depositors and the taxpayer.

This study focuses on listed banks operating in Mena Region in order to provide empirical evidence on the effects of corporate governance on risk taking and bank performance covering a period from 2015 to 2019. The rest of the paper is organized as follows: the following section provides a theoretical background and hypotheses development. The research methodology is provided in section 3, followed by data analysis in section 4; multiple regression are provided in section 5 and finally results and discussion in section 6.

2. Theoretical Background

Our work finds its theoretical foundation in these theories:

2.1. Bank Governance

The Basel Committee on banking supervision believes that bank governance is necessary to ensure the soundness of the financial system and the economic development of the country, drawing attention to study, understand and improve the governance of financial entities.

Banking governance has taken on the concerns of managers, shareholders, academics, professionals, governments and international organizations, particularly following numerous scandals, such as : Enron, Worldcom, Parlamat and Vivendi, which have shaken the economic world in recent years.

The debate on banking governance has continued to grow. The latter is of crucial importance for both developed and developing countries. The organization of power in the company is now considered an important determinant of the stability of capital markets, the dynamism of investment and economic growth.

According to La Porta et al. (2000) corporate governance is defined as the set of mechanisms by which external investors protect themselves against the risk of expropriation of internal investors (majority shareholders and managers).

According to another approach, governance is considered as a system aiming to delimit the manager's freedom of action and its leeway, in other words his discretionary space (Charreaux, 1997b).

Corporate governance refers to the establishment of certain binding mechanisms aimed at controlling and disciplining managers in order to protect the interests of all the company's stakeholders.

The main objective of corporate governance is to deal in the first place with the agency problems that arise from the separation between ownership and control.

As for the banking sector, banks are distinguished by certain intrinsic characteristics that make their governance more specific. The specificity of bank governance, compared to corporate governance, stems from the opacity of bank assets, bank indebtedness and the strong regulation of the banking sector that amplifies agency problems within banks *(Morgan, 2002; Levine, 2004*).

Shareholders will find it difficult to properly control the activities and decisions of the management team. In addition, creditors/depositors will also find it difficult to control the risk taken by shareholders and managers.

2.2. Risk Takig/Risk Management

A meta-analysis of 150 studies carried out on the behavior of individuals faced with taking risk shows that men are more likely to be involved in "risky experiences" than women (Byrnes et al, 1999), a result confirmed by Farell and Hersch (2005).
Wilson and Altanlar (2011) show that the proportion of female directors in the board members has a negative impact on the risk of insolvency. Adam and Funk (2012) within Swedish firms in 2005, show that female and male directors differ consistently in their core values and attitudes towards risk. The female members of the board of directors of Swedish firms are more inclined to risk than male administrators.

Sapienza, Zingales and Maestripieri (2009) find that women working in the financial sector are less averse to debt than women who works in other sectors.

Recently, Sila et al (2015) examine the effect of the presence of women among the members of the board of directors on the risk-taking of American firms during the period 1996-2010. They find that the number of female board members of directors has no effect on the risk taking of American companies measured by total risk and systemic risk. Hence a board of directors with a high proportion of female directors is neither more nor less risk averse than councils dominated by men.

2.3. Agency theory

Agency theory (**Jensen and Meckling, 1976**) has its origins in property rights theory (Furibotn and Pejovitch, 1972). As long as there is a separation between ownership and management/control, the owner only has the power to enjoy the income and disposal of the assets and delegates the power of use to the managers. .

The separation of ownership and control gave rise to an agency problem whereby management operates the company for its own benefit, not that of the shareholders (Jensen and Meckling, 1976; Fama and Jensen, 1983). This creates opportunities for managers to empire building and, in the extreme, for outright expropriation.

According to agency theory, the firm is a node of contracts (Jensen and Meckling, 1976). Each contracting party will tend to disregard the terms of the contract and seek to maximize its own utility. In addition, informational asymmetry makes contracts incomplete. The contractual relationship between owners and managers poses an agency problem, given the fact that each party seeks to

maximize its own utility and behaves opportunistically in a context of informational asymmetry. Managers can thus adopt opportunistic behavior that is detrimental to the interests of the owner.

The agency theory therefore offers a relevant reading of the issues of power within the company, particularly banks. It highlights control mechanisms intended to reduce agency conflicts, between owners and managers, resulting from the separation between ownership and control. These mechanisms constitute the banking governance system.

2.4. Ownership Structure

Ownership structure is considered to be one of the most important governance mechanisms to control agency problems. Several studies are focused on how insiders/individuals, state shares structure or Sovereign Wealth Fund, employee stock ownership plan (ESOP), institutional investors, corporations (private) and (public)… can affect a bank performance. An important dimension of the ownership structure is state or public ownership in relation to the private ownership structure. In particular, the study examines the impact of holding shares by different groups of shareholders on on bank performance.

A bank's ownership structure influences its performance for several reasons. Firstly, differences in ownership type identity, concentration, diversity, and resource endowments among shareholders determine their incentives and ability to monitor bank managers. Shareholdings by state owned structure (SOS), (ESOP) and sovereign wealth fund and private Corporations are typical examples of this phenomenon. Secondly, as shareholders have divergent interest, consequence they have different impacts on risk taking behavior. The relationship between the shareholder and management is complicated due to their interests are not aligned. The effect that ownership structure has on bank performance may be considered through the principal–agent framework (Altunbas et al., 2001).

2.5. Board members :

Agency theory asserts that the board of directors is the primary internal control mechanism. The board of directors provides services to the managers of a company to monitor the behavior of the managers.

Waldo (1985) and Fleischer et al. (1988) argue that the main tasks of a board of directors are:
(1) to monitor the behavior of management on behalf of the owners of the firm;
(2) formulating strategic decisions about business activities;
(3) detect managerial misconduct and remove the managers concerned.

Macey and O'Hara (2003) argue that two duties are incumbent on the board of directors of a company: the duty of care and the duty of loyalty. Even though banking institutions have the same responsibilities as non-banking enterprises, the boards of directors of banking institutions have additional responsibilities, which take the form of policies, laws and regulations. These additional responsibilities relate to the stability of banks.

The BCBS (1999) states that boards in the banking sector play a vital role in creating good corporate governance.

A larger board of directors facilitates the supervision of managers and brings in more human capital to advise them. However, boards with too many members pose problems of coordination, control and flexibility in decision-making. Large boards also give excessive control to the CEO, thereby undermining efficiency (Yermack, 1996; Eisenberg et al., 1998; Fernández et al., 1997). Therefore, the effect of board size on bank value is a trade-off between advantages (monitoring and advice) and

disadvantages (coordination, control and decision problems). The assumption is that such a trade-off will appear as a non-linear relationship between board size and bank value.

The literature also points out that, to preserve the effectiveness of supervision, it is not enough to appoint more directors. Additional directors, especially non-executives, should be equipped with the knowledge, incentives, and capabilities to monitor, discipline, and advise managers, to enable directors to reduce conflicts of interest between insiders and shareholders (Harris and Raviv, in press).

The corporate governance literature offers no conclusive evidence of the effect of appointing outside directors (Bhagat and Black, 2002; Hermalin and Weisbach, 1991; John and Senbet, 1998). On the one hand, an independent board has fewer conflicts of interest when overseeing managers. Thus, when the surveillance function predominates, we expect a positive link between the presence of independent and bank value. On the other hand, an excessive proportion of non-executive directors could undermine the advisory role of boards, as it would prevent bank managers from becoming board members. The inside directors add information to the board that it would be difficult to bring together outside directors. In addition, executive directors facilitate the transfer of information between board directors and management (Adams and Ferreira, 2007; Harris and Raviv, in press; Coles et al., 2008). We could therefore expect a negative link between the presence of independent directors and bank value. This indicates a trade-off between the pros and cons of the proportion of non-executive directors.

2.6. Performance : CAMELS APPROACH

1980 : The Uniform Financial Institution Rating system, commonly referred to the acronym CAMEL rating, was adopted by the Federal Financial Institution Examination Council on November 13 1979, and then adopted by the National Credit Union Administration in October 1987. It has proven to be ***an effective internal supervisory tool for evaluating the soundness of a financial firm, on the basis of identifying those institutions requiring special attention or concern***. (The United States. Uniform Financial Institutions Rating System 1997, p.1).

1999 : Nevertheless, Hirtle and Lopez (1999, p. 4) stress that the bank's CAMEL rating is highly confidential, and only exposed to the bank's senior management for the purpose of projecting the business strategies, and to appropriate supervisory staff. Its rating is never made publicly available, even on a lagged basis. CAMEL is an acronym for five components of bank safety and soundness: • Capital adequacy • Asset quality • Management quality • Earning ability • Liquidity

2002: Barr et al. (2002 p.19) states that "CAMEL rating has become a concise and indispensable tool for examiners and regulators". This rating ensures a bank's healthy conditions by reviewing different aspects of a bank based on variety of information sources such as financial statement, funding sources, macroeconomic data, budget and cash flow.

The main six criteria are :

- Capital adequacy: Solvency;
- Asset quality;
- Management quality;
- Earning ability;
- Liquidity position
- Sensitivity to market risk.

We exposed bellow different research of CAMELS APPROACH

Table 1: Reasearch of CAMELS APPROACH[1]:

Year	Autor	Objective	Ratios used	Approaches and methods used	Conclusions or results
2016	Tawfiq AhmadMoussa	Analyze the performance of three Islamic banks operating in Jordan over a period from 2010 to 2015 using the CAMELS approach.	**Capital adequacy:** Capital / Risk-weighted assets; **Asset quality =** Non-performing loans / total loans; **The quality of management:** (Salary + benefits) / Average assets; **The ability to make profits:** Net income / average assets and net income / equity; **Liquidity =** Total deposits / Total of the asset.	Quantitative approach;: Descriptive statistics.	Capital adequacy, asset quality and ability to earn profits are on the rise despite the economic downturn and regional instability**.**
2011	Dang Uyen	Determine whether the CAMEL model plays a crucial role for banking supervision and identify the advantages and disadvantages of the CAMEL system by studying the case of American International Assurance Vietnam (AIA).	**Capital adequacy:** [(Tier 1 capital – Goodwill) + Tier 2 funds] / Risk-weighted assets, with a criterion of ≥ 8%. Own funds / Total assets with a criterion ≥ 4 – 6% **Asset quality:** Non-performing loans / Total loans, with a criterion ≤1%; Non-performing loans / Total capital, with a criterion ≤ 1%; Provisions for loan losses / Total loans, with a criterion ≥ 1.5%; (shown in the balance sheet); Provisions for loan losses / Total loans, with a criterion ≥ 100%. **The quality of management:** Average growth rate of assets compared to GDP growth; Average growth rate of near to GDP growth; Average profit growth rate for a criterion ≥ 10 – 15%. **The ability to make profits:** Net interest income / average earning assets for a margin of 4.5%; (Operating expenses – loss provisions) / (interest income + non-interest income) for a margin ≤ 70%; Net interest income / growth rate of assets, for a margin >1% Net interest income / growth rate of shareholders' equity, for a margin > 15% **Liquidity:** Total deposits / total assets, for a margin > 75%; Total loans / total deposits, for a margin < 80%.	Qualitative approach by combining primary and secondary data.	The CAMEL system is a useful supervision tool due to its international standardization and its combination of on-site and off-site examinations.

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2017	Maryam binti Badrul Munir et Ummi Salwa AhmadBustamam	Analyze the performance and profitability of 19 banks (10 operating in Malaysia and 09 operating in Indonesia) through CAMEL ratios	**Capital adequacy:** Debt / equity; Non-performing loans **Asset quality:** ROA the quality of management: Expenses / products **The ability to make profits:** ROE **Liquidity:** debit interest / deposits	Descriptive statistics. Multiple linear regression method.	The evaluation by the CAMEL method can be used for purposes of measuring the financial performance of banks. There is a significant difference between Malaysian and Indonesian banks, especially in terms of the quality of management, the ability to make profits and in cash.
2015	Getahun Mulualem	Analyze the financial performance of 14 commercial banks in Ethiopia, using the CAMELS approach	**Capital adequacy:** capital / total assets. **Asset quality:** Allowance for bad debts / total loans. **The quality of management:** Other costs that interest / (net interest income + loan interest). **Profitability:** Net interest income / total interest income. **Liquidity:** Total loans/total deposits. (the last market sensitivity component was not measured due to lack of unavailability of data)	Use of panel data from 2010 to 2014; Quantitative approach; Multiple linear regression model; Performance was measured by ROA and ROE.	For ROA, quality of assets and quality of management have a significantly negative effect on ROA, while the ability to make profits and liquidity have a significantly positive effect, however, capital adequacy has no effect. As for ROE, capital adequacy and quality of management have a significantly negative effect and the ability to generate profits and liquidity have a positive effect and that the quality assets has no effect.
2012	Jha et Hui	Compare the financial performance of 18 banks in Nepal and identify determinants of performance by financial ratios based on the CAMEL method between 2005 and 2010.	**Capital adequacy :** (6% of capital + 10% of total capital) / risk-weighted assets. **Asset quality :** Non-performing loans / total loans. **Quality of management :** Interest charges / total loans. **Profitability :** Net interest income / total earning assets. **Liquidity:** Total loans / total deposits	Multivariate regression analysis model. Performance was measured by ROA and ROE.	Capital adequacy and quality of management have a negative impact on ROA. While the ability to make profits and liquidity did not have a significant impact on ROA. As for ROE, capital adequacy had a positive impact, while asset quality, liquidity and management quality had no impact. significant.
2011	Apostolos G. Christopoulos	Analyze the financial data of LEHMANE BROTHERS bank between 2003 to 2007 before declared bankruptcy using CAMELS ratios	**Capital adequacy:** [(Tier 1: ordinary and preferred shares + the bank's share in subsidiaries + convertible bonds) + Tier 2 (the capital derived from bonds issued by the bank in the long term)] / Risk-weighted assets; **Asset quality:** (Total non-performing loans > 90 days – provisions) / total loans; **The quality of management:** Management costs / sales; **Profitability:** ROA = net profit / total assets ROE = net profit / equity Liquidity: L1: Total loans / total deposits L2: Current assets / total assets **Sensitivity to market risk:** Total securities / total assets	The comparison of the different scores	**For capital adequacy < 8%:** insufficient capital left the bank unprotected against regular and exceptional risks. **The quality of assets:** the bank granted loans to insolvent customers is at high risk leading to an increase in non-performing loans. **The quality of management:** poor decisions in granting loans to disputed clients. **The ability to make profits:** the bank's profits were low and insufficient. **Liquidity:** The bank's liquidity status was poor relative to its liabilities. **Sensitivity to market risk:** As an investment bank, it was exposed to variations in interest rates, exchange rates, product purchases and very high selling prices. affecting these profits.

3. Research Methodology

3.1. The method

In order to test the hypotheses, quantitative method is used to mesure the effects of corporate governance mechanisms on bank performance.

- **Definition of hypotheses**: After our preliminary research / literature, the definition of the problematic, we formulated the hypotheses on the basis of a hypothetical-deductive approach, note that we have a modeling focused on a large number of variables of different types: descriptive, analytical, causal...

- **Determination of the variables**: We have established a table comprising the different variables including the measures relating to each one, Based on the selected hypotheses,

- Data collection: For the construction of the empirical part, we have started the collection of data which will allow us, after their exploitation, to provide answers/test our hypotheses. To do this, we relied on the S&P Capital IQ tool, **which is** the research division of **S&P** Global, one of the world's largest providers of ratings, data, research, and the **S&P** Dow Jones Indices.

3.2. Sampling

Our research aims to examine the relationship between governance mechanisms, risk taking and the performance of listed banks in MENA REGION. More specifically, we examined the effect of the characteristics of the board of directors (Board size, the presence of independent directors, number of committees, the ownership structure ….) on bank's financial performance, (ROA/ROE/Cash flows generated, market capitalization, capital adequacy….). The selected sample includes all listed banks based in the Mena region. The study covered 141 banks in 19 countries.

We found that there are countries with unlisted banks such as Algeria, IRAQ, Syria, Libya and Yemen. These countries are therefore excluded from our sample.

The choice of such a sample stems from the scarcity of scientific research carried out in the MENA region. At the beginning, we tried to select only Morocco. However, the listed banks in our country are only 6. The study will be more interesting if we if we expand the sample. And, since our research coincides with the current health crisis "COVID 19", we are interested in carrying out the same study according to the current context (a related scientific article will follow).

3.2.1. Hypotheses Development

H.1 There is a positive link between Ownership structure and Bank performance :
The presence of State, ESOP[2], and SWF[3] as a shareholders promotes Bank's performance.

H.2 Risk taking impact negatively Bank performance :
The risk-taking behavior of woman present on the board committee has a negative impact on Bank performance.

H.3 There is a positive Relationship between Board of Director & committees on Bank performance

[2] ESOP: Employee stock Ownership plan
[3] SWF : Sovering wealth Funds

The presence of independent directors and executive directors, the board size, the number of committees, positively impact bank performance;

3.2.2. Selected variables

We analyze the performance and soundness of 141 listed banks based in the Mena region over a period covering from 2015 to 2019 using the CAMELS approach. The Table 2 below presents the variables selected for our study:

Table 2: Selected variables

Dependent Variables		
Performance according to the camel approach	Capital adequacy	TCR
	Asset quality	ROA Nonperforming Loans / Total Assets % Nonperforming Loans / Total Loans % Nonperforming Assets / Total Assets %
	Management Quality	Total Revenue Annual Growth Rate Over Five Years Total Deposits Annual Growth Rate Over Five Years
	Earnings	ROE ROCE SVA EBT MARGIN NET INCOME MARGIN
	Liquidity	Net Loans / Total Deposits % Cash from Ops Cash from Investing Cash from Financing Net change Cash
	Sensitivity	Share price Share out Market Capitalization
Independent Variables		
Ownership structure	PAM : Présence d'actionnaire majoritaire; SOS: State Owned Shares; CORPRIV: Corporations (Private); CORP: Corporations (Public); INVINST: Institutions; INDINS: Individuals/Insiders POO : Public and other ESOP : Employee stock Ownership plan SWF: Sovering wealth Funds	PAM SOS COPRIV CORP INVINST INDINS POO
Risk taking	Présence des femmes	PRFM
Board members and Committes	PCAI: Independent Chairman of the board of directors, DI: Independent Director; DINE : Non Executif Independent Director; DNE: Non Executif Director, MSS : Shariaa Member; NC : Number of committee ; PCAUD : Audit Committee; PCC: Compensation Committee, PCN: Nomination committee	PCAI DI DINE DNE MSS NC PCAUD PCC PCN
Control Variables		
Bank Size : TCA		

4. Data analysis

4.1. Descriptive analysis

Table 4 presents the descriptive statistics corresponding to our study including the mechanism of Banking Governance, as well as the performance ratios.

Ownership structure

On average, 54% of the banks have a majority shareholder; 35% of the shares are held by "Public and Other", 19% by "Public corporation", 14% by "Private corporation", 10% by institutional investors and 7% by individuals/insiders as to the percentage owned by the state does not exceed 5.6 %.

Risk taking

We notice the presence of 3 women maximum on the Board of Directors. And, on average, 53% of women are present on the board members.

Board members and other committe

- 0 as a minimum of board size is explained by the fact that a few banks has a supervisory board.
- The maximum number of director's board is 18 members.

On average:

*8 members make up the board,

*Board members is composed of 3 independent directors (2 DI + 1 DINE);

*6 committees held per bank;

*Presence of 86% of audit committee, 79% of Remuneration Committee and 60% of Nomination Committee.

Table 3 : Descriptive statistics

Statistiques descriptives					
	N	Minimum	Maximum	Moyenne	Ecart type
Return on Assets %	141	0,0%	5,79%	1,39%	0,94%
Return on Equity %	141	0,0%	56,99%	11,88%	8,07%
Return on Common Equity %	141	0,0%	56,99%	11,80%	8,15%
Shareholders Value Added	138	0,00	4684,70	158,35	449,77
Net Interest Income / Total Revenue %	134	5,79%	543,21%	90,64%	51,46%
EBT Margin %	134	0,12%	213,33%	46,54%	23,14%
Net Income Margin%	141	0,00%	243,33%	38,98%	33,28%
Nonperforming Loans / Total Loans %	141	0,00%	48,68%	4,18%	5,65%
Nonperforming Loans / Total Assets %	141	0,00%	54,28%	2,67%	5,04%
Nonperforming Assets / Total Assets %	141	0,00%	58,70%	3,03%	5,64%
Net Loans / Total Deposits %	139	0,00%	986,22%	103,88%	108,35%
Total Capital Ratio %	140	0,00%	38,23%	12,45%	8,97%
Total Revenue	141	0,00%	37,47%	9,71%	8,82%
Total Deposits	139	0,00%	56,77%	9,36%	9,55%
Cash from Ops.	140	1,41	24 998,6	1 127,9	2 737,0
Cash from Investing	140	0,03	6 473,9	663,3	1 183,5
Cash from Finacing	140	3,50	29 648,8	1 614,2	3 400,7
Net Change in Cash	140	1,800	6 624,7	673,1	992,5
Share Price	139	0,00	156,0	5,9	16,4
Shares Out.	139	0,00	10 901,1	1 738,3	2 213,2
Market Capitalization	139	0,00	53 275,4	4 543,4	8 996,3
Majority shareholder	141	0	1	0,54	0,500
Institutions	140	0,00%	79,90%	10,29%	13,26%
Individuals/Insiders	139	0,00%	81,12%	7,03%	13,18%
State Owned Shares	139	0,00%	59,67%	5,58%	11,06%
Corporations (Public)	140	0,00%	99,88%	19,24%	28,75%
ESOP	139	0,00%	37,52%	0,62%	4,42%
Sovering wealth Funds (> 5% stake)	139	0,00%	75,29%	5,85%	13,54%
Corporations (Private)	140	0,00%	92,43%	13,71%	20,19%
VC/PE Firms (>5% stake)	140	0,00%	41,12%	2,40%	7,33%
Public and Other	139	0,00%	99,96%	35,70%	23,70%
Presence of women on board of directors	141	0	3	0,53	0,723
Board size	141	0	18	8,18	3,072
Independant chairman	141	0	2	0,15	0,377
Independant directors	141	0	6	1,74	1,810
Non executif independant directors	141	0	8	0,79	1,677
Non executif directors	141	0	9	1,16	1,970
Executif directors	141	0	12	3,62	3,023
Member of Shariah Supervisory Board	141	0	2	0,06	0,273
Number of committe	141	0	10	5,94	3,005
Audit committe	141	0	1	0,86	0,350
Compensation committe	141	0	1	0,78	0,416
Nomination committe	141	0	1	0,59	0,494
N valide (liste)	126				

4.2. Our model vs hypothesis: (ANOVA TEST)

Table 4: Our model and hypothesis/ ANOVA TEST

Principal hypothesis	Under assumption	CAMELS	Ratios	ANOVA TEST	
				H0 Rejected	H0 accepted
H1. The impact of ownership structure on bank performance ***H2 The impact of Risk taking on bank performance*** ***H3. The impact of Board members and committes on bank perfromance***	***H1.a*** *The impact of ownership structure on capital adequacy*	**C**	**TCR** The Total Capital Ratio (TCR) is defined as **TCR = Total Capital / Risk Weighted Assets**: Total Capital is the total of the Bank's eligible Capital and Reserves; Risk Weighted Assets are the credit institution's assets or off-balance sheet exposures weighted according to risk.	TCR	
	H2. a *The impact of the presence of women on capital adequacy*				
	H3.a *the impact of board members and other committees on capital adequacy*				TCR
	H1.b *The impact of ownership structure on the quality of assets.*	**A**	Return On assets Nonperforming Loans / Total Assets % Nonperforming Loans / Total Loans % Nonperforming Assets / Total Assets %	NPLL NPAA	ROA NPLA
	H2.b *The impact of the presence of women on the quality of assets.*				ROA NPLA NPLL NPAA
	H3.b *The impact of board members and other committees on the quality of assets.*			ROA	NPLA NPLL NPAA
	H1.c *The impact of ownership structure on the quality of management.*	**M**	Total revenue annual growth rate over five years Total deposits annual growth rate over five years		TR TD
	H2.c *The impact of the presence of women on the quality of management.*				
	H3.c *The impact of board members and other committees on the quality of management.*				
	H1.d *The impact of ownership structure on earnings.*	**E**	ROE ROCE SVA EBT MARGIN NET INCOME MARGIN	EBT MARGIN NIM	ROE ROCE SVA
	H2.d *The impact of the presence of women on earnings.*			NIM	ROE ROCE SVA EBT MARGIN
	H2.d *The impact of the presence of women on earnings.*				ROE ROCE SVA EBT MARGIN NIM
	H1.e *The impact of ownership structure on liquidity.*	**L**	Net Loans /Total Deposits % Cash from Ops Cash from Investing Cash from Financing Net change Cash	CFO CFI CFF	NLD NCC
	H2.e *The impact of the presence of women on liquidity.*				NLD CFO CFI CFF NCC
	H3.e *The impact of of board members and other committees on liquidity.*			CFI	NLD CFO CFF NCC
	H1.f *The impact of ownership structure on sensitivity.*		Share price	SO MC	SP
	H2.f *The impact of the presence of women*				

	on sensitivity.	S	Share out Market Capitalization	SO	SP MC
	H3.f *The impact of board members and other committees on sensitivity.*				

4.3. Multivariate test: Verification of the absence of Multicollinearity in regression analysis

By analyzing the correlation between the dependent and independent variables relating to the 3 hypotheses (Table n°4). We note that the correlation is significant at 1% and 5% level. The correlation coefficient between these variables generally does not exceed the limit value from which we assume the presence of a serious problem of multicollinearity, namely 0.8 (Kennedy, 2003).
The absence of perfect Multicollinearity is one of the conditions required to be able to estimate a linear model and, by extension, our multiple regression model.

Table 5. Pearson correlation

Pearson Correlation																															
	ROA	ROE	ROCE	SVA	NIIR	EBTM	NIM	NPLL	NPLA	NPAA	NLD	TCR	TR	TD	COP	COI	COF	NCC	SP	SO	MC	INVINST	INDINS	SOS	CORP	ESOP	F	CORPRIV	VSPEFIR	POO	PAM
ROA	1																														
ROE	,849**	1																													
ROCE	,837**	,977**	1																												
SVA	,270**	,223**	,183*	1																											
NIIR	-0,08	-0,03	0,016	0,027	1																										
EBTM	,601**	,632**	,624**	,177*	,352**	1																									
NIM	,448**	,310**	,323**	0,121	,495**	,739**	1																								
NPLL	0,161	,306**	,307**	0,007	0,106	0,052	-0,031	1																							
NPLA	,230**	,412**	,405**	-0,003	0,129	0,086	-0,049	,914**	1																						
NPAA	,219**	,392**	,388**	-0,004	0,165	0,071	0,038	,908**	,979**	1																					
NLD	0,011	-0,013	-0,011	-0,053	-0,074	-0,111	-0,093	0,051	0,04	0,037	1																				
TCR	,218**	0,022	-0,03	,168*	-0,005	,208*	0,144	,209*	0,154	0,155	0,135	1																			
TR	0,098	,231**	,233**	0,125	0,07	,203*	0,135	-,225**	-,199*	-,191*	-0,067	-,195*	1																		
TD	0,031	0,141	0,118	0,046	-0,169	-0,002	-0,011	-0,152	-0,126	-0,144	-0,06	-0,06	,721**	1																	
COP	0,013	0,012	0,012	0,137	0,035	0,12	0,105	-0,033	-0,022	-0,03	0,004	,213*	0,049	,182*	1																
COI	0,01	0,004	-0,034	,196*	0,009	0,116	0,061	-0,091	-0,075	-0,084	-0,058	,238**	-0,035	0,096	,449**	1															
COF	0,02	0,029	0,012	,179*	0,063	0,127	0,108	-0,035	-0,024	-0,033	-0,019	,227**	0,037	,187*	,922**	,562**	1														
NCC	0,044	-0,002	0,006	0,165	0,013	0,147	0,094	-0,093	-0,086	-0,094	-0,012	,205*	-0,039	0,035	,518**	,525**	,614**	1													
SP	-0,077	-0,021	-0,012	-0,028	-0,076	-0,061	-0,107	0,083	0,085	0,057	-0,03	-0,02	-0,12	-0,122	-0,028	-0,003	-0,019	0,019	1												
SO	0,155	0,062	0,028	,171*	0,091	,216*	,231**	0,049	0,082	0,077	0,142	,371**	-0,054	0,104	,503**	,442**	,582**	,538**	-0,159	1											
MC	0,154	0,094	0,065	,269**	0,009	,217*	0,153	-0,076	-0,053	-0,069	-0,009	,245**	-0,039	0,03	,657**	,540**	,697**	,658**	,259**	,598**	1										
INVINST	-,222**	-0,149	-0,145	-0,062	-,184*	-0,159	-,214*	-0,158	-0,124	-0,139	-0,048	-,167*	0,103	0,12	-0,02	0,13	-0,04	0,011	0,09	-0,054	-0,027	1									
INDINS	-0,149	-0,123	-0,118	-0,097	0,049	-0,123	-0,135	-0,104	-0,096	-0,077	-0,058	-0,166	-0,033	-0,033	-0,119	-,189*	-0,143	-0,147	-0,052	-,227**	-,196*	-0,033	1								
SOS	0,114	0,065	0,054	-0,046	-0,046	0,025	-0,032	,235**	,314**	,295**	-0,068	,252**	-,215*	-0,126	-0,003	-0,069	-0,005	0,005	-0,124	0,113	-0,053	-0,126	-0,049	1						
CORP	-0,013	0,05	0,038	0,107	-0,086	-0,161	-0,108	0,102	0,048	0,023	0,042	-0,127	0,061	0,08	-0,125	-,186*	-0,142	-0,107	-0,015	-0,061	-0,116	-0,109	-,232**	-,186*	1						
ESOP	0,051	0,165	0,16	-0,024	,189*	,382**	,179*	0,068	0,063	0,047	-0,009	-0,052	0,076	0,098	0,06	0,072	0,12	0,072	-0,044	0,07	-0,027	-0,037	-0,07	0,002	-0,033	1					
F	0,065	0,028	-0,013	0,154	0,032	,189*	0,159	-0,015	-0,01	-0,019	0,045	,264**	-0,001	0,137	,468**	,491**	,578**	,259**	-0,054	,453**	,427**	-0,152	-0,156	0,093	-,225**	0,072	1				
CORPRIV	-0,094	-0,067	-0,035	-0,124	0,108	-0,073	-0,071	-0,018	-0,039	-0,035	-0,097	-0,052	-0,004	0,023	-0,152	-0,158	-0,157	-0,137	,264**	-,322**	-0,134	-0,103	0,085	-0,069	-,322**	-0,088	-,226**	1			
VSPEFIR	-0,004	-0,041	-0,064	-0,03	0	0,051	0,128	-0,009	-0,003	0,027	0,104	0,117	-0,067	-0,071	-0,066	-0,079	-0,082	-0,002	-0,092	0,077	-0,076	0,008	0,006	-0,097	-0,113	-0,046	-0,081	-0,093	1		
POO	,213*	0,094	0,098	0,011	0,011	0,157	,188*	-0,122	-0,067	-0,039	0,073	0,08	-0,025	-0,129	0,094	0,157	0,083	0,162	-0,105	,205*	,193*	-0,123	-,173*	-0,064	-,477**	-0,034	0,05	-,237**	0,005	1	
PAM	0,003	0,05	0,072	0,091	-0,02	-0,103	-0,024	0,093	0,082	0,084	,180*	-0,07	0,089	-0,008	-0,066	0,061	-0,088	-0,006	0,142	0,044	0,016	-0,058	-0,166	-0,154	0,133	-0,15	-0,003	-0,027	-,243**	,216*	1
*The correlation is significant at the 1% level (two-sided).																															
**The correlation is significant at the 5% level (two-sided).																															

Table 6 : Listing of significantly relevant correlations

H.1

ARSON CORRELATON		CAMELS APPROACH/ Performance : Dependent Variables																			
CAMELS		C	A				M		E					L					S		
Key Indicators		TCR	ROA	NPLL	NPLA	NPAA	TR	TD	ROE	ROCE	SVA	EBTM	NIM	NLD	COP	COI	COF	NCC	SO	SP	MC
Ownership Structure	PAM	-0,07	0,003	0,093	0,082	0,084	0,089	-0,008	0,05	0,072	0,091	-0,02	-0,1	,180*	-0,07	0,061	-0,088	-0,01	0,142	0,044	0,016
	SOS	,252**	0,114	,235**	,314**	,295**	-,215*	-0,126	0,065	0,054	-0,05	0,025	-0,03	-0,07	-0	-0,07	-0,005	0,005	0,113	-0,12	-0,05
	CORPRIV	-0,052	-0,094	-0,02	-0,04	-0,04	-0	0,023	-0,07	-0,04	-0,12	-0,07	-0,07	-0,1	-0,15	-0,16	-0,157	-0,14	-,322**	,264**	-0,13
	CORP	-0,127	-0,013	0,102	0,048	0,023	0,061	0,08	0,05	0,038	0,107	-0,16	-0,11	0,042	-0,13	-,186*	-0,142	-0,11	-0,06	-0,02	-0,12
	INVINST	-,167*	-,222**	-0,16	-0,12	-0,14	0,103	0,12	-0,15	-0,15	-0,06	-0,16	-,214*	-0,05	-0,02	0,13	-0,04	0,011	-0,05	0,09	-0,03
	INDINS	-0,166	-0,149	-0,1	-0,1	-0,08	-0,03	-0,033	-0,12	-0,12	-0,1	-0,12	-0,14	-0,06	-0,12	-,189*	-0,143	-0,15	-,227**	-0,05	-,196*

PAM : Présence d'actionnaire majoritaire; **SOS:** State Owned Shares; **CORPRIV:** Corporations Private); **COR P:** Corporations Public); **INVINST** : Institutions; **INDINS** : Individuals/Insiders

H2.

PEARSON CORRELATON	CAMEL APPROACH / Performance: Dependent Variables																			
CAMELS	C	A				M		E					L					S		
Key Indicators	TCR	ROA	NPLL	NPLA	NPAA	TR	TD	ROE	ROCE	SVA	EBTM	NIM	NLD	COP	COI	COF	NCC	SO	SP	MC
PFEM	-,221**	-0,125	-0,022	-0,042	-0,056	0,123	0,162	0,054	0,048	0,004	-0,101	-0,082	-0,044	-0,164	-0,102	-0,16	-0,131	0,088	-,218**	-0,122

PFEM Présence de Femmes

H3.

SON CORRELATON	CAMEL APPROACH / Performance: Dependent Variables																			
CAMELS	C	A				M		E					L					S		
Key Indicators	TCR	ROA	NPLL	NPLA	NPAA	TR	TD	ROE	ROCE	SVA	EBTM	NIM	NLD	COP	COI	COF	NCC	SO	SP	MC
TCA	-0,02	-0,12	-0,13	-0,11	-0,08	-0	0,115	-0,09	-0,09	-0,08	0,025	0,072	-0,04	0,143	,192*	,221**	0,151	0,142	-0,07	0,144
PCAI	0,079	-0,06	-0,02	-0,04	-0,04	-0,05	0,09	-0,09	-0,11	0,021	-0,01	-0,03	0,117	0,115	,250**	0,129	0,11	,215*	-0,1	0,104
DI	-0,04	-,230**	-0,1	-0,13	-0,13	-0,07	-0,07	-0,16	-0,14	-0,07	0,004	-0,06	-0,07	-0,03	,224**	0,003	0,162	-0,09	0,153	0,125
DINE	0,136	0,019	0,067	0,006	0,055	-0,06	-0,08	-0,04	-0,05	-0,04	0,037	0,081	0,039	-0,04	-0,01	-0,03	-0,05	0,036	-0,12	-0,04
DNE	0,008	0,047	-0,07	-0,07	-0,05	0,085	0,003	0,062	0,036	0,062	0,112	0,086	-0,13	-0,05	-0,08	-0,07	-0,04	-0,08	0,142	0,019
DE	-0,06	-0,05	0,002	0,024	0,008	-0,03	0,124	-0,05	-0,06	-0,09	-0,11	-0,11	0,088	0,105	0,03	0,134	-0,02	0,072	-0,1	-0,02
MSS	-0,03	-0,01	0,1	0,033	0,031	-0,04	-0,01	0,052	0,032	-0	-0,01	-0,1	0,125	-0,08	-0,07	-0,08	-0,08	-0	-0,08	-0,09
NC	0,109	-,202*	-0,07	-0,13	-0,11	-0,09	-0,12	-,238**	-,240**	-0,04	-0,08	-0,01	0,162	0,131	0	0,108	0,126	0,019	0,048	0,155
PCAUD	-0,01	-,282**	-0,08	-0,16	-0,14	-0,07	-0,12	-,232**	-,238**	0,063	-0,08	-0,1	0,073	0,091	0,078	0,087	0,139	-0,11	0,079	0,067
PCC	0,042	-,247**	-0,08	-0,14	-0,13	-0,13	-0,12	-,249**	-,240**	-0,11	-0,17	-0,1	0,05	0,127	0,065	0,13	0,142	-0,04	0,104	0,1
PCN	0,055	-0,06	-0,06	-0,11	-0,09	-0,04	-0,12	-0,14	-0,12	-0,05	-0,01	0,032	0,152	0,053	-0,13	-0,01	0,05	-0,06	0,123	0,12

TCA: Board Size, PCAI: Independent Chairman of the board of directors, DI: Independent Director; DINE: Non Executif Independent Director; DNE: Non Executif Director, MSS: Shariaa Member; NC: Number of committee; PCAUD: Audit Committee; PCC: Compensation Committee, PCN: Nomination committee

5. Multiple Regression

Step 1: Evaluation of the relevance of the regression model -ANOVA-

Before starting to examine the results, it is important to check whether the chosen model with predictor (Independent variable) significantly explains our dependent variables. However, we must formulate a null hypothesis if there is no relationship between our variables to be explained and the independent variables chosen. This was confirmed and invalidated through the analysis of the ANOVA tables (*Cf. Table n° 2*).

Step 2. Assessing the Fit of Regression Models

To determine the fit of the model to the data, we should take account of the goodness-of-fit Test.

S

Assess the model's ability to describe the response.

S is measured in units of the response variable and represents the distance between the data values and the fitted values. The smaller S, the better the model describes the response. However, a low value of S does not by itself indicate that the model meets the model assumptions. We should examine the residual value plots to verify the assumptions.

R squared

R2 represents the percentage of response variation explained by the model. The higher the R2 value, the better the model fits your data. R2 is always between 0 and 100%. A high value of R2 does not indicate that the model verifies the assumptions. We should examine the residual value plots to verify the assumptions.

R squared (prev)

The predicted R2 value helps determine your model's ability to predict the response for new observations. Models with high predicted R2 values have better predictive ability.

A predicted R2 value significantly lower than R2 may be a sign of model overfitting. A model is said to be overfitted when it includes terms for effects that are not significant in the population. The model is then specially fitted to the sample data, but may not be useful for making predictions about the entire population.

Predicted R2 may also be more useful than Adjusted R2 for comparing models because it is calculated with observations that are not included in the model calculation.

Step 3: Evaluate model parameters

We evaluate the parameters of the regression equation used, constructed through the unstandardized B coefficients. These step is favorable to us in our case of multiple regression, because they make it possible to determine which of the independent variables contribute significantly to the chosen model. As for the standardized beta coefficients, they inform us about the direction of the relationship (positive or negative) between each predictor and the variables to be explained, as well as their weight in the model.

6. Results & discussion

H1. Impact of Ownership Structure on Bank performance using CAMELS approach

H1.a) Impact of Ownership Structure on Capital adequacy

ANOVA MODEL

- The values of F calculated are significant at p (1%) < α (5%);
- We can therefore reject the null hypothesis stated above and retain the alternative hypothesis of the existence of a statistically significant relationship between our explanatory variables and our variables to be explained.

ANOVA

Modèle		Somme des carrés	ddl	Carré moyen	F	Sig.
1	Régression	1906,207	9	211,801	2,992	0,003
	de Student	8849,798	125	70,798		
	Total	10756,005	134			

Chi-Square Goodness-of-Fit Test

According to the results presented above the values of R explaining the intensity of the relationship between predictors are 0.42 which is the multiple correlation for the TCR.
We can therefore say that the independent variables chosen explain 42% of the TCR of banks listed in the Mena region.

Récapitulatif des modèles

Modèle	R	R-deux	R-deux ajusté	Erreur standard de l'estimation
1	0,421	0,177	0,118	8,41418%

Multiple Regression Analysis

Coefficients

Modèle		Coefficients non standardisés B	Erreur standard	Coefficients standardisés Bêta	t	Sig.
1	(Constante)	10,207	8,409		1,214	0,227
	INVINST	-0,055	0,098	-0,082	-0,563	0,574
	INDINS	-0,072	0,100	-0,105	-0,721	0,472
	SOS	0,224	0,110	0,249	2,033	0,044
	CORP	0,001	0,087	0,004	0,015	0,988
	ESOP	-0,140	0,182	-0,070	-0,771	0,442
	F	0,166	0,100	0,250	1,663	0,099
	CORPRIV	0,017	0,090	0,039	0,191	0,849
	VSPEFIR	0,196	0,129	0,163	1,525	0,130
	POO	0,017	0,087	0,043	0,191	0,849

We note that in our model, only the independent variable "State Owned Shares" is significant and contribute relevantly to the explanation of the level of overall banking performance specially its solvency (capital adequacy).

The equation is then declined as follows:

CAR= 10,2 - 0,055 INVINST - 0,072 INDINS + 0,224 SOS- 0.001 CORP- 0,14 ESOP+0,16 F+0,017 CORPRIV+0,196 VC+0,017 POO.

Among the regulations imposed on banks, capital regulation is the most prominent regulation and highly associated with risk taking incentives (Santos, 2000). Ciancanelli and Gonzalez (2000) argue that higher capital requirements avoid expropriation problems between shareholders and bank creditors. Capital requirements reduce incentives for high risk taking in banking as shareholders are forced to absorb a larger part of the losses (La Porta, Silanes and Shleifer, 1999; Rime, 2001).

The results show that the most significant variable of ownership structure, that impacts the capital adequacy of banks in the region, is the state owned shares which promotes compliance with the Basel ratio. However, companies owned by the government may not be managed efficiently because the board of directors and the management does not hold any shares in the company. Then, company's performance will be affected (Megginson, et al, 1994; Megginson and Netter, 2001). Agency problems in the context of government ownership is more complicated because the government led by politicians who do not have any ownership in these companies, they probably will not be monitoring the actions of the board of directors or management. In addition, the objectives of the politicians who led a government may differ from an individual who has a business.

La Porta, Silanes and Shleifer (2002); Barth, Caprio and Levine (2004) argue that government-owned banks are highly associated with inefficiency and low performance. Even if state-owned banks have only the same vulnerability as privately-owned banks, state-owned banks may be more exposed to solvency-threatening losses, this explain the importance of capital adequacy relating to the state ownership. indeed, the state shareholder tends to strengthen its capital in order to compensate losses.

In addition to this, La Porta, Lopez de Silanes, and Shleifer (2002) find only a weak relationship between the level of government ownership of the banking system and measures of financial instability in their examination of 92 countries. They hypothesize that this "may be because such factors as the general interventionist stance of the government, its efficiency and the security of

property rights may be more important correlates of government bank ownership than are the assorted crises." Their findings indicate that countries with higher levels of government ownership of the banking system "are more backward and statist. They are poorer and have more interventionist and inefficient governments, and less secure property rights. Countries with less developed financial systems also seem to have higher government ownership of banks." Nevertheless, we found that the first 3 banks owned by the state ranked according to the TCR ratio are based in the most developed countries of the selected sample wish are rich such as UAE and Turkey.

TOP 3		% SOS
UAE	**NATIONAL BANK OF OUM AL-QAIWAIN**	30%
Bahrein	**National Bank of Bahrain BSC**	10%
TURKEY	**TURKIYE VAKIFLAR BANKASI**	37%

H1.b) *Impact of Ownership Structure on Asset Quality*

- **Non performing loans/ Total Loans**

ANOVA

Modèle		Somme des carrés	ddl	Carré moyen	F	Sig.
1	Régression	599,970	9	66,663	2,188	0,027
	de Student	3839,149	126	30,469		
	Total	4439,119	135			

Modèle	R	R-deux	R-deux ajusté	Erreur standard de l'estimation
1	0,368	0,135	0,073	5,51991%

Coefficients

Modèle		Coefficients non standardisés		Coefficients standardisés		
		B	Erreur standard	Bêta	t	Sig.
1	(Constante)	11,014	5,517		1,997	0,048
	INVINST	-0,120	0,064	-0,276	-1,864	0,065
	INDINS	-0,102	0,065	-0,230	-1,550	0,124
	SOS	0,093	0,072	0,162	1,293	0,198
	CORP	-0,049	0,057	-0,245	-0,855	0,394
	ESOP	0,015	0,119	0,012	0,124	0,901
	F	-0,077	0,065	-0,181	-1,175	0,242
	CORPRIV	-0,063	0,059	-0,225	-1,067	0,288
	VSPEFIR	-0,036	0,084	-0,046	-0,421	0,674
	POO	-0,086	0,057	-0,353	-1,501	0,136

- **Non performing Assets/Total Assets**

ANOVA

Modèle		Somme des carrés	ddl	Carré moyen	F	Sig.
1	Régression	628,788	9	69,865	2,306	0,020
	de Student	3817,545	126	30,298		
	Total	4446,333	135			

Récapitulatif des modèles

Modèle	R	R-deux	R-deux ajusté	Erreur standard de l'estimation
1	0,376	0,141	0,080	5,50436%

Coefficients

Modèle		Coefficients non standardisés		Coefficients standardisés		
		B	Erreur standard	Bêta	t	Sig.
1	(Constante)	4,841	5,501		0,880	0,381
	INVINST	-0,067	0,064	-0,154	-1,045	0,298
	INDINS	-0,047	0,065	-0,107	-0,722	0,472
	SOS	0,175	0,072	0,303	2,432	0,016
	CORP	-0,013	0,057	-0,066	-0,232	0,817
	ESOP	0,034	0,119	0,027	0,290	0,773
	F	-0,039	0,065	-0,093	-0,606	0,546
	CORPRIV	-0,025	0,059	-0,089	-0,422	0,674
	VSPEFIR	0,033	0,084	0,043	0,392	0,696
	POO	-0,027	0,057	-0,110	-0,471	0,639

After analyzing the results relating to the impact of ownership structure on asset quality, we conclude that the ratio non-performing Assets/Assets increase with the state owned shares, and the presence of institutional investors favors the control of non-performing loans.

Reporting that Micco et al. (2004), examining 50000 financial institutions with different ownership types covering 119 countries, conclude that NPLs tend to be higher for banks with government ownership than for other groups. This is explained by the development mandate given to government-owned banks in developing economies. Hu et al. (2004) examining a panel of Taiwanese banks find a positive correlation between capital share owned by the government and the level of NPLs.
Government acquired control of banks in order to finance projects that would not get privately financed, provide employment, … Gursoy and Aydogan (2002) found that government ownership increase bank risks, while Fan and Wiwattanakantang (2005) and Micco, Panizza and Yanez (2007) found a positive relationship between government ownership and non-performing loans which is an important contributor to risk.

The results of current study don't reject the traditional view of (Berger et al. 2005 and Iannota et al. 2007) who associated high NPLs/NPA with government owned banks and who also decided that privately owned banks are more profitable than government owned and mutual banks. They found that publicly owned banks has the highest NPLs and bad loan quality. Furthermore, Micco et al. (2007)

have found that privately owned banks has the better performance than all other government owned banks in developing countries. They also find that the government owned banks have higher costs and lower profitability as compared to the private banks, whereas opposite is the case for foreign owned banks.

H1.c) ***Impact of Ownership Structure on Management Quality***

- **Growth over 5 years (until 2019) of Total revenue and total deposit:**

After carrying out the Anova test, we find that the 2 ratios, i.e. the growth of total revenue and total deposits in 5 years since 2019, are not significant, indeed p>5%.

H1.d) ***Impact of Ownership Structure on Earning Ability***

- **EBIT MARGIN**

ANOVA

Modèle		Somme des carrés	ddl	Carré moyen	F	Sig.
1	Régression	16245,812	9	1805,090	4,084	0,000
	de Student	52598,455	119	442,004		
	Total	68844,267	128			

Récapitulatif des modèles

Modèle	R	R-deux	R-deux ajusté	Erreur standard de l'estimation
1	0,486	0,236	0,178	21,0239%

Coefficients

Modèle		Coefficients non standardisés		Coefficients standardisés		
		B	Erreur standard	Bêta	t	Sig.
1	(Constante)	76,910	21,011		3,660	0,000
	INVINST	-0,502	0,246	-0,290	-2,044	0,043
	INDINS	-0,480	0,250	-0,274	-1,920	0,057
	SOS	-0,282	0,286	-0,114	-0,987	0,326
	CORP	-0,389	0,218	-0,489	-1,790	0,076
	ESOP	1,535	0,455	0,303	3,375	0,001
	F	-0,117	0,249	-0,070	-0,471	0,638
	CORPRIV	-0,345	0,226	-0,308	-1,526	0,130
	VSPEFIR	-0,130	0,322	-0,042	-0,403	0,688
	POO	-0,230	0,218	-0,236	-1,054	0,294

The result of regression method above, shows that the independent variable ESOP (Employee stock Ownership plan) have significant effect on EBIT MARGIN. These results indicate that this variable plays a significant role in increasing EBT MARGIN in banks MENA REGION (listed one).

When ESOPs are introduced or not, they do not seem to have the same significant effects. Sutherland et al. (2012) in Sunarsih & Dewi, (2018) state that ESOP is a form of compensation given to employees, especially executive employees.

However, the result reject the research conducted by Sunarsih & Dewi (2018), which shows the number of employee stock options (ESOP) have a negative effect on the performance of the company. It indicates that the large or small number of employee stock options (ESOPs) provided by the company has not been able to motivate employees to perform better.

Quarrey & Rosen (1987), General Accounting Office (GAO) (1987), Winther & al. (NCEO, 1989) carried out a longitudinal study over 10 years, comparing results before and after ESOP implementation. They observed major disparities depending on the intensity and vigor of participative practices. The above researchers have divided companies into three groups, by order of descending participation. For the first group, the productivity gain varies from 8% to 11%. For the second group, there is no gain, and for the third there is a loss. This phenomenon could be explained by the lack of trust among employees, when they perceive any manipulation behind ESOPs.

Other resarch shows that the different goals and objectives of managers and shareholders as suggested by agency theory, creates agency problem where managers may not act in the best interest of the shareholders. One way to align the interests of the managers with those of the shareholders is by allowing top management or inside directors to hold shares in the company. As shareholding of managers in a company increased, there is an incentive for them to align their interests with those of the shareholders (Jensen and Meckling, 1976).

- **NET INCOME MARGIN**

ANOVA

Modèle		Somme des carrés	ddl	Carré moyen	F	Sig.
1	Régression	24282,295	9	2698,033	2,639	0,008
	de Student	128806,453	126	1022,273		
	Total	153088,749	135			

Récapitulatif des modèles

Modèle	R	R-deux	R-deux ajusté	Erreur standard de l'estimation
1	0,398	0,159	0,099	31,97301%

Coefficients

Modèle		Coefficients non standardisés		Coefficients standardisés		
		B	Erreur standard	Bêta	t	Sig.
1	(Constante)	83,775	31,954		2,622	0,010
	INVINST	-0,924	0,373	-0,362	-2,478	0,015
	INDINS	-0,735	0,379	-0,284	-1,939	0,055
	SOS	-0,619	0,418	-0,183	-1,481	0,141
	CORP	-0,520	0,330	-0,445	-1,575	0,118
	ESOP	0,800	0,692	0,106	1,156	0,250
	F	-0,202	0,378	-0,081	-0,535	0,594
	CORPRIV	-0,493	0,343	-0,298	-1,437	0,153
	VSPEFIR	0,143	0,488	0,032	0,293	0,770
	POO	-0,283	0,331	-0,198	-0,855	0,394

Institutional investors hold on average only 10% of the shares in our sample. The result of the multiple regression shows that this type of shareholder should hold more shares in order to increase the profitability of banks, in particular NET INCOME MARGIN. This confirm that insititutional investors

ownership will encourage more effective supervision because institutions are professionals who can evaluate bank performance.

Institutional ownership is one tool that can be used to reduce agency conflict. Institutional ownership can control management through the monitoring process effectively. The high number of institutional ownership shares will lead to greater supervision efforts by institutional investors so that it can prevent opportunistic behaviour by managers and can minimize the level of fraud committed by management which will reduce company performance (Pualam, 2015).

Neverthless, large shareholding of institutional ownership might induce self interest behavior, whereby controlling shareholders tend to use bank resources to finance their own businesses or related businesses. Mikkelson and Ruback (1991) indicate that institutional investors tend to promote shareholder-driven corporate strategies, which is enlarging their benefits even though it means transferring risks to the creditors. Wright et al. (1996) found that institutional ownership increase bank risk taking. They argue that institutional owners increased firm value through the promotion of high risk taking activities such as investing in a high risk project.

H1.e) *Impact of Ownership Structure on Liquidity*

- **Cash flow from operating**

ANOVA

Modèle		Somme des carrés	ddl	Carré moyen	F	Sig.
1	Régression	250214353,975	9	27801594,886	4,417	0,000
	de Student	786791398,252	125	6294331,186		
	Total	1037005752,227	134			

Récapitulatif des modèles

Modèle	R	R-deux	R-deux ajusté	Erreur standard de l'estimation
1	0,491	0,241	0,187	2508,850570682980000

Coefficients

Modèle		Coefficients non standardisés B	Coefficients non standardisés Erreur standard	Coefficients standardisés Bêta	t	Sig.
1	(Constante)	443,830	2507,337		0,177	0,860
	INVINST	12,418	29,254	0,059	0,424	0,672
	INDINS	-7,675	29,798	-0,036	-0,258	0,797
	SOS	0,331	32,801	0,001	0,010	0,992
	CORP	-1,297	25,932	-0,013	-0,050	0,960
	ESOP	13,114	54,264	0,021	0,242	0,809
	F	94,654	29,660	0,461	3,191	0,002
	CORPRIV	-5,832	26,980	-0,042	-0,216	0,829
	VSPEFIR	-13,396	38,312	-0,036	-0,350	0,727
	POO	6,216	25,938	0,053	0,240	0,811

- **Cash flow from investing**

ANOVA

Modèle	Somme des carrés	ddl	Carré moyen	F	Sig.

1	Régression	65437644,517	9	7270849,391	7,136	0,000
	de Student	127353736,001	125	1018829,888		
	Total	192791380,518	134			

Récapitulatif des modèles

Modèle	R	R-deux	R-deux ajusté	Erreur standard de l'estimation
1	0,583	0,339	0,292	1009,371035847290000

Coefficients

Modèle		Coefficients non standardisés B	Coefficients non standardisés Erreur standard	Coefficients standardisés Bêta	t	Sig.
1	(Constante)	76,615	1008,762		0,076	0,940
	INVINST	21,144	11,770	0,233	1,797	0,075
	INDINS	-6,870	11,989	-0,074	-0,573	0,568
	SOS	-6,964	13,197	-0,058	-0,528	0,599
	CORP	-0,641	10,433	-0,015	-0,061	0,951
	ESOP	10,374	21,832	0,039	0,475	0,635
	F	44,846	11,933	0,507	3,758	0,000
	CORPRIV	-0,283	10,855	-0,005	-0,026	0,979
	VSPEFIR	-8,743	15,414	-0,054	-0,567	0,572
	POO	6,799	10,435	0,134	0,652	0,516

➢ Cash flow from financing

ANOVA

Modèle		Somme des carrés	ddl	Carré moyen	F	Sig.
1	Régression	579887279,809	9	64431919,979	7,908	0,000
	de Student	1018413437,864	125	8147307,503		
	Total	1598300717,673	134			

Récapitulatif des modèles

Modèle	R	R-deux	R-deux ajusté	Erreur standard de l'estimation
1	0,602	0,363	0,317	2854,348875472330000

Coefficients

Modèle		Coefficients non standardisés B	Coefficients non standardisés Erreur standard	Coefficients standardisés Bêta	t	Sig.
1	(Constante)	599,380	2852,627		0,210	0,834
	INVINST	15,876	33,283	0,061	0,477	0,634
	INDINS	-10,385	33,902	-0,039	-0,306	0,760
	SOS	-4,125	37,318	-0,012	-0,111	0,912
	CORP	-0,949	29,503	-0,008	-0,032	0,974
	ESOP	56,618	61,737	0,073	0,917	0,361
	F	146,538	33,745	0,575	4,343	0,000
	CORPRIV	-3,467	30,695	-0,020	-0,113	0,910
	VSPEFIR	-19,575	43,588	-0,042	-0,449	0,654
	POO	5,845	29,510	0,040	0,198	0,843

The results of the multiple regression relating to the variable "Sovereign wealth funds (K>5%) vs the liquidity ratios of banks, in particular cash flow from operating, cash flow from investing and cash flow from financing, demonstrates a strong and positive correlation between the 2 types of variables.

During the 2000s, we note a rise in power of sovereign wealth funds which was alternatively perceived as a form of threat to the national sovereignty of host countries, due to the lack of transparency of these funds and their supposed ambition to invest in strategic sectors, then as an element favorable to international financial stability, and an important vehicle for financing the economies of industrialized countries. A consensus now seems to exist to recognize the positive role of these funds. At the onset of the financial crisis, their equity investments in Western banks were even hailed as a bailout of the global financial system, leading some observers to argue that "sovereign wealth funds play a fundamentally stabilizing role within the system. international financial institution and this finding is clearly verified in the current liquidity crisis" (Senate Finance Committee (2008), p. 11).

For macroeconomic and financial reasons, sovereign wealth funds represent medium, long and even very long-term investors. They favor so-called buy and hold strategies, and therefore a low rotation of assets in their portfolios, accompanied by a reasonable profitability requirement, a priori stabilizing for the system. Their stabilizing role is no longer to be demonstrated. They had, in fact, to intervene as a financier of last resort by making massive injections of liquidity into a banking sector hit hard by the subprime crisis.

Generally speaking, it is better for a company to have a sovereign wealth fund in its capital than not at all; this presence providing it with deep liquidity and offering it a gateway and therefore the possibility of developing in the territory from which the fund originates. Thus, American banks that have opened their capital to Chinese sovereign wealth funds have been able to increase their activities in China. On the other hand, those already present in this country and which do not house any Chinese sovereign wealth fund have had to revise their ambition to conquer this market downwards.

H1.f) ***Impact of Ownership Structure on*** **Sensitivity to market risk.**

- **Share Outsiders**

ANOVA

Modèle		Somme des carrés	ddl	Carré moyen	F	Sig.
1	Régression	181985192,150	9	20220576,906	5,903	0,000
	de Student	424771957,959	124	3425580,306		
	Total	606757150,109	133			

Récapitulatif des modèles

Modèle	R	R-deux	R-deux ajusté	Erreur standard de l'estimation
1	0,548	0,300	0,249	1850,832327932

Coefficients

Modèle		Coefficients non standardisés		Coefficients standardisés		
		B	Erreur standard	Bêta	t	Sig.
1	(Constante)	138,909	1849,716		0,075	0,940
	INVINST	13,973	21,583	0,087	0,647	0,519
	INDINS	-11,894	21,983	-0,072	-0,541	0,589
	SOS	17,995	24,331	0,083	0,740	0,461

	CORP	12,375	19,131	0,168	0,647	0,519
	ESOP	22,587	40,034	0,048	0,564	0,574
	F	72,163	21,892	0,459	3,296	0,001
	CORPRIV	-8,665	19,906	-0,082	-0,435	0,664
	VSPEFIR	34,640	28,268	0,121	1,225	0,223
	POO	21,237	19,138	0,236	1,110	0,269

- **Market capitalization**

ANOVA

Modèle		Somme des carrés	ddl	Carré moyen	F	Sig.
1	Régression	2683399297,506	9	298155477,501	4,396	0,000
	de Student	8409469108,069	124	67818299,259		
	Total	11092868405,574	133			

Récapitulatif des modèles

Modèle	R	R-deux	R-deux ajusté	Erreur standard de l'estimation
1	0,492	0,242	0,187	8235,186655967170000

Coefficients

		Coefficients non standardisés		Coefficients standardisés		
Modèle		B	Erreur standard	Bêta	t	Sig.
1	(Constante)	-359,328	8230,221		-0,044	0,965
	INVINST	57,563	96,032	0,084	0,599	0,550
	INDINS	-53,862	97,813	-0,077	-0,551	0,583
	SOS	-37,718	108,258	-0,041	-0,348	0,728
	CORP	22,737	85,121	0,072	0,267	0,790
	ESOP	-106,842	178,130	-0,053	-0,600	0,550
	F	300,117	97,409	0,447	3,081	0,003
	CORPRIV	14,602	88,571	0,032	0,165	0,869
	VSPEFIR	-50,588	125,778	-0,041	-0,402	0,688
	POO	77,843	85,154	0,202	0,914	0,362

According to the results of the tests carried out above, it is clearly explained that the variable SWF (K>5%) has a considerable effect on the sensitivity to the market in particular the shares outstanding and the market capitalization.

A survey by IFSWF[4] that looked at the distribution of sovereign wealth fund allocations to specific asset classes across geographic regions. The survey results show that most funds invest in globally listed stocks. North America received the largest proportion of SWF allocations, followed by Europe, then Asia. Indeed, survey responses confirmed that the United States, United Kingdom and Japan were the three preferred investment countries, reflecting the fact that these three countries are the largest markets measured by the market capitalization, according to ***Bank of America Merrill Lynch's Transforming World Atlas: Investing Themes Illustrated by Maps.*** Only a small percentage of funds are allocated to the Middle East and North Africa (MENA). It should be noted that listed European equities are the only assets common to all funds.

[4] IFSWF International Forum Sovereign Wealth Funds

H2. Impact of risk taking on Bank performance using CAMELS approach

- **Capital adequacy: TCR**

ANOVA

Modèle		Somme des carrés	ddl	Carré moyen	F	Sig.
1	Régression	546,750	1	546,750	7,094	0,009
	de Student	10635,440	138	77,068		
	Total	11182,189	139			

Récapitulatif des modèles

Modèle	R	R-deux	R-deux ajusté	Erreur standard de l'estimation
1	0,221	0,049	0,042	8,77886%

Coefficients

Modèle		Coefficients non standardisés		Coefficients standardisés		
		B	Erreur standard	Bêta	t	Sig.
1	(Constante)	13,914	0,924		15,054	0,000
	PFEM	-2,740	1,029	-0,221	-2,664	0,009

- **Earning ability : Net Income Margin**

ANOVA

Modèle		Somme des carrés	ddl	Carré moyen	F	Sig.
1	Régression	9008,968	1	9008,968	8,573	0,004
	de Student	146074,108	139	1050,893		
	Total	155083,077	140			

Récapitulatif des modèles

Modèle	R	R-deux	R-deux ajusté	Erreur standard de l'estimation
1	0,241	0,058	0,051	32,41748%

Coefficients

Modèle		Coefficients non standardisés		Coefficients standardisés		
		B	Erreur standard	Bêta	t	Sig.
1	(Constante)	44,888	3,394		13,225	0,000
	PFEM	-11,101	3,791	-0,241	-2,928	0,004

- **Sentives market risk: Shares Outstanding**

ANOVA

Modèle		Somme des carrés	ddl	Carré moyen	F	Sig.
1	Régression	32260810,381	1	32260810,381	6,866	0,010
	de Student	643679372,135	137	4698389,578		
	Total	675940182,516	138			

Récapitulatif des modèles

Modèle	R	R-deux	R-deux ajusté	Erreur standard de l'estimation
1	0,218	0,048	0,041	2167,576890822

Coefficients

		Coefficients non standardisés		Coefficients standardisés		
Modèle		B	Erreur standard	Bêta	t	Sig.
1	(Constante)	2098,183	229,478		9,143	0,000
	PFEM	-666,917	254,512	-0,218	-2,620	0,010

Results of Anova test, Chi-Square Goodness-of-Fit Test, shows the absence of a significant link between the independent variable “Presence of women on the board of directors” and the performance ratios using the Camels approach. Excluding the impact on capital adequacy (TCR) and Earning ability (Net income margin) and sensitivity to market risk (Shares Outstanding).

We conclude from the results that the presence of women reinforces compliance with the regulator's standard, i.e. the total capital ratio, also, their presence serves to increase the profitability of the bank as well as the number of shares outstanding in orther to increase bank’s liquidity. According to (Kang et al. 2010), intensifying gender diversity in the boardroom can enhance the power of boards to perform their control and strategic roles. For instance, the presence of females on boards could enhance corporate governance mechanisms, such as transparency and accountability, because of their contribution to mitigating fraud (Capezio and Mavisakalyan 2016). Loukil et al. (2020) proved that women executives raise transparency and disclosure and reduce asymmetric information, particularly in family corporations.

Concerning the risk taking, prior studies have found that women could improve the decision-making process because of their different insights and innovative ideas that boost firm performance (Terjesen et al. 2009). Moreover, women on board increase perceptions of the board’s lawfulness and reliability, thus promoting stockholder confidence in the company (Perrault, 2015). However, some research shows that women are generally more risk-averse than men in personal financial investments (Jianakoplos and Bernasek, 1998);Sunden and Surette, 1998; Barber and Odean, 2001; Dwyer et al., 2002; Agnew et al., 2003; Watson and McNaughton, 2007). An insightful overview of reasons explaining female risk aversion has been recently provided by Hurley and Choudhary (2020). Some of the primary reasons are emotional factors that negatively impact female utility and in turn their risk-attitude (Brody, 1993; Croson and Gneezy, 2009) and the greater confidence males have compared to females (Barber and Odean, 2001).

H3. Impact of board committee and other main committees on Bank performance using CAMELS approach

- **Asset quality:** ROA

ANOVA

Modèle		Somme des carrés	ddl	Carré moyen	F	Sig.
1	Régression	17,737	11	1,612	1,947	0,039
	de Student	106,002	128	0,828		
	Total	123,739	139			

Récapitulatif des modèles

Modèle	R	R-deux	R-deux ajusté	Erreur standard de l'estimation
1	0,379	0,143	0,070	0,9100%

Coefficients

Modèle		Coefficients non standardisés		Coefficients standardisés	t	Sig.
		B	Erreur standard	Bêta		
1	(Constante)	2,423	0,314		7,703	0,000
	TCA	0,006	0,041	0,018	0,147	0,883
	PCAI	-0,129	0,211	-0,052	-0,611	0,542
	DI	-0,132	0,062	-0,253	-2,129	0,035
	DINE	-0,054	0,066	-0,096	-0,825	0,411
	DNE	-0,022	0,061	-0,046	-0,361	0,719
	DE	-0,057	0,050	-0,183	-1,139	0,257
	MS	-0,059	0,294	-0,017	-0,200	0,842
	NC	0,003	0,075	0,011	0,047	0,963
	PCAUD	-0,520	0,397	-0,194	-1,309	0,193
	PCC	-0,278	0,369	-0,123	-0,753	0,453
	PCN	0,155	0,286	0,081	0,542	0,589

- **Liquidity:** CFI

ANOVA

Modèle		Somme des carrés	ddl	Carré moyen	F	Sig.
1	Régression	34888961,900	11	3171723,809	2,527	0,006
	de Student	159392275,570	127	1255057,288		
	Total	194281237,470	138			

Récapitulatif des modèles

Modèle	R	R-deux	R-deux ajusté	Erreur standard de l'estimation
1	0,424	0,180	0,109	1120,293393694530000

Coefficients

Modèle		Coefficients non standardisés		Coefficients standardisés		
		B	Erreur standard	Bêta	t	Sig.
1	(Constante)	-169,439	387,809		-0,437	0,663
	TCA	77,160	50,519	0,185	1,527	0,129
	PCAI	807,677	260,361	0,258	3,102	0,002
	DI	97,962	76,813	0,147	1,275	0,205
	DINE	12,648	81,243	0,018	0,156	0,877
	DNE	-69,398	75,009	-0,116	-0,925	0,357
	DE	-31,659	61,533	-0,081	-0,515	0,608
	MS	-160,024	362,486	-0,037	-0,441	0,660
	NC	23,853	91,988	0,061	0,259	0,796
	PCAUD	273,864	489,097	0,081	0,560	0,577
	PCC	52,691	454,970	0,019	0,116	0,908
	PCN	-546,838	352,851	-0,228	-1,550	0,124

➢ Sensitivity to market risk: Shares outstanding

ANOVA

Modèle		Somme des carrés	ddl	Carré moyen	F	Sig.
1	Régression	119878783,880	11	10898071,262	2,472	0,008
	de Student	555595466,542	126	4409487,830		
	Total	675474250,422	137			

Récapitulatif des modèles

Modèle	R	R-deux	R-deux ajusté	Erreur standard de l'estimation
1	0,421	0,177	0,106	2099,878051149

Coefficients

Modèle		Coefficients non standardisés		Coefficients standardisés		
		B	Erreur standard	Bêta	t	Sig.
1	(Constante)	1824,742	726,956		2,510	0,013
	TCA	244,387	95,978	0,313	2,546	0,012
	PCAI	1071,906	488,899	0,184	2,192	0,030
	DI	-297,862	144,234	-0,239	-2,065	0,041

DINE	-211,167	158,732	-0,155	-1,330	0,186
DNE	-343,237	141,227	-0,307	-2,430	0,016
DE	-228,158	117,109	-0,312	-1,948	0,054
MS	62,465	679,714	0,008	0,092	0,927
NC	484,962	175,373	0,658	2,765	0,007
PCAUD	-2154,454	919,828	-0,343	-2,342	0,021
PCC	-715,640	869,617	-0,135	-0,823	0,412
PCN	-1474,350	661,388	-0,328	-2,229	0,028

Results of Anova test, Chi-Square Goodness-of-Fit Test, shows the absence of a significant link between the independent variables related to board committee & other ones selected above and the performance ratios using the Camels approach. Excluding the impact on Asset quality (ROA), Liquidity (CFI) and sensitivity to market risk (Shares Outstanding).

We conclude that the absence of independent directors affect the bank's ROA. And the presence of the independent chairman can improve cash-flow from financing. Compared to market risk, we deduce that the presence of an independent chairman is important to increase the number of outstanding shares that aim to increase banks' liquidity. The same goes for the usefulness of several committees, especially those of audit and nomination ones. King III reports recommends that the chairperson should be an independent non-executive director. The chairperson should not also be the CEO. The independence of the chairman is paramount to the successful implementation of good corporate governance practices at board level and also banking performance.

According to the Agency Theory, in order to control management opportunistic behaviour and prevent agency problems, a majority of the board must consist of independent directors (Quttainah et al., 2013). It is believed that independent directors don’t chase their own interests such as executive compensation and have no requirement to meet pre-set targets (Man & Wong, 2013). Thus, boards with more independent directors strive for better quality in earnings quality through proper monitoring (Machuga & Teitel, 2009; Man & Wong, 2013; Alves, 2014).

According to Fama and Jensen (1983), independent directors are widely believed to be the best managers in the director market. Nevertheless, the empirical results concerning the relationship of independent directors and performance are diversified. Independent directors are also critically important to the bank, as they tend to help improve the quality of earnings (Mishra and Nielson, 2000; Cornett et al., 2009). Referring to the work of Griffith (1999), boards dominated by outside directors control bank managers better than those dominated by inside directors.

For the control variable, ther is not a significant effect of the board size (TCA) on banking performance. It joints the research of Simpson and Gleason (1999) who does not perceive a significant effect of the number of directors on financial risk; after having worked on a sample of 300 American banks.

However, Baysinger and Zardkoohi (1986) explain that an enlarged board size is a necessity within a highly regulated sector, such as the banking system, since it exerts more effective control over managerial actions; which is also confirmed by the research of subra hmanyam et al (1997). Pathan (2009) explains that a small board can lead to excessive risk taking, since when the board of directors is small, shareholders can exercise direct control over the decisions of managers through directors.Beltratti and Stulz (2009) find that a small board has a positive influence on the bank's risk since directors are authorized in the interests of shareholders, which automatically leads to an increase in risk taking. This result is also demonstrated by Pathan (2009). Research by Kogan and Wallach (1964) follows the same logic and argues that the larger the board size, the lower the risk propensity.

Indeed, it is much more difficult to convince a large group of people to make controversial decisions that consider the potentially negative consequences than a small group.

7. Conclusion

We conclude that the presence of the state as a shareholder reinforces the adaptation of Bank capital adequacy. The State aims from its representatives to develop and finance its projects by its credit institutions. Also, politicians do not hold shares in banks, they only represent the state. And Government acquired control of banks in order to finance projects that would not get privately financed, and to provide employment, subsidies .... This, affect bank performance (Megginson, et al, 1994; Megginson and Netter, 2001), and the agency problems in this case are more complex. Indeed, what interests politicians the most, is to finance projects of their policital program or those of the state, and probably they are not going to monitor the actions of directors or managers. La Porta, Lopez de Silanes and Shleifer (2002) realize that countries with a less developed financial system seem to have higher government ownership of banks.This is not the case for our sample because the countries well ranked according to their adequacy capital ratio are the Emirates, Bahrain and Turkey.

Futhermore, the shares held by the State have a negative impact on non-performing loans, particularly in comparison with the bank's total assets, which confirms the work of Panizza and Yanez (2007).

For the ESOP ownership, the result of regression method, indicates that this variable plays a significant role in increasing EBT MARGIN of MENA REGION's Banks (listed one). However, the result reject the research conducted by Sunarsih & Dewi (2018), which shows that the number of employee stock options (ESOP) have a negative effect on the company's performance. It indicates that the large or small number of employee stock options (ESOPs) provided by the company has not been able to motivate employees to perform better.

Concerning Institutional investors, multiple regression shows that this group of shareholder increase the bank's profitability, in particular NET INCOME MARGIN. This confirm that institutional investors ownership will encourage more effective supervision because institutions are professionals who can evaluate bank performance. Nevertheless, large shareholding of institutional ownership might induce self interest behavior. Mikkelson and Ruback (1991) indicate that institutional investors tend to promote shareholder-driven corporate strategies, which is enlarging their benefits even though it means transferring risks to the creditors. Wright et al. (1996) found that institutional ownership increase bank risk taking. They argue that institutional owners increased firm value through the promotion of high risk taking activities such as investing in a high risk project.

Finally, we draw attention to SWF (Sovereign Wealth Funds (K>5%) ownership which consolidates Bank's liquidity in terms of operations, financing and investment. The results of the multiple regression demonstrate the positive correlation between this independent variable and the 3 performance ratios in terms of liquidity: cash flow from operating, cash flow from investment and cash flow from financing. They act as a last resort by carrying out massive injections of liquidity in a hard-hit banking sector. Moreover, the results show that these funds have a considerable effect on the sensitivity to market risk, in particular the outstanding shares and the market capitalization. According to a survey conducted by IFSWF, North America received the largest proportion of SWF allocations, followed by Europe, then Asia. Survey confirmed that the United States, United Kingdom and Japan countries are the largest markets measured by the market capitalization, according to ***Bank of America Merrill Lynch's Transforming World Atlas: Investing Themes Illustrated by Maps.*** Only a small percentage of funds are allocated to the Middle East and North Africa (MENA).

Moreover, the presence of women reinforces compliance with the regulator's standard, i.e. the total capital ratio, their presence, also, serves to increase the profitability of the Bank as well as the number of shares outstanding in order to increase bank's liquidity.

Regarding the impact of the board of directors and other committees, we concluded that the presence of external directors enhance Bank's ROA, i.e. the quality of their assets. In addition, the presence of independent Chaiman has a positive impact on the bank's liquidity, particularly cash-flows from financing. His presence, as well as that of a large number of committees, especially the audit and nominating committee, serves to maximize the number of outstanding shares that increase in turn bank's liquidity. For the control variable, which is the board size, we note that the results of our study are in line with those of Simpson and Gleason (1999) who does not perceive a significant effect of the number of directors on financial risk, after having worked on a sample of 300 American banks.

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