

# THE IMPACT OF STRUCTURE-RELATED VARIABLES ON FORWARD-LOOKING DISCLOSURE IN THE ANNUAL REPORTS OF NON-FINANCIAL EGYPTIAN COMPANIES

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## Abstract

The main objective of this study is to test the relationship between numbers of variables representing firm characteristics (structure-related variables) and the extent of voluntary disclosure levels (forward-looking disclosure) in the annual reports of Egyptian firms listed on the Egyptian Stock Exchange. This study uses empirically investigate hypothesized impacts of structure-related variables on the extent of forward-looking disclosure.

This study uses a list of forward-looking keywords to determine the differences in the level of forward looking disclosure between firms in different sectors. The sample includes 49 non-financial firms listed on the Egyptian Stock Exchange for the years 2008, 2009 and 2010. Statistical analysis is implemented using a multiple linear regression analysis.

The results show that firm size is significantly positive (in all the three years) with the level of forward-looking disclosure. Firm age also is, only for the year 2008, and with insignificant association with the level of forward-looking disclosure in years 2009 and 2010. On the other hand, leverage and ownership dispersion variables are found being insignificantly associated with the level of forward-looking information disclosed in the annual reports for all the three years.

There are some limitations in this study. First, the study uses the same list of forward-looking items as applied in previous studies. Second, the selected items do not show observed importance levels by financial information users. Third, the study applies an "unweights" approach to measure the level of forward-looking disclosure. Finally, the study concentrates on non-financial listed firms on the Egyptian Stock Exchange and excluded financial and insurance firms.

Few studies have examined the forward-looking information disclosure in developing countries, particularly in the Middle East; no study has yet tested disclosure of forward-looking information in the annual reports for Egyptian firms. Furthermore, all previous studies examined the forward-looking disclosure in the annual reports for a sole year: this study examines it for a somewhat longer period (three years).

**Keywords:** Forward-looking Disclosure, Structure-related Variables, Annual Reports, Egyptian Stock Exchange

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## 1- Introduction

There is an increasing importance in the level of non-financial information disclosure in financial reporting. Thence studying the relationship between the level of non-financial disclosure and corporate characteristics has been considered as the main objective in accounting academic research for over 40 years.

Companies prefer to disclose non-financial information for legitimacy purposes: due to the absence of any regulatory or obligatory requirements (Parsa, 2001).

Academic research has investigated the association between corporate characteristics and the level of voluntary disclosures in developed and developing countries. A lot of studies are dedicated to

the developed countries such as : UK ( Spero,1979;Firth,1979), USA (Buzby,1975;Lang and Lundholm,1993), Canada( Belkaoui and Kahl,1978), Sweden ( Cooke,1989), Switzerland (Raffournier,1995), Japan (Cooke,1992), Mexico (Chow and Wong-Boren,1987) and New Zealand (McNally et al.,1982).

In addition, a few other studies pertinent to developing countries also exist : Egypt (Abd-Elsalam and weetman, 2003; Hassan et al.,2006), Jordan (Naser et al.,2002), Nigeria (Wallace,1987), Saudi Arabia (Alsaed,2006), Bangladesh (Ahmed and Nicholls,1994), India (Singhvi,1968), Malaysia (Hossain et al.,1994), Zimbabwe (Owusu-Ansah,1998), and Kenya (Barako et al.,2006).

It is common to divide firm characteristics into three groups (Alsaeed, 2006):

- a) Structure- related variables such as firm size, leverage, ownership dispersion and firm age
- b) Performance- related variables such as profitability (profit margin), return on equity and liquidity
- c) Market- related variables such as cross listing, industry type and audit firm size.

The remainder of the paper proceeds as follows: section 2 shows the importance of annual reports as a source of disclosure, section 3 explains the definition of forward-looking information, section 4 surveys the associated literature conducted on disclosure studies, section 5 shows the variables discussion and hypotheses development, section 6 outlines research methodology including sample description and model development, section 7 reports the obtained results, whilst section 8 presents the conclusions along with its limitation and future research.

## **2- The importance of annual reports as a source of disclosure**

There are many sources that might provide relevant information to investors and other users to help them to predict the future performance for the company. These sources contain interim report, press release, conference calls and direct communication with analysts (Hussainey, 2004). There are many reasons that explain why choose annual reports as the main source of disclosure: (Hussainey, 2004):

- a) Annual report is legal document and it needs to be produced on an annual basis
- b) The time difference between the end of financial year and prepare annual report is minimized
- c) Annual report for any company can be compared with other annual reports in other companies because the structure for making annual reports is formalized
- d) Stakeholders groups prefer annual report as a communication source of information
- e) There is a positive association between annual reports and other sources of financial communication (Lang & Lundholm, 1993)
- f) The use of annual reports in this study is presented on an electronic version for a large number of Egyptian firms

The main objective of annual reports is to provide relevant information to different user of such documents such as: investors, managers, customers, creditors, employees and unions. Most of the previous studies found that annual reports consider the most important source of information and the income statement and direct communication with management are more valuable than other sources of information.

## **3-Definition of forward-looking information**

Information in the annual report can be classified into two types of information: backward-looking information and forward-looking information. Backward-looking information is related to past financial operations and their related disclosures. While forward-looking information is related to current and future forecasts operations that help users of information (investors) to evaluate a firm's future performance (Hussainey,2004).

Forward-looking information contains different types of information: financial information such as cash flow, profitability, changes in revenues, expected operating results and expected financial resources. It also includes non-financial information such as significant risk and uncertainties that might be effective on actual results and makes difference between actual results and expected results (Khaled Aljifri & Hussainey, 2007).

According to the CICA (Canadian Institute of Chartered Accountants) framework (2001), defined forward-looking information consists of financial and non-financial information so as to provide better estimates of the impact of operations, transactions and decisions on value creation.

There are different strategies used to measure forward-looking information: intellectual capital (INT), quantity (QNT), environment (ENV), information about activity (ACT), coverage (COV), financial (FIN), organization and corporate governance (ORG). Previous studies found significant relationships between the quality of forward-looking information, coverage of information and financial forward-looking information (Abad and Bravo, 2010).

## **4- Literature review (previous empirical studies)**

Since the 1960s, a growing interest has arisen in accounting disclosure studies. The methods, which organized to researching accounting disclosure, contained of two types of methods. The first, based upon questionnaires sent to users asked whether annual reports requested from them arrange accounting disclosure items in according to their level of importance in relating to decisions making process, and the second method, was mentioned to relationship between level of disclosure (mandatory or voluntary) and firm characteristics (Alsaeed, 2006).

More and more international studies have developed to explain the relationship between the firm's characteristics and the level of disclosure in corporate annual reports. Weight and unweight index score are used in many previous studies to measure voluntary disclosure, weight index score depended on importance of selected items by users of annual reports. Alternatively, unweight index score all items as the same importance, the aim of using unweight

index is to decrease subjectively in determining weight (Ahmed & Courtis, 1999).

This study concentrates on the association between the level of voluntary disclosure (forward-looking information) and structure-related variables (firm size, leverage, ownership dispersion and firm age). The most common variables examined in previous studies were: corporate size, listing status, capital structure (leverage), profitability and size of audit firm, to discover the relationship between these variables and the level of disclosure in annual reports. These studies used the following to explain this association: agency costs, political costs, corporate governance and monitoring, proprietary costs, signaling and information asymmetry, litigation costs, capital needs, and audit firm reputation (Ahmed & Courtis, 1999).

K. Aljifri (2008) examined the level of disclosure for 31 listed firms in the UAE. The study determines five variables would affect the extent level of disclosure in the UAE: size (assets), debt-equity ratio, profitability, sector type and audit firm size. The study found a significant association between debt-equity and profitability and the level of disclosure. However, insignificant association between sector type, firm size and audit firm size and the level of disclosure.

While, Alsaeed (2006) examined the relationship between firm characteristics and the level of disclosure in Saudi Arabia. The study examined 20 voluntary items to evaluate the level of disclosure in the annual reports of 40 firms. It was found a positive association between firm size and the level of disclosure, while debt-equity ratio, ownership dispersion, firm age, profit margin, industry type and audit firm size were found insignificant association with the level of disclosure.

Moreover, M. Hossain and Reaz (2007) studied the relationship between the extent of disclosure and firm characteristics by 38 listed banking in India. The results showed that size and assets in place are significant and other variables examined such as firm age, diversification, board composition, multiple exchange listing and complexity of business are insignificant with the level of disclosure.

Wang and Claiborne (2008) examined the extent of voluntary disclosure in the annual reports of Chinese listed firms. The results indicated that there are positive relationship between the level of disclosure and proportion of state ownership, foreign ownership, firm performance and reputation of the engaged auditor. While, the study found no proof that the firm has a lower cost of debt capital if it discloses more voluntary disclosures. Haniffa and Cooke (2002) examined the association between the extent level of disclosure and corporate governance, cultural and firm characteristics in the annual reports of Malaysian firms. The results found a positive relationship between the level of disclosure and corporate governance, and the same relationship

between proportion of Malay directors on the board and the extent disclosure, and T.E. Cooke (1991) studied the impact of some specific firm characteristics and voluntary disclosure of 106 items in Japanese corporate annual reports for the year 1988. The results showed that size was the only variable related positively with voluntary disclosure.

## **5- Variables discussion and hypotheses development**

### **5-1-Firm characteristics (independent variables)**

The firm characteristics considered, predictors of the indexes of comprehensive disclosure, the firm characteristics can be classified into three categories: structure-related variables, performance-related variables, and market-related variables (Wallace, Naser, & Mora, 1994). There are many considerable previous studies investigated the relationship between firm characteristics and the extent of the level of disclosure in the annual reports, for example, Singhvi and Desai (1971), Buzby (1975), McNally et al., (1982), Belkaoui and Kahl (1978), Firth(1979), Chow and Wong-Boren(1987), Salamon and Dhaliwal(1980), cooke(1989,1991 and 1992),Lang and Lundholm(1993), Malone et al.,(1993), Ahmed and Nicholls(1994), Hossain et al.,(1995), Beattie et al.,(2004), Hassan et al.,(2006).

Most of all previous studies found that firm size and listing status significantly related with the level of disclosure, while different results have reported about leverage, profitability and audit firm size in relation to level of disclosure (Ahmed & Courtis, 1999).

Alsaeed (2006) made the same relationship between level of disclosure and firm characteristics divided into structure-related variables, performance-related variables and market-related variables.

### **5-2- structured-related variables**

These variables refer to a firm on the basis of its original structure (size, leverage, ownership dispersion and firm age).

#### **5-2-1- Firm Size**

Firm size is considered the most important variable associated to the level of voluntary disclosure. Previous studies suggested that large firms disclosed more information as they are believed to be more in the public eye and they received more public attention than smaller firms(T. E. Cooke, 1992). So, large companies are expected to disclose more voluntary information than small companies to attract investors to finance their growth.

Wallace and Naser (1995) stated that "size is a function of growth and the growth of a firm invariably results in a greater need for more comprehensive

information", and T.E. Cooke (1991) stated that "larger firms are likely to be entities of economic significance so that there may be greater demands on them to provide information for customers, suppliers and analysts, and governments as well as the general public"

All the previous studies expected positive relationship between company size and the level of voluntary disclosure and this association was always argued.

Riahi-Belkaoui (2001) concluded the reasons of the argument as the following:

a) More affordable disclosure appears when the companies apply the disclosure cost hypothesis which means decreasing costs related with larger companies.

b) The inducements for private information acquisition are bigger for larger companies when the companies apply the transaction hypothesis.

c) The value of damages in securities litigations are a function of company size which lead to growing the level of disclosure with larger companies, when the companies apply the legal hypothesis.

Jennifer Ho and Taylor (2007) also summarized the reasons for the relationship between company size and the level of voluntary disclosure as the following:

a) The objective of larger companies is decreasing the disclosure cost (the cost of accumulation and dissemination of information) because economics of scale.

b) The higher agency costs in larger companies make larger companies are motivated to disclose more information because higher information asymmetry between managers and share-holders (Alsaeed, 2006).

c) Smaller companies need to disclose more information than the larger companies, to improve their competitive position.

While, Husted and Allen (2007) argued that larger companies have essential motivation to design social strategy. So, larger companies have greater attention from society.

Although the previous studies showed a positive relationship between the company size and the level of voluntary disclosure, there are some previous studies found a negative relationship between the two variables (K. Aljifri, 2008; Khaled Aljifri & Hussainey, 2007; Gray, Kouhy, & Lavers, 1995)

While, Zimmerman (1977) argued that, large firms tend to publish higher levels of disclosure as they have a higher level of political costs, and want to reduce political costs to improve confidence.

There are a lot of reasons to explain the positive effect of size on the level of voluntary disclosure:

a) The cost of disclosure (information gathering, classifying, management supervision, audit and legal fees and information disseminating) is lower in the larger companies because the economies of scale and firms are supposed to publish this information for internal purpose (T. E. Cooke, 1992; Raffournier, 1995; Stephen, 1998).

b) Disclosure may be used to deduct agency costs and decrease information asymmetry, and agency costs increase due to the increasing of outside capital (Meek, Roberts, & Gray, 1995). So, larger firms are estimated to disclose more information than smaller firms due to the need of money and to be listed on stock exchange market, and to encourage investors to demand their securities (Alsaeed, 2006; Botosan, 1997).

c) Providing large amount of information will help managers to make control on their firm's operations and help them to make right decisions because the structure of larger firms is complexity (Haniffa & Cooke, 2002).

d) The negative relationship between propriety cost and size explained the necessity for disclosure. So, smaller firms may face a risk if they disclose more information because larger firms can provide the same information at lower cost (M. Hossain et al., 1994).

e) Lang and Lundholm (1993) stated that the importance of disclosure is related to demand for information by investors and financial analysts. They need it to evaluate the firm value in the market.

f) Smaller firms may be unwilling to provide more information about their activities to achieve competitive disadvantages, because their annual reports are the most important source of information for their competitors (Meek et al., 1995; Raffournier, 1995). Moreover, competitive disadvantages of additional disclosure which lead to proprietary costs are smaller when company size increases (Lopes & Rodrigues, 2007).

g) The pressure by government and legal agencies on the larger companies to provide a certain amount of information, and to avoid political costs (Ahmed & Nicholls, 1994; Meek et al., 1995; Raffournier, 1995)

All the previous studies concluded that there was a significant association between size and the level of voluntary disclosures. While (Beretta & Bozzolan, 2004; Jensen & Meckling, 1976) found a non-significant relationship between the two variables. They explained that, large firms might have the motivation for withholding relevant information to avoid the political costs and increasing social obligations and tax. While there are few previous studies tested the association between the level of forward-looking disclosure and firm size such as the study made by (Khaled Aljifri & Hussainey, 2007), they found that insignificant association between firm size and forward-looking information disclosed in UAE annual report.

To sum up, the previous arguments refer to an interactive effect between the two variables. So, this study will test the relationship between firm size and forward-looking information disclosed in the Egyptian annual reports.

Thus, it seems variable to hypothesis that:

H1: there is a significant association between firm size and the level of forward-looking disclosure in the annual reports for Egyptian companies

This study used total assets as a proxy for firm size to measure the previous association. The choice of this variable because most of the previous studies used it to measure the relationship between the two variables, and total assets considered the most important element in any manufacturing firms and represents a high percentage of their activities.

### **5-2-2- Leverage**

High level of leverage (long term debt/equity) may persuade managers to publish more information to meet the interests of the creditors. But low level of leverage may encourage managers to turn their disclosure toward shareholders more than creditors (Malone, Fries, & Jones, 1993).

Some previous studies observed a significance association between leverage and the level of disclosure within annual reports, for example, (Ahmed & Curtis, 1999; Belkaoui & Kahl, 1978; Hassan, Giorgioni, & Romilly, 2006; M. Hossain et al., 1995; Malone et al., 1993; Naser & Al-Khatib, 2000; Naser, Al-Khatib, & Karbhari, 2002). These studies noted that leveraged firms disclose more information to creditors and investors to help and satisfy them.

Other studies found no significance association between the two previous variables, for example, (Abraham & Cox, 2007; Ahmed & Nicholls, 1994; Ali, Ahmed, & Henry, 2004; Alsaeed, 2006; Archambault & Archambault, 2003; Camfferman & Cooke, 2002; Chow & Wong-Boren, 1987; Haniffa & Cooke, 2005; Ho & Shun Wong, 2001; Konishi & Ali, 2007; Linsley & Shrides, 2005; Mangena & Tauringana, 2007; Meek et al., 1995; Naser, 1998; Patton & Zelenka, 1998; Raffournier, 1995; Wallace & Naser, 1995; Wallace et al., 1994). While Belkaoui and Kahl (1978) found a negative association between the two variables. Few previous studies tested the association between the level of forward-looking disclosure and leverage (or debt ratio) such as the study made by (Khaled Aljifri & Hussainey, 2007), they found that significant association between leverage and forward-looking information disclosed in UAE annual report. This study will test the relationship between leverage and the level of forward-looking information disclosed in the Egyptian annual reports.

Thus, it seems variable to hypothesis that:

H2: there is a significant association between leverage and the level of forward-looking disclosure in the annual reports for Egyptian companies

The leverage could be measured by the ratio of debt (liabilities) to total assets.

### **5-2-3- Ownership dispersion**

There are little previous studies examined the relationship between ownership dispersion and the level of disclosure, also with the level of forward-looking disclosure.

Ownership dispersion defined as "the percentage of common shares owned by individual investors after deducting shares owned by government and domestic and foreign institutions" (Alsaeed, 2006).

While Stephen (1998) defined it as "the proportion of the voting shares of a sample company owned directly and indirectly by corporate insiders". The proportion of shareholders' interest makes differences in the level of disclosure among firms. Agency cost (monitoring cost) increases when ownership extent among more shareholders and increases the conflict between shareholders and managers in the firm, so management provides more information (financial disclosure) to decrease the higher agency cost (monitoring cost) (Alsaeed, 2006).

Some previous studies found a positive relationship between ownership dispersion and the level of disclosure. Gelb (2000) examined the relationship between managerial ownership and the level of disclosure in US firms, the result of his study showed a positive relationship between the two variables, whereas, firms with low managerial ownership dispersion (higher shareholders ownership) disclosed more information in their annual reports Prencipe (2002). Also, Ruland, Tung, and George (1990) found that firms, which hold a high percentage of shares, tend to disclose more information about managers' forecasts (Patelli & Prencipe, 2007).

Other studies found no significance relationship between the two previous variables, for example, Alsaeed (2006), Wallace et al. (1994) and (Eng & Mak, 2003); Naser et al. (2002) Craswell and Taylor (1992). The negative relationship between the two variables in UK companies was found by (Li, 2008).

No previous studies tested the association between the level of forward-looking disclosure and ownership dispersion, especially in Egypt's environment. So, the contribution of this study is testing the relationship between ownership dispersion and the level of forward-looking information disclosed in the annual reports for Egyptian companies. This study will expect a positive relationship between the two variables.

Thus, it seems variable to hypothesis that:

H3: there is a significant association between ownership dispersion and the level of forward-looking disclosure in the annual reports for Egyptian companies

Ownership dispersion could be measured by the number of shares owned by individual.

### 5.2.4 Firm Age

There are rare studies examined the relationship between firm age and the level of disclosure, also with the level of forward-looking disclosure.

Firm age (stage of development and growth) considered a new variable investigated by (Camfferman & Cooke, 2002), the reason to select this variable is that it lies in the availability that old firms might have enriched their financial reporting practices over time. Whereas, old firms might have actually enriched their annual reporting practices over time and have also tried to improve their reputation and image on the market. There are three reasons explained why older firms are preferred to disclose more information in their annual reports (Mohammed Hossain & Hammami, 2009; Stephen, 1998):

- a) Because the competitive disadvantage, young firms do not prefer to disclose more information in their financial statements about their financial results.
- b) The higher cost for younger firms to gathering, processing and disseminating the required information
- c) Younger firms may lack a track record to rely on for public disclosure and consequently may have less rich disclosure

Alsaeed (2006) found no significant relationship between firm age and the level of disclosure.

No previous studies tested the association between the level of forward-looking disclosure and firm age in Egypt's environment, so the contribution of this study is testing the relationship between firm age and the level of forward-looking information disclosed in the annual reports for Egyptian companies. Also, this relationship will contribute to the scope of disclosure literature and understanding the variation disclosure between firms.

H4: older firms are more likely to disclose more forward-looking information than younger firms.

Log of the age of firm used to measure the firm age variable

## 6 Research Methodologies:

### 6.1 Data collection and variables definition:

The sample used in this study contains annual reports for non-financial companies (49 companies) listed and non-listed in Egyptian stock exchange, they represented different sectors (industries, cement, property, construction, petrochemicals, food and cultivate and services) for three years 2008, 2009 and 2010. The choice of firms was based on the availability of data. The study cannot collect data

from the annual reports in the year of 2011 because there were problems and setbacks in the Egyptian Stock Exchange due to the Egyptian revolution.

This study excluded financial and insurance firms because they are subject to specific disclosure requirements, so their annual reports cannot be considered as voluntarily determined.

The study used cross-sectional regression (Ordinary Least Square (OLS) regression and multiple regressions) using Minitab program (the same SPSS program) to test and analyze the hypotheses and regression variables collected from the annual reports.

In this study there are different proxies to measure structure-related variables; the size of the firm was measured by total assets. Leverage was measure by debt ratio. Ownership dispersion was measured by number of shares owned by individual. And Firm age was measured by log of the age of firm. These variables are measured as continuous variables. For the purpose of this study, the study used the same list of forward-looking words as in (Hussainey, Schleicher, & Walker, 2003) to determine the differences in the level of forward looking disclosure between firms in different sectors. (1)

### 6.2 Model development:

Matched-pair statistical was used by many previous studies to test the difference between disclosure indexes of two or more samples (Wallace, Naser, & Mora, 1994). Then the cross-sectional regression analysis was used in the case of non-linearity directions and monotonic data (Chow & Wong-Boren, 1987). While Lang and Lundholm (1993) used the ranked Ordinary Least Square (OLS) regression, the main feature of (OLS) is easy conducted after transforming continuous variables into ranked scores.

The extent of disclosure was measured as the ratio of the value of the number of forward-looking sentences a firm discloses divided by the total sentences in its narrative sections. This study used the same formula as used in (Aljifri & Hussainey, 2007):

$$TDS = FWD / TD \quad (1)$$

Where:

TDS= total disclosure score

FWD= total forward-looking sentences disclosed

TD= maximum sentences disclosed for each company

This study prefers to use unranked (OLS), and the regression analysis model, which test the association between the level of voluntary disclosure (forward-looking disclosure) and firm characteristics (structure-related variables), is presented as the following

$$Y = B_0 + B_1X_1 + B_2X_2 + B_3X_3 + B_4X_4 + E \quad (2)$$

Where:

Y= voluntary disclosure index level (forward-looking disclosure level)

B0= constant value or the value of Y when all X values are zero.

X1= natural logarithm of the firm's assets (measured by log of the book value of total assets)

X2= leverage ratio (measured by total liabilities divided by total assets)

X3= ownership dispersion (measured by number of shares owned by individuals)

X4= natural logarithm of the age of firm

E= the error term normally distributed about a mean of zero

## 7 Results

This section shows the practical Minitab methods uses to test the research hypotheses of the study and report the results. It contains of two parties: descriptive analysis and regression analysis.

### 7.1 Descriptive statistics

Table (1) shows the results related to descriptive analysis, the minimum, maximum, mean and standard deviation (the smaller the standard deviation the more accurate future predictions because there is less variability) for the continuous and categories variables in the sample data set and also provides information about disclosure for three years (2008, 2009 and 2010). There is a wide range of variation in some variables within the sample as showed by the minimum and maximum values, in the year 2008, the extent of forward-looking disclosure level (dependent variable (DV) ranges from 3 to 49 with a mean of 17.73 and a standard deviation of 9.76. the assets (LASSETS) (in logarithms) range from 11.08 to 17.80

with a mean of 14.69 and a standard deviation of 1.677. The leverage (LEV) ranges from 0.010 to 1.70 with a mean of 0.467 and a standard deviation of 0.328. The ownership dispersion (OD) ranges from 0.02 to 0.88 with a mean of 0.436 and a standard deviation of 0.216, while the age of firm (A) ranges from 5 to 104 with a mean of 34.50 and a standard deviation of 24.48.

In the year 2009, the extent of forward-looking disclosure level (dependent variable (DV) ranges from 0.00 to 40 with a mean of 13.71 and a standard deviation of 9.26. The assets (LASSETS) (in logarithms) range from 11.82 to 17.66 with a mean of 14.64 and a standard deviation of 1.424. The leverage (LEV) ranges from 0.050 to 1.34 with a mean of 0.369 and a standard deviation of 0.232. The ownership dispersion (OD) ranges from 0.020 to 0.88 with a mean of 0.436 and a standard deviation of 0.216, while the age of firm (A) ranges from 5 to 104 with a mean of 34.50 and a standard deviation of 24.48.

While in the year 2010, the extent of forward-looking disclosure level (dependent variable (DV) ranges from 2.00 to 38 with a mean of 15.38 and a standard deviation of 8.02. The assets (LASSETS) (in logarithms) range from 11.82 to 17.66 with a mean of 14.64 and a standard deviation of 1.424. The leverage (LEV) ranges from 0.010 to 2.05 with a mean of 0.417 and a standard deviation of 0.340. The ownership dispersion (OD) ranges from 0.020 to 0.88 with a mean of 0.436 and a standard deviation of 0.216, while the age of firm (A) ranges from 5 to 104 with a mean of 34.50 and a standard deviation of 24.48. From the previous results, the standard deviation for assets (LASSETS) was the smaller one and it considered the more accurate future predictions because there was less variability.

Table 1. Descriptive statistics

#### Descriptive Statistics: DV; lassets; LEV; OD; la (2008)

Variable	N	N*	Mean	Median	TrMean	StDev
DV	40	8	17.73	15.00	17.06	9.76
lassets	29	19	14.694	14.894	14.712	1.677
LEV	29	19	0.4676	0.4200	0.4389	0.3286
OD	44	4	0.4368	0.4400	0.4350	0.2169
la	44	4	34.50	30.50	32.80	24.48

  

Variable	SE Mean	Minimum	Maximum	Q1	Q3
DV	1.54	3.00	49.00	11.00	23.75
lassets	0.311	11.083	17.801	13.343	16.148
LEV	0.0610	0.0100	1.7000	0.2500	0.6050
OD	0.0327	0.0200	0.8800	0.2525	0.5675
la	3.69	5.00	104.00	15.00	46.25

**Descriptive Statistics: DV; lassets; LEV; OD; la (2009)**

Variable	N	N*	Mean	Median	TrMean	StDev
DV	45	3	13.71	14.00	13.39	9.26
lassets	44	4	14.642	14.775	14.630	1.424
LEV	44	4	0.3695	0.3050	0.3513	0.2326
OD	44	4	0.4368	0.4400	0.4350	0.2169
la	44	4	34.50	30.50	32.80	24.48

Variable	SE Mean	Minimum	Maximum	Q1	Q3
DV	1.38	0.00	40.00	6.50	20.50
lassets	0.215	11.821	17.663	13.447	15.667
LEV	0.0351	0.0500	1.3400	0.2125	0.4700
OD	0.0327	0.0200	0.8800	0.2525	0.5675
la	3.69	5.00	104.00	15.00	46.25

**Descriptive Statistics: DV; lassets; LEV; OD; la (2010)**

Variable	N	N*	Mean	Median	TrMean	StDev
DV	42	6	15.38	14.50	15.11	8.02
lassets	44	4	14.642	14.775	14.630	1.424
LEV	40	8	0.4170	0.3350	0.3817	0.3400
OD	44	4	0.4368	0.4400	0.4350	0.2169
la	44	4	34.50	30.50	32.80	24.48

Variable	SE Mean	Minimum	Maximum	Q1	Q3
DV	1.24	2.00	38.00	9.00	19.75
lassets	0.215	11.821	17.663	13.447	15.667
LEV	0.0538	0.0100	2.0500	0.1925	0.5775
OD	0.0327	0.0200	0.8800	0.2525	0.5675
la	3.69	5.00	104.00	15.00	46.25

**7.2 Assessing the validity of the model or (OLS) regression analysis**

Before explaining the results of multiple regression analysis, it is useful to check the existence of multicollinearity or collinearity between the independent variables. Multicollinearity or collinearity means that two or more of the independent variables are highly correlated and this situation can have damaging effects on the results of multiple regressions. The correlation matrix is a powerful tool for getting a rough idea of the relationship between predictors.

Table (2) displays the correlations between independent variables, and between dependent variable {the level of forward-looking disclosure (DV)} and other independents variables, in three years. In the year 2008, there was no multicollinearity between independents variables. The correlation between each of the continuous variables was not too high. The highest correlation found between leverage (LEV) and ownership dispersion (OD) (0.244) was acceptable, and all correlations were insignificant at the 0.05 level (two-tailed). The only significant correlation was between the level of forward-looking disclosures {dependent variable (DV)} and firm size measured by (LASSETS) (0.006<0.05) and also the highest correlation found between the two previous variables (0.526).

In the year 2009, there was no multicollinearity between independents variables. The correlation between each of the continuous variables was not too high. The highest correlation found between firm size (LASSETS) and leverage (LEV) (0.179) was acceptable, and all correlations were insignificant at the 0.05 level (two-tailed) except the correlation between (LASSETS) and ownership dispersion (OD) was significant (0.029<0.05). The correlation between the level of forward-looking disclosures {dependent variable (DV)} and firm size measured by (LASSETS) was also significantly (0.00<0.05) and also the highest correlation found between the two previous variables (0.551).

While in the year 2010, there was no multicollinearity between independents variables. The correlation between each of the continuous variables was not too high. The highest correlation found between firm size (LASSETS) and leverage (LEV) (0.309) was acceptable, and all correlations were insignificant at the 0.05 level (two-tailed) except the correlation between (LASSETS) and ownership dispersion (OD) was significant (0.029<0.05). The correlation between the level of forward-looking disclosures {dependent variable (DV)} and firm size measured by (LASSETS) was also significantly (0.001<0.05) and also the highest correlation found between the two previous variables (0.524).



To sum up, the results in all the three years confirm that no colinearity exists between the independent variables. The correlation between the level of forward-looking disclosure {dependent

variable (DV)} and firm size (independent variable) measured by (LASSETS) was significantly and highly correlation in all the three years.

**Table 2. Correlations**

**Correlations: DV; lassets; LEV; OD; la (2008)**

	DV	lassets	LEV	OD
lassets	0.526** 0.006***			
LEV	0.100 0.627	-0.235 0.221		
OD	-0.254 0.123	-0.333 0.077	0.244* 0.202	
la	-0.014 0.935	-0.295 0.120	0.221 0.250	0.162 0.293

Cell Contents: Pearson correlation  
 P-Value

**Notes:**

- \*the highest correlation between independent variables
- \*\*the highest correlation in the correlation matrix
- \*\*\*correlation is significant at the 0.05 level (two-tailed)

**Correlations: DV; lassets; LEV; OD; la (2009)**

	DV	lassets	LEV	OD
lassets	0.551** 0.000***			
LEV	-0.014 0.931	0.179* 0.246		
OD	-0.324 0.034	-0.329 0.029***	-0.115 0.457	
la	-0.044 0.780	-0.036 0.818	0.001 0.994	0.162 0.293

Cell Contents: Pearson correlation  
 P-Value

**Notes:**

- \*the highest correlation between independent variables
- \*\*the highest correlation in the correlation matrix
- \*\*\*correlation is significant at the 0.05 level (two-tailed)

**Correlations: DV; lassets; LEV; OD; la (2010)**

	DV	lassets	LEV	OD
lassets	0.524** 0.001***			
LEV	0.132 0.430	0.309* 0.056		
OD	-0.254 0.114	-0.329 0.029***	0.065 0.695	
la	-0.001 0.993	-0.036 0.818	-0.120 0.468	0.162 0.293

Cell Contents: Pearson correlation  
P-Value

**Notes:**

- \*the highest correlation between independent variables
- \*\*the highest correlation in the correlation matrix
- \*\*\*correlation is significant at the 0.05 level (two-tailed)

**7.3 Multiple regression results**

Appendix (A) showed all the multiple regression results for the years 2008, 2009 and 2010. Results of the OLS regression in table (3) showed that standard deviation of the error terms are 8.970, 7.988 and 6.884 for the three years respectively.

The results statistically (ANOVA tests) support the significance of the model in all the three years 2008, 2009 and 2010 because F-ratio was 4.55 (P=0.008<0.05), F-ratio was 4.98 (P=0.002<0.05) and F-ratio 3.58 (P=0.016<0.05) respectively. In fact F is nothing but T-square, A low P-value suggests that beta plays a significant role in the model; this is just reassurance of the T-test.

While R<sup>2</sup> which means the percentage of independent variables that explain the variance in

dependent variable (the level of looking-forward disclosure), in another words, (the variance percentage in dependent variable due to the variance percentage in independent variables)

R<sup>2</sup> (46.4%, 34.4% and 30.9%) for the three years, was not a respectable result because it less than 75% (the begging percentage to accept the R<sup>2</sup> result for any model). So the best R<sup>2</sup> was 46.4% for the year 2008, implies that independent variables explain 46.4 percentage of the variance in the level of looking-forward disclosure. In other words, there were a variation in the value of Y (level of looking-forward disclosure), 46.4% of it was due to the model (or due to change in X –independent variables) and 53.6% was due to error or some unexplained factor.

**Table 3. Model summary**

**Year 2008**

S = 8.970                      R-Sq = 46.4%                      R-Sq(adj) = 36.2%

Analysis of Variance

Source	DF	SS	MS	F	P
Regression	4	1462.91	365.73	4.55	0.008
Residual Error	21	1689.59	80.46		
Total	25	3152.50			

**Year 2009**

S = 7.988                      R-Sq = 34.4%                      R-Sq(adj) = 27.5%

Analysis of Variance

Source	DF	SS	MS	F	P
Regression	4	1272.27	318.07	4.98	0.002
Residual Error	38	2424.85	63.81		
Total	42	3697.12			

**Year 2010**

S = 6.884      R-Sq = 30.9%      R-Sq(adj) = 22.3%

Analysis of Variance

Source	DF	SS	MS	F	P
Regression	4	678.79	169.70	3.58	0.016
Residual Error	32	1516.40	47.39		
Total	36	2195.19			

Table (4) shows the results of regression related to independent variables, firm size (L assets), leverage (LEV), ownership dispersion (OD) and firm age (A) for the three years.

The sample estimated alpha (constant) and beta (independent variables) are {-56.43, 4.542, 6.296, -1.46 and 0.21590} respectively for the year 2008, {-32.51, 3.48, -4.93, -7.63 and 0.007} respectively for the year 2009, and {-24.83, 2.75, -0.169, -3.52 and 0.045} for the last year 2010.

The comment on the results is the following:

\*firm size: (measured by the log of the book value of total assets) as the previous studies estimated, firm size coefficient showed that it was significantly ( $P < 0.05$ ) positive associated to the level of forward-looking disclosure in all the three years, where ( $p = 0.001 < 0.05$ ) in the years 2008 and 2009 but ( $P = 0.004 < 0.05$ ) in the year 2010, this means that large firms disclose more data than small firms. The main reason for this result is that large firms are expected to disclose more voluntary information than smaller firms in order to attract investors to finance their growth, and large firms have the capability to pay more costs for larger and extensive disclosure.

\*leverage ratio (debt ratio): (measured by total liabilities divided by total assets), it found to be insignificantly correlated to the level of forward-looking disclosure in all the three years ( $P > 0.05$ ). But positively in the year 2008, and negatively in other years 2009 and 2010

This may be clarified by the fact that creditors may share private information with their debtors (Alsaed, 2006). Also, the output may be explained

on the basis that Egyptian companies actually favor equity to debt in financing their assets.

\*ownership dispersion: (measured by number of shares owned by individuals), in contrast of the hypothesis, it found to be insignificantly ( $P > 0.05$ ) negative correlated to the level of forward-looking disclosure in all the three years. This means that firms with a large proportion of shares owned by the individual investors tend to disclose less disclosure related to forward-looking information. This result does not necessarily suggest the existence of a negatively associated between the ownership dispersion and the level of forward-looking disclosure.

No previous studies tested the association between the level of forward-looking disclosure and ownership dispersion, especially in Egypt environment.

\*firm age: (measured by logarithm of the age of firm), it found to be significantly ( $P < 0.05$ ) positive correlated to the level of forward-looking disclosure only in the year 2008. But the relationship was insignificantly in other years 2009 and 2010 ( $P > 0.05$ )

This result support the hypothesis which means that old firm will disclose more forward-looking information than younger firms. Nevertheless, firm age would become significantly positive related to the forward-looking disclosure level if the highly ranked firm was erased from the sample.

No previous studies tested the association between the level of forward-looking disclosure and firm age in Egypt environment.

**Table 4.** Regression results of the effect of the structure-related variables on the level of forward-looking disclosure

**Year 2008**

Predictor	Coef	SE Coef	T	P
Constant	-56.43	19.95	-2.83	0.010
lassets	4.542	1.175	3.87	0.001
LEV	6.296	5.469	1.15	0.263
OD	-1.46	10.20	-0.14	0.887
la	0.21590	0.09605	2.25	0.035

**Year 2009**

Predictor	Coef	SE Coef	T	P
Constant	-32.51	14.83	-2.19	0.035
lassets	3.4820	0.9414	3.70	0.001
LEV	-4.939	5.335	-0.93	0.360
OD	-7.639	6.039	-1.26	0.214
la	0.00790	0.05085	0.16	0.877

### Year 2010

Predictor	Coef	SE Coef	T	P
Constant	-24.83	13.53	-1.83	0.076
lassets	2.7581	0.8796	3.14	0.004
LEV	-0.169	3.561	-0.05	0.963
OD	-3.529	5.507	-0.64	0.526
la	0.04560	0.05043	0.90	0.373

## 8 Conclusions, limitations and further research

The main purpose of preparing annual reports is to offer satisfactory and timely information to the users of financial reports and if the management fails to provide this information, the firm will lose its value.

The objective of this paper is to examine the relationship between the level of forward-looking disclosure and firm characteristics (structured-related variables) and to discover the effect of four main structured-related variables (firm size, leverage, ownership dispersion and firm age) on the extent of the level of forward-looking information disclosure through the annual reports of non-financial Egyptian firms.

Also, this paper helps to determinant of the disclosure policy of Egyptian firms by making connect between annual reports to specific firm characteristics (structured-related variables).

The results for the sample of 49 firms showed that firm size variable has significant positive effects on the forward- looking disclosure level in all the three years, moreover, firm age has the same association (significantly) but only in the year 2008 and insignificantly relationship with the level of forward-looking disclosure in the years 2009 and 2010.

While, other variables, leverage and ownership dispersion, have an insignificant association with the level of forward-looking disclosure in all the three years

The study revealed that large firms tend to present more forward-looking disclosure than smaller firms.

The previous study made by Aljifri (2006) found that an insignificant association between firm size and the level of voluntary disclosure (items presented in financial statements). So, the previous result leads to an important conclusion, the variables that affect the level of disclosing accounting information could be different from those that affect the level of disclosing forward-looking information (Aljifri & Hussainey, 2007).

This study has some limitations, first, the study uses the same list of forward-looking items as in previous study made by (Hussainey et al., 2003). Second, the selected items do not show observed importance levels by financial information users. Third, the study applies an "unweights" approach to measure the level of forward-looking disclosure. Fourth, in real life some information items have higher value to users of annual reports than other

users, so the items should be weighted to reflect their level of importance. Finally, this study concentrates on non-financial listed firms on the Egyptian Stock Exchange and excluded financial and insurance firms because they are subject to specific disclosure requirements, so their annual reports cannot be considered as voluntarily determined.

Further research could address the following suggestions:

\*introduce new forward-looking items not addressed by the current study.

\*introduce a list of items related to forward-looking disclosure reflects the level of importance observed by users.

\*making a new study to examine the impact of firm characteristics on forward-looking disclosure in the annual reports of financial and non-financial listed and non-listed firms

\*new research may be conducted by increasing the time of the period to more than 3 years, increasing the number of firms or introducing more variables to rise the strength of evidence that presented in this study.

\*examine the effect of cost of equity (as independent variable) on the level of forward-looking disclosure.

### \*notes

(1) Accelerate, anticipate, await, coming (financial) year(s), coming months, confidence (or confident), convince, current financial year, envisage, estimate, eventual, expect, forecast, forthcoming, hope, intend (or intention), likely (or unlikely), look-forward (or look ahead), next, novel, optimistic, outlook, planned (or planning), predict, prospect, remain, renew, scope for (or scope to), shall, shortly, should, soon, will, well placed (or well positioned), year(s) ahead.

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