

Determinants of voluntary disclosure in Tunisian bank's reports

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Abstract

Disclosure and bank transparency are currently of crucial importance with regard to the adaptation of regulatory tools (Basle II) to enhance the stability of the banking sector. Voluntary disclosure in banking firms can improve the transparency of market transaction and forcing bankers to reduce the risk taking.

The paper aims to examine the determinants of voluntary disclosures of listed banks in Tunisia. Using Prais-winsten regression model to test the determinants of the level of voluntary disclosure, on a sample based on 10 banks observations during the period 2000-2011. Results show that higher board size, blockholder ownership and state ownership is associated with decreased disclosure. However, proportion of independent directors, CEO duality and auditors' reputation are not related to banks' voluntary disclosure. Moreover, an increase in foreign ownership and bank performance increases corporate disclosure. The paper also finds that larger banks had greater disclosure.

This paper provides evidence for Tunisian regulators to improve corporate governance and optimize ownership structure. Distinct from prior empirical research based on disclosure behavior in developed markets, this study examines the determinants of voluntary disclosures of listed banks in Tunisia.

Keywords: Voluntary disclosure, Banks, Tunisia, Corporate ownership, Boards of directors

1. Introduction

Voluntary disclosure and its determinants have attracted for non-financial firms both analytical and empirical researchers since the 1970s. Despite the importance of voluntary disclosure for the case of banking firms, the study of its determinants remains relatively unexplored. The aim of this study is to examine the determinants of voluntary disclosure of Tunisian banks.

The Tunisian banking sector serves more than 90% of the national economy. But Tunisian banks face several problems: a high level of non performing loans and insufficient capitalization and profitability. Moreover, the cover of these bad loans is only at 44 % for the commercial banks and 66 % for development banks.

To overcome these problems and to align with the guidelines of the first Basel Accord, regulators Tunisian were brought in 1999 to increase the requirements of capital ratio to 8%. Subsequently, in recent years, Tunisia has begun to prepare for the implementation of the directives of the second Basel Accord.

The implementation of the directives Basel II need to improve the transparency of banks, but the quality of financial reporting remains very irregular between Tunisian banks (IMF, 2007). This fact requires a thorough analysis of the factors affecting the communication strategy adopted by these institutions.

The Basel Committee on Banking Supervision released a document entitled 'Enhancing Bank Transparency' (BASEL, 1988), which considers transparency to be a key element of an effectively supervised, safe and sound banking system. Therefore, adequate public disclosure facilitates a more efficient allocation of capital between banks, since it helps the market to accurately assess and compare the risk and return prospects of individual banks. This study examines the determinants of voluntary disclosure of Tunisian banks.

The remainder of the paper is organized as follows. Section 2 describes the regulatory environment for disclosure in Tunisia. Section 3 presents a review of the literature and develops the study's hypotheses. The research design is outlined in Section 5. Section 6 presents the results and analysis. Finally, Section 7 presents the conclusions and directions for future research.

2. The environment of corporate reporting in Tunisia

In Tunisia ownership is highly concentrated and legal system does not protect minority investors. These latter are dominated by the controlling shareholders. This is explained by the opaque nature of the firms' disclosure policies and their lack of transparency.

Indeed, Tunisia has inherited the cultural values of the euro-continental model (Kamla, 2007), characterized by the uniformity, conservatism and discretion.

The Tunisian financial market moves toward a strengthening of Transparency. In addition, corporate governance rules encourage the improvement of transparency and disclosure.

In this sense, the guide of good corporate practices of the Tunisian enterprises (2008) insists in the right of the shareholders to a better transparency and disclosure. It affirms that all firms that decide to adopt this guide should guarantee an equal treatment of all shareholders and have to make sure that all the shareholders have all the required information and all the ways that enable them exercise their rights.

But, the Tunisian accounting framework stipulates that: "other financial and non financial information, that the publication makes the information more useful, can be communicated under the form of reports or separated states that completes the financial statements." This orientation shows that Tunisian standards setters are more aware about the information's importance that goes beyond the financial dimension to reach other dimensions such as social dimension, ecological dimension, as well as technological dimension. Nevertheless, regulators don't give any precision about the form nor the content of this report, except that it should be "detailed". Thus, managers have wide margin to exercise discretion in fixing the report content.

3. Literature review and hypotheses development

There is extensive literature focusing on disclosures of non-financial companies, including voluntary disclosure, research addressing the disclosure by financial companies, including their voluntary disclosures is much less numerous. As we know, there are only Nier and Baumann (2006) and Hossain and Reaz's (2007) have been studied voluntary disclosure of banking firms.

Nier and Baumann (2006) study reported the results of an empirical investigation of 729 banks of 32 countries. The results show that the extent of voluntary disclosure requires banks to reduce risk-taking and increase coverage of these risks by equity.

Hossain and Reaz's (2007) study reported the results of an empirical investigation of the extent of voluntary disclosure by 38 listed banking companies in India. It also reports the results of the association between company-specific characteristics and voluntary disclosure of the sample companies. The study revealed that Indian banks are disclosing a considerable amount of voluntary information. The findings also indicated that size and assets-in-place are significant and other variables such as age, diversification, board composition, multiple exchange listing and complexity of business are insignificant in explaining the level of disclosure.

The literature review show that the extent of voluntary disclosure is affected by board size, board composition, duality, blockholder ownership, auditor reputation, state ownership, foreign ownership, firm performance and firm size.

Board size

Agency theory suggests that large boards can play a crucial role in monitoring the board and in making strategic decisions. In addition, it suggests that large boards are less likely to be dominated by the management (Hussainey and Wang, 2011). Furthermore, large boards lead to increase the expertise diversity in the board including financial reporting expertise (Yermack, 1996). Prior researches also find that there is a negative association between board size and earnings management, suggesting that large board size leads to higher disclosure quality. Therefore, firms with large board size are more likely to voluntarily disclose more information in their annual reports.

On the other hand, Goodstein et al (1994) argue that large board size might have a negative effect of the effectiveness of the board. Members of large boards are more likely to be less motivated to participate in strategic decision-making. As a result, a negative association between board size and disclosure would be expected.

Majority of prior studies find a positive association between board size and voluntary disclosure (Barako et al, 2006; Hussainey and Al-Najjar (2011). On the other hand, some studies did not find any association between board size and disclosure (Evans, 2004; Lakhali, 2005).

Based on these arguments, we set our first hypothesis as follows:

H1: Board size is positively related to the extent of voluntary disclosure.

Board Composition

Fama (1980) argues that the board of directors, which is elected by the shareholders, is the central internal control mechanism for monitoring managers. Fama (1980) and Fama and Jensen (1983), and more recently Chau and Leung (2006) suggest that boards with a higher proportion of outside or independent directors will increase the quality of monitoring over management, because “they are not affiliated with the company as officers or employees, and thus are independent representatives of the shareholders’ interests” (Pincus et al. 1989). Beasley (1996) found less likelihood of fraud in financial statements produced by companies with boards with higher proportions of outside directors.

The presence of independent directors on boards may improve the quality of financial statements. For example, they are associated with less earnings management (Peasnell et al., (2000); Xie et al., 2001; and Klein, 2002). Such findings may be attributable to the positive association between the number of independent directors and firms’ discretionary decisions to increase the level of independence on the audit committee above the suggested minimum (Williams, 2002).

Furthermore, non-executive directors may boost monitoring of the quality of financial disclosures, as reported by Chen and Jaggi (2000) in Hong Kong and Cheng and Courtenay (2004) in Singapore. That is, they encourage more voluntary disclosures (Adams and Hossain, 1998), specifically, as reported by Leung and Horwitz (2004), in relation to voluntary segment disclosure. They reduce the benefits from withholding information (Forker, 1992) and, as Dechow et al. (1996) found, firms with boards dominated by management incur more accounting enforcement actions by the SEC. Prior research supports the positive association between voluntary disclosure and board independence (Adams et al., 1998 and Chen and Jaggi (2000). On the other hand, other studies some researchers, especially in developing nations, do not find a significant relationship between the level of voluntary disclosure and board independence (Haniffa and Cooke 2002, and Ho and Wong 2001). This may be due to the ties that some non-executive directors have to the company that undermines their independence in some countries (Tengamnuay and Stapleton, 2008).

Based on these arguments, we set our second hypothesis as follows:

H2: Proportions of independent non-executive directors is unrelated to the extent of voluntary disclosure.

CEO Duality

Agency theory predicts that duality creates individual power for CEO that would affect the effective control exercised by the board. Fama (1980) and Fama and Jensen (1983) argue that independent directors can play a significant role in monitoring the performance of managers and limit their earnings management. In addition, Gul and Leung (2004) argue that firms with large number of independent directors are expected to be more effective in board monitoring and hence in offering more information to the public. Prior research on the association between duality and corporate voluntary disclosure is mixed. Some studies find a negative association between the two variables (Lakhali, 2005; Laksamana, 2008; Forker, 1992, Haniffa and Cooke, 2002; Eng and Mak, 2003; Gul and Leung, 2004). Other studies did not find any significant association between the two variables (Arcay and Vazquez, 2005; Cheng and Courtenay, 2006; Ho and Wong, 2001; Ghazali and Weetman, 2006).

Based on these arguments, we set our third hypothesis as follows:

H3: CEO Duality is negatively related to the extent of voluntary disclosure.

Blockholder ownership

Blockholder ownership is the percentage of shares held by substantial shareholders (more than 5% of a firm’s outstanding shares). Jensen and Meckling (1976) argue that substantial shareholders are expected to have both greater

power and incentives to monitor management, as their wealth is tied to the firm's financial performance. Fama and Jensen (1983) propose that diffusion in ownership raises the potential conflicts between the principal and the agent. Agency problems can be mitigated by involving substantial shareholders in monitoring or controlling activities that potentially cause such problems (Shleifer and Vishny, 1986). Therefore, managers are predicted to disclose more information in annual reports in order to reduce agency costs entailed in monitoring activities. Hossain et al. (1994) provide support for this prediction in revealing an association between the ownership structure and the extent of information voluntarily disclosed by the listed Malaysian, Hong Kong and Singapore firms, respectively.

When share ownership is less diffused, less monitoring is required. Prior research indicates a negative relationship between block ownership and disclosure (Schadewitz and Blevins, 1998). We predict that need for more monitoring and more transparent disclosure is decreased by a greater percentage of blockholder ownership. Accordingly, we test the following hypothesis stated in the alternative form:

H4: Blockholder ownership is negatively related to the extent of voluntary disclosure.

Auditor reputation

Accordingly to the Tunisian Commercial Code, the verification of the information given in the management report with the annual accounts is the responsibility of the external auditors who gives their opinion toward financial statements.

Auditors often work for several firms, which allow them to bring experience from one firm to another. They may thus use their experience with annual reporting practices in other firms to influence and constrain the company's executive and supervisory board members' decision-making processes on voluntary corporate annual disclosure, and help them to deal with related uncertainty. For normative reasons, their main focus will be on disclosure of information on the financial position, performance, and changes in the financial position of a reporting firm.

The disclosure literature suggests that the contents of annual reports may be influenced by type of auditor; where the distinction is usually drawn between the larger Big 4 auditors and the smaller non-Big 4 auditors (Firth 1979). However, the theoretical reasons why Big 4 auditors might have an effect upon voluntary strategy disclosure are not clear. Firms providing more strategy disclosure may employ a Big 4 auditor to signal to the market that their strategy disclosure is more reliable as large auditors are commonly believed to bring enhanced credibility to financial reports (Kent and Ung 2003).

Alternatively, Giner (1997) suggests that larger audit firms have incentives to supply higher audit quality, because the Big 4 auditors may risk losing some of their reputation if they are associated with poor quality reporting practices. To the extent that non-disclosure of strategy information is seen as poor quality reporting, auditor type may be expected to have an association with extent of strategy disclosure. It may also be that Big 4 auditors install better reporting practices and may therefore have a positive effect on disclosure in general (Firth 1979). Alternatively, firms with higher agency cost might hire Big 4 auditors, and to the extent that strategy disclosure and Big 4 auditors are complementary monitoring mechanisms one would expect the relationship between Big 4 auditors and strategy disclosure to be positive (Giner 1997). All the explanations above are consistent with predicting a positive relationship between Big 4 auditor and strategy disclosure.

H5: Auditor reputation is positively related to the extent of voluntary disclosure.

State ownership

Tunisian banks are characterized by a strong state participation. The state shareholders may focus on wealth distribution and maintaining social order (Xu and Wang, 1999). That is, enhancing shareholder value may not be the primary objective of state ownership banks. This factor should weaken the pressures for voluntary disclosures directed at the public. Hence, there may be less disclosure in corporations with a higher proportion of state-ownership corporation.

There has been no prior research on voluntary disclosure and government ownership in the Tunisian context. But Eng and Mak (2003) find that a company with significant government ownership in Singapore is associated with an increased propensity to disclose information. The government may have to consider the comprehensive development of the industry and the society. Agency costs are high in state-owned companies because of the conflicting objectives between the pure profit goals of commercial enterprises and goals related to national interests. This explanation above is consistent with predicting a negative relationship state ownership and strategy disclosure.

H6: State ownership is negatively related to the extent of voluntary disclosure.

Foreign ownership

In general, due to space and language barriers, foreign shareholders likely face a higher level of information asymmetry. In order to compete effectively in the capital market, firms with foreign shares would voluntarily disclose more information. Moreover, the foreign owners' influence on corporate governance practices, which impacts significantly on firms' corporate reporting practices (Oxelheim and Randoy, 2003).

Haniffa and Cooke (2002) found a significant positive relationship between the proportion of foreign ownership and the level of voluntary disclosure by listed companies in Malaysia. They argued that there is a greater need for disclosure as a means to monitor the actions of management by foreign owners. Similarly, Singhvi (1968) found that companies, in which foreigners owned a majority of stocks, present higher quality disclosure than locally Indian owned companies.

Moreover, most of these companies are multinational subsidiaries, and the presence of foreigners on boards may significantly influence their approach to corporate financial reporting in order to meet foreign reporting requirements. Consistent with previous research findings, it is possible that this group of investors can influence the corporate disclosure practices of listed banks in Tunisia. Given the geographical separation of owners and management, company management may be inclined to voluntarily provide more information in the annual reports. Thus, ownership by foreigners can be a significant determinant of the level of corporate disclosure. Based on the discussion above, the following hypothesis is tested:

H7: Foreign ownership is positively related to the extent of voluntary disclosure.

Firm performance

Theoretically, investors generally are thought to perceive the absence of voluntary disclosure as an indication of "bad news" about a firm (Verrecchia, 1983; McKinnon and Dalimunthe, 1993). This provides average-or-better performing firms with an adverse selection incentive to disclose (Lev and Penman, 1990; Lang and Lundholm, 1993; Clarkson, et al. 1994). On the other hand, managers likely have incentives to disclose voluntary information (especially earning forecasts), even if it will be unfavorable to the firms, in order to avert legal liability (Skinner, 1994). However, prior empirical evidence on the relationship between firm performance and voluntary disclosure practices was mixed. Based on the above discussions, it could be concluded that better performing firms have greater incentives to disclose more voluntary information as to avoid perceptions by the users of hiding some unfavorable information.

Therefore, the hypothesis on the relationship between the extent of voluntary disclosure and firm performance is stated as follows:

H8: Bank performance is positively related to the extent of voluntary disclosure.

Firm size

The size of the firm has been argued to have a positive association with the extent of voluntary disclosure, and such has been selected as an independent variable in most of the general voluntary disclosure studies (Firth, 1979; Chow and Wong-Boren, 1987; Cooke, 1989 and 1991; Lang and Lundholm, 1993; Ahmed and Nicholls, 1994; Botosan, 1997). Specifically, studies on voluntary disclosure such as Ashbaugh et al. (1999), and Ettredge and al. (2002) have also chosen firm size as one important factor to explain the extent of voluntary disclosure.

Various reasons have been offered to justify the expected positive relationship of voluntary disclosure practices and firm size. Buzby (1975), for example, suggested that since collecting and disseminating information is a costly exercise, it is only the larger firms that could afford such expenses. Ashbaugh et al. (1999) note that the economics of scale suggest larger firms are more likely to present financial reports at websites. Apart from that, the political-cost hypothesis predicts that larger companies have a stronger incentive to enhance their corporate reputation and public image, as they are more publicly visible. They also attract more attention by the governmental bodies. Increased disclosures would be generally believed to reduce government intervention (Firth, 1979; Chow and Wong-Boren, 1987).

In addition, larger firms are motivated to undertake more voluntary disclosure practices in order to create or maintain strong demand for their securities (Hossain and al., 1994). Furthermore, larger companies have also face higher

information asymmetry as the shareholders' base is more diverse, and thus leads toward higher agency cost. In order to reduce such agency cost, larger firms are expected to disclose more information than smaller companies (Jensen and Meckling, 1976). All the above theoretical arguments lend support for higher voluntary disclosures by large firms. Therefore the hypothesis is represented as follows:

H9: Bank size is positively related to the extent of voluntary disclosure.

4. Research Method

4.1. Sample selection

The total number of banks listed on the Tunisian Securities Market is 11 as of 31st December 2011. Annual reports for the years 2000-2011 have been used for the study. However, the criterion used for sampling the banks is: the bank must have been listed for the entire period of. Therefore, under this criterion, one bank was excluded because it was listed after 2002. Therefore, the total number of banks cover under the study is 10.

The annual report material originates from the banks' websites, the library of the central bank and the professional association of banks. The variable data manually is collected and reorganized according to the annual report material.

4.2. Measurement of voluntary disclosure

It is understand that the selection of voluntary items is a subjective judgment. Moreover, such selection depends on the nature and context of the industry and the country context. As we saw in our literature review while there is extensive literature focusing on disclosures of non-

financial companies, including voluntary disclosure, research addressing the disclosure by financial companies, including their voluntary disclosures is much less numerous. We referred to the study of Nier and Baumann (2006) to arrive at the selection of a list of voluntary items of information to be included in the disclosure index.

We present in the Table 1, 17 categories used to construct the Disclosure score named (SCORE). It is defined as:

$$\text{SCORE} = \frac{1}{17} \sum_{i=1}^{17} I_i$$
 where each item I_i can be related to one or more sources of risk. For all items, we assign a 0 if

there is no information about the corresponding categories and a 1 if there is at least one informed category. Then, the index will be ranged between 0 and 1.

TABLE 1: Items of the disclosure score based on annual reports Information

Sub-index	Items	Categories
Assets		
Loans	S1 : Loans by maturity	Loans and advances (3 months, Loans and advances 3-12 months, Loans and advances >1 year
	S2 : Loans by counterparty	Loans to Group Companies, loans to other corporate, Loans to banks.
	S3 : Problem Loans	Total problem banks
	S4 : Problem loans by type S5: risk weighted assets	Overdue/ restructured/ Other non performing Total of risk weighted assets
Other Earning Assets	S6 : Securities by type	Treasury bills, other bills, Bonds, CDs, Equity investments, other investments
	S7: Securities by holding purpose	Investment, trading
Liabilities		
Deposits	S8: Deposits by maturity	Demand, Savings, Sub 3 months , 3-6 months, 6months-1 year, 1-5 years, + 1 year
	S9: Deposits by type of customer	Banks/customers/ Municipal, Government
Other funding	S10: Money market funding	Total Money Market Funding
	S11: Long term funding	Convertible Bonds, Mortgage Bonds, Other Bonds, Subordinated debt, Hybrid Capital
Income statement		
	S12: Non-interest income	Net Commission Income, Net fee Income, Net Trading income
	S13: Loan Loss Provisions	Total Loan loss Provisions
Memo lines		
	S14: Reserves	Loan loss reserves (memo)
	S15: Capital	Total capital ratio, Tier 1 ratio, total capital
	S16: Off-balance sheet (OBS) Items S17: liquid assets	OBS items Total liquid assets

4.3 Definition and measurement of variables

Table 2 summarizes the definition and measurement of variables used in this paper. All of the data were collected from the annual reports of the Tunisian banks.

TABLE 2: Definition and measurement of dependent and independent variables

Variable	Definition	Measurement
SCORE	Voluntary disclosure score	Total number of points awarded for voluntary disclosure divided by the number of items
TAILB	Board size	Total number of directors
OUTDR	Outside directors	Total number of outside directors divided of total number of directors
DUAL	CEO duality	1 if the CEO is also chairman of the board, 0 otherwise
BLOCK	Blockholder ownership	Proportion of ordinary shares owned by substantial shareholders (with equity of 5 percent or more)
BIG4	Auditor reputation	1 if auditor is big-four firm, 0 otherwise
ST_OWN	State ownership	Proportion of ordinary shares owned by the state
FR_OWN	Foreign ownership	Proportion of ordinary shares owned by the foreign investors
ROA	Firm performance	Return On Assets
SIZE	Firm size	Natural logarithm of firm's total assets

4.4 Regression mode

A linear-multiple regression analysis was used to test the association between the dependent variable of voluntary disclosure of Tunisian banks and the independent variables. The following model is estimated:

$$SCORE_{it} = \beta_0 + \beta_1TAILB_{it} + \beta_2OUTDR_{it} + \beta_3DUAL_{it} + \beta_4BLOCK_{it} + \beta_5BIG4_{it} + \beta_6ST_OWN_{it} + \beta_7FR_OWN_{it} + \beta_8ROA_{it} + \beta_9SIZE_{it} + u_{it}$$

5. Finding and analysis

5.1 Descriptive statistics and univariate analysis

Table 3 contains descriptive statistics for the dependent and independent variables. The average voluntary SCORE for our sample of banks is 0.58, suggesting a low-voluntary disclosure in Tunisian banks. The average percentage of OUTDR is 39,25. The mean of BLOCK is about 31,102% revealing that the ownership in Tunisia is considerably concentrated. The mean of ST_OWN and FR_OWN is about 22,48% and 24,78%, respectively. Across the 10 banks and across the period 2000-2011, the mean percentage of banks performance is about 0.71 percent, with a minimum of -10,64 and a maximum of 2,912.

Table 4 reveals a number of significant correlation among the dependent and independent variables. The analysis shows that voluntary SCORE is negatively correlated with TAILB, BLOCK, ST_OWN and FR_OWN, and positively associated with OUTDR and ROA. The disclosure levels are also positively correlated to SIZE and BIG4. The positive

correlations between SCORE and these firm characteristics are consistent with the results of prior studies, as discussed in Ahmed and Courtis (1999).

TABLE 3: Descriptive statistics for dependent and independent variables

Variables	Moyenne	Ecartype	Min	Max
SCORE	0.5848	0.287	0	1
TAILB	10.969	1.125	8	13
OUTDR	39.251	20.981	7.692	90
DUAL	0.608	0.608	0	1
BLOCK	31,102	17.785	5,61	64,24
BIG4	0.616	0.488	0	1
ST_OW N	22.479	27.316	0	68.4
FR_OW N	24.781	22.780	0	64.2
ROA	0.721	1.585	-10.647	2.912
SIZE	14.512	0.501	13.539	15.445

TABLE 4: Correlation matrix

	SCORE	TAILB	OUTDR	DUAL	BLOCK	ST_OW N	FR_OW N	ROA	BIG4	SIZE
SCORE	1.000									
TAILB	-0.191**	1.000								
OUTDR	0.119*	-	1.000							
DUAL	0.053	-0.154	0.270	1.000						
BLOCK	-	-	0.048	-	1.000					
ST_OW N	0.415***	0.117***	0.320***	0.105**	0.286***	1.000				
FR_OW N	0.201***	0.185***	0.224***	-0.345	0.425***	0.839***	1.000			
ROA	-	-	-	-	-	-	-	1.000		
BIG4	0.231***	-0.053	-0.039**	0.317**	0.227***	0.038***	-0.187***	-	1.000	
SIZE	-0.004	0.116	0.253	-0.125	0.143***	-0.341**	0.233***	0.141***	-	1.000
	0.359***	0.182	-	-0.158	0.437***	0.531	-0.496	0.110***	0.237*	0

*, ** and *** indicate statistical significance at the 10%, 5% and 1% level, respectively.

5.2 Multivariate hypothesis test

The use of this statistical tool is based on the assumption of no significant multicollinearity between the explanatory variables. The maximum Pearson correlation among explanatory variables is 0.839, between ST_OWN and FR_OWN. So, we introduce these two variables separately in the regression model. Concerning the other variables, applying the cutoff of correlation coefficient values of 0.8 or higher for multicollinearity to be considered as troublesome according to Judge et al. (1980), the problem of multicollinearity is minimal.

In addition, the maximum variance inflation factor (VIF) is 2.631, which is lower than ten, a number that is used as a rule of thumb as an indicator of multicollinearity problems (Belsely, 1991). Thus, these results further support the lack of presence of multicollinearity in the research model. The results of the regression analysis can, therefore, be interpreted with a greater degree of confidence.

Baltagi (2001) and Hsiao (1986) indicate that panel data methodology controls for individual heterogeneity, reduces problems associated with multicollinearity and estimation bias, and specifies the time-varying relation between dependent and independent variables. This study uses a panel data methodology and an F-test is used to determine whether the fixed-effects model outperforms the pooled OLS. The appropriateness of the random-effects model relative to the pooled OLS model is examined with the Breusch and Pagan Lagrange multiplier (LM) test. These tests indicate that there are no specific effects and the Ordinary Least Squares (OLS) estimator is more suitable. However, the post regression analysis shows that the residuals are not independent and not identically distributed because of the presence of serial correlation, the contemporaneous (spatial) correlation and the panel-level heteroscedasticity.

We used the Prais Winsten Regression estimator to overcome these problems and to provide consistent standard deviations. The regression results are presented below in Table 5.

We introduce separately the variables ST_OWN and FR_OWN, in the equations (1) and (2), respectively, to overcome the problem of multicollinearity between these two variables.

Table 5 displays the result of the Prais-winsten regression model used to test H1-H9. The adjusted coefficient of determination (R^2) for the level of voluntary disclosure is (0,661) for the first regression and (0,695) for the second regression, suggesting that there are other related variables ignored in our model.

Hypothesis 1 predicts that firms with little Board size will be more likely to engage in voluntary disclosure than firms with a large Board size. Results in Table 5 do not support for H1 as the coefficients on Board Size are negatively and statistically significant. That is, members of large boards are more likely to be less motivated to participate in strategic decision-making, as argued by Goodstein et al (1994), large board size might have a negative effect of the effectiveness of the board.

This result demonstrates the interest to encourage banks to implement the best practices of corporate governance.

Hypothesis 2 predicts that the extent of voluntary disclosure will be positively associated with the proportion of independent or external directors. As shown in Table 5, the coefficients of (OUTDR) are not statistically significant. Therefore, H2 is not supported.

This result could be explained by the fact that in practice, outside directors of Tunisian banks, even if they appear to be external, some of them may have business relationships with these banks. However, board independence is a necessary condition for better reducing conflicts of interest and better governance.

Hypothesis 3 predicts that the extent of voluntary disclosure will be negatively associated with CEO duality. As shown in Table 5, the coefficients of (DUAL) are not statistically significant. Therefore, H3 is not supported.

This result confirms those of Coulton et al. (2001) and Hanifa and Cooke (2000). These authors did not find a significant relationship between duality and the level of disclosure.

Hypothesis 4 predicts that the extent of voluntary disclosure will be negatively associated with a bank's blockholder ownership. As shown in Table 5, the coefficients on BLOCK are negative and statistically significant for the two regressions (1) and (2), providing some support for H4. Results suggest that the effect of blockholders on the extent of voluntary disclosure is substitutive, such that need for disclosure transparency is decreased by an increased percentage of blockholders. Similarly, this result may indicate that the concentration of ownership promotes the retention of information. This result confirms the predictions of Lennox (2005) which states that the concentration of ownership may encourage principal shareholders to control the decisions of the director, as it may encourage them to expropriate minority shareholders by hiding the true performance the firm.

Hypothesis 5 predicts that the extent of voluntary disclosure will be positively associated with the reputation of auditors. As shown in Table 5, the coefficients of (BIG4) are not statistically significant. Therefore, H5 is rejected.

This result could indicate that the services provided by these auditors did not differ from those provided by local auditors.

Hypothesis 6 predicts that the extent of voluntary disclosure will be negatively associated with the proportion of state ownership. As shown in Table 5, the coefficients of (ST_OWN) are negative and statistically significant. It is evident that there is a negative relationship between the proportion of state ownership and voluntary disclosure, so agency costs are high in state-owned companies because of the conflicting objectives between the pure profit goals of commercial enterprises and goals related to national interests (Wong, 2008).

Hypothesis 7 predicts that the extent of voluntary disclosure will be negatively associated with the proportion of foreign ownership. As shown in Table 5, the coefficients of (FR_OWN) are positive and statistically significant and in line with the results from previous research as mentioned. Due to space and language barriers, foreign shareholders likely face a higher level of information asymmetry. In order to compete effectively in the capital market, banks with foreign shares would voluntarily disclose more information. Moreover, the foreign owners' influence on corporate governance practices, which impact significantly on banks' corporate reporting practices.

The sign of the correlation coefficient of Bank performance, as predicted, was positive and is significant at 1%. Therefore, the results provide some support for H8. This is consistent with the view that more profitable banking companies disclose significantly more financial information than do less profitable ones. The result is also consistent with other previous studies such as Singhvi and Desai (1971).

Finally, Size by assets is statistically related to the level of information disclosed by the sample of banks in their annual reports. It is significant at a 1% level. The variable assets size (log of assets) was significantly positive and in line with the results from previous research as mentioned. The positive sign on the coefficient suggests that size has a direct influence on level of disclosure in the banking sector in Tunisia.

Table 5: Estimated Coefficients from regressing the extent of voluntary disclosure on explanatory variables

VARIABLES	(1) SCORE	(2) SCORE
<i>Board size (TAILB)</i>	-8.528*** (0.957)	-8.880*** (0.928)
<i>Board Composition (OUTDR)</i>	0.0826 (0.0665)	0.110 (0.0643)
<i>Duality (DUAL)</i>	1.638 (1.498)	1.919 (1.460)
<i>Blockholder ownership (BLOCK)</i>	-0.286*** (0.0810)	-0.394*** (0.0981)
<i>Auditor reputation (BIG4)</i>	1.414 (2.473)	1.839 (2.487)
<i>State ownership (ST_OWN)</i>	-0.144** (0.0709)	
<i>Foreign ownership (FR_OWN)</i>		0.220** (0.0895)
<i>Bank performance (ROA)</i>	6.286*** (1.692)	6.963*** (1.707)
<i>Firm size (SIZE)</i>	14.18***	12.81***

	(3.892)	(3.545)
<i>Constant</i>	-9.52	-4.98
	(6.33)	(5.66)
Observations	120	120
R-squared	0.661	0.695
Number of banks	10	10

*, ** and *** indicate statistical significance at the 10%, 5% and 1% level, respectively. Robust standard errors (to account for both heteroskedasticity and autocorrelation) are in parentheses.

6. Conclusion

In this study, we examine the determinants of corporate voluntary disclosure. We extend previous studies on this subject in two ways. First, unlike the primary research that to date have focused on mature capital markets, we examine determinants of corporate voluntary disclosure in Tunisia. Second, we studied determinants of corporate voluntary disclosure of banks firms.

Our results have implications regarding policy. First, board composition, duality and auditors reputation are insignificant relative to voluntary disclosure, but blockholder ownership and board size and state ownership are negatively associated with voluntary disclosure. Moreover, foreign ownership, bank performance and the size of bank are positively associated with voluntary disclosure.

Thus, Tunisian regulators should commit to facilitating multi-ownership and optimize ownership structure and board size. In this way, an effective corporate-governance mechanism will materialize to improve the level of voluntary disclosures in Tunisian banks.

Therefore, extending the current research by comparing Tunisian banks to those of other African countries is an avenue for future research.

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