Research article

The determinants of voluntary disclosure in Tunisia: A study of the firms listed in the Tunisian stock exchange

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Abstract

Our study attempts to highlight the level of voluntary disclosure of Tunisian companies and subsequently raise the impact of several determinants on this disclosure. Our sample consists of annual reports of listed Tunisian firms relative to the year 2007. The empirical results showed that the size of the company (as measured by the number of employees), the independence of the board of directors and audit firm size have a positive and significant influence on the level of disclosure, while the age of the firm, and contrary to our hypothesis, has a negative influence on the level of disclosure. We have not been able to establish a relationship between the level of voluntary disclosure and leverage, as well as the ownership concentration and type of industry.

Keywords: Voluntary disclosure, Emerging countries, Firm size, Leverage, Ownership concentration, Board independence, Firm age, Profitability, Audit firm size, Industry type.

1. Introduction

The field of accounting disclosure stay occupying an important place in the accounting research due to the importance of accounting information in the decision making process of internal and external users. Accounting standards in several countries tried to take into account the informational needs of different types of users, but in the same time focusing on one category, as investors in Tunisia. But with the development of economies and the globalization of financial markets, the need for additional information (not mandated) is more pronounced. Indeed, the listed companies should make all stakeholders (local and foreign investors) regularly informed of all significant events happened in the company. Thus, a more transparent firm will easily raise funds. So, listed companies conduct a voluntary disclosure, in addition to the disclosure mandated, to facilitate the process of decision making.

The purpose of our research is to determine the level of voluntary disclosure of listed Tunisian firms and to investigate the impact of some determinants on the level of disclosure of these companies.

Our contribution is on two levels. First we have introduced a new determinant of voluntary disclosure.

This determinant has been investigated in only two studies and their results were inconclusive. It is the age of the company. Then we use a new measure of the size of the firm. It is the number of employees. The results observed on a sample of Tunisian listed companies during the year 2007 led us to conclude that the size of the firm, measured by the number of employees, the independence of the board and the quality of audit firm has a positive and significant influence on the level of voluntary disclosure. It appears that older firms tend to disclose less information than youngest ones. We failed to prove the existence of a relationship between, on the one hand, the level of voluntary disclosure and leverage, profitability, ownership concentration and type of industry on the other hand. This article has four parts. In the first one, we will present the theoretical background of the determinants of voluntary disclosure. Review of the empirical literature and development of hypotheses will be presented in the second part. We then present the operational framework and verification strategy. Finally we will give the results and their interpretation.

2. Background

Before presenting the theoretical framework of this research, we consider that it's relevant to give the

definition of voluntary disclosure because it will limit the scope of our investigation. At this level, previous studies are divided into two parts (Pourtier, 2004): Those who do not define the voluntary disclosure (for exemple Xiao et al. (2004) and those that present it in opposition to mandatory one (Chavent et al. 2005, Raffournier, 1995, Cooke, 1992). But these definitions are incomplete because they don't care about the dimensions of voluntary disclosure given by Pourtier (2004) which are: The content, the chronological sequence of publications and the vector chosen for publications. Thus, in this study, voluntary disclosure consists in voluntary publications regarding their content, disclosed in a mandatory vector (the annual report) and which are made in the chronological sequence provided by law. So we are dealing with only one of the dimensions of voluntary disclosure which is the content. Precisely we deal with two categories of the dimension "content" which are information not provided in accounting laws and information which gives more details to mandatory publications.

We will classify determinants of voluntary disclosure in three groups (Lang and Lundholm, 1993, Wallace et al., 1994, Camfferman and Cooke, 2002, Alsaeed, 2006). The first one is composed of the determinants related to the structure of the firm (Size of the firm, leverage, ownership concentration, board independence and firm age). The second group contain determinants related to firm's performance (we will deal here only with one determinant with is profitability). The latest group includes market related determinants (industry type and audit firm size).

2.1 Structure-related determinants

2.1.1 Firm size

The relationship between voluntary disclosure and firm size is explained essentially by the agency theory. According to Chow and Wong-Boren (1987) accounting practices and voluntary disclosures are supposed to control conflicts of interest between shareholders, creditors and managers. This conflict of interest depends on some characteristics of the firm.They explained, based on the amount of external capital and referring to the work of Jensen and Meckling (1986) and those of Leftwich, Watts and Zimmerman (1981), that agency costs increase with the amount of external capital which increase with the size of the firm. This leads to an increase in the benefits of the contract connecting shareholders, creditors and managers simultaneously with the size of the firm. These benefits include financial disclosures. Disclosure's costs are also used to explain the positive association between the level of voluntary disclosure and the size of the firm (Raffournier 1995). In addition to agency theory, political costs's theory is also used. Indeed, large firms face high visibility and are subject to governmental interventions. In order to reduce these

political costs, larger firms are moving towards a greater voluntary disclosure to reassure social and governmental groups (Watts and Zimmerman, 1978). It is also important to say that large firms have their place within their industry or at least have managed to create and maintain their market share. So, the disclosure of favorable information about their activities is not likely to threaten their competitive advantage, which is unfortunately the case for small firms (Healy and Palepu, 2001). Ahmed and Courtis (1999) argue that large companies disclose more information due to their business portfolio which is developed enough and the presence of several owners that have different information needs. The majority of studies collected were able to prove the existence of a positive and significant relationship (to different degrees of significance) between firm size and the level of voluntary disclosure. (Raffournier, 1995 for Switzerland, Chow and Wong-Boren, 1987, for Mexico, Cooke, 1992, for Japan, and Zeghal et al. 2007 for Canada). Thus we can formulate the following hypothesis:

H_1 : *The level of disclosure increases with firm size.*

2.1.2 Leverage

According to the agency theory of Jensen and Meckling (1976), a situation of information asymmetry exists between creditors and the company. Lenders have no idea about the activity of the firm, but they are convinced that greater the amount of debt is, greater will be the managerial discretion to divert resources (Ahmed and Courtis, 1999). To cope with this situation, creditors will introduce controls which costs will be borne by the firm. To reassure them and reduce these costs, managers will have to disclose more information about the firm. But for firms who propose to borrow capital, another explanation may be advanced. Indeed, firms tend to disclose more information in the annual report when they are seeking to raise capital. These disclosures are intended to lower the cost of debt. The estimated debt risk by lenders will be minimized in presence of information on the activity of the firm and especially on its continuity (Ahmed 1994). Results related to this determinant are non-conclusive (Ahmed and Courtis, 1999). Some researchers have been able to reach a positive and significant relationship (Naser et al., 2006, Barako 2007) while others have not been able to prove the existence of relationship between the level of voluntary disclosure and the level of debt (Chow and Wong-Boren, 1987, Raffournier, 1995).

H_2: *There is a positive relationship between the degree of leverage of the firm and the level of voluntary disclosure.*

2.1.3 Ownership concentration

According to Fama and Jensen (1983) when the capital of the firm is more dispersed there is more possibility to conflicts of interest between principal and agent to occur.To reduce these conflicts, some shareholders will tend to require managers to disclose more information in order to evaluate the performance of the firm (Lakhal, 2004). So it's intended that voluntary disclosure will be more important in capital diffused firms (Chau and Gary, 2002). Ho and Wong (2001) explain that for companies with highly concentrated ownership, conflict of interest is not between shareholders and managers but between majority and minority shareholders. In this situation, managers are encouraged to act against the interests of small shareholders by withholding information. Chau and Gray (2002) showed statistically, for companies of Hong Kong and Singapore, that more the capital of the firm is diffused, more it will make disclosures voluntarily.

Lakhal (2004) empirically validated the hypothesis of a positive relationship between the diffusion of ownership and disclosure of earnings forecasts. But, Raffournier (1995) and Naser et al. (2006) could not prove the existence of a positive relationship between the dispersion of capital and the level of voluntary disclosure.

H₃: There is a positive relationship between the diffusion of the capital of the firm and the level of voluntary disclosure.

2.1.4 Board independence

The agency theory states that the presence of increasingly high external directors on the board helps to control and limit the opportunism of managers thanks to their competence, independence and objectivity necessary for the function of control (Ho and Wong, 2001). Indeed, Fama and Jensen (1983) argue that the presence of more outside directors (non-executive) makes the board more effective so the company will have to disclose more. In the same vein, Forcker (1992) showed that a high percentage of non-executive directors on the board increase the control of the quality of financial disclosures and reduced profits from withholding information. Ho and Wong (2001), Zeghal et al. (2007) and Lakhal (2004) were unable to validate their hypotheses of a positive relationship between the degree of independence of the board and the level of voluntary disclosure. Arcay and Vasquez (2005), on a sample of Spanish companies, have been able to prove empirically that the independence of the Board and subsequently the adoption of good governance rules promote voluntary disclosure. Contrary to this, the results of Eng and Mak (2003) who worked on a sample of companies listed on the Singapore Stock Exchange, showed the presence of a negative relationship between the degree of independence of the Board and the level of voluntary

disclosure. They explain their results by the fact that the presence of a fairly high percentage of outside directors will act as a substitute for other governance mechanism namely the voluntary disclosure.

H₄: There is a positive relationship between the degree of independence of the board of directors of a firm and the level of voluntary disclosure.

2.1.5 Age of the firm

Studies of the relationship between voluntary disclosure and firm age are not multiple and rely very largely on logical reason. Courtis (2004), in his study of the determinants of intentional release of non-clear and not understandable information by firms, explains that a senior company have necessarily acquired habits of disclosure through the development of an information system and sophisticated communication strategies in addition to employing specialized staff for the preparation of annual reports which pushes them to publish clear, comprehensible and more detailed reports than younger firms. Akhtaruddin (2005) in his study of the determinants of voluntary disclosure in Bangladesh, argues that older firms are more experienced and are therefore more likely to include more information in their annual reports to improve their image and reputation on the market. In addition to this logical argument based on the experience of the firm, we believe that the theory of competitive advantage can be invoked to argue the relationship that may exist between this determinant (age of the firm) and voluntary disclosure. Indeed, an old company has certainly positioned itself in the market and within its industry by acquiring a competitive advantage. Therefore, aged firms are not afraid of the reactions of their competitors consequently to their publications because they were able over time to anticipate and knew how to face them. We can say that these firms have acquired a competitive advantage even at the informational level. Few studies have investigated this determinant. The age of the firm was quoted by Camferman and Cooke (2002) as a new variable to consider in order enriching the literature on the determinants of voluntary disclosure.

Akhtaruddin (2005) investigated the relation between the age of the firm and its level of voluntary disclosure. He has not been able to establish statistically a positive association between the level of voluntary disclosure and the age of the firm. Alsaeed (2006) studied the impact of the age of Saudi firms on their level of voluntary disclosure and has been able to prove a positive and significant association between these two variables. Ansha (1998) also obtained a positive and significant relationship at 5%.

H_5: *There is a positive association between firm's age and level of voluntary disclosure.*

2.2 Performance- related determinants

We will study only the impact of the level of profitability of the firm on its level of voluntary disclosure. Companies that are conducting or achieve a high degree of profitability will try to disclose more voluntarily to report it to the market and reduce the information asymmetry (Eccles et al., 2001). Singhvi and Desai (1971) argue that an important profitability motivates managers to disclose more information in order to increase the confidence of investors who will be able to increase managers' market compensation. The relationship between the degree of profitability and the level of voluntary disclosure has been widely studied. But the results are far from conclusive. Indeed, some authors have led to a positive relationship between the level of profitability of the firm and the level of voluntary disclosure. We can mention at this level Lakhal (2004) who was interested in the French context and who confirmed the hypothesis that firms that have a higher degree of profitability will tend to disclose more about their expected results. Similarly, Chavent et al. (2005) demonstrated empirically that the greater the degree of profitability is greater the voluntary disclosure on provision will be for French firms. On the other hand there are those who obtained statistically no relationship between the degree of profitability of the firm and the level of voluntary disclosure. We can mention at this level Raffournier (1995) for the case of Switzerland and Ahmed and Courtis (1999) for the meta-analysis.

There are studies, despite having made the assumption of a positive correlation between the degree of profitability of the firm and the level of voluntary disclosure, their statistical results showed a negative relationship. We can mention Camfferman and Cooke (2002), Balkaoui andKahl (1978) and Wallace and Naser (1995).

H_6: *There is a positive relationship between the level of profitability of the firm and its level of voluntary disclosure.*

2.3 Market-related determinants

2.3.1 The size of the audit firm

Raffournier (1995) argues that auditors in general play an important role in the definition of financial communication policy for their customers. Large audit firms encourage companies to disclose audited additional information and be more transparent. Against by, the smaller firms do not influence their customers but try to align their needs for fear of losing them by forcing them to publish more information (Alsaeed, 2006). Big audit firmsand internationally renowned ones are found to have a positive influence on levels of disclosure of their customers. But the empirical results are inconclusive at this level. Camfferman and Cooke (2002) and Nasser et al. (2002) found a positive and significant relationship between the size of the audit firm and the level of voluntary disclosure. Raffournier (1995) support this positive relationship only when he rejected the variable firm size suggesting that this latter variable capted the effect of the variable size of the audit firm. Ahmed and Courtis (1999), Ansah (1998) and Alsaeed (2006) led to the absence of relationship between firm size and the level of voluntary disclosure. Wallace and Naser (1995), meanwhile, showed the presence of a negative relationship between the size of the audit firm and the extent of disclosure level.

H_7: *There is a positive relationship between the size of the audit firm and the level of voluntary disclosure.*

2.3.2 The type of industry

Some characteristics specific to an industry such as the degree of competition within the industry, product differentiation, the industry's structure (monopoly or oligopoly) and growth can give rise to differences in the policies of communications. (Leventis and Weetman, 2004). Cooke (1992) argues that the manufacturing sector is exposed on the international level, thereby causing an effect on disclosure practices in this sector. Zeghal et al. (2007) suggest several reasons that lead some firms in a sector to disclose more than others belonging to another one. First, they argue that proprietary costs vary by industry due to the differences in the levels of competitiveness, the type of private information and hazard due to entry of new firms in the sector. Second, and based on the theory of signals, they explain that within the same sector, companies are required to align with each other about their disclosure practices because any deviation will be considered as bad news by the market. Several previous studies used the theory of political costs to highlight the influence of the industry type, to which the company belongs on its level of disclosure. Raffournier (1995) has not been able to confirm the relationship between the type of industry and the level of voluntary disclosure. But Ho and Wong (2001) and Cooke (1992) showed that manufacturing firms voluntarily disclose more than others belonging to other sectors. Zeghal et al (2007) argue that companies belonging to the sector of biotechnology industries disclose more about their research and development activities. Lakhal (2004) also argues that firms in the high technology sector disclose more about earnings forecasts. She adds that firms belonging to sectors subject to significant price volatility do too.

H_8: *Manufacturing firms disclose more voluntary information than non-manufacturing ones.*

3. Methodology

3.1. Sample

Our sample consists of the annual reports of 22 Tunisian firms listed on the Tunisian stock exchange. Our choice was based on this information devise for two reasons. The first is that the annual reports are considered as the most dominant mean of the diffusion of voluntary information for investors (Zeghal et al., 2007). The second is that it has been shown that there is a significant correlation between the level of information contained in annual reports and other devises of financial communication (Lang and Lundholm, 1993). In addition we have limited our investigation to a single year 2007 because Botosan (1997) affirms that firms keep a stable strategy of disclosure over time. So, we consider that it is superfluous to work on the reports of several successive years.

3.2 Variables estimation

3.2.1 The dependent variable: Voluntary disclosure

In this study we used a disclosure index to measure voluntary disclosure variable. There are several lists of items developed by many researchers since the work of Cerf 1961. For our case we will adopt the index of Botosan (1997) (see Annex 1). For the valuation of items, we decided to use the dichotomous approach (0 or 1) because we will not focus on a specific user of accounting information. The valuation of items leads to the calculation of the following score of disclosure :

Score= $\sum_{k=0}^{n} \mathbf{d} i$

with: $\sum_{k=0}^{n} \mathbf{d} i$ sum of the elements disclosed by a firm

3.2.2 The independent variables:

The firm size (SIZE): There are several measures that have been used to approximate the size of the firm. We can mention the book value of assets, total shareholders, total market value and total income (Ahmed and Courtis, 1999). We will try to distinguish ourselves from these studies and try to measure the size of the firm by the number of employees in addition to its measurement by the book value of assets.

Leverage (LEV): It will be measured by the book value of debt divided by the value of assets.

Ownership concentration (CONC): We have chosen to use the measure used by Depoers (2000), which is the percentage of shares held by the top three shareholders, because after an initial consultation of annual reports, specifically the ownership category, we found that the majority of Tunisian firms is characterized by a concentrated share holding in the top 5 shareholders.

The degree of independence of the board of directors (INDEP): Most studies on corporate government measures the degree of independence of the Board of Directors by the proportion of outside directors (eg. Pearce and Zahra, 1989). It is a percentage that is calculated by the ratio: number of outside directors/total number of directors. In our study we will use this measure.

The age of the firm (AGE): Akhtaruddin (2005) has empirically investigated the relationship between this variable and the level of disclosure by dividing companies into three groups: very old business, old business and new business (based on the date of cotation). Alsaeed (2006), who dealt with the firm age as a determinant for voluntary disclosure, used the log of the age of the firm. In our study we will simply measure this variable by the number of years since the creation of the firm because Tunisian stock exchange was recently established (1995), which makes the measurement of the age from the date of listing irrelevant because all companies are listed in substantially closer dates.

The level of profitability of the firm: (PROF): Most of the studies used two measures of firm performance (Chau and Gray 2002, Eng and Mak 2003; Lakhal 2004): Return on assets (ROA = net income/assets) and return on equity (ROE = net income/equity). In our study we use the same measures.

The size of the audit firm: (AUDIT): This is a dichotomous variable that takes the value 1 if the firm is audited by a member of the Big 4 and 0 otherwise (Ahmed and Nicholls, 1994, Raffournier, 1995).

The type of industry (INDUSTRY): Previous studies have demonstrated that the manufacturing sector is characterized by a higher level of disclosure. The variable type of industry will be considered as a dichotomous variable that takes the value 1 if the firm belongs to the manufacturing sector and 0 otherwise.

Thus the model is as following:

$$Div = \alpha_0 + \alpha_1 size + \alpha_2 Lev + \alpha_3 Conc + \alpha_4 Indep + \alpha_5 Age + \alpha_6 Prof + \alpha_7 Audit + \alpha_8 Industry + \varepsilon_{it}$$

4. Results

4.1 Descriptive analysis of the dependent variable

The results presented in Tables 2.1 and 2.2 show a disclosure index quite low compared to other countries especially developed ones. These voluntary disclosures are mainly general-oriented information.

4.2 Bivariate Analysis of quantitative variables

Table 6 allows shows that there is a positive and significant relationship between voluntary disclosure and firm size. This relationship is significant at the 5% level when the size is measured by the number of employees, but it becomes insignificant while keeping the same direction as measured by the value of total assets. This allows us to say that a priori, the measurement of the variable size of the company by the number of employee is most appropriate and gives better results.

The table also allows us to identify the presence of a negative and significant relationship at the 5% level between voluntary disclosure and profitability of the firm as measured by return on assets. The relationship keeps the same direction but becomes insignificant when the performance is approximated by the return on equity ratio.

Concerning the level of debt, it has a negative and insignificant effect on voluntary disclosure.

Regarding the age of the firm, we can see that it has a negative influence but not significant on voluntary disclosure.

The comparison rank test of Mann-Whitney of the variable voluntary disclosure under the terms of the variable Audit shows that there is no significant difference between voluntary disclosures of companies audited by Big 4 firms and those audited by non Big 4. This same test highlights the fact that there is no significant difference in disclosure between manufacturing and non-manufacturing firms.

4.3 Multivariate analysis

We checked the absence of multicollinearity between variables but we opted to keep for the rest of the study the variable (Size) as measured by the number of employees and profitability as measured by ROA. After these modifications we get a VIF indicating the absence of multicollinearity. The Poisson model proved inappropriate because there is a problem of over-dispersion. So we used the negative binomial model. Our study aimed to investigate the impact of certain characteristics of the firm on its level of voluntary disclosure. The statistical results through the negative binomial regression were able to demonstrate the following relationships: For the variable firm size (SIZE) measured by the number of employees, it appears as a variable that has a positive and highly significant effect on the level of voluntary disclosure of the firm. This result adds to those of (Raffournier, 1995) for Switzerland, Wong-Boren (1987) for Mexico and Cooke (1992) for Japan, Barako (2007) in Kenya, etc). So H_1 is confirmed.

For the variable leverage (LEV), the results show a positive but not significant relationship. Our results are consistent with those identified by Raffournier (1995) and Wong-Boren (1987). So H_2 is rejected.

Our statistical results, contrary to our expectations, show a positive relationship, but that is not significant between ownership concentration (CONC-PROP) and the level of voluntary disclosure of Tunisian companies. Our results at this level are added to those of Raffournier (1995) for Switzerland and Naser et al. (2006) in the context of Qatar. This may be due to the fact that Tunisian firms were not open to the public for a long time. Indeed, some companies in our sample are publicly traded only since 2007. This latter leads to voluntarily publishing more information, despite the concentration of ownership, to reassure the public in order to attract more funds and try to align disclosure with other oldest financial market firms. On the shadow of these results our hypothesis H3 is rejected.

As regards the independence of the board (INDEP), the statistical results of our study show a positive and significant relationship to the order of 5% between this variable and the level of voluntary disclosure. These results are consistent with those identified by Arcay and Vasquez (2005) in the Spanish context. So we can say at this point that the adoption of good governance rules positively and significantly influences the level of voluntary disclosure. These results lead us to accept our fourth hypothesis (H_4).

We now turn to the interpretation of the variable which is the object of our major contribution in this research. We formulate, in the literature review, the hypothesis of a positive relationship between the level of voluntary disclosure of the firm and its age. But the statistical results reveal the presence of a negative and significant relationship to the order of 5% which means that the older the firm is and less it will be inclined to make disclosures on a voluntary basis. These results are contrary to those generated by Ansah (1998) and more recently Alsaeed (2006) in the Saudi context that led to a positive and significant relationship.

These results may be due to the specificities of the Tunisian context. Indeed, older firms are rooted on the market. They have gained the trust of the public and especially investors. In addition to the fact, some have quasi-monopolistic positions in their area. So, these firms may think that it is unnecessary to make voluntary disclosure regarding the financial and economic position they have acquired over time . A second argument can be advanced to explain the negative influence of age on voluntary disclosure. Presumably the oldest companies necessarily have older people at their head . Cultural variant may play an important role at this level. Indeed, these managers have experienced the period of opaque company that does not send any information to the public (not even

mandatory information as the legislation was not as binding). So this type of manager may have cultural residues pushing them to refrain from making voluntary disclosures. Against by younger firms necessarily, have younger staff who only live the time of globalization and the opening of business on the external environment.

Finally we can say that our fifth hypothesis (H_5) is rejected.

As for profitability (ROA) and the type of industry (INDUSTRY) they appear to have a positive but insignificant impact on the level of voluntary disclosure. So H_6 and H_8 are rejected.

For audit quality (AUDIT) It appears that the companies audited by Big 4 firms disclose more information than those audited by non-Big 4. The relationship is significant at the 1% level. These results support our hypothesis H7 and are in line with those of Camfferman and Cooke (2002), Naser et al. (2002) and Raffournier (1995).

5. Conclusion

The process of informing from the company to its internal and external environment is very complex. Indeed, business leaders are increasingly aware of the need for greater transparency to stakeholders. But there are differences between the levels of disclosure voluntary. These differences have been the subject of several studies across many countries to try to identify the factors that may play an important role in conditioning the level of disclosure of each company. At this level several determinants have been empirically investigated to try to identify their impact on the level of voluntary disclosure. The main objective of this study was to identify the impact of certain characteristics of the firm on the level of disclosure in the annual reports of listed Tunisian firms. To do this we chose a sample of listed Tunisian firms that are observed in a single year (2007). The regression results show that firm size is a determining factor at this level. In addition to this factor, it is clear that the independence of the board has a positive impact on the transparency of the firm. It is also apparent through this analysis that companies audited by member of big 4 tend to disclose more information voluntarily. On the other hand, and contrary to our expectations, the empirical analysis showed a negative relationship between firm age and level of disclosure. It should be noted that our contribution in this study is located on two levels. The first contribution is the introduction of a new measure of the variable size of the firm. The second is the use of a new variable which has been proposed for the first time by Camfferman and Cooke (2002). Like any other research, this study is not without limitations. Indeed, the major limitation of this study is the sample size mainly due to the specificities of the Tunisian context. In fact , we were

faced with two types of problem. The first we can call economic related to the small number of listed Tunisian companies. The second is essentially cultural and lies in the fact that forbearance to provide annual reports to unlisted companies and to ensure confidentiality. At this study we investigated the relationship between certain characteristics of the firm and the level of voluntary disclosure of listed Tunisian companies. It would be interesting to expand the sample by introducing businesses from several other countries and subsequently try to study the impact of country of origin on the level of disclosure .It would also be interesting to see the impact of the internationalization of some companies on the level of disclosure. By internationalization we mean the opening of capital to different nationalities and the exercise of a large volume of international trade mainly exports.

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Appendix

Appendix 1. Index of Botosan (1997)

Company Name :

Type of report :

1) General information about the company :

a) Presentation of the objectives of the company

b) Presentation of the general strategy of the company

c) Discussion of action taking during the year to achieve the objectives.

d) Discussion of action that the company intends to take in future years.

e) Presentation of a timetable for achieving the objectives.

f) Discussions on barriers to entry .

g) Discussion on the effect of barriers to entry on current profits

h) Discussion on the effect of barriers to entry on future profits.

i) Discussion on the level of competition on the market.

j) Discussion of the impact of competition on current profits

k) Discussion of the impact of competition on future profits.

l) A general description of the company's business .

m) Identification of the main products and services.

n) Description of the specific characteristics of the products and services offered.

o) The main markets of the company are identified.

p) Description of the main features associated with these markets

2) Historical Summary of financial results :

a) Presentation of return on assets or information necessary to calculate it (net income , tax rate, interest expense and total assets)

b) Presentation of the net profit or the information needed to calculate it (net income , tax rate, interest expense and total sales)

c) Presentation of the rotation of the asset or the information needed to calculate (total sales , total assets)

d) Presentation of return on capital or the information needed to calculate the (net income and net worth)

e) Presentation of a summary of the levels of sales and profits for at least the last eight quarters.

3) non-financial information:

a) Number of employees.

b) Average compensation per employee.

c) Percentage of associated with new products launched on the market in the past five years sales.

d) Market share .

e) Amount of new orders made during the year.

f) Units sold .

g) Price per unit.

h) Rate of growth units.

i) Customer Satisfaction.

j) Age of key employees

k) Growth rate of sales by product

l) Breakeven

m) Volume of production units.

n) Prices of production units.

o) Ratio of inputs vs. outputs.

p) growth rate of sales by geographic area.

4) Forward-looking information :

a) Comparison of earnings estimates with actual profits for the year

b) Comparison of sales forecasts with actual winds of the year.

c) Discussion of the impact of the business opportunities and sales and future profits.

d) Discussion of risks facing the business including sales or future profits.

e) Presentation of forecasts of market share.

f) Presentation of forecast cash.

g) Presentation of forecast capital expenditures or research and development.

h) Presentation of forecast profits

i) Presentation of forecast sales.

5) Analysis and management discussions (with explanations)

a) Changes in the level of sales .

b) Change in operating income

c) Change in the cost of factors of production.

d) Change in gross profit.

e) Change in gross profit as a percentage of sales.

f) Change in selling expenses and administrative expenses.

g) Change in interest expense .

h) Change in net income.

i) Change in accounts receivable .

j) Change in capital expenditure or expenditure on research and development.

k) Change in market share.

Table 1. Summary presentation of the model variables and the expected theoretical relationships with the dependent variable

Variables	Mesure used	Expected sign
Size : size of the company	- Book value of asset - Number of employees	(+)
Lev : leverage	- Debt / total assets	(+)
Conc : ownership concentration	- Percentage of shares held by the top three shareholders.	(-)
Indep : degree of independance of board of directors	- Number of outside directors / total number of directors.	(+)
Age : age of the firm.	- Number of years since creation date.	(+)
Prof : profitability of the firm	- Roa : net income / total assets - ROE : net income / equity	(+)
Audit : audit firm size	- 1 if the firm is audited by a big 4 - 0 otherwise	(+)
Industry : industry type	- 1 if firm is a manufacturing one - 0 otherwise	(+)

Table 2.1. Descriptive analysis of the dependent variable

	N	Min.	Max.	Average	Standard deviation
Div	22	6	27	15.95	6.94

Table 2.2. Descriptive analysis of the dependent variable

	Min	Max	Average	Standard deviation
General information about the company	1	12	6.272727	3.549415
Historical Summary of Results	4	4	4	0
Non-financial information	0	7	2.77272	2.27452
forecast information	0	4	1.181818	1.140253
Analysis and discussion of managers	0	5	1.727272	2.07809

Table 3. Descriptive analysis of the independent variables

Variables	Moyenne	Ecart type	Minimum	Maximum
Size 1	1,20 e08	3,08 e 08	1,68 e 07	1,48 e 09
Size 2	615,8182	756, 3217	29	3175
Lev	0,1166091	0,1095508	0	0,3204
Conc-prop	0,6507827	0,1613648	0,367	0,9627
Indep	0,21	0,141956	0	0,5
Age	35,45	18,5491	16	92
ROA	0,0397873	0,0848238	-0,164	0,15512
ROE	0,0627545	0,2809973	-1,05	0,3771

Table 4. Normality Test of Shapiro Wilk

Variables	W	Z	Significativity Prob>Z
Div	0.92192	1.579	0.05715
Size 1	0.29726	5.838	0.00000
Size 2	0.71059	4.040	0.00003
Lev	0.89010	2.076	0.01893
Conc-prop	0.97044	-0.586	0.72109
Indep	0.95325	0.343	0.36570
Age	0.77270	3.550	0.00019
ROA	0.88427	2.181	0.01459
ROE	0.65413	4.401	0.00001

Table 5. Parametric Test Pearson

Dependent Variables	Independent variables	Significativity
Div	Conc-prop	0,1844
	Indep	0,2081

Table 6. Spearman nonparametric test (RHO)

Dependent Variables	Independent variables	RHO de Spearman	Significativity
Div	SIZE 1	0,3479	0,1126
	SIZE 2	0,4972	0,0186**
	LEV	-0,1910	0,3946
	AGE	-0,0116	0,9591
	ROA	-0,4537	0,0339**
	ROE	-0,1239	0,5828

Table 7. Test of Shapiro Wilk for qualitative variables

Dependent Variables	Independent variables	Modalities	W	Significativity
Div	Industry	Manufacturière	0,85142	0,02322
	0.29726	Non manufacturière	0,89118	0,24001
	Audit	Big 4	0,93934	0,65385
	0.89010	Non Big 4	0,86747	0,02488

Table 8. Mann-Whitney test for qualitative variables

Dependent Variables	Independent variables	Categories	AUDIT	N	Somme of ranks	Z	Signification
Div	Audit	1	BIG 4	6	162,5	-1,588	0,1123
		0	NON BIG 4	16	91,5		
	Industry	1	Manufacturière	14	163,5	-0,176	0,8642
		0	Non manufacturière	8	89,5		

Table 9. Results of the negative binomial model

Variables	B	Z	Significativity
SIZE 2	0,0004412	4,03	0,000***
LEV	0,7125552	1,01	0,311
CONC-PROP	0,5342619	1,34	0,181
INDEP	0,9712421	2,04	0,042**
AGE	-0,0137533	-2,36	0,019**
ROA	1,703053	1,43	0,152
INDUSTRY	0,1588743	1,19	0,233
AUDIT	0,4638782	3,05	0,002***
CONSTANT	2,002586	6,03	0,000***
Khi2	18,82		
Significativity	0,0158**		
Pseudo R^2 de CraggUhler	0,1292		

Table 10. Results of the marginal transformation

Variables	dy/dx	Z	Significativity	X
SIZE 2	0,0066697	4,11	0,000***	615,818
LEV	10,77242	1,01	0,311	0,116609
CONC-PROP	8,076978	1,34	0,18	0,650783
INDEP	14,68325	2,05	0,041**	0,209091
AGE	-0,2079221	-2,38	0,017**	35,4545
ROA	25,74677	1,44	0,151	0,039787
INDUSTRY	2,35286	1,22	0,223	0,636364
AUDIT	0,4638782	3,05	0,002***	
CONSTANT	2,002586	6,03	0,000***	