

Research Paper

MEASURE AND DETERMINANTS OF BANKS' TRANSPARENCY IN EMERGING MARKETS

Abstract

The main objective of this paper is to analyze banks' transparency measure and its determinants. The first issue is to develop a measure of bank transparency using elements revealed by the bank according to the recommendations of the third pillar of the Basel II agreements. In the second step, we examine internal and external factors that may explain the differences of transparency across banks. Our sample is an unbalanced panel data of 69 commercial banks operating in seven emerging countries (Tunisia, Morocco, Lebanon, Egypt, turkey, Thailand and Malaysia) over the period 2006-2009. The results relative to governance variables indicate that ownership concentration has a negative effect on transparency. We also find a positive correlation of transparency with government ownership. Concerning macroeconomic and juridical indicators, we observe a positive association of transparency with the existence of an explicit system of deposits insurance, the protection of stockholders' rights, and a negative one with the development of financial market and inflation. Finally, the empirical results show an association between transparency and profitability measured by ROE and ROA.

Keywords: Basel II, Stability, Transparency, Information, Corporate Governance.

Classification: G14, G21, G28, G29, G30.

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1. INTRODUCTION

The recent wave of corporate scandals (Enron, Equitable life, Worldcom, Xerox, heath south and others) and financial crises (subprime 2008, Asia, 1998, Mexico, 1994,...) has revived the interest for the issue of governance and transparency, especially with regard to countries seeking access to capital markets. Many experts generally agree that the main failure leading to financial crises stemmed directly from the lack of disclosure and obscure management practices. Several international institutions, such as the Basel Committee on Banking Provision, G7 Finance Ministers, International Monetary Fund, World Bank and the Financial Stability Forum (2008) have called for increased transparency and disclosure in the banking sector. Numerous scholars, such as Jordan et al. (1999, 2000), Nier (2005), Chen and Hassan (2008), Dermirguc-kunt et al. (2008), Bushman and Williams (2009), Jeffrey and Rusticus (2012) also advocate a transparent bank system. It has been argued that the

measures that enhance transparency reduce the likelihood of major bank problems, increase financial stability or at least limit the accumulation of bad debts. The main argument for transparency is that it improves market discipline. The pillar three of the new Basel Capital Accord (Basel 2) addresses corporate governance concerns by focusing on market-discipline mechanism to improve the flow of information between management and investors. Market discipline is a set of disclosure recommendation which is expected to enhance transparency, to limit excess risk-taking, to allow market participants to assess key information for banks financial position and to permit better supervision (eg, Kalfaoglou and Sursis, 2005, Bliss and Flannery, 2002).

According to many authors such as Cordella and Yeyati (1998), Nelson (2001) and Baumann and Nier (2004) bank transparency differs from disclosure of information. Apparently, the levels of corporate transparency depend on the levels of information disclosure exhibited by the firm. In consequence, disclosure contributes to the effectiveness of transparency when the information is available in such a way that it renders the bank understandable and visible (Alexandre et al. 2010). Indeed, Gelos and Wei (2002) define transparency as “the level of financial disclosure and the availability of financial and other business information about firms in a country on average”.

In the banking literature, the issue about the benefits of enhancing bank transparency is very ambiguous. Many researchers conclude that transparency may have various beneficial effects. It can increase fundamental value and reduce overall funding costs by facilitating screening and monitoring (Boot and Schmeits, 2000, Flannery, 2001). Other empirical studies have demonstrated that high-quality disclosures improve a firm’s market liquidity (Welker, 1995) and reduce its cost of capital (Botosan, 1997). In the period of crises, several papers (Nier, 2005; Tadesse, 2006; Giannetti, 2007) show that greater transparency reduces the probability of systemic banking crises and improves financial stability. However, the size of the gains of transparency may vary considerably depending on the informativeness of disclosed information as well as on the ways the information is disseminated and used (Hossain, 2008). On the other hand and according to many studies, transparency has not always been considerably desirable in all circumstances. Nier (2005) conclude that the exposit beneficial effects of transparency are far less obvious, especially when an adverse shock has occurred and the bank is already in difficult. Matutes and Vives (2004) show that in cases when bank risk is exogenous and beyond the control of the bank, enhanced transparency can lead to reduction of the bank’s value. Allenspach (2009) analyzes the impact of transparency on welfare when banks are not able to control their risk exposure. She shows that increasing transparency over the level chosen by the bank decreases welfare since it may lead to the inefficient liquidation of the bank.

These costs and benefits of transparency (transparency-stability or stability-fragility; Tadesse, 2006) raise the question of transparency determinants. The factor impacting disclosure and transparency remain of much interest to managers, investors and researchers. In the literature, there are a number of papers that identify the determinants of disclosure and transparency, especially in the developed countries and in non-financial companies. However, in the banking sector, a few studies have investigated the determinants of bank’s transparency in developing countries (Kahl and Belkaoui, 1981 (18 countries); Chipalkatti, 2002 (indian banks); Hossain, 2008 (indian banks); Lal Bhasin et al. 2012 (Khazakhstan banks);...). To fill in this gap, the present paper contributes to the existing literature by examining the factors influencing the transparency of banks in seven emerging countries. Since transparency and corporate disclosure are quite complex, we attempt in this research to consider a large number of variables that represent determinants of transparency. Then, the aim of this study is to analyze how bank’s specific characteristics, bank governance and the banking environment (macroeconomic and juridical indicators) affect the transparency of banks. By considering all these factors together, we can develop a more comprehensive model of the transparency decision including several variables that have not been empirically examined in the prior literature or have not yielded consistent

results. In addition, we can also control interrelationships among various indicators on transparency. Before formally investigating the determinants of bank transparency, we first try to construct a composite index of the transparency of a bank based on four dimensions: completeness, opportunity, credibility and accessibility of information according to Nelson (2001) and not only on the basis of the volume of revealed information.

This paper makes several contributions. It is the first study that analyzes the determinants of banks' transparency in these developing countries (Egypt, Lebanon, Malaysia, Morocco, Thailand, Tunisia and Turkey). Second, we examine a variety of variables by introducing internal and external factors that may be important in explaining the level of transparency in a bank. Third, to proxy for the level of transparency, we develop a new measure containing several dimensions of information (41 items). Finally, we collect data from an important number of banks (69) for a recent period 2006-2009.

The rest of the paper is organized as follows. The next section presents the method used to compute the score of transparency. Section 3 analyzes the factors influencing the level of transparency. Section 4 describes the sample and the model used in this study. Section 5 reports empirical findings and section 6 concludes the paper.

2. MEASURE OF TRANSPARENCY

In this study, we will try to develop a measure of the bank transparency using elements revealed by the bank according to the recommendations of the third pillar of the Basel II agreements. The previous studies (eg, Durnev and Kim 2002, Khanna and al. 2004) simply used the summary scores published by Standard and Poor's in 2001 and 2002 and their samples consist exclusively of non-banking firms. The most known research related to the banking sector is the study of Baumann and Nier (2003). These two authors developed a measure of the banking transparency based on the disclosed information, but this measure proves to be deficient in the sense of the third pillar of Basel II agreements. In addition, these previous studies simplified their measures by assessing the degree of transparency by the volume of revealed information. However, the adequate measure according to Nelson (2001) consists of the following four dimensions: the completeness of information, the accessibility of information, the opportunity of information and the investors' right of appeal. Consequently, we suggest developing a measure of the banking transparency which consists of the four dimensions of information¹ while applying some adjustments. Indeed, we will develop a composite index of banking transparency which represents the aggregation of four intermediate indexes. Each index represents one of the four dimensions of information.

2.1. The completeness of information index

We suggest widening the disclosure index "DISC" index proposed by Baumann and Nier (2003) by adding other elements so as to take into account all the information published by banks in their annual reports. Indeed, the information contained in financial statements has a financial and a quantitative nature. This information is not enough for constituting an accurate image of the firm which reflects reality. Consequently, it seems to us relevant to take into account in the calculation of the intermediate index the elements of non-financial information. It consists of the quality of risk management, bank governance, business strategy of the company, the quality of management, as well as social and environmental performance (Perrini and Tencati, 2006). These elements allow to the different stakeholders to better understand the overall performance of the company, its strategy in addition to its growth perspectives. According to the study of SP (2002) as well as to BPS (2004), we add other types of information such as: the subsidiaries' identity of and part of the capital held in each subsidiary; the rank of shareholders; the identity of the major shareholders; the information on the bank management; the list of the board of directors members; benefits of the board

¹ Given the complexity to measure the investors' right of appeal, this dimension will be excluded from the multidimensional measure and replace by the credibility of the information.

members and of the executive directors together with the part of the capital held by the executive directors and other employees. Furthermore, we propose an additional sub-index which informs about related lending. Indeed, when the bank is monitored by persons or entities having substantial interests in firm customers of this bank, we speak about related loans because the bank would lend these firms using preferential rates and for less consequent guarantees. According to Laporta and al. (2002) we will integrate the related loans as being an interesting element which gives indications on the bank transparency because our sample consists of banking practice in developing countries. The index developed by Baumann and Nier (2003) reflects the following types of risk revealed by banks: the interest rate risk, the credit risk, the liquidity risk and the market risk. In our study, we add the operational risk which is defined by the committee of Basel (2001) as the risk of losses which can result from inadequate or unapplied internal procedures, from persons, systems or external events.

Finally, more and more interest is given by academicians and practitioners to the activities of social and environmental responsibility (CSR). The disclosure of this non-financial information was defined as being "the process of announcing the social and environmental effects of economic actions undertaken by firms on the stakeholders particularly and the community in general." (Gray and al., 1996) Jeucken and Bouma (1999) differentiate two types of environmental impact of the banking activity: an internal impact and an external one. The internal impact is related to the banking activity process while the external impact is linked to its products. As a result, we consider two sub-indexes of CSR; "direct CSR" and "indirect CSR". Consequently, the addition of 20 new sub-indexes in the intermediate index carries the total number of sub indexes to 37². The grading details of the 20 sub-indexes are developed as follows. We follow the measurements adopted by Baumann and Nier (2004) to calibrate the sub-indexes. Indeed, for all sub-indexes, one is assigned if the corresponding element exists in the bank annual report and Zero otherwise except "securities by type" (S_6), "capital" (S_{13}), "subsidiaries" (S_{18}), «CSR direct» and «CSR indirect» sub-indexes. In fact, two is assigned to S_6 ³ if the detailed analysis is disclosed by the bank, one is assigned if only the coarse analysis is revealed and zero otherwise. Three is assigned to S_{13} if three or four elements are disclosed (see S_{13} in table 1), two is assigned if two elements are revealed, one is assigned if only one element is published, and zero otherwise. Furthermore, two is assigned to S_{18} if both subsidiaries identity and the portion held by the bank in each one are disclosed, one is assigned if only one element is published and zero otherwise. Concerning the sub-index "direct CSR", 2 is assigned if the revealed information on the direct activities of social and environmental responsibility of the bank is quantitative. 1 is assigned if the disclosed information is qualitative. Finally, zero is assigned if there is no information on direct CSR. Concerning the sub-index "indirect CSR", 2 is assigned if the revealed information on the indirect activities of social and environmental responsibility of the bank is quantitative. 1 is assigned if the disclosed information is qualitative. Finally, zero is assigned if there is no information on indirect CSR.

By aggregating the 37 sub-indexes, we build the intermediate index of information completeness which will be named "MRDISC"⁴. The intermediate index is calculated as follows:

$$MRDISC_{it} = \frac{1}{43} (FRE_{it} + NFRE_{it})$$

- FRE_{it} : the financial items revealed by the bank i regarding the period t (Illustrated by Baumann and Nier (2003)).

² 17 sub indexes presented by Baumann and Nier (2003) + 20 new sub indexes.

³ See table 1.

⁴ This abbreviation means "multi risk disclosure".

- $NFRE_{it}$: the non financial items revealed by the bank i regarding the period t

$$MRDISC_{it} = \frac{1}{43} \left(\sum_{i=1}^{17} s_i + \sum_{i=18}^{37} s_i \right)$$

$$MRDISC_{it} = \frac{1}{43} \sum_{k=1}^{37} s_{kit}^5$$

The 37 sub-indexes are detailed in the following table:

Table 1: intermediate index of information completeness

Information	Sub indexes	Categories
<u>FINANCIAL INFO</u>		
Assets		
loans	S ₁ : loans to maturity S ₂ : loans by type S ₃ : Loans by counterparty S ₄ : Problem loans S ₅ : Problem loans by type	Less than three months, three to six months, six months to one year, one to five years, more than five years. Loans to municipalities/government, mortgages, HP/lease, other loans. Loans to group companies, loans to other corporate, loans to banks. Total problem loans. Overdue/restructured/other nonperforming.
Other earning assets	S ₆ : Securities by type S ₇ : Securities by holding purpose	Detailed breakdown: Treasury bills, other bills, bonds, CDs, equity investments, other investments. Coarse breakdown: government securities, other listed securities, non-listed securities. Investment securities, trading securities.
Liabilities		
Deposits	S ₈ : Deposits by maturity S ₉ : Deposits by type of customer	Demand, savings, less than three months, three to six months, six months to one year, one to five years, more than five years. Bank deposits, municipal/government.
Other funding	S ₁₀ : Money market funding S ₁₁ : Long term funding	Total money market funding. Convertible bonds, mortgage bonds, other bonds, subordinated debt, hybrid capital.
Memo lines	S ₁₂ : Reserves S ₁₃ : Capital S ₁₄ : Contingent liabilities S ₁₅ : Off-balance-sheet items	Loan loss reserves (memo). Total capital ratio, tier 1 ratio, total capital, tier 1 capital. Total contingent liabilities. Off-balance-sheet items.
Income statement	S ₁₆ : Non interest income S ₁₇ : Loan loss provisions	Net commission income, net fee income, net trading income. Loan loss provisions.
<u>NON FINANCIAL INFO</u>		
Bank governance	S ₁₈ : Subsidiaries S ₁₉ : Shareholders ranking S ₂₀ : Major shareholders S ₂₁ : Management S ₂₂ : Board of directors S ₂₃ : Remuneration policy S ₂₄ : Stock options	Subsidiaries identity and the part held by the bank in the capital of each one. Property structure. Major shareholders identity. List of the executive directors. List of board of directors' members. Remuneration of board of directors' members and executive directors. Part held by the top management and other employees in the capital of the bank.

⁵We divide by 43 because the maximum scores of S₆, S₁₃, S₁₈, S₃₆ and S₃₇ are respectively equal to 2, 3, 2, 2 and 2.

Operational risk	S ₂₅ : Related lending	Loans given to parties linked to the bank.
	S ₂₆ : Internal fraud	Losses associated to employees' corruption.
	S ₂₇ : External fraud	Losses associated to phishing ⁶ .
	S ₂₈ : Employment and safety practices	Labor unions' annual report.
Forecasts	S ₂₉ : Commercial practices	Aggressive sales or whitening of money.
	S ₃₀ : Tangible assets damages	Losses associated to terrorism or disasters.
	S ₃₁ : Dysfunctions of the activity and the systems	Losses associated to information systems breakdown.
	S ₃₂ : Processes management	Losses associated to execution mistakes.
Corporate Social Responsibility	S ₃₃ : Perspectives	Segments of the bank development.
	S ₃₄ : Expected growth	Expected growth rate.
	S ₃₅ : Dividends distribution	Dividends distribution policy.
	S ₃₆ : CSR direct	The nature of the undertaken activities and the proportion of total assets allocated to these activities.
	S ₃₇ : CSR indirect	The nature of the undertaken activities and quantitative information regarding the rejected loans to corporations.

Source: Ben Douissa I. (2011)

2.2. The opportunity of information index

We think that the opportunity of the information is positively correlated to the frequency of its disclosure. Concretely, a good opportunity of the information is guaranteed by the existence of its periodic updating, and consequently an important frequency of interim reports publication. That's why; we suggest introducing the sub-index "frequency of the interim reports". Two is assigned to S₃₆ (see table 2) if the bank publishes quarter reports, one is assigned if it publishes only biannual reports and 0 otherwise. Consequently, the intermediate index of information opportunity is built as follows:

Table 2: the intermediate index of information opportunity

Information	Sub indexes	Categories
Information Opportunity	S ₃₈ : Frequency of interim reports	Biannual or quarter reports.

Source: Ben Douissa I. (2011)

The opportunity of information intermediate index is named "OPPORT" and calculated as follows:

$$OPPORT_{it} = \frac{1}{2} s_{36it} \quad 7$$

$OPPORT_{it}$: the intermediate index of the opportunity of information of the bank i during the period t.

⁶ In the field of computer security, phishing is the criminally fraudulent process of attempting to acquire sensitive information such as usernames, passwords and credit card details by masquerading as a trustworthy entity in an electronic communication..

⁷ The division by 2 is related to the maximum score of this sub index.

2.3. The credibility of information index

We introduce three sub-indexes: audit, accounting standards and accounts adjusted by inflation. Indeed, BPS (2004) support the fact that the variable Audit is a measure of the reliability of financial disclosures. Consequently, we distinguish the most prestigious four auditing firms in the world named "Big Four"⁸ or "Fat Four". We distinguish banks audited by a "Big Four" auditing company, from banks audited by the other auditing companies. We propose to assign zero to the sub-index "Audit" if the bank does not communicate the identity of the company which audited its accounts, to assign one if the bank is audited by a company which is not a member of the "Big Four". Finally, two is assigned if the bank is audited by a "Big Four". Furthermore, the sub-index "accounting standards" inform about accounting practices used by the bank. So, we distinguish two types of standards applied by banks: the local standards ("local GAAP"⁹) and the international standards ("IFRS"¹⁰). According to SP (2002), we support the idea that the bank applying the IFRS standards is more transparent than a bank adopting the local standards. In fact, the degree of data comparability is more relevant in the first case. Consequently, we suggest assigning one if the bank applies the IFRS standards and 0 otherwise. Finally, we introduce the sub index "accounts adjusted by inflation" to distinguish the banks which publish their financial statements adjusted by the inflation. Indeed, this type of data publication reflects the real image of the bank by taking into account the inflation. Consequently, we consider the bank which publishes its annual accounts adjusted by inflation is more transparent than a bank which does not. Our suggestion is supported by the study of SP in 2002 which showed that the adjustment by inflation is a criterion of the firm transparency. Afterward, we suggest assigning one if the bank publishes its annual accounts adjusted by inflation and 0 otherwise. The intermediate index of information credibility is detailed as follows:

Table 3: intermediate index of information credibility

Information	Sub indexes	Categories
Information Credibility	S₃₉ : Audit S₄₀ : Accounting Standards S₄₁ : Accounts adjusted by inflation	Auditing company identity. Applied accounting standards (IFRS or Local GAAP). Annual financial statements adjusted by inflation.

Source: Ben Douissa I. (2011)

The above detailed intermediate index is built by aggregating the information of three sub indexes: "Audit", "Accounting standards" and "Accounts adjusted by inflation". It is calculated as follows:

$$CRED_{it} = \frac{1}{4} \sum_{k=37}^{39} s_{kit}^{11}$$

⁸Deloitte, formerly Deloitte Touche Tohmatsu (DTT); Ernst and Young (EY); KPMG; Price waterhouse Coopers (PwC).

⁹ Local Generalized Accepted Accounting Principles.

¹⁰International Financial Reporting Standards.

¹¹The division by 4 is due to the maximum score of S39 which is equal to 2.

$CRED_{it}$: intermediate index of the information credibility of the bank i during the period t

2.4. The accessibility of information index

To measure the accessibility of information, we distinguish the information revealed to the public and the private information. Indeed, the first type of information is contained in the financial statements published by the bank in its annual reports. Besides, the private information represents any element not revealed in the public. We retain two distribution channels which are annual reports and risk rating agencies. We consider two sub-indexes which measure the information accessibility according to both chosen channels as follows:

Web-Access: we suggest measuring the information accessibility using the first channel (annual reports) - by the introduction or not - of these reports by the bank in its Web site. We assign one if the bank publishes its annual reports on its Web site and 0 otherwise.

Rating: we suggest measuring the information accessibility using the second channel (Rating agencies) by distinguishing banks rated by international agencies. Indeed, this requires the analysis of the rating agencies classification. According to the classification made by BIS (2000), we think that a bank rated by an international agency is more transparent than a bank rated by a regional agency as well as a bank rated by a national agency. Consequently, we assign two if the bank is rated by an international agency; one is assigned if the bank is rated by a regional agency and 0 otherwise. The intermediate index of information accessibility is detailed as follows:

Table 4: intermediate index of information accessibility

Information	Sub indexes	Categories
Information Accessibility	S ₄₂ : Web Access S ₄₃ : Rate	Annual reports disclosure on the bank Website. Rating agency classification.

Source: Ben Douissa I. (2011)

The above detailed intermediate index is built by aggregating the information of both sub indexes "Web Access" and "Rate". It is calculated as follows:

$$ACCESS_{it} = \frac{1}{3} \sum_{k=40}^{41} s_{kit}^{12}$$

$ACCESS_{it}$: the intermediate index of the information accessibility of the bank i during the period t.

Finally, once we compute the four intermediate indexes, the composite index of banking transparency called "TRANS" is calculated as follows:

$$TRANS_{it} = \frac{\sum_{j=1}^4 S_{jit}}{N}$$

- $TRANS_{it}$: the composite index of the transparency of the bank i during the period t.
- N : the number of the dimensions of information which is equal to 4.
- S_{jit} : the intermediate index of the dimension j, of the bank i during the period t.

¹²The division by 3 is due to the maximum score of S43 which is equal to 2.

$$TRANS_{it} = \frac{MRDISC_{it} + OPPORT_{it} + CRED_{it} + ACCESS_{it}}{N}$$

$$TRANS_{it} = \frac{\frac{1}{43} \sum_{k=1}^{37} S_{kit} + \frac{1}{2} S_{38it} + \frac{1}{4} \sum_{k=39}^{41} S_{kit} + \frac{1}{3} \sum_{k=42}^{43} S_{kit}}{N}$$

By developing the composite index, we consider that four dimensions of the information (measured each one by the corresponding intermediate index) possess the same degree of importance to explain transparency. Indeed, we introduced the intermediate indexes without weights in the construction of the composite index, in order to eliminate the subjectivity problem¹³.

3. DETERMINANTS OF TRANSPARENCY

Once the composite disclosure index is calculated bank by bank and of each year of our sample, we examine internal and external factors that may explain the differences of transparency across banks. The vector of explanatory variables comprises bank-governance characteristics, macroeconomic and juridical indicators, and bank-specific variables (Table 5).

3.1. Characteristics of the bank governance

The bank bank-governance variable that we include in our model represents information about ownership structure, composition of the board of directors and the activities of social responsibility.

* Ownership structure

The ownership structure consists in detailed distribution of common stock among the different shareholders' categories. First of all, the major shareholders' ownership represents the part of common stock held by the relatively important shareholders. Caprio and al. (2005) identified the major shareholder as the direct or indirect holder of 10 % or above of the voting rights in the firm. However, Eng and Mak (2003) considered that the shareholder as a major one if he detains 5 % or above of the firm's common stock. In their studies, McKinnon and Dalimunthe (1993), Mitchell and al. (1995), Schadewitz and Blevins (1998) found that the ownership concentration will imply information opacity because major shareholders have a direct access to information via the board of directors. According to the above-mentioned studies, we assume that the part of the common stock held by major shareholders affects the bank transparency as follows:

H1a: where the common stock is concentrated in the hands of major shareholders the bank has a relatively weak transparency.

Moreover, it is important to study managers' ownership as being a determiner of bank transparency. Ruland and al (1990) measured managers' ownership by the percentage of the voting rights they hold. Jensen and Meckling (1976) confirmed that when managers' ownership goes down, the stockholders would demand a stricter monitoring of the executive directors' behavior. In fact, this situation would affect negatively managers' motivation to maximize the firm profitability. As a result, managers would disclose information deliberately to reduce monitoring as requested by outside stockholders (Eng and Mak (2003)). Then we adopt the following assumption:

H1b: An important percentage of common stock held by the executive directors of bank shows relatively a low level of transparency.

¹³Hodgdon and al. (2008).

Finally, government ownership seems to be a factor in bank transparency. Eng and Mak (2003) showed that government ownership encourages the firm to disclose information. Firm managers would be protected for markets' discipline when they reveal information which encourages them to disclose more. Generally, banks would be encouraged to disclose more information to the public since the capital invested by the government belongs to the national taxpayer. As per Eng and Mak (2003), we expect that government ownership enhances bank transparency.

H1c: A bank shows relatively a high level of transparency where an important percentage of its common stock is held by the government.

*Composition of the board directors

The board of directors has the main role of ensuring that the executive directors of the company are acting with the intention of maximizing the stockholders' wealth. According to Geneen (1984), the board of directors loses its effectiveness of management control if it is dominated by the executive directors or by the Chief Executive Officer. To achieve its control mission, the board must be independent of the firm's management. There is no consensus concerning what constitutes a good board of directors. However, to maximize transparency, as shown above, stockholders should be represented by an independent board. Several studies have analyzed the link between the percentage of non-executive managers in managers' total number in the board and volunteer disclosure of information (Eng and Mak (2003); Makhija and Patton (2004); Chen and Jaggi. (2000)). In our study, we expect that the highest board independence is linked to more transparency and a better control. Consequently, we assume that:

H1d: A bank being characterized by high number of independent directors in its board shows a relatively high level of transparency.

* The activities of social responsibility

Companies have different priorities of social responsibility because processes and products differ across sectors. Actually, the banking sector for instance would be less directly sensitive to environmental problems than chemical industry. Jeucken and Bouma (1999) differentiate two types of banking activity's impact on the environment: an internal impact and an external one. The internal impact is linked to the banking activity's process while the external impact is linked to its products. Few studies focused on the CSR practices of financial institutions. Tarna (1999) studied the CSR reports of 12 banks and insurance companies. He noted that these reports were targeting stockholders, customers and employees. Hamid (2004) studied the disclosure of CSR in the annual reports of banks and other financial institutions in Malaysia. He noted that the published information is more linked to the group product/service than to the group environment/energy. In our study, we introduce this indicator as dummy variable and we estimate that social responsibility activities would have a positive impact on the bank's volunteer transparency.

H1e: A bank that invests in CSR shows a relatively high transparency.

2.3. Macroeconomic and juridical indicator

In addition to the bank governance variable, the transparency of banks is related to the economic and juridical environment of the country. We consider five external determinants: financial market, inflation, deposit insurance deposit, protection of stockholder's rights and national corruption index.

* Financial market

The banking system and financial markets are sharing the role of financing the economy. As a result, undeveloped financial markets imply that banks are the major contributor to financing the economy. On the one hand, the major economic stake would encourage them to show a relatively high level of transparency. On the other hand, when financial markets are not developed, listed banks would be less encouraged to show more transparency since

investors do not have sufficient monitoring power on the bank using market discipline. Consequently, we have two contradictory possible effects. As a result, we assume the following hypothesis:

H2a: The level of financial markets development has an ambiguous effect on bank transparency.

* Inflation

In the case of high inflation countries, regulators will print too much money and as a result, cannot guarantee the stability of prices. This situation would be favorable for a climate of opacity in the banking system as a whole. In fact, banks would not be strict in terms of lending policies which may increase default risks and could lead after all to reduce the bank risk rating. Consequently, banks would be more opaque. On the contrary, regulators in low inflation countries are led to adopt a monetary policy that can guarantee the stability of prices. The adopted monetary policy allows sending a strong message to banks related to borrowers' quality. In fact, banks would be more selective in lending, which allows adopting a balanced policy of risk taking. This healthy climate would favor the bank transparency and its extroversion towards the public. Several studies (Archambault and Archambault (2003) and Chen and al. (2004)) showed that there is a negative relationship between inflation and firms' information disclosure. Then, we adopt this hypothesis.

H2b: Banks operating in inflationary countries show a relatively weak transparency.

* Deposit insurance system

There are two systems of deposits insurance: implicit and explicit. The implicit system represents a regime of total guarantee by public authorities. This system is based on discretionary decisions taken according to the situation. The explicit system has a known limit of deposits coverage as well as the different procedures of intervention. The majority of banking systems that have no explicit system of deposits insurance adopt an implicit system. This later favors the moral hazard. In fact, banks would have an appetite at risk since the deposits coverage exists implicitly and its border can vary according to the situation. As a result, the level of bank transparency would be relatively weak. The explicit system guarantees the confidence of the public on it and contributes to reduce the expense of banking failures. As a result, the bank would adopt balanced risk taking policies and show a relatively high level of transparency. In consequence, we assume the following hypothesis:

H2c: Banks operating in countries adopting an explicit system of deposits insurance show a relatively high level of transparency.

* Protection of stockholders' rights

According to Laporta and al. (1998), stockholders' rights differ from one country to another. The commercial laws in different countries were typically transplanted from both historically known jurisdictions: the common law which has an English origin and the codified civil law which comes from Roman law. France, Germany and Scandinavian countries had developed the civil law. The study of Laporta and al. (1998) showed that on average, countries adopting common law protect the stockholders' rights better than countries adopting civil law. Moreover, other studies such as Doupnik and Salter (1995) as well as Archambault and Archambault (2003) found that companies from common-law countries (high protection minor shareholders' rights) disclose more information than companies from civil law countries. Then, we adopt the following hypothesis:

H2d: Banks operating in common-law countries show a relatively high level of transparency and those operating in civil-law countries show a relatively low level of transparency.

* National corruption index

Laporta and al. (1998) confirmed that juridical standards are insufficient to protect minor shareholders; the quality of implementation of these norms is complementary. In fact,

corruption is a sign of weakness of the implementation of laws related to minor shareholders protection. Zingales (1994) showed that in the majority of countries, the biggest companies operate in a complicated political environment and have to consider several laws and regulations which constrain their activities. In several countries, to avoid these pressures, firms have to corrupt politicians or regulators. We will adopt the index used by Laporta and al. (1998) who measures the corruption level of every country using ICR guide (International Country Risk). We assume that banks operating in corrupted countries are necessarily opaque. The scale from 0 to 10 classifies countries from the most corrupted to the most transparent.

H2e: The domiciled banks operating in highly-corrupted countries show a relatively low level of transparency.

2.4. Bank-specific variables

In addition to governance variables, economic and juridical indicators, there are other variables explaining bank transparency. Based on previous studies such as: Lang and Lundholm (1993), Archambault and Archambault (2003), Eng and Mak (2003) and Branco and Rodrigues (2008), we include the following control variables: bank size, opportunities of growth, debt ratio, deposits, profitability (return on equity and return on assets). These variables are assumed to be linked to bank transparency as follows:

H3a: Large banks show a relatively high level of transparency.

H3b: A bank, in which deposits represent an important part of its liabilities, shows a relatively low level of transparency.

H3c: A bank having interesting growth opportunities shows a relatively high level of transparency.

H3d: A bank having a high debt ratio shows a relatively low level of transparency.

H3e: A bank having high profitability shows a relatively high level of transparency.

Table 5: variables' description

Variables	Definition and measure
Dependant variable TRANS: transparency index	Based on four dimension of information
Independent variables <u>Bank governance</u> -Mshare: major shareholders -Mown: manager ownership -Gown: government ownership -Bdirect: composition of the board directors -Sreso: social responsibility	The direct or indirect or indirect of 5% or above of the firm's common stock. Percentage of common stock detained by the execution directors of bank. Percentage of common stock detained by the government. Percentage of independent directors in the board of directors. 2: if 2 activities are cited in the annual report; 1: only one

activities	activity, 0: no activity.
<u>Macroeconomic and juridical indicators</u>	
-Fmark: Financial market	Total market capitalization to GDP
-Inf: inflation	Annual average rate of inflation
-Dins: deposit insurance system	1: if there is an explicit system of insurance, 0: if the implicit system is adopted.
-Srigh: protection of stockholder's rights	1: if the country adopts common law, 0: if the country adopts civil law.
-Cindex: national corruption index	Index calculated by transparency international.
<u>Bank-specific variables</u>	
-Size: bank size	Natural logarithm of total assets.
-Growth: opportunity of growth	Market to book value of share.
-Depo: deposits	
-Debt: debt ratio	Natural logarithm of total deposits
-ROE: return on equity	Total debt (without deposits)/ total liabilities.
-ROA: return on asset	Net income to capital equity.
	Net income to total assets.

3. DATA AND METHODOLOGY

4.1. Data

To compute the composite index of transparency and to analyze the determinants of bank's transparency, we use annual data from balance sheet accounts and income statements of 69 banks operating in seven emerging countries (12 banks in Tunisia, 5 banks in Morocco, 6 banks in Lebanon, 15 banks in Egypt, 15 banks in turkey, 12 banks in Thailand and 5 banks in Malaysia) over the period 2006-2009. All bank financial statement data is taken from Bankscope Database of bureau Van Dijk's company. The macroeconomic variables are sourced from annual report published by central banks in each country and from the International Financial Statistics (IFS). The data of corporate social responsibility is collected from CSR report and annual report for each bank. The rest of variables such as the corruption index and the insurance deposit are collected from the website of transparency international organization and from the report of central bank of each country respectively.

3.2. Model formulation

In order to investigate the internal and external factors that affect the transparency of banks, we use a two-stage procedure. In the first stage of analysis, we build a multidimensional measure of the transparency which is based on four the dimensions of information. In the second stage, we examine the determinants influencing the transparency of banks by adapting the following linear model:

$$TRANS_{i,t} = \alpha + \beta_1 X_{i,t} + \beta_2 Y_t + \beta_3 Z_{i,t} + \epsilon_{i,t} \quad (1)$$

Where $TRANS_{i,t}$ is the measure of transparency of bank i in year t , α is a constant, $X_{i,t}$ represents the vector of characteristics of governance' bank, Y_t indicates the macroeconomic and juridical variables, $Z_{i,t}$ concerns the bank- specific variables, β_1 , β_2 and β_3 are the vector of regression coefficients, and $\epsilon_{i,t}$ is the disturbance term.

This model is estimated by using fixed effect model (FEM) and random effect model (REM). The first one is tested by Fisher test (F), while the second is examined by Lagrange Multiplier

test (LM). In order to find which of these models (FEM, REM) is the most appropriate, we calculate the Hausman test (H).

4. EMPIRICAL RESULTS

The empirical findings on the transparency of banks in seven emerging countries are structured on two main parts. First, we compute the transparency measure using the four dimensions of information and develop a composite index which represents four intermediate indexes. In the second part, we attempt to identify internal and external factors that explicate differences in transparency between banks.

5.1. Transparency measures of banks

The composite index of transparency is calculated bank by bank and for each country of our sample.

5.1.1. Transparency score by bank

Overall, we have detected a considerable disparity among banks concerning their transparency indexes. The results show that the least transparent bank is the 'Société Arabe Internationale de Banque' in Egypt with a transparency index equal to 14.57 %. This means that this bank is far from being in compliance with the recommendations of the Basel Committee. On the other hand, the most transparent bank is the Audi SAL bank in Lebanon, which possesses a transparency index equal to 85.03 %. Moreover, a wide disparity exists also among banks of the same country. For example, in Lebanon, the Bank of Beirut SAL has a transparency index of 39.29% which is the lowest at the country level. On the other hand, the transparency index of the Audi SAL bank is 85.03 %. This statement emphasizes the voluntary action of that bank to meet international banking standards.

5.1.2. Transparency by country

Table 6 shows that there is a disparity between seven countries in our sample. First, we observe a lack of banking transparency in the countries of North Africa. Indeed, this statement is due to several factors: micro and macroeconomic, cultural and political factors. Second, Turkey and Thailand appear on the top of the list and seem to be the countries most prepared to apply the Basel II agreements among those of the sample. Indeed, a big effort has been undertaken in these countries regarding banking transparency; for example, Turkey is trying hard to be coherent with European standards at the political, economic, and financial level with the aim of acceding to the European Union. On the other hand, Thailand is a country which attracts important foreign investments in particular in the banking domain. Accordingly, banking transparency is guaranteed.

Table 6: National average of banking transparency

Rank	Country	Number of studied banks	National average of the banking transparency
1	Turkey	15	63,24%
2	Thailand	12	61,63%
3	Lebanon	6	59,80%
4	Malaysia	4	51,91%
5	Morocco	5	51,32%
6	Tunisia	12	35,30%

7	Egypt	15	30,15%
	Total	69	

4.2. Determinants of bank transparency

Our next analysis is to investigate the factors which could affect the transparency of banks. For this reason, we regress the score of transparency on a number of three groups of variables comprising four bank governance characteristics¹⁴, five macroeconomic and juridical indicators and six bank-specific variables. To estimate the pane regression model (equation1), we used three alternative models: pooled ordinary least square, fixed effects model and random effects model. Three tests are used to choose between these models. Firstly, the F test shows that individual effects are present since the relevant F statistic is significant at the 1% level ($F(48, 167) = 18.34$), thus we choose the fixed effects model. Secondly, for the random effects model and in order to investigate whether there is evidence of heteroscedasticity in the residual variance, the Breush-Pagan Lagrange multiplier (LM) is calculated. With the large chi-squared (LM statistic = 38.57 with $p < 0.000$), we reject the null hypothesis in favour of the random effects model. Finally, to choose between these two models (fixed and random), we apply the Hausman test. The result ($H = 9.13$, with $\text{prob} > \chi^2 = 0.8456$) provides evidence in favour of a random effects model. Table 7 reports the results of regression using the random effects model.

¹⁴ The variable manager ownership is eliminated in our model because of the high number of missing values

Table 7: Regression results of bank risk measures on ownership structure variables

Explanatory Variables	Coefficient	t-Student
<u>Bank Governance</u>		
Major Shareholders	0.518	(1.94)***
Government ownership	0.001	(2.16)**
Composition of the board directors	-0.0007	(-0.89)
Social responsibility activities	-0.005	(-0.42)
<u>Bank-characteristics</u>		
Size	0.0006	(0.37)
Deposits	-0.001	(-0.07)
Opportunity of growth	0.0001	(0.51)
Debt ratio	-0.083	(-0.63)
ROE	-0.0039	(-1.67)***
ROA	0.001	(1.87)***
<u>Macroeconomic and Juridical indicators</u>		
Financial market	-0.0003	(-1.84)***
Inflation	-0.003	(-1.67)***
Deposit Insurance system	0.146	(2.89)*
Protection of stockholder's rights	0.081	(4.20)*
National corruption index	0.005	(0.29)
Number of observation	235	
F-value	52.76*	
Adjusted R2	0.309	
Lagrange multiplier (LM)	38.57	
Hausman test	9.13	

Notes: t- statistics are between parentheses. *, ** and *** indicate statistical significance at 1%, 5% and 10%, respectively.

As can be seen in table 7, the coefficient of ownership concentration is statistically significant at 5% and negatively related to the index of transparency. The result means that a highly-

concentrated bank capital is associated with a low level of its transparency. In fact, when the part of capital owned by major shareholders is increasing, the bank is less motivated to show its transparency since these shareholders would have a direct access to information via the board of directors. Our result is in line with McKinnon and Dalimunthe (1993), Schadewitz and Blevins (1998), as well as Hamrouni and Lakhal (2010). However some studies did not find any effect of ownership concentration (eg. Craswell and Taylor, 1992) or reported a positive relationship between transparency and ownership concentration (e.g. Haniffa and Cooke, 2002). As expected, the government ownership indicator has a positive and statistically (5%) significant impact on the level of transparency. This result proves that government ownership is in line with the high level of bank transparency. This finding is in line with Eng and Mak (2003). Referring to the board composition, the variable is insignificant. In our case, the composition of the board of directors (percentage of independent directors) does not explain the level of bank transparency. This is inconsistent with a result reported by other studies (eg, Lal Bhasi et al., 2012: a negative impact; Hossain, 2008: a positive effect). A possible reason for this statement is that social and cultural factors can intervene to blur this lane. These factors differ from a country to another and do not allow giving a clear tendency of this variable in the sample. For instance, in Turkey, we pointed out that banks are characterized by boards of directors with low percentage of independent managers while their transparency indexes are higher than other studied countries. Also, the variable of social responsibility activities is insignificant. As a result, the existence of social and environmental activities undertaken by the bank does not allow the explanation of its transparency level. This finding could be attributed to the nature of the chosen measure. In fact, this measure allocates the same value to two banks investing different amounts in social and environmental activities. In other words, using this measure, we cannot differentiate between the bank which makes considerable efforts in social responsibility and the one which invests low amounts only for marketing.

Turning to the macroeconomic and juridical indicators, table 7 shows that the development of financial market is statistically significant (10%) and negatively related to transparency score. This complies with our prediction in the sense that the development of financial markets led banks to get financed by issuing new securities and to finance the economy by buying securities. At the same time, banks tremendously developed their off balance sheet activities (Securities investment, lines of credit, guarantees, contracts on interest rates or on exchange rates, swap, options, etc). These new banking activities favored the bank opacity, a result which obviously complies with Plihon (1998). We also find a negative relationship between inflation and transparency. This result means that banks operating in countries having a comparatively weak level of inflation show a comparatively high level of transparency. Similar results which support the argument of a negative association between bank transparency and inflation were reported in other studies (Archambault and Archambault (2003) ;Chen and al. (2009);...). Concerning the juridical indicators, we observe, as expected, that the coefficient of deposit insurance system is significant (1%) and positively correlated to the index of transparency. This result confirms that the existence of an explicit system of deposits insurance encourages banks to show a comparatively high level of transparency compared to the case of an implicit system. The importance of this variable in the explanation of the level of transparency chosen by the bank is in coherence with the report published in 2009 by the Basel Committee on Bank Monitoring and the International Association of Deposits Insurers. The report stipulates that the regulating authorities of the banking system do not control enough the levels of risk chosen by banks and think that the explicit system of the bank deposits insurance plays the role of the supplementary control tool of banks risk taking. As for the proxy of protection of stockholders' rights, the results showed that this variable is significant (1%) and positively correlated with bank transparency. The banks operating in countries adopting Common Law are more transparent than those operating in Civil Law countries. Archambault and Archambault (2003) found similar results. This statement was also supported by Chen and al. (2009) who showed that in emergent countries with weak protection of stockholders, companies which want to reduce their

expenses of external financings have to reinforce their governance mechanisms rather than adopt more transparent disclosure policies. Finally, table 7 reveals that corruption has no influence on transparency. This finding can be explained by the following reason: some transparent banks represent subsidiaries of Europeans or North American banks and are in obligation to satisfy the same conditions of transparency applied by the mother bank. For instance, several French banks (BNP Paribas, Société Générale, Credit Agricole...) have subsidiaries in Tunisia, Morocco and Egypt.

Now, regarding the effect on bank-specific (control variables) on transparency, the results summarized in table 7 showed that profitability indicators (ROE, ROA) are strongly associated with bank transparency. Contrary to our expectation, we find a negative association between ROE and the bank transparency level. However, the result shows a positive impact on transparency. This is consistent with the idea that more profitable banking companies disclose significantly more information than do less profitable ones. This issue in the literature is ambiguous. Some studies have shown that profitability influences the level of transparency in a company (eg. Wallace and Naser, 1995; Barako, 2007; Hossain, 2008). Other researchers found no relationship between profitability and transparency (eg. Wallace et al., 1994) and some others suggested that the direction of the relationship is not clear (eg, Lang and Lundholm, 1993). In our case, we think that this interesting difference between ROE and ROA is due to the ownership structure of banks. When we analyzed the ownership structure of banks in these countries, we faced considerable difficulties to reveal the 'shareholders of last resort': The ownership origin. In fact, several politicians and Businessmen from Gulf countries are investing in banks capital via funds. The ownership structure of these funds is very difficult to reveal. This could point out the influence of political and cultural factors on bank transparency in emergent countries. Banks in these countries would be more opaque in the case of the high shareholders' profitability. So, this opacity would serve for hiding the wealth of politicians. The remaining control variables are insignificant. In fact, size, deposits, debt ratio and growth variables did not serve to explain the level of transparency of banks.

By analyzing the model's results, we can conclude that all governance, economic and juridical variables are significant except for two variables: board composition and corruption. As for bank characteristics, only the profitability indicator proved to be significant.

5. CONCLUSION

Transparency is a key variable in the financial markets, and even more so in the banking sector. It is widely considered as an important contributor to bank stability because of the use of financial reports in effective market discipline and bank supervision. It is also regarded as a necessary condition for the implementation of corporate governance especially in emerging economies. However, the issue related to factors influencing bank transparency is less analyzed in the banking literature. In order to formulate policies for an enhanced transparency of banks, this paper has used regression analysis to investigate the determinants of banks' transparency for 69 banks operating in 7 emerging economies. The factors that may affect transparency, measured by composite disclosure index, have involved bank's characteristics, Governance variables, and macroeconomic and juridical indicators.

We have obtained several interesting results. First, the transparency scores show an important disparity between banks as well as between countries. The level of transparency in countries of North Africa for all categories of information is low. For instance, Turkey is twice as transparent as Egypt. We can explain these differences by several factors, such as micro, macroeconomic, cultural and political factors. Second, a regression analysis provides evidence that the level of transparency is shaped especially by corporate governance attributes and economic as well as juridical factors. The part of capital owned by major shareholders and the government ownership are key variables in the transparency and disclosure decisions. The development of financial market, inflation, the deposit insurance system and juridical system related stockholder's rights are also key variables that influence

the level of transparency. Third, most bank's characteristics variables such as size, opportunity of growth, deposits and debt ratio are insignificant in explaining the transparency levels.

Based on the results of this study, banks have to increase disclosure and enhance transparency by improving their corporate governance and implementing of voluntary disclosure system with the four categories of information. In addition, makers in these emerging markets, particularly in North Arica, have to undertake actions to develop financial market, to implement an explicit system of insurance and give more protection to minor shareholders.

There are several limitations to this study. First, our study does not include some variables in our model such as market structure (Spiegel and Yamori, 2003), the number of subsidiaries in a bank (Hanifa and Cooke, 2002) and cultural variables (Barako, 2007). Second, the time period of analysis is relatively short (4 years), and we estimate that the results can be different if a larger time frame is used. Finally, it would be interesting to widen the sample of study by adding other financial institutions such as insurance and financial companies.

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