



# **Assessing the Development of Voluntary Internet Financial Reporting and Disclosure in Egypt**

A Thesis submitted for the Degree of  
Doctor of Philosophy

By

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*To My Mum*

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## Abstract

Currently the provision of corporate financial information through the internet is a new issue confronting providers and users of financial information in Egypt. It is expected to be important as financial information would be disseminated worldwide and this availability of information could encourage people to invest in any part of the world. Studying internet reporting in Egypt will help in providing on line timely information, thus encouraging investors to invest in Egypt. It will meet stakeholders' demands for greater speed and volume of financial information. Businesses must find better and more effective ways of communicating financial information with these stakeholders. Therefore, there is a need to examine the role played by the internet in communicating financial information in Egypt, in order to find out how that role may be enhanced.

The major objectives of the study were to 1) identify the extent of internet corporate financial reporting in the Egyptian companies; 2) identify factors which influence Egyptian listed companies to voluntarily adopt internet-based corporate financial reporting; 3) evaluate the effectiveness of voluntary internet financial reporting and disclosure to selected groups of users; and 4) explore the role of Investor Relations and auditors regarding internet financial reporting and their functions or procedures are affected. Innovation diffusion, institutional change, and economic-based theories were employed to explain the adoption of internet financial reporting in Egypt. To accomplish these objectives, a sequential explanatory triangulation design was employed, employing both quantitative and qualitative data collection and analysis.

Quantitative methods were used to achieve the first and second objectives. A disclosure index was constructed to determine the level of voluntary internet financial reporting of the 100 most active listed Egyptian companies for the year ended 2004. Ten hypotheses were formulated to test the relationship between the level of voluntary financial internet disclosure and the company's characteristics. It was found that 27 companies had no websites, the websites of 9 companies were under construction, 62 companies had websites and 35 companies disclosed their financial information on their websites. The average disclosure rates of financial information were 30% for the Egyptian companies which had websites and 44% for companies having websites and disclosing financial information. 100% of communication companies and 67% of financial services companies disclosed financial information on their websites and all communication companies had disclosure scores over 50%. The results of Univariate analysis revealed that firm size variables (total assets, total sales); leverage variables (Total Debt /Total Assets and Long term Debt/ Total Assets); foreign listing; industry type; and audit firm size are significantly associated with the extent of internet disclosure at least at the 5% level of significance. The results of multiple regressions indicated that profitability, foreign listing and industrial sector (communications and financial services) are important factors affecting the amount and presentation formatting of financial information disclosed on Egyptian companies' websites.

Qualitative method was used to accomplish the second, third and fourth objectives. Seventeen interviews were conducted with stakeholders [Investor relations officers, financial analysts & fund managers, audit partners & key managers from Egyptian Stock Exchange]. A framework was developed which includes six main factors affecting companies' disclosure of financial information on the internet, which include companies' characteristics [Size, Foreign listing, Industrial sector (banking and communications sectors), Capital structure (Foreign investors, Governmental

ownership, Number of shareholders)], management style, amount of paper-based disclosure, imitation, rules and regulations, and number of analysts covering the company. Investor relations officers should be responsible and decide upon the financial information to be published on companies' websites but this is not the case in Egypt. Auditors have no responsibility regarding internet financial reporting in Egypt.

This study makes the following contribution to knowledge:

- 1) This study is the first which undertakes an empirical investigation regarding internet financial reporting and disclosure of Egyptian listed companies.
- 2) This is the first study to examine the effects of culture, organizational structure and demographic characteristics on the adoption of voluntary internet reporting and disclosure.
- 3) One of the significant features in this study is that it employed quantitative and qualitative methods to identify the factors which affect companies' adoption of voluntary internet financial reporting and disclosure in Egypt.
- 4) This study will contribute to the understanding of the concept, functions and activities of Investor Relations within companies and this might draw the attention to the importance of Investor Relations and help in the development of Investor Relations in Egypt. This is the first time that the role of Investor Relations has been investigated in Egypt, or indeed any Arab country.
- 5) The disclosure index used was modified to be suitable for companies working in the Egyptian environment context. This index could be used by other researchers to investigate internet financial reporting and disclosure for companies working in other Arab countries that are experiencing similar economic changes.

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## List of Abbreviations

AARF	Australian Accounting Research Foundation
AGS	Accounting Guidance Statement
AICPA	American Institute of Certified Public Accountants
AIMR	The Association for Investment Management and Research
An	analysts and fund managers
AP	audit partners
APB	Accounting Principles Board
ASE	Athens Stock Exchange
AuASB	The Auditing & Assurance Standards Board
CA	Current Assets
CAQDAS	Computer assisted qualitative data analysis software
CASE	Cairo & Alexandria Stock Exchange
CEO	Chief Executive Officer
CFO	Chief Financial Officer
CIB	Commercial International Bank
CICA	The Canadian Institute of Chartered Accountants
CL	Current Liabilities
CPAs	Certified Public Accountants
DIS	Disclosure Information System
e.g.	Example
EDGAR	Electronic Data gathering, analysis, and Retrieval
EGID	Egypt for Information Dissemination
ESE	Egyptian Stock Exchange (ESE).
Est.	Estimated
F. Information	Financial Information
FASB	Financial Accounting Standards Board
FD	Fair Disclosure
FTSE	Financial Times Stock Exchange
GAAP	Generally Accepted Accounting Principles
IAR	Inside Annual Report
IASB	International Accounting Standard Board
IFRSs	International Financial Reporting Standards
IIF	Institute of International Finance



IR	Investor Relations
IRO	Investor Relations officer
IRS	The Investor Relations Society
IRs	Investor Relations
IRs1	Investor Relations managers of companies with internet financial reporting and disclosure
IRs2	Investor Relations officers of companies with no internet financial reporting and disclosure
ITIDA	Information Technology Industry Development Authority
Ldbt	Long term debt
MD&A	Management discussion and Analysis
N/A	Not applicable
NIRI	Standards of Practice for Investor Relations
OE	Owners equity
R&D	Research and Development
ROA	Return on Assets
ROE	Return on Equity
SAS	Statements on Auditing Standards
SEC	Securities Exchange Commission
SEDAR	System for Electronic Document Analysis and Retrieval
SIRAS	Sovereign Investor Relations Advisory Service
Stk	Stock
UK	United Kingdom
URL	Uniform Resource Locator
USA	United States of America

# **Chapter One**

## **General Nature and Scope of the Study**

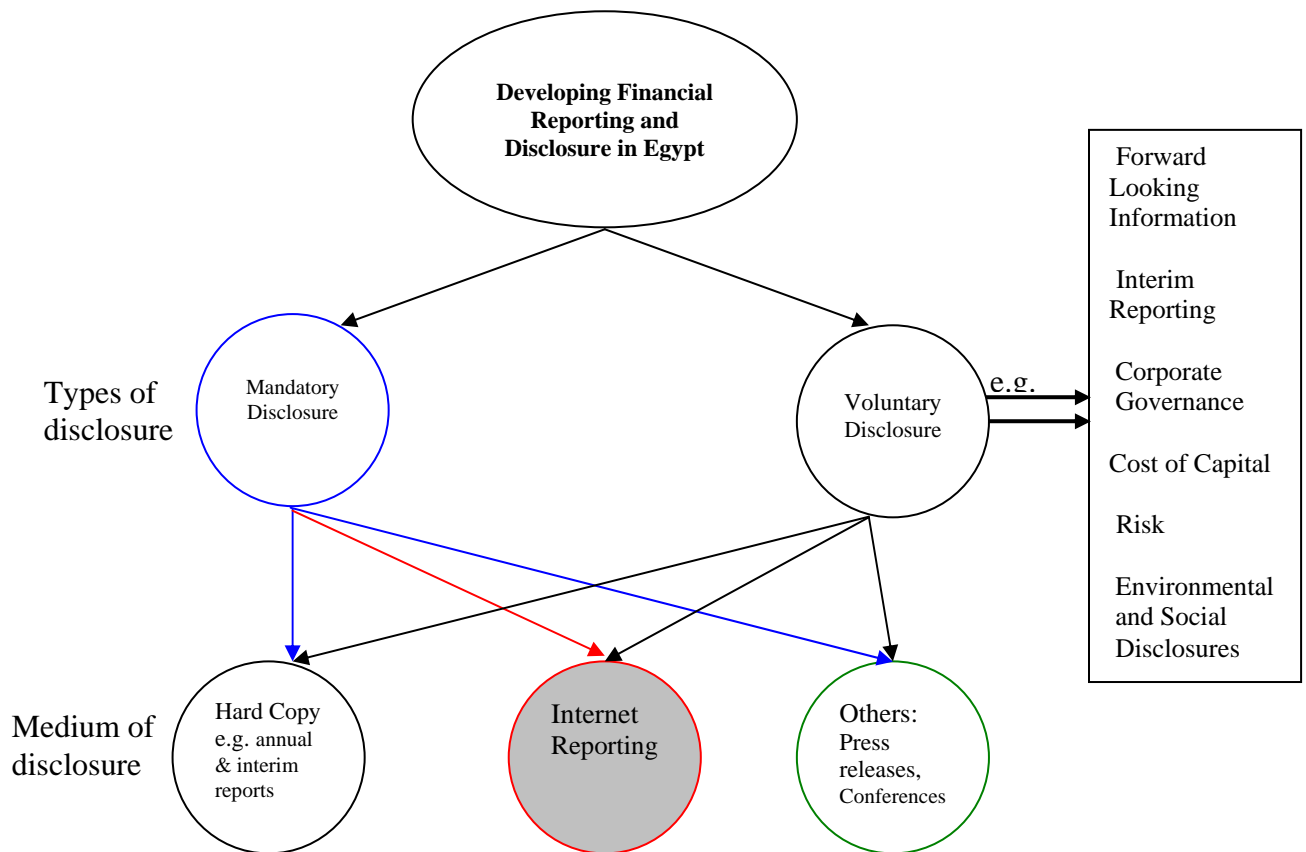
### **1.1 Introduction**

The end of the 20<sup>th</sup> century witnessed a large degree of globalization. The internet is erasing the barriers between countries. National economies are now interconnected and capital markets are evolving to meet capital formation needs worldwide. Technological advancements in telecommunications are helping in connecting dealers all over the world (Abd El Shahid, 2003:1). Raising capital has become a global objective.

For Egypt, as a developing country (Kamel and Hussein, 2001:119), the concern to raise capital is particularly acute as it needs to attract foreign investment into the country (Nafie, 2001), and to promote the confidence and understanding of stakeholders. For this reason, fairness, efficiency and transparency of financial information are among the major objectives of the Egyptian stock market. Attention has therefore been directed towards disclosure of financial information, as a very important factor in encouraging people to invest (Hasan and Anandarajan, 2003:12). Concern to improve financial reporting and disclosure in Egypt gives rise to a need for studies exploring the level of mandatory and/or voluntary disclosure and on the manner of disclosure. The various possibilities are shown in Figure 1.1.

It can be seen from the figure that disclosure can be divided basically into two kinds: mandatory and voluntary. Mandatory disclosure can be defined as the disclosure of all information mandated by the rules and regulations imposed by regulatory bodies such as the Securities Exchange Commission (SEC), legislation (Companies Act), and accounting standards setters such as the Financial Accounting Standards Board (FASB),

**Figure 1.1 Developing Financial Disclosure in Egypt**



and International Accounting Standards Board (IASB). Martson and Shrivess (1991:196) defined mandatory disclosure as the disclosure of all information mandated by statutes, professional regulations and listing requirements of the stock exchange. Stakeholders need more information, which can be supplied voluntarily. Therefore, voluntary disclosure can be defined as information outside the financial statements, not explicitly required by the regulations (Boesso, 2002:3). Voluntary communication of financial information can take place in different formats. It can be hard copy annual reports or interim reports or provided electronically through the internet or by other means, such as conference calls and press releases. Previous studies have been conducted in various contexts, to investigate mandatory and/or voluntary disclosure through various media.

Mandatory disclosure studies have focused on the examination of the relationship between the mandatory disclosure and company variables (Tai et al., 1990; Wallace et al., 1994; Owusu-Ansah, 1998; Abd El Salam, 1999). All these studies have used a disclosure index. Abd El Salam's study focused on mandatory disclosure of financial information in Egypt and indicated that Egyptian companies have to follow the Egyptian Standards, which are more or less translation of International Accounting Standards. According to Ministerial Decree 503/1997, if there is an accounting issue not covered by the Egyptian Standards, the International Accounting Standard dealing with this issue is to be followed.

Most voluntary disclosure studies have focused on the types of voluntary information to be disclosed and not on the medium of disclosure. They focused on forward-looking information (Kent and Ung, 2003; Johnson et al., 2001; Lee and Yan, 2003), interim reporting (D'Arcya and Grabensberger, 2003; Leftwich et al., 1981), corporate governance (Gul and Leung, 2004; Haniffa and Cooke, 2002; Eng and Mak, 2003; Bujaki and McConomy, 2002; Okeahalam, 2004; Ho and Wong, 2001), cost of capital (Hail, 2002; Verrecchia, 1999; Botosan, 1997; Botosan and Plumlee, 2000), and risk (Estrella, 2004; Beretta and Bozzolan, 2004; Marshall and Weetman, 2002).

Hard copy mandatory and voluntary disclosure in an Egyptian context has been studied by Abd El Salam (1999). It was found that, for interim reporting, the Egyptian Stock Exchange listing rules require all listed companies to file, with the Stock Exchange and Capital Market Authority, quarterly reviewed financial statements. Article 20 of the Capital Market Authority's board of directors Decree number 30 dated 18/6/2002 concerning listing and de-listing rules of securities at Cairo Alexandria Stock Exchange states that a copy of the quarterly financial statements and the audit report should be

As regards corporate governance and risk, any study of those in Egypt must be exploratory as these issues are in their infancy. Most accounting studies related to corporate governance examine the impact of ownership structure and board composition on voluntary disclosure (Eng and Mak, 2003; Haniffa and Cooke, 2002). Abd El Shahid (2001:55) explained that in Egypt, there are no rules governing the composition of executive and non-executive directors and the concept of independent directors is not well established and that in most listed companies, the roles of the chairman and managing director are not separated. As for risk disclosure in Egypt, there are no rules or regulations recommending the measurement or disclosure of risk except for banks, which have to follow regulations set forth by the New Basel Capital Accord in 2001. A brief review by the researcher of banks' annual reports revealed that banks in Egypt tend to write the same narrative information about credit risk, interest rate risk and foreign currency risk with no disclosure of any measurement of risk such as "value at risk" or sensitivity analysis. There have been many environmental and social disclosure studies carried out in Egypt as well (Aly, 1996; Othman, 1999).

Currently, there is a new issue confronting providers and users of financial information. It is the potential role of new means of communication such as the internet. The internet is the major technology trend of the decade, which is opening new avenues for bringing information to the general public. Internet use can meet stakeholder demands for greater

speed and volume of information, at a time when it is recognized that businesses must find better and more effective ways of communicating (Willis et al., 2003:4).

*“As information moves further, faster, and reaches more and more people. It becomes increasingly obvious that paper has few, if any, advantages over electronic information formats. The reasons are clear: digital communication is a faster, cheaper, and more efficient way to reach a global audience. For the audiences of business reporting data, looking to the internet for information, especially for time-sensitive corporate disclosures, has become a given”.* (Willis et al., 2003:8)

Use of the internet enables information to be disseminated worldwide and this improved availability of financial information in particular, could encourage people to invest in any part of the world as information is available.

Internet financial reporting has not, as far as the researcher knows, been researched in Egypt, so it is not clear whether the Egyptian companies are exploiting this resource to the full. Therefore, there is a need to examine the role played by the internet in communicating financial information in Egypt, in order to see how that role may be enhanced. This study is an attempt to fill the gap.

The following figure 1.2 shows the various types of financial disclosure being developed in Egypt, and the different media of disclosure, respectively; the areas of interest in this study are shaded. Internet financial reporting is considered a voluntary means of communicating information, although it may be used for disclosure of both mandatory and voluntary information. As the figures illustrate, the mandatory disclosures which are required by accounting standards are communicated through hard copy annual or interim reports. Also some mandatory information is disclosed in press releases and conferences. These forms, however, are outside the scope of the study. It is not mandatory to publish financial information on the websites of companies or on the internet, although these websites may include information which is considered

mandatorily required by accounting standards and regulations, such as balance sheet and income statement. This study therefore examines the role played in Egypt by internet reporting, in the disclosure of both mandatory and voluntary information.

**Figure 1.2 Medium and Types of Disclosure**

<b>Medium of Disclosure</b>	Others	N/A	N/A
	Hard copy	N/A	N/A
	Internet	Focus of the Study	Focus of the Study
		Mandatory Disclosure	Voluntary Disclosure
		<b>Types of Disclosure</b>	

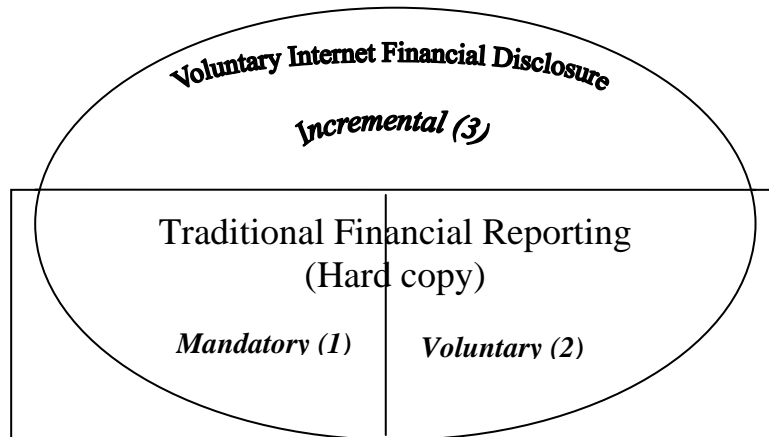
Figure 1.3 shows how voluntary internet financial reporting and disclosure is related to traditional hard copy financial reporting. It may include all or some of the traditional hard copy financial reports (annual and interim financial reports) and/or some incremental information. Hard copy annual and interim financial reports include mandatory and voluntary financial information. This mandatory information is required by accounting standards, laws and regulations. Examples include the financial statements (Balance sheets, Income statement, Statement of cash flow), notes to the financial statement and audit report. Voluntary information is information which is not

required by rules, regulations or laws but is disclosed by companies, such as forward looking information, management discussion and analysis, and financial ratios. Therefore, internet financial reporting may include companies' mandatory information and/or voluntary information and/or incremental information which may help stakeholders in making investment decisions. Examples of incremental information include power point presentations, appropriation statement (statement of proposed dividend), press releases, share prices, conference calls, graphics or diagrams. Some companies disclose their financial information using PDF, so it is merely an exact copy of the hard copy information; others use Excel to facilitate the analysis and reduce the chance of error that may occur when typing the numerical figures into a spread sheet. The websites of companies may have links to analysts' reports as well. Therefore, the websites of companies can provide more information than the traditional financial reports.

Internet financial reporting and disclosure is voluntary, not because it provides voluntary information, which is provided by the traditional financial reporting, but because there are no rules or regulations in Egypt which require the companies to disclose their financial information (whether voluntary, mandatory or incremental) on their websites. Voluntary internet financial reporting is a way of communicating financial information, not required by rules and regulations.



**Figure 1.3 Voluntary Internet Financial Reporting and Disclosure**



## **1.2 The Research Objectives**

This research aims to achieve the following four objectives:

1. Identify the extent of internet corporate financial reporting of Egyptian companies.
2. Identify factors which influence Egyptian listed companies voluntarily to adopt internet based corporate financial reporting.
3. Evaluate the effectiveness of voluntary internet financial reporting and disclosure as perceived by selected groups of users.
4. Explore the role of Investor relations and auditors regarding internet financial reporting and disclosure and whether their function or procedures are affected.

The first objective of the study is to determine the extent of financial information disclosed via the internet by Egyptian companies. Hossain et al. (1995:76) stated that a disclosure index can be used as a proxy to determine the extent of information disclosed by firms. Therefore, a disclosure index was developed and descriptive analysis was used to achieve this first objective.

The second objective is to identify the different factors that affect the level of voluntary internet disclosure among the different Egyptian companies. Al-Mulhem (1997:4) argued that the extent of disclosure varies among companies according to a number of factors. In this research, seven variables were selected as follows: firm size, profitability, leverage, liquidity, industrial sector, size of audit firm, foreign listing. Ten hypotheses were formulated to test the effect of these factors. The sample consists of the 100 most actively traded Egyptian companies listed in Cairo and Alexandria Stock Exchange (CASE) during the period January to June 2005. The disclosure index, the hypotheses and the sample are discussed in the Research Methodology Chapter.

In addition, semi structured interviews were carried out with investor relations officers, audit partners, analysts and fund managers and key managers of the Egyptian Stock Exchange to find out other factors which might affect companies' adoption of internet reporting and disclosure which were not revealed by the use of the disclosure index. Therefore, this study employed methodological triangulation following a sequential explanatory strategy, which is characterized by collection and analysis of quantitative data followed by collection and analysis of qualitative data. A conceptual model of the factors affecting companies' adoption of internet financial reporting and disclosure was deduced from the results of the disclosure index and interviews.

The third and fourth objectives are to evaluate the effectiveness of voluntary internet financial reporting and disclosure in the perceptions of selected groups of users and to find out the role of Investor relations and auditors in relation to internet financial reporting and disclosure. These were achieved by undertaking semi structured interviews. Detailed discussion of the interviews can be found in Chapters 8 and 9.

### **1.3 An Overview of the Development of Financial Disclosure and Reporting in Egypt**

The Alexandria Stock Exchange was established in 1888, followed by the Cairo Stock Exchange in 1903. The Egyptian Stock Exchange was ranked the fifth most active exchange worldwide (Hassan et al., 2006:43). In the period before 1954, the private sector was dominant and the prevailing Egyptian Accounting System, training of accountants, disclosure standards and laws were based on those of the UK (Desoky, 2002:139).

In the late 1950s; there was a massive wave of nationalization and law no. 119 of 1961 nationalized all companies with capital in excess of L.E. 10,000 (Desoky, 2002:43). Hassan et al. (2006:43) added that during this period, the public sector developed, and the role of the private sector was diminished and this caused a recession of the Egyptian Capital Market until the early 1990s.

In 1966, the uniform accounting system was introduced for national planning and control purposes, satisfying the needs of the central government. It requires companies to prepare accounts which are different from the traditional accounts (Hassan et al., 2006:43). Abd El Salam (1999:101) explained that according to this system, companies are required to prepare traditional financial statements such as Balance Sheet, Profit and Loss account and Production and Trading account, as well as current production account, statement of changes in financial position and cash flow statement.

In the mid 1970s, the Egyptian government introduced an “open-door” policy to liberalize the national economy to encourage the flow of foreign investment in Egypt and enhance the role of the private sector in the economy (Ragab and Omran, 2006:281). In 1981, Tax Law no. 157 and Company Law no. 159 were issued to

encourage companies to be listed on the Egyptian Stock Exchange (Abd El Salam, 1999:72-76). The tax law offered tax exemption for listing companies and the Company law no. 159/1981 required all companies to prepare annual audited financial statements. The company law did not cover accounting and auditing standards. It required auditors to follow the accounting practice law 133/1951 (Rahman et al., 2002:3).

In 1990, Egypt started a comprehensive programme for privatization and economic reform under the supervision of the World Bank and International Monetary Fund (Desoky, 2002:143). In 1992, a new capital market law 95/1992 was issued which required all listed companies to follow Egyptian Accounting Standards (Rahman et al., 2002:3). Article 6 and 7 of this law require listed companies to provide the Capital Market Authority and the Egyptian Stock Exchange with their annual and semi annual financial statements and to publish their annual, semi annual financial statements and any material information which might affect their operation or financial position in two daily and widely circulated newspapers (CML, 1992: articles 6, 7). In 1997, the Minister of Economy issued Decree no. 503 requiring all listed firms to adopt international accounting standards (Ragab and Omran, 2006:281).

To develop disclosure in Egypt, in June 1999 the Cairo & Alexandria Stock Exchange (CASE) established a company for disseminating information called “Egypt for Information Dissemination (EGID)” as a fully owned subsidiary of the Cairo and Alexandria Stock Exchange. EGID started exclusively transmitting CASE data to all local and international recipients, as of 1<sup>st</sup> January 2002. Its mission is to stimulate investment growth in Egypt and the Middle East by increasing the level of transparency, thus building investor confidence in the economy. EGID aims to fulfil its mission by enhancing and improving both the depth and the quality of information, together with

the level of information dissemination technology used by the different market players. EGID is also working on making all the information of the CASE listed companies available to all users using all important delivery channels and methods to suit the needs of the different interested parties. EGID is trying to combine technology together with information to make financial markets work better, not only in Egypt but in the region as well. This company has a Disclosure Information System (DIS) which is a direct link to the disclosure information of CASE's listed companies. DIS provides the following information (EGID): Company Information (such as addresses, telephone numbers, faxes, e-mails, law, purpose, auditor), Board of Directors, Management, and Investor Relations Officers (including name, title, address, telephone), Financial Statement (based on a dynamic database retrieval system), Free Floats (a comprehensive ownership structure), dividends and material events.

On June 18<sup>th</sup>, 2002, the Securities Listing & De-listing Rules of the Cairo & Alexandria Stock Exchanges were issued. Article 15 of these rules states that listed companies should have an Investor Relations Officer (IRO) who will be in charge of contacting the Stock Exchange and answering shareholders' and investors' inquiries. According to the National Investor Relations Institute (NIRI) in USA, the Investor Relations Society in UK, and the Australasian Investor Relations Association, one of the responsibilities of investor relations activities is to use the investor relations section on the company's website as a vehicle to publish financial information and a key tool to perform their duties and communicate effectively with different stakeholders. However, the concept and role of investor relations are not clear in Egypt, and there is no official job description. Eighteen out of 35 articles of the listing rules are directed to disclosure and transparency issues.

The new Egyptian Accounting Standards were issued as per the decree of the Minister of Investment, no. 243/2006 to replace those issued under the two ministerial decrees no. 503/1997 and 345/2002. The 35 Egyptian accounting standards were prepared according to international standards on preparation of financial statements issued by the International Federation of Accountants. The Egyptian Accounting Standards are in compliance with the International Financial Reporting Standards in substance and in form, with the aim of improving the comparability and reliability of corporate reporting. Disclosure and reporting has become fundamental in today's turbulent environment. Companies can use their websites to publish timely financial information and material information which might affect stakeholders' decisions.

#### **1.4 Overview of Internet Usage in Egypt**

The internet is the most important force of change in the worldwide marketplace because it is a global information highway connecting countries such as Egypt to all other countries of the world (Kamel and Hussein, 2002:147). The internet represents a challenge and an opportunity to the developing world; it plays an important role in economic growth and business development. Thus, providing global information and communication technology will increase the mobility of capital and will globalize markets (Kamel and Hussein, 2001:120). The number of internet users has been increasing dramatically and is expected to rise as the people become aware of the opportunities provided by the internet (Kamel and Hussein, 2002:147).

The internet was first introduced to Egypt in 1993, by the establishment of a small university network (Hamdy, 2004). Commercial internet usage began three years later when connectivity was introduced to private Internet Service Providers, causing an explosion in the number of users at home, at places of work and at cyber cafes (Hamdy, 2004). The Egyptian Government emphasized the importance of information and

communication technologies and by October 1999, a separate Ministry of Communication and Information Technology was established. It had a three-year plan with the private sector to develop the country's communication and information technology industry. The Free Internet Model was introduced in the beginning of 2002. Users access the internet with no charge, paying only the local dial-up phone tariff (Hamdy, 2004). In order to facilitate entry into the information and communication technology age, the government has passed laws concerning intellectual property, e-commerce, consumer protection, computer piracy, and e-signature (Sadek, 2004). Sadek (2004) stated that

*“The digital preparedness index gauges the digital business environment, the viability of Information and Communication Technology (ICT) infrastructure, government computerization, and the size of e-commerce in various countries. In 2003, a list was published of countries gauged by that index. The list includes 60 countries, only three of which are Arab: Saudi Arabia (ranked 45), Egypt (ranked 51), and Algeria (ranked 58)”.*

Table 1.1 shows internet usage in Egypt and in selected other countries. Although the ratio of the number of internet users in Egypt in 2007 to the number of population is very low compared to other countries, the number of users is growing at an increasing rate (Internet World Stats, 2007). The percentages of population using the internet in developed countries are higher compared to developing countries; however, the growth rate is increasing in developing countries.

**Table 1.1 Internet Usage and Population Statistics for Some Countries on September 12, 2007.**

For Developing Countries

<b>Country</b>	<b>Population (2007 Est.)</b>	<b>Internet Users December 2000</b>	<b>Internet Users Latest data</b>	<b>Use Growth (2000-2007)</b>	<b>% Population (Penetration)</b>
Egypt	72,478,498	450,000	5,100,000	1033.3 %	8.3%
Bahrain	738,874	40,000	155,000	287.5 %	21.0 %
Qatar	824,355	30,000	219,000	630.0 %	26.6 %
Saudi Arabia	24,069,943	200,000	2,540,000	1170.0%	10.6 %
Jordan	5,375,307	127,300	719,800	465.4 %	13.4 %
United Arab Emirates	3,981,978	735,000	1,321,000	79.7 %	33.2 %

Source: (Internet World Stats, 2007)

For Developed Countries

<b>Country</b>	<b>Population (2007 Est.)</b>	<b>Internet Users December 2000</b>	<b>Internet Users Latest data</b>	<b>Use Growth (2000-2007)</b>	<b>% Population (Penetration)</b>
United Kingdom	60,363,602	15,397,117	37,600,000	144.2 %	62.3 %
United States	301,967,681	95,348,066	210,575,287	120.8 %	69.7 %
Canada	32,440,970	12,701,863	22,000,000	73.2 %	67.8 %
Japan	128,646,345	47,080,000	86,300,000	83.3 %	67.1 %
Finland	5,275,491	1,927,273	3,286,000	70.5 %	62.3 %
France	61,350,009	8,150,968	32,925,953	287.4 %	53.7 %
Germany	82,509,367	23,999,302	50,426,117	110.1 %	61.1 %

Source: (Internet World Stats, 2007)



## **1.5 Importance of the Study**

The primary motivation of this research is to examine the scope of voluntary internet disclosure of financial information in Egypt and to evaluate its effectiveness for selected groups of users. It must be pointed out that this study covers a new area in which there are relatively few studies in emerging financial capital markets. It covers a topic that is not covered by any other study in Egypt. This research aims to expand our understanding about internet financial reporting and increasing voluntary disclosure, which will be an incentive to encourage investment in Egyptian companies.

It is expected that this research will be beneficial to companies, investor relations, financial analysts, auditors, investors and other users. Companies need to attract investors by disclosing timely, relevant information. Financial analysts will save time and effort in collecting and analysing the information their clients need. International investors can easily access and obtain information required for their investment decisions. In addition, it is hoped that this study will provide beneficial insights and recommendations for legislators, accounting professionals and researchers. An Investor Relations Society can be formed so that the functions of Investor Relations are developed and one of its activities is to enhance internet financial reporting. The legislators in Egypt can include in the rules and regulations communication of financial information through companies websites and determine who is responsible for it, what should or should not be included. The auditors should determine what their responsibilities regarding internet financial reporting are and how to develop this. Training courses should be given to the companies to enhance internet financial reporting with emphasis on XBRL language.

This is the first study to examine the effects of culture, organisational structure and demographic characteristics on the adoption of voluntary internet reporting and disclosure.

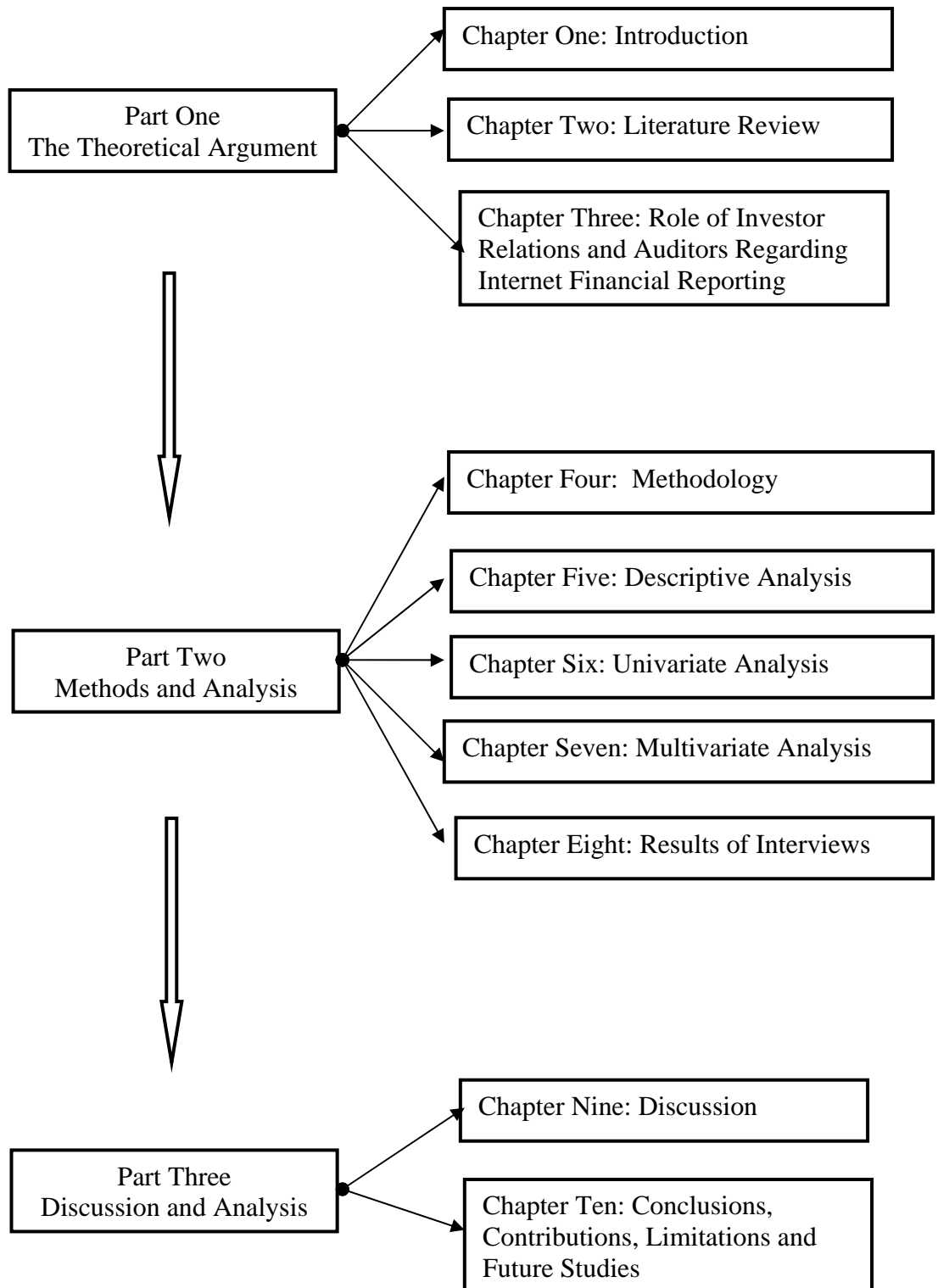
This study contributes in understanding the concept, functions and activities of investor relations within companies. This might draw attention to the importance of investor relations and help in the development of investor relations in Egypt and other Arab countries that are experiencing similar economic changes.

One of the significant features in this study is that it employed quantitative and qualitative methods to find out the factors which affect companies' adoption of voluntary internet financial reporting and disclosure in Egypt. This is the first time such a triangulation has been used in internet financial reporting and disclosure. The previous studies used quantitative methods to investigate the extent of internet financial reporting and disclosure. Examples include Debreceeny et al. (2002), Ettredge et al. (2002), and Xiao et al. (2004),

## **1.6 Organisation of the Study**

This study is divided into three main parts and ten chapters, as shown in Figure 1.4.

**Figure 1.4 Organisation of the Study**



This first part presents the *Theoretical Argument* in three chapters. The first chapter provides a brief introduction to the objectives and importance of the thesis. Chapter two is the literature review which reviews the levels and types of financial disclosure and focuses on internet financial reporting, its importance and current regulations and the legal environment. Studies related to internet financial reporting are reviewed and motivations for voluntary internet disclosure are discussed using appropriate theories like Innovation diffusion, Institutional change and Economic-based such as agency, capital need, signalling, and legitimacy. The effects of culture, organisational structure and demographic characteristics on the adoption of voluntary internet reporting and disclosure are examined. Then Chapter Three presents the role of investor relations and audit in the provision of internet financial reporting. Differences between printed audit reports and electronic audit reports and professional pronouncements are presented.

The second part contains the *Methods and Analysis* in four chapters. Chapter Four describes the research methods employed to achieve the objectives of the study. It explains the research process which includes the research philosophy, research approaches, research strategies, time horizons, and data collection method. It discusses methods used to construct a disclosure indexes, the weighting and scoring of the index. The use of semi structured interviews, construction of an interview schedule and ethical considerations are covered. In addition, the research hypotheses are formulated in this chapter and the measurement of each variable is defined.

Chapter Five presents the descriptive statistics related to the extent of internet financial reporting and disclosure. It describes the disclosure level of companies as well as the disclosure for each item in the index and for each group of items. It is shown that there

are significant variations among Egyptian companies in the level of voluntary internet reporting and disclosure.

Chapters Six and Seven examine the relationship between the extent of voluntary internet reporting and companies' characteristics by using univariate analysis, which shows the impact of each variable on the extent of internet disclosure and multivariate analysis (multiple regression) to show the impact of all variables on internet financial reporting and disclosure.

Chapters Eight present the results and analysis of interviews to examine the factors of voluntary internet disclosure of financial information, to ascertain the perceptions of some users and to find out how investor relations and audit are affected by internet reporting and disclosure.

The third part of the study is the *Discussion and results*, which encompasses Chapters Nine and Ten. Chapter Nine presents the discussion of the quantitative study and the interviews and their relationship with theories and with previous empirical studies.

Chapter Ten summarises the major features of the thesis, the limitations, the conclusions that are reached and findings. Recommendations are offered to maximize the exploitation of the internet for voluntary disclosure of financial information by Egyptian companies and to increase the effectiveness of such disclosure and its usefulness for investors. Suggestions are also made for future research building on the contribution of the study.

# Chapter Two

## Literature Review

### 2.1 Introduction

The objective of this chapter is to explore existing literature on internet financial reporting and related issues, particularly Investor Relations and audit. Disclosure issues, the importance and the advantages and disadvantages of adopting internet financial disclosure and reporting are considered in sections 2.2 to 2.5. The current regulations for corporate internet reporting and various system introduced are examined in section 2.6. Then a summary of previous relevant studies of internet financial reporting is presented in section 2.7, together with the theories (section 2.8) which are employed to explain the adoption of voluntary internet reporting. The effects of culture, organisational structure and demographic characteristics on the adoption of internet financial reporting are considered in section 2.9.

### 2.2 Levels and Types of Financial Disclosure

Before stating the levels and types of financial disclosure, it is necessary to define what is meant by disclosure. Cooke (1989b:6) defined items disclosed as

*“Those items in corporate annual reports that are relevant and material to the decision-making process of users who are unable to demand information for their particular needs. If an item of information is relevant and material and is not disclosed then the decisions users make are likely to be less than optimal”.*

Disclosure can be mandatory, voluntary or selective; it may be printed on hard copy papers or provided electronically through the internet.

#### 2.2.1 Mandatory Disclosure

Mandatory disclosure can be defined as the disclosure of all information required by the rules and regulations imposed by regulatory bodies such as the Securities Exchange

Commission (SEC), legislation (Companies Act), and accounting standards setters such as the Financial Accounting Standard Board (FASB), and International Accounting Standard Board (IASB). Martson and Shrivies (1991:196) stated that mandatory disclosure is imposed by statute, professional regulations and listing requirements of stock exchanges.

### **2.2.2 Voluntary Disclosure**

Voluntary disclosure is described as disclosures primarily made outside the financial statements, which are not explicitly required by Generally Accepted Accounting Principles (GAAP) or Securities Exchange Commission (SEC) rules (FASB, 2001:15). However, the FASB Steering Committee (FASB, 2001:V) recognizes that many of these disclosures are made to comply with the SEC's requirements concerning description of a business and management's discussion and analysis of financial condition and results of operations. Companies use voluntary disclosures to differentiate themselves by enhancing the amount of business information they provide, thus providing more transparency and understanding about the company to investors and creditors (FASB, 2001:3).

Enhanced disclosures reduce investors' risk of making poor investment decisions, and thus have the potential to decrease the cost of capital. A number of studies have focused on the relationship between enhanced disclosure and cost of capital (Botosan, 1997; Verrecchia, 1999; Healy and Palepu, 2001; Botosan and Plumlee, 2002). Other studies have focused on the relationship between increased disclosure and cost of debt (Sengupta, 1998), while still others have focused on increased disclosure and stock performance (Pownall et al., 1993; Healy et al., 1999).

Studies of voluntary disclosure cover both developed (Wallace et al., 1994; Cooke, 1989a; 1991; 1992; 1993) and developing countries (Ahmed and Nicholls, 1994; Hossain et al., 1994). These studies of voluntary disclosure are important to this study because Internet reporting is considered a voluntary disclosure as there are no rules, regulations or standards which govern the Internet disclosure of financial information by companies. Voluntary disclosure studies will help in developing the current research questions, hypotheses and methodology.

### **2.2.3 Selective Disclosure**

Selective disclosure is the situation when a company discloses important and material information to a selected group of people, mainly to certain investors or analysts without making this information available to the public, thus, creating a potential for insider trading and conflict of interest for analysts (investorwords.com). In other words, managers provide some important information to selected investors, which they may use in trading at the expense of less informed investors (Gintschel and Markov, 2004:295). To eliminate selective disclosure, the Securities Exchange commission (SEC) in 2000 adopted the Regulation Fair Disclosure (Regulation FD) which states that “*managers may not privately disclose material information to financial analysts*” (Gintschel and Markov, 2004:295). The regulation requires that (1) if a company wants to release certain information, it should release it in such a way that all the public has access to it and (2) if information was released unintentionally, this information should be disseminated widely within 24 hours (Bushee et al., 2003:151).

### **2.3 Internet Financial Reporting**

Ashbaugh et al. (1999:241) consider a company to be providing internet financial reporting when it discloses on its website a comprehensive set of financial statements and auditors’ report or when there is a link to its annual report elsewhere on the internet



or when there is a link to the securities and exchange commission's electronic data gathering, analysis, and retrieval (EDGAR) system. However, Oyelere et al. (2003:27) defined a company as using internet financial reporting when it provides on the web a comprehensive set of financial statements or some financial highlights from its financial statements or partial or summarized financial statements. There is a difference between the two definitions. The second definition is more practical and comprehensive, because the first definition concentrates only on the publication of the annual reports on the internet, while the second one generalises internet financial reporting to any form of financial information (financial statements, highlights of financial statements, summarized or partial financial statements). Since disseminating the information via the internet is voluntary, the words "voluntary disclosure" can be added. Therefore, internet financial disclosure could be defined as a voluntary disclosure of any financial and non-financial information that is provided by the enterprise via the internet.

Lymer et al. (1999:2) defined web-based business reporting as

*"the public reporting of operating and financial data by a business enterprise via the world wide web or related Internet - based communications medium".*

The previous definitions did not specify whether the information disclosed via the internet is voluntary or compulsory, mandated via the rules and regulations on what is to be included in the paper-based annual or interim reports. Figure 2.1 demonstrates that disclosure of accounting information can be voluntary or compulsory, disclosed via the internet or paper-based, and that voluntary internet disclosure which is the focus of this study contains both voluntary and compulsory information.

**Figure 2.1 Types and Format of Disclosure of Financial Information**

	<b>Electronic-based (Internet)</b>	<b>Paper-based</b>
<b>Compulsory</b>	Applicable to this study	Not Applicable to this study
<b>Voluntary</b>	Applicable to this study	Not Applicable to this study

## **2.4 Importance of Internet Reporting**

Many studies have dealt with corporate reporting on the internet as a new way of disclosing financial information voluntarily (Lymer, 1997b; Lymer and Tallberg, 1997; Lymer, 1999; Lymer and Debreceeny, 2003; Lyboert, 2002; Larran and Giner, 2002; Jones and Xiao, 2004; IASC, 1999; Gray and Debreceeny, 2001; Gowthorpe and Flynn, 1997; Gowthorpe, 1999; Gowthorpe and Amat, 1999; FASB, 2000; Gowthorpe, 2004). An increased number of companies are combining web-based reporting with hard copy, while others are no longer producing hard copies at all (Line et al., 2002). Internet reporting has some obvious benefits, such as saving the cost of printing, making the information available to a broader audience, providing immediate updates, and enabling quick retrieval of information (Shepherd et al., 2001).

As internet corporate reporting is becoming more important, the professional bodies (CICA, 1999; IASC, 1999; FASB, 2000) have conducted research to consider its use. Their reports identify present practices for the electronic distribution of business information and consider the implications of technology for business reporting in the future.

## **2.5 Advantages and Disadvantages of Adopting Internet Reporting**

There are many advantages for companies in providing financial information on the internet. First, it reduces the cost of distributing information; if decision makers use a firm's site to obtain financial information, the firm can avoid the printing and

distribution costs associated with mailing annual and interim reports to stakeholders (FASB, 2000:1). Second, the time needed to print and mail the annual and interim reports is saved (Shepherd et al., 2001); thus the internet increases the timeliness of accounting information, which means that the information will be disclosed before it loses its capacity to influence the decision makers. Third, internet reporting makes the financial information accessible by a wider audience; Ashbaugh et al. (1999:248) explained that by engaging in internet financial reporting, firms increase their audience and financial information becomes a public good with unrestricted access, whereas traditional paper-based reporting is restricted to the parties who have requested and/or are required to receive financial information. Fourth, the internet can be accessed anywhere in the world, making accounting data electronically portable and globally accessible (Xiao et al., 2004:251) Fifth, it facilitates the provision of more relevant disaggregated financial data such as weekly or quarterly sales (Ashbaugh et al., 1999:251) which may help in analysing the financial position and operation of the company. Sixth, the information provided can be searched by using keywords (Fisher et al., 2004:414). Seventh, companies can provide streaming audio and video on their websites, which allows the audience to listen to analysts' conference calls, annual meetings and similar presentations (FASB, 2000:13). Eighth, some companies provide graphics and other tools on their websites to enable the users to view the history of stock prices for a specified period or the closing price on a certain date (FASB, 2000:12). These graphics and diagrams enhance the presentation of the companies' performance information (Lymer, 1997b). Lymer (1997b) cites the websites of Mark and Spencer and Tesco in UK as good examples of the usage of graphs to explain trend data.

Although financial reporting on the internet has its own advantages, it is also associated with some disadvantages. Generally, financial reporting is considered reliable when independent auditors certify it. However, internet financial reporting could generate unreliable financial information if firms report unaudited financial information in their websites or provide links from audited to unaudited information (Ashbaugh et al., 1999:255). Another risk is inadequate web security; it can result in reliable financial information being fraudulently transformed into unreliable financial information by hackers. In addition, companies may present incomplete financial statements, omitting material facts. Links to analysts' sites are risky because visitors of the website may think that all information provided in other websites to which the company's website is linked has the same level of accuracy and reliability. Sometimes consumers become lost when using navigational aids, such as the forward and back buttons and this may disrupt the necessary integrity of financial statements.

## **2.6 Current Regulations and Legal Environment for Corporate Internet Disclosures**

The USA has begun to adjust its existing patterns of accounting regulation to deal with the development of online reporting and is ahead of most of Europe in this respect. The US SEC was the first regulator in the world to require all companies to submit their major annual returns in electronic format – part of the EDGAR Project, from May 1996 (Lymer, 1999:294). A similar situation was found in Austria from the beginning of 2000 (Lymer, 1999:294). Boesso (2002:17) mentioned that the SEC passed the rule *Regulation Fair Disclosure* in 2000 allowing companies to disclose internal material information to all users and to use their website as a means of disseminating such information.

Beattie and Pratt (2003:156) report that in the UK, the Companies Act 1985 (Electronic Communication) Order 2000, which was enacted in December 2000, allows companies to distribute their annual financial reports electronically or to post them on the company website and advise shareholders that this has been done. They added that paragraph number 8.86 of the Final Report of Modern Company Law for a Competitive Economy -DTI, 2001- recommends that both the preliminary announcements and full annual reports of listed companies are published on a website and that electronic notification of that fact should be made to shareholders that register for this. The draft Companies Bill -DTI 2002- requires the publication of annual reports on the internet within four months of year-end (Beattie and Pratt, 2003:156). Companies are not allowed to release price-sensitive (new) information on the internet without first making an announcement to the Regulatory News Service of the London Stock Exchange (Craven and Marston, 1999:324).

Article 430 of companies Act (2006) “Quoted companies: annual accounts and reports to be made available on website” states that

- (1) A quoted company must ensure that its annual accounts and reports—
  - (a) are made available on a website, and*
  - (b) remain so available until the annual accounts and reports for the company’s next financial year are made available in accordance with this section.**
  
- (2) The annual accounts and reports must be made available on a website that—
  - (a) is maintained by or on behalf of the company, and*
  - (b) identifies the company in question.**
  
- (3) Access to the annual accounts and reports on the website, and the ability to obtain a hard copy of the annual accounts and reports from the website, must not be—
  - (a) conditional on the payment of a fee, or*
  - (b) otherwise restricted, except so far as necessary to comply with any enactment or regulatory requirement (in the United Kingdom or elsewhere).**
  
- (4) The annual accounts and reports—*

*(a) must be made available as soon as reasonably practicable, and  
(b) must be kept available throughout the period specified in  
subsection (1) (b).*

*(5) A failure to make the annual accounts and reports available on a website  
throughout that period is disregarded if—*

*(a) the annual accounts and reports are made available on the  
website for part of that period, and  
(b) the failure is wholly attributable to circumstances that it would  
not be reasonable to have expected the company to prevent or  
avoid.*

*(6) In the event of default in complying with this section, an offence is  
committed by every officer of the company who is in default.*

*(7) A person guilty of an offence under subsection (6) is liable on summary  
conviction to a fine not exceeding level 3 on the standard scale.*

### **2.6.1 EDGAR System**

The Securities and Exchange Commission (SEC) has established a system called EDGAR (Electronic data gathering, analysis and retrieval). Its mission is to perform “*automated collection, validation, indexing, acceptance and forwarding of submissions by corporations and others required by law to file forms with the SEC*” (Cook, 2000:13). Cook (2000:13) pointed out that the SEC required electronic filing of most enacted company documents (annual report on form 10-K or 10-KSB) on its EDGAR database.

*“The Commission recently adopted a new electronic filing rule (Rule 14 of Regulation S-T, [Rel. No. 33-7472](#), October 24, 1997) to make it clear that it will not accept filings made on paper that should have been filed electronically. The rule is effective January 1, 1998. After that date, if a filer submits a paper document otherwise required to be filed electronically and does not follow the appropriate procedures for a temporary or continuing hardship exemption outlined in Rules 201 or 202 of Regulation S-T, the filing will not be accepted or processed”* (SEC, 1998).

Asthana and Balsam (2001) examined the impact of filing form 10-K on EDGAR on the information dissemination process. They used a sample of firms that used EDGAR for the first time and compared the market response to that of the previous years’ filing.

They found a price and volume reaction to 10-Ks filed on EDGAR. Asthana and Balsam (2001:350) explained that prior to EDGAR, any individual could obtain the financial reports of a company, either by going to one of the SEC's offices or purchasing them from an intermediary or obtaining them from the company itself. However, now after EDGAR, the information of the 10-K is available more rapidly to a larger number of people, who can view the reports online simultaneously. Therefore, EDGAR has increased the speed of collecting information and reduced the cost, thus accelerating and increasing the market reaction. Qi et al. (2000) found a market reaction to the information contained in the 10-K in the post EDGAR period and not in the pre-EDGAR one.

Many US companies provide links from their websites to their reports filed on EDGAR to validate the published information (Cook, 2000:13). Companies publish financial information on their own websites because the EDGAR system standardizes the reporting format and companies might like to publish more specific information (Cook, 2000:23), highlight important information, present information in a different format or use graphs in representing information.

### **2.6.2 SEDAR**

Canada's SEDAR system (System for Electronic Document Analysis and Retrieval) started its operation on January 1, 1997 (Cook, 2000:10-11). As Cook (2000:10-11) reports, the system was developed by the Canadian Depository for Securities to facilitate access to public securities' filing. Electronic filing of documents with the Canadian Securities Administration is mandatory for all public listed companies and mutual funds. Although companies can file their documents in MS Word, Word Perfect or PDF format, SEDGAR has accepted only PDF format since 1999 (Cook, 2000:10-11).

### **2.6.3 Companies House**

In the UK, companies are required to file their financial reports in Companies House, which is the company registry for the public record. Companies House has an electronic direct on-line distribution service for company accounts (Cook, 1999:7).

According to Company Law, Companies House has two main functions (Cook, 1999:11):

- “a) the incorporation, re-registration and striking off of companies and the registration of documents required to be filed under companies, insolvency and related legislation, and*
- b) the provision of company information to the public, which requires compliance with statutory requirements”.*

In order for Companies House to perform its central role of receiving, storing and distributing company-related information, including company accounting data, it has to move towards performing these functions in an “electronic environment”.

Cook (2000:9) explains that Companies House provides an electronic filing service to all who are required to present documents to Companies House. This service allows companies to submit their statutory documents to Companies House electronically through email and then an automatic confirmation of documents for compliance with the Companies Act follows, with an email notice of acceptance or refusal. Signing the submitted papers as required by Companies Act is replaced with company authentication codes and all documents submitted by one company are required to bear the same authentication code before Companies House confirms acceptance.

### **2.6.4 DIS**

The Cairo & Alexandria Stock Exchange (CASE) in June 1999 established a company for disseminating information called “Egypt for Information Dissemination (EGID)” as a fully owned subsidiary of the Cairo and Alexandria Stock Exchange. EGID started exclusively transmitting CASE data to all local and international recipients, as of



1/1/2002. Its mission is to stimulate investment growth in Egypt and the Middle East by increasing the level of transparency, thus building investor confidence in the economy. EGID aims to fulfil its mission by enhancing and improving both the depth and the quality of information, together with the level of information dissemination technology used by the different market players. EGID is also working on making all the information of the CASE listed companies available to all users using all available delivery channels and methods to suit the needs of the different interested parties. EGID is trying to combine technology together with information to make financial markets work better, not only in Egypt but in the region as well. This company has a Disclosure Information System (DIS) which is a direct link to the disclosure information of CASE's listed companies. DIS provides the following information (EGID) through a monthly subscription.

1. Company Information (such as addresses, telephone numbers, faxes, e-mails, law, purpose, auditor)
2. Board of Directors, Management, and Investor Relation Officers (including name, title, address, telephone)
3. Financial Statements (based on a dynamic database retrieval system)
4. Free Floats (a comprehensive ownership structure)
5. Dividends
6. Material Events.

## **2.7 Studies Related to Internet Financial Reporting**

The literature in relation to financial reporting in the last 30 years has focused on voluntary disclosure of printed papers annual reports (Oyeler et al., 2003:27). Starting from 1996, literature extended to include studies on voluntary internet financial reporting and disclosure. These studies can be classified into descriptive and

explanatory studies. Therefore, this section will evaluate prior research and present key studies carried out by accounting organisations and standard setters.

### **2.7.1 Evaluation of Prior Studies**

Internet financial reporting and disclosure has attracted much research attention in recent years. Appendix 1 summarizes these studies. There are a number of themes and shortcomings in the research which can be identified, in terms of locational focus, tendency to describe rather than explain, some theories were not adequately used, limited range of variables and variations in the disclosure indices employed.

The majority of these studies focused to analysing the internet financial reporting and disclosure in the USA and European Union countries. Few studies focused on developing and Arab countries. These studies started in the USA, for example Louwers et al. (1996), Gray and Debreceeny (1997), Booker and Galbreath (1997), and Gowthorpe and Flynn (1997), then expanded to include various European countries, for example, UK (Lymer, 1997b; Marston and Leow, 1998; Hussey and Sowinska, 1999; Craven and Marston, 1999), Sweden (Hedlin, 1999), Germany (Marston and Polei, 2004), and Spain (Larran and Giner, 2002).

Another strand of research compares internet financial reporting and disclosure among different countries. Lymer and Tallberg's (1997) study included 50 top UK companies and 72 Finnish listed companies. Allam and Lymer (2003) compared internet financial reporting among 250 companies across five countries (USA, UK, Canada, Australia and Hong Kong). They discovered that US companies had higher levels of internet financial disclosure and Hong Kong had the lowest level of internet financial disclosure. Debreceeny and Gray (1999) compared internet financial disclosure of the 15 largest companies in each of UK, Germany and France. Khadaroo (2005b) compared internet

financial reporting among 100 Malaysian and 45 Singaporean companies and discovered that Singaporean companies use more internet financial reporting than their Malaysian counterparts.

Other studies considered wider European groupings. For example, Bonson and Escobar (2002) analysed internet financial reporting usage by the biggest 20 companies in each of the countries which are members of the European Union. Then Bonson and Escobar (2006) examined internet financial disclosure among 630 companies in Eastern Europe.

There are some studies which analysed the determinants of internet financial reporting in other developed countries such as New Zealand (Oyeler et al., 2003; Fisher et al., 2004), China (Xiao et al., 2004; Zhang et al., 2007), Australia (Lodhia et al., 2004; Chan and Wickramasinghe, 2006), Canada (Trabelsi et al., 2004; Trabelsi, 2007), Japan (Marston, 2003), and in some developing countries such as Thailand (Davey and Homkajohn, 2004), Malaysia (Hamid, 2005), some Arab countries (Ismail, 2002), and Jordan (Al-Htaybat and Napier, 2006).

It is noticeable that most of the previous studies were conducted for developed countries, especially the USA and European countries. The findings of such research may not be generalizable to different countries at different stages of development, or with different business environments and cultures. Very few studies were conducted in developing countries. In an Arab context, only one study was conducted in Jordan (Al-Htaybat and Napier, 2006), a comparative study was conducted to compare internet reporting in Qatar, Bahrain and Saudi Arabia (Ismail, 2002), and no study has been undertaken in Egypt as far as the researcher knows. This highlights a need to examine

internet financial reporting and disclosure in the distinctive cultural and regulatory environment of Egypt.

In early studies, researchers used descriptive analysis only to offer a general overview of the current state of internet financial reporting and disclosure in different countries (Zhang et al., 2007:3). They focused on the existence of Websites for large, stock exchanges listed companies and whether these companies disclosed some type of financial information on their websites (Allam and Lymer, 2003:3). These studies include Louwers et al. (1996); Gowthorpe and Flynn (1997); Lymer (1997b); and Gray and Debreceeny (1997).

Following this came a number of explanatory studies which offer explanations about why some companies adopt internet financial reporting and disclosure and why the amount of internet disclosure differ from one company to another (Zhang et al., 2007:3). Most studies found that firm size, is associated with internet financial reporting. Examples include Ashbaugh et al. (1999), Craven and Marston (1999) Pirchegger and Wagenhofer (1999). Ashbaugh et al. (1999) suggested that future research should develop a more complete model of the determinants of internet financial reporting.

The number of factors examined as potential predictors of levels of internet financial reporting in previous studies varies. Some researchers examined only one factor such as firm size (Allam and Lymer, 2003), or two factors such as company size and capital ownership (Pirchegger and Wagenhofer, 1999), or size and industry type (Craven and Marston, 1999). A few studies examined seven factors e.g. Xiao et al. (2004). Other studies examined company characteristics and environmental characteristics such as the

rate of internet penetration in different countries and national disclosure environment (Debreceeny et al., 2002; Bollen et al., 2006).

A weakness of much previous research has been the neglect of factors such as culture as a determinant of internet financial reporting and disclosure. For that reason, Oyeler et al. (2003:58) suggested that future research should consider some explanatory variables which are specific to the internet financial reporting environment, such as age and levels of education of company directors/managers, attitude of management to IT and new ideas, the age and strategic position of each company in its industry, and the stage in the life cycle of the company's major products. These factors may influence the use of the internet for financial reporting purposes. This study considers the effects of culture, organisational change and demographic characteristics on the adoption of internet financial reporting and disclosure in Egypt.

Previous research has employed several theories to explain why companies may adopt internet financial reporting and disclosure. Some studies used voluntary disclosure theories such as agency, capital need, and signalling theories to generate hypotheses. Examples include Craven & Marston (1999), Debreceeny et al. (2002), Ettredge et al. (2002), Oyelere et al. (2003), Marston & Polei (2004) and Xiao et al. (2004), Zhang et al. (2007). Xiao et al (2004:196) identified that internet financial reporting and disclosure studies failed to recognize how internet reporting as an innovation is adopted and put in use. Studies did not use the innovation diffusion theory and institutional change theory as a theoretical foundation for their analysis. However, Xiao et al. (2004:196) used institutional change in explaining that the big four international audit firms, foreign listing and being a member of certain industry may facilitate internet reporting and disclosure. Bonson and Escobar (2006) used mimetic isomorphism in

explaining why companies within same industries adopt internet reporting. However, these theories were not fully integrated with their results. For that reason, Xiao et al. (2002) recommended that future research should be more theory-guided so that theory and empirical results are integrated. The lack of theoretical background has created a gap in internet financial reporting and disclosure studies. Consequently, a study is required to fully incorporate into internet financial reporting and disclosure. Therefore, this study employs three sets of theories which are Innovation Diffusion theory, the Institutional Change theories (Coercive, Mimetic and Normative isomorphisms) and the Economic-Based theories (Agency, Capital need, Signalling and Legitimacy theories) to explain the adoption of internet financial reporting and disclosure in Egypt.

As regards methodology, most prior studies employed un-weighted disclosure indices and used the dichotomous approach. However, Debreceeny et al. (2002) and Bollen et al. (2006) used both un-weighted and weighted disclosure indices. Still, the results of both indices were consistent. This suggests that it does not matter which method researchers use. Therefore, this study uses an unweighted index.

The number of items included in the disclosure indices or checklists varies among studies. Bollen et al. (2006) index includes 29 items, Lymer et al. (1999) index includes 117 items, while Xiao et al. (2004:203) included 82 items in the disclosure index, 58 items of disclosure content and 24 items about presentation format. Pirchegger & Wagenhofer's (1999) disclosure index included 60 items. Allam & Lymer's (2003) checklist included 24 financial reporting items and 12 general items. The variation of disclosure index items will result in difficulty in comparing the results of different studies. The disclosure index in this study includes 58 content items and 31 presentation format items.

Some internet financial reporting and disclosure studies collected data by means of questionnaires and interviews. For example, Smith and Pierce (2005) used a questionnaire to survey senior officers in 100 large European companies quoted on the London Stock Exchange about financial reporting and/or information risk responsibilities. Results showed that the use of internet financial reporting was standard practice for large companies. The nature, format and content of disclosure did not differ noticeably from paper-based disclosures. The slow development of internet financial reporting was compounded by limited engagement with internet financial reporting by senior management of large organisations. Corporate governance procedures and framework surrounding internet financial reporting had received insufficient managerial attention. Xiao et al. (2002) examined the immediate trends in external financial reporting on the internet and their implications by using an open-ended questionnaire to seventeen experts in accounting and/or the internet. These experts were drawn from academics, auditors, regulators and users of corporate reports. Gowthorpe (2004) interviewed senior officers in smaller listed companies in UK about their use of internet financial reporting and disclosure and about how they identified stakeholders and their needs. It was found that the internet as a means of communication has not fundamentally changed the nature of dialogue between company and stakeholders which stays asymmetrical (Gowthorpe, 2004). Using semi structured and open ended interviews is valuable as it provides an additional dimension to the data, but not many studies have taken advantage of this.

### **2.7.2 Accounting Organisations and Standard Setters' Internet Reporting Studies**

Accounting organisations and standard setters are also paying attention to the rapid growth of internet financial reporting and the need of standards to regulate the form and

contents of internet financial reporting. They have conducted some studies to examine the implications of voluntary internet reporting on the profession.

**AICPA-FASB:** The AICPA special committee on financial reporting in its Jenkins Committee report, “Improving Business Reporting: A Customer Focus” created an annual report of a fictitious computer company called “FauxComs,Inc” to demonstrate their ideas and vision of business reporting (FauxcomHomepage, 2005).

Since the publication of the Jenkins Committee’s report, internet use has exploded. Many public companies have posted financial data on websites and have added special features such as financials that can be downloaded into spreadsheets that go beyond what mere paper statements can offer. This prompted the FASB, now under Jenkins’ leadership, to post the FauxCom information online, and visitors to the site now have access to all the information that was in the comprehensive report, with the addition of hypertext and download features.

The FauxCom Website provides a wealth of graphic information and five-year summaries. All financial information can be downloaded as Excel spreadsheet files, allowing users to manipulate, combine or summarize the information according to their needs. The FASB’s goal in creating a Web site for FauxCom, as if it were a real company, is to invite comments on the internet’s role in business information reporting.

**CICA:** The Canadian Institute of Chartered Accountants conducted a study, “The Impact of Technology on Financial and Business Reporting” in 1999. This study surveyed 370 companies listed on New York Stock Exchange, NASDAQ and the Toronto Stock Exchange in order to provide an overview of how much the web is being



used for financial reporting in North America. The report addresses topics such as boundaries of information, focusing on the hyperlinks which can take the users to web pages or servers outside the formal financial presentation and information which is not prepared according to GAAP and may be unreliable. Other issues discussed include presentation of unstructured information, user-designed reporting models, selective data, comparability, convergence of management and financial accounting, information overload, data integrity, security and confidentiality, multimedia communications, corporate governance, quality of information, democratization of business reporting, international standards, corporate dialogue, and impact of on-line reporting on current accounting models.

The study concluded that:

- There is a shift from the old concept of periodicity to a concept of continuous reporting or real time reporting. This has implications for timeliness relevance and reliability.
- Users are becoming more involved in the design of reports, in that they draw down data and create their own reports.
- Reporting is moving beyond financial measures to include non-financial measures.
- The traditional model is static and unilateral; the new model will be dynamic and interactive.
- There is a trend towards measurement of shareholder value creation, which is a more comprehensive concept than income measurement. This may well replace traditional financial reporting.
- There is a trend towards increased integration of the concepts of internal reporting with those of external reporting.

**IASC:** The International Accounting Standards Committee has published the report, “Business Reporting on the internet” prepared for the IASC by Lymer et al. (IASC, 1999). The aims of this study (IASC, 1999:2) were:

- To illustrate to accounting policy makers, at the international level, the nature of changes occurring in business reporting and to explain how those changes are affecting the dissemination of accounting and business information.
- To identify how those changes can affect the setting of accounting standards in the future.
- To recommend a set of measures to address those changes in electronic business reporting occurring now or that will be occurring in the future to help ensure the dissemination of high quality information to the users of business and financial information.

The report:

- Reviews some of the reasons behind the usage of Web-based business reporting.
- Provides background information on the increasing types and number of corporate Web sites.
- Explores and summarizes the different electronic technologies that can be used by Web designers. It shows that designers can use any mix of technologies to develop a website.
- Summarizes the findings of the existing literature on Web based financial reporting and adds further findings from a survey of 660 corporations in 22 countries conducted by the authors.
- Discusses electronic reporting environments such as EDGAR and SEDAR in the USA and Canada, respectively.
- Proposes the development of a “code of conduct” that would cover both the form and content aspects of Web-based business reporting.

- Highlights the significant need for a universal Business Reporting Language to facilitate the electronic dissemination and use of business information.
- Suggests a consortia approach that will help ensure the development of standards that provide both certainty in reporting and flexibility for future innovations.
- Discusses the opportunities, challenges, and implications for the accounting profession and the IASC, its international standard setter.

**FASB:** The Financial Accounting Standard Board conducted a study, “Electronic Distribution of Business Reporting Information”, in 2000. The aim of the study was to identify the broad trends in providing business information via the internet and consider its implication in the future. The objective was achieved through:

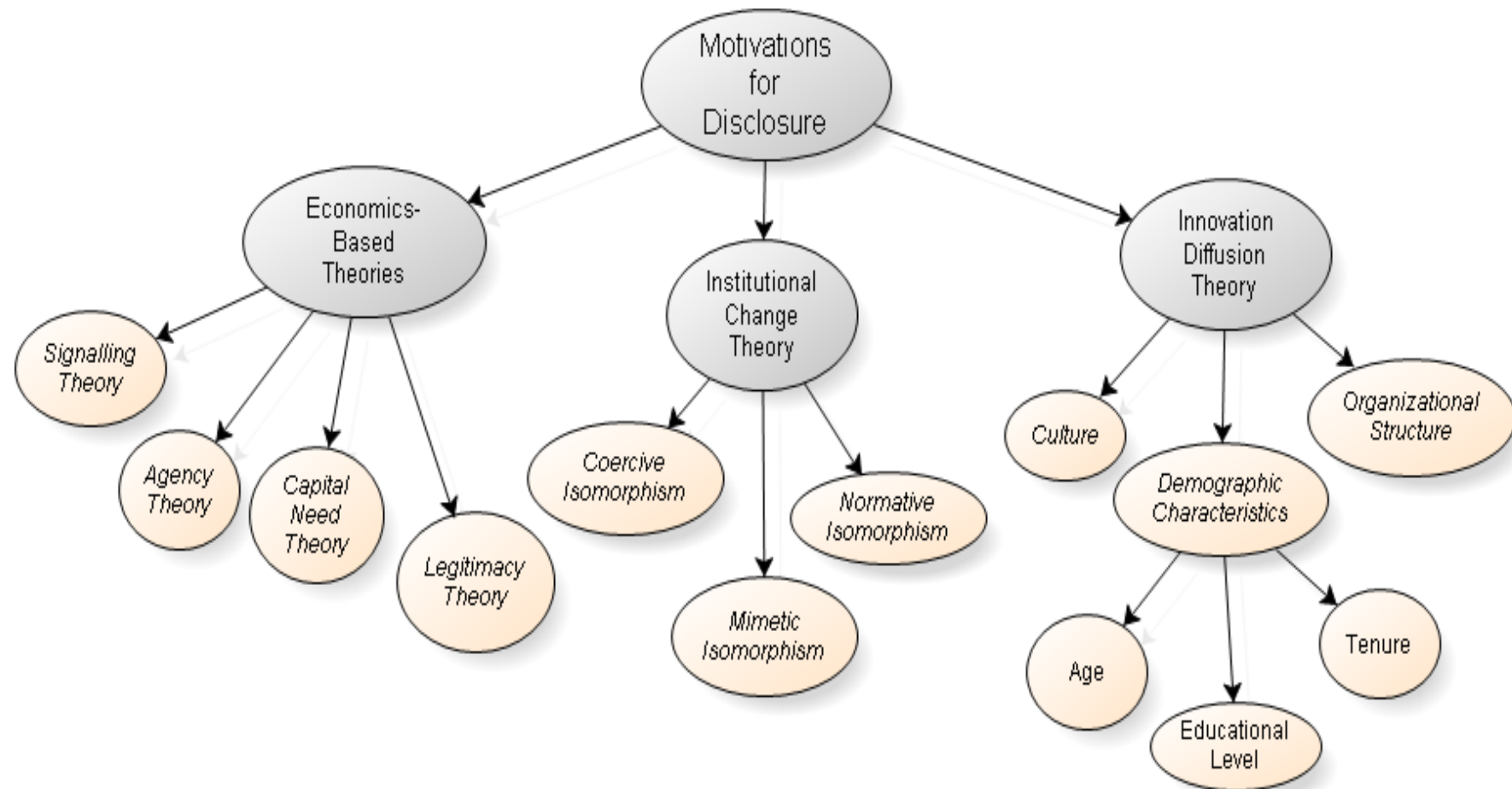
- Considering the current state of electronic dissemination and the incentives and motivations for using the internet to publish business information.
- Considering the current and future needs of users of electronically distributed information.
- Understanding the obstacles that delay the internet potential’s from being realized, such as audit concerns, securities law and other liability issues, challenges and opportunities that the internet presents for standard settings.
- Summarizing the practices of web-based business information which are considered helpful in making investments and other decisions

Therefore, the study described the internet background for reporting business information, the incentive for using electronic dissemination of business information, the current practices of companies, the data presented on the websites, and other academic research which examined the growing popularity and capabilities of corporate websites. The study used an interview methodology.

## **2.8 Motivations for Disclosure**

The main purpose of this section is to discuss the theories that provide explanatory grounds for voluntary internet disclosure. There are three sets of theories: the first set belongs to Economics-based theories; the second set is related to institutional change theories; while the last set belongs to innovation diffusion theory and they are consistent with the objectives of the study. Theories identified in the first group may be categorized as Agency theory, Capital Need theory, Signalling theory, and Legitimacy theory. The Institutional Change theory includes Coercive, Mimetic and Normative isomorphism. The Innovation Diffusion Theory suggests diffusion is affected by culture, organisational structure and demographic characteristics such as age, tenure and educational level. The following section will discuss in details each of these theories.

**Figure 2.2 Theories Explaining Motivations for Disclosure**



## 2.8.1 Innovation Diffusion Theory

Mahajan and Peterson (1985:7) defined an innovation as

*“any idea, object or practice that is perceived as new by members of social system”*

and defined diffusion of innovation as

*“the process by which the innovation is communicated through certain channels over time among members of a social system”.*

Diffusion of innovation theory tries to explain and describe the mechanism of how a new invention, in this case internet financial reporting, is adopted and becomes successful (Clarke, 1999). Sevcik (2004:8) stated that not all innovations are adopted, even if they are good, and it might take a long time for an innovation to be adopted. He added that resistance to change may be an obstacle to diffusion of innovation. Although it might not stop the innovation, it will slow it down. Rogers (1995:15-17) identified five critical attributes that greatly influence the rate of adoption:

1. Relative advantage: If an innovation has a higher relative advantage, it will be adopted more rapidly.
2. Compatibility: If an innovation is perceived to be consistent with existing values, past experiences, and needs of potential adopters, it will be easier to adopt.
3. Complexity: New ideas that are simple to understand are adopted more rapidly than those which require the innovator to develop new skills and understanding.
4. Trialability: New ideas that can be tried represent less uncertainty to the individual who is considering its adoption, as s/he can evaluate the idea and decide whether to adopt it or not.
5. Observability: This is the degree to which the results of an innovation can be seen by others. If the results of an innovation are observed easily, it will if perceived a success be adopted faster.

Based on Rogers' ideas, the rate of adoption of internet financial reporting will depend on how organisations perceive its relative advantage, compatibility, triability, observability and complexity. If organisations in Egypt observe the benefits of publishing financial information via the internet, they will adopt the innovation given other factors such as the availability of the required tools. Organisations with websites and having information technology departments will adopt the innovation faster than other organisations with no such facilities. Other factors to be considered are triability and complexity; organisations may decide whether to use PDF, HTML or XBRL in presenting the financial reporting on the internet depending on their triability and complexity.

Clarke (1999) identified the following five stages through which an innovation passes:

1. Knowledge: to know that it exists and understand its function
2. Persuasion: to form a favourable attitude towards it
3. Decision: to make a decision to adopt it
4. Implementation: to put it into use
5. Confirmation: to confirm its usage based on favourable outcomes.

Diffusion theory has highlighted the value of social systems in the adoption and use of an innovation (Zhu and He, 2002:471). Scholars have used different variables in explaining the adoption and the diffusion process. For example Baldrige and Burnham (1975) tested the impact of individual characteristics, organisation structure and environmental input from the community and organisations on the diffusion of innovation. Wejnert (2002) used the characteristics of the innovation itself, the characteristics of the adopters, and characteristics of the environment such as geographical settings, societal culture, political conditions, and global uniformity.

Therefore, the effects of the Egyptian culture, organisational change and demographic characteristics on the diffusion of internet financial reporting and disclosure will be discussed in detail in section 2.9.

## **2.8.2 Institutional Change Theories**

The American sociologist, Philip Selznick, who is considered the father of institutional theory, observed that organisations adapt not only to the strivings of their internal group but also to the values of external society (Hatch, 1997:83-84). The American Neo-institutional theorist, Richard Scott, defined institutionalization as “*the process by which actions are repeated and given similar meaning by self and others*” (Hatch, 1997:84). This has led the Neo-institutionalists to describe the process by which practices become institutions (Hatch, 1997:84). Hatch (1997:84) explained that some actions are repeated because explicit rules or laws exist to ensure their repetition such as the legal and political influences, while other actions are supported by norms, values, expectations, and cultural influences; sometimes actions are repeated because of a desire to be or look like another institution. These actions are governed by social influences.

Trying to answer the question of what makes organisations similar or homogeneous, DiMaggio and Powel (1983:147) identified three mechanisms (theories) of institutional change: coercive, mimetic and normative isomorphism.

### **2.8.2.1 Coercive Isomorphism**

According to Carpenter and Feroz (1992:621), coercive isomorphism results from political influence and problems of legitimacy. Formal and informal pressures will be exerted on the organisation by other organisations or by cultural expectations in the society in which the organisation is a member. These can take the form of governmental mandates or statutory requirements or cultural expectations. Therefore, coercive isomorphism is a form of forced selection where a company is forced by powerful



organisations such as the government or providers of capital to adopt an innovation, such as internet financial reporting, regardless of its benefit to the organisation (Xiao et al., 2004:198).

#### **2.8.2.2 Mimetic Isomorphism**

Mimetic isomorphism occurs “*when organisations model themselves after others*” (Carpenter and Feroz, 1992:621). In this case, companies follow earlier adopters from the same sector as a result of uncertainty about organisational technology. It is a form of fashion, where companies imitate others (Xiao et al., 2004:198). DiMaggio and Powel (1983:151-152) emphasized that organisations tend to mirror other organisations in the same field that are perceived to be more legitimate or successful or when there is a greater uncertainty about what is the correct way to handle technology.

#### **2.8.2.3 Normative Isomorphism**

Normative isomorphism results from professionals (Carpenter and Feroz, 1992:621). They create standards and homogeneous organisational practices to be followed (Xiao et al., 2004:198). There are some professional pronouncements (discussed later, in section 3.3.2) which affect the adoption of internet financial reporting among companies in different countries. DiMaggio and Powel (1983:152) explained that there are two features of professionalization which are considered important sources of isomorphism; the first is related to the formal education produced by university specialists and the second is related to the growth and expansion of professional networks across which new models diffuse rapidly. Universities and professional training institutions are important centres for the adoption of innovation. Professional and trade associations are another vehicle for the spread of normative isomorphism, as they enable individuals working in same positions to exchange ideas. Another important aspect for encouraging the normative isomorphism is the selection of highly skilled personnel at the entry level. The Investor Relations Society (IRS) in the UK and National Investor Relations

Institute (NIRI) in the USA are examples of normative isomorphism; they create Best Practice guidelines and provide training courses and conferences for the development of the profession and adoption of innovations e.g. internet financial reporting and disclosure.

## **2.8.3 Economics-Based Theories**

### **2.8.3.1 Agency Theory**

Agency theory provides an explanation for management incentives to disclose voluntarily. Watson et al. (2002:290) stated that managers have incentives to increase disclosure to convince shareholders that they are acting optimally because they know that shareholders seek to control their behaviour through bonding and monitoring activities. Therefore, one way of reducing agency costs is to increase the amount of information included in accounting reports (Marston, 1996). Many disclosure studies, e.g. Ruland et al. (1990), Cooke (1989a; 1991; 1993), Bradbury (1992) and Hossain et al. (1994) have used agency theory to explain cross-sectional variation in voluntary disclosure practice.

### **2.8.3.2 Capital Need Theory**

The constant need for capital is one reason why management has a prime motive for disclosure and needs to do an effective job in explaining the company to investors. Highly leveraged companies are likely to increase their disclosure also to satisfy the needs of debenture holders and trustees (Watson et al., 2002:290). The FASB Working Group\* (FASB, 2001:16) that studied companies in the chemical industry observed that there had been a significant increase in the quality of voluntary disclosures over the previous five years. It was stated in the report (FASB, 2001:16) that

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\* The organisational structure of the Business Reporting Research Project consisted of a Steering Committee and seven Working Groups. The Steering Committee guides, and directs the Working Groups, which were responsible for the basic research or fact finding for the project.

*“the reason is competition for capital. After one company provides a particular disclosure requested by investors, competitive pressure causes other companies to follow suit. A company’s cost of capital is believed to include a premium for investors’ uncertainty about the adequacy and accuracy of the information available about the company. To cite an extreme example, if a company disclosed nothing, its cost of capital, if any was available, would be very expensive. Informative disclosures that help investors interpret companies’ economic prospects are believed to reduce the cost of capital”.*

### **2.8.3.3 Signalling Theory**

Firms will try to adopt the same level of disclosure as other firms within the same industry because if a firm does not keep up with the same level of disclosure as others, it may be perceived by stakeholders that it is hiding bad news (Craven and Marston, 1999:326). Therefore, firms may use internet disclosure to keep pace with other firms in the same industry. Craven and Marston (1999:323) stated that

*“The very use of the Internet might itself be a signal of high quality. It implies that the firm is modern and up to date with the latest technology rather than old fashioned and conservative”.*

It is also argued that managers of profitable firms increase the level of disclosure to signal to investors that the firm is profitable and to support their continuation and compensation (Oyeler et al., 2003:36).

### **2.8.3.4 Legitimacy Theory**

The threat of shareholder litigation can have two effects on managers’ disclosure decisions. First, managers may increase voluntary disclosure for fear of legal actions against them for inadequate or untimely disclosures (Healy and Palepu, 2001:442-443). Skinner (1994) stated that managers of firms with bad earnings news have an incentive to pre-disclose that information to reduce the cost of litigation.

Second, litigation can potentially decrease managers’ incentives to provide disclosure, particularly of forward-looking information (Healy and Palepu, 2001:443).

Therefore, early adoption of internet financial reporting could be due to organisational characteristics suggested by economics based theories (Xiao et al., 2004:198), while later stages of adoption may be due to innovation diffusion theory.

## **2.9 The Effect of company's Characteristics on the Adoption of Internet Financial Reporting and Disclosure**

To achieve the first two objectives of this research, namely to identify factors that influence Egyptian listed companies' to voluntarily adopt internet based corporate financial reporting and to identify the extent of internet corporate financial reporting, it is important to measure the explanatory variables and to determine whether there are any relationships between these variables and the extent of internet corporate disclosure. According to the theories which were discussed in the previous section, the firm's specific characteristics may affect the level of internet corporate disclosure. The next section will discuss how these variables are measured and hypotheses generated.

### **2.9.1 Firm Size**

Size seems to have a significant influence on internet corporate disclosure. Many researchers have found a positive relationship between firm's size and the extent of internet corporate disclosure (Pirchegger and Wagenhofer, 1999; Ashbaugh et al., 1999; Hedlin, 1999; Craven and Marston, 1999; Ettredge et al., 2001; Ettredge et al., 2002; Debreceeny et al., 2002; Marston, 2003; Oyeler et al., 2003; Xiao et al., 2004; Lodhia et al., 2004; Marston and Polei, 2004). However, Allam and Lymer (2003:28-29) found no relationship between the size of the companies and their internet financial reporting in US, UK, Canada and Hong Kong as they only included large companies in their study. If companies covered in the study varied in size, the results may have been different. Xiao et al. (1996:218) stated that

*“large companies are more likely than small ones to use IT [Information Technology] to improve financial reporting to meet the greater demand for information”.*

According to innovation diffusion theory; it is easier for large firms to adopt an innovation (internet financial reporting and disclosure) as they have information technology department and have adequate personnel as well as the necessary resources to adopt it.

The following reasons explain why companies' size affects internet corporate disclosure:

1. The need for external funds and capital by larger companies can create a conflict in interest among shareholders, managers and creditors. Craven and Marston (1999:325) explained that this conflict of interest was the main reason for agency cost rising. Therefore, to reduce agency costs and information asymmetry, companies increase their disclosure. They added that larger organisations are more complex than smaller ones; therefore, more disclosure will be required.
2. Smaller companies may disclose less information because they believe that this will place them at a competitive disadvantage with larger companies in their industry (Hossain et al., 1994:73).
3. Large companies enjoy economy of scale in the production of information and the use of information technology; on the other hand it is more costly for small companies to process and communicate information (Xiao et al., 1996:218) via the internet because there will be increased costs of setting up, maintaining, and updating the website, providing sufficient security and having adequate trained personnel. Ashbaugh et al. (1999) note that economies of scale suggest large firms are more likely to post financial reports on Websites. Since larger firms usually have various products and more complex distribution networks which require larger and more complex management information systems and databases for management control

purposes, disclosure costs per £1 of sales may be generally lower for larger firms (Oyeler et al., 2003:29).

4. McKinnon and Dalimunthe (1993:40) pointed out that “*larger firms tend to attract more analysts’ followings than smaller ones, and may therefore be subjected to greater demand by analysts for private information*”. Thus, this will result in the reduction of analysts’ costs to collect their own information.
5. The pressure on larger companies is greater than on smaller companies because they are being securitized by the public and governmental agencies. Therefore, larger companies will disclose more to allay public criticism or government intervention in their affairs (Al-Mulhem, 1997:44).

Previous studies have used various variables to measure the firm’s size. The following table shows these studies and the different variables used.

**Table 2.1 Variables Used by Previous Studies to Measure Firms’ Size**

<b>Variables</b>	<b>Previous Studies of Internet Corporate Disclosure</b>	<b>Previous Studies of Hard-Copy Corporate Disclosure</b>
Total Assets	Craven and Marston, 1999; Oyeler et al., 2003	Ahmed and Nicholls, 1994; Hossain et al., 1995; Haniffa and Cooke, 2002; Abd El Salam, 1999; Ferguson et al., 2002; Wallace et al., 1994; Cooke, 1989a; Cooke, 1992
Sales, Turnover	Pirchegger and Wagenhofer, 1999; Craven and Marston, 1999	Cooke, 1989a; Cooke, 1992; Wallace et al., 1994; Abd El Salam, 1999
Average Market Value of Firm (Market Capitalization)	Craven and Marston, 1999; Ettredge et al., 2002; Debreceny et al., 2002; Marston and Polei, 2004; Oyeler et al., 2003; Xiao et al., 2004	Owusu-Ansah, 1998
Number of Shareholders		Cooke, 1989a; Cooke, 1992
Number of Employees	Craven and Marston, 1999	

From the table, it is clear that researchers use more than one variable to measure size. For example, Cooke (1992) used eight size variables which are capital stock, turnover, number of shareholders, total assets, current assets, fixed assets, shareholders' funds and bank borrowings. The one unusual measure of size is bank borrowings. It was included because this study examined Japanese corporations which tend to raise capital through bank borrowings rather than on equity raised in the public markets. Therefore, it is possible that in the case of Japanese corporations, bank borrowings may be a useful measure of size (Cooke, 1992:231-232).

Therefore, size can be measured in different ways and there is no theoretical reason behind the selection of a certain measure (Abd El Salam, 1999:42). In this research, size is measured by the two variables, total assets and total sales, because market capitalization, number of shareholders and number of employees are not always available in the traditional financial statements (Income statement and Balance sheet) in Egypt.

Hence, the following hypothesis can be formulated:

H1: There is a positive relationship between the amount of disclosure of corporate information via the internet and the size of Egyptian companies.

This hypothesis can be divided into two sub-hypotheses:

H1a: There is a positive relationship between the amount of disclosure of corporate information via the internet and the total assets of Egyptian companies.

H1b: There is a positive relationship between the amount of disclosure of corporate information via the internet and the total sales of Egyptian companies.

## **2.9.2 Profitability**

Signalling theory suggests that profitable companies have an incentive to disclose more to signal the firm's profitability to investors to support management continuation of their positions and compensation (Oyeler et al., 2003:36), and to raise capital at the lowest price (Marston and Polei, 2004:294). Agency theory as well suggests that managers of higher profits companies are interested in disclosing more information to boost their compensation (Abd El Salam, 1999:46). A number of studies have examined the association between profitability and the extent of disclosure; the findings are conflicting (Street and Gray, 2002:54). Lev and Penman (1990:50) argued that firms with good news voluntarily disclose in order to distinguish themselves from firms with worse news, because investors interpret silence as withholding the worst possible information. When profitability is low, managers may disclose less information to conceal the reasons for losses or declining profit (Stolowy, 2004:4) and to avoid the negative effect on the firm's market value. However, Abd El Salam (1999:46) argued that bad news may induce the company to disclose it on time in order to avoid legal liability and to maintain the reputation of the company. Pirchegger and Wagenhofer (1999) found that profitability affects internet corporate disclosure of Austrian companies, but it does not affect that of German companies. Marston and Polei (2004:303) and Oyeler et al. (2003) found that profitability is not associated with internet financial reporting. Ismail (2002:18) found that profitability may increase the likelihood of the firm publishing financial information via the internet when this variable is within a particular range. If it increases beyond this range, the likelihood of a firm publishing financial information on the internet decreases. It is the same for hard copy studies of voluntary disclosure; the results are mixed. For example, there are some studies which have found a positive relationship between profitability and disclosure (Owusu-Ansah, 1998; Raffournier, 1995; Haniffa and Cooke, 2002). Other studies have



found no relationship (McNally et al., 1982; Meek et al., 1995; Dumontier and Raffournier, 1998), or a negative relationship (Wallace et al., 1994). Therefore, more studies are needed to test the theoretical proposition.

Following previous studies, two ratios were used to measure profitability; return on assets which is net profit divided by total assets (Xiao et al., 2004:209, Oyeler et al., 2003; Ismail, 2002; Bushee and Leuz, 2005), return on equity which is net profit divided by equity (Abd El Salam, 1999; Marston and Polei, 2004:297, Haniffa and Cooke, 2002; Oyeler et al., 2003; Ismail, 2002).

Hence, the following hypothesis should be tested:

H2: There is a positive relationship between the amount of disclosure of corporate information via the internet and the profitability of Egyptian companies.

This hypothesis can be divided into two sub-hypotheses;

H2a: There is a positive relationship between the amount of disclosure of corporate information via the internet and the return on assets of Egyptian companies.

H2b: There is a positive relationship between the amount of disclosure of corporate information via the internet and the return on equity of Egyptian companies.

### **2.9.3 Leverage**

Empirical evidence regarding the association between leverage and voluntary disclosure is inconclusive. Ettredge et al. (2002) and Ismail (2002) have found a relationship between a firm's leverage and the extent of internet corporate disclosure. On the other hand, Brennan and Hourigan (1998), Debreceeny et al. (2002), Oyeler et al. (2003), Xiao et al. (2004), Debreceeny and Rahman (2004) did not find an association between leverage and internet corporate disclosure. The same applies to hard copy voluntary

disclosure. Meek et al. (1995) and Zarzeski (1996) found that disclosure decrease with leverage; this may be because creditors are able to obtain private information. In contrast, Wallace et al. (1994) found no effect of leverage on disclosure. Ahmed and Courtis (1999:40, 51) using meta analysis, which involves combining the results of a set of disclosure studies over a period of time, concluded that disclosure increases with leverage.

Agency theory has been used to explain the relationship between leverage and corporate disclosure. Increased disclosure can reduce debt holders' inclinations to price protect against the transfers from themselves to shareholders (Xiao et al., 2004:209). Debreceeny et al. (2002:388) pointed out that debt-equity ratio creates agency costs. Management could voluntarily disclose on the internet to allow creditors to monitor constantly the affairs of the company and help them assess the ability of the company to pay its obligations on time. Ismail (2002:7) added that although there are extra costs associated with dissemination of corporate information on the internet, this dissemination would provide more reliable information to creditors and would in return reduce agency costs.

On the contrary, Oyeler et al. (2003) found that leverage does not explain the decision to use the internet as a medium for corporate financial reporting. They explained that this may be due to the differences between internet financial reporting and traditional print-based financial reporting environment and culture, manifested in the differences of costs, benefits, demand and supply structure of the two environments (Oyeler et al., 2003:57). Zarzeski (1996:24) suggested that companies with higher debt ratios are likely to share more private information with their creditors because these companies on the average exist in countries with high uncertainty avoidance and likely have developed banking relationships. On the contrary, companies with lower debt have a

higher percentage of stock ownership, which would encourage investor demand for information. According to Hofstede (1991:55,123), Egypt is similar to the other Arab countries, where uncertainty avoidance is the predominant characteristics. In the past few years, an unprecedented number of business people, who owed large sums of money to the Egyptian banks, escaped from the country (El-Din, 2000). This has resulted in making the Egyptian banks more conservative, not giving loans unless it is fully secured.

Following previous research, leverage was measured using the ratio of total debt to total assets (Haniffa and Cooke, 2002; Debreceeny et al., 2002; Xiao et al., 2004:209), and net long term debt to owners' equity (Abd El Salam, 1999; Hossain et al., 1994; Debreceeny et al., 2002:381).

Hence, the following hypothesis should be tested:

H3: There is a positive relationship between the amount of disclosure of corporate information via the internet and the leverage of Egyptian companies.

This hypothesis can be divided into two sub-hypotheses:

H3a: There is a positive relationship between the amount of disclosure of corporate information via the internet and the ratio of total debt/total assets.

H3b: There is a positive relationship between the amount of disclosure of corporate information via the internet and the ratio of long term debt/owners' equity.

#### **2.9.4 Liquidity**

Paragraph 49 of Statement of Financial Accounting Concepts No. 1, "Objectives of Financial Reporting by Business Enterprises" (FASB, 1978:20) states that

*“Financial reporting should provide information about how an enterprise obtains and spends cash, about its borrowing and repayment of borrowing, about its capital transactions, including cash dividends and other distributions of enterprise resources to owners, and about other factors that may affect an enterprise's liquidity or solvency”.*

Abd El Salam (1999:48) argued that companies, according to signalling theory, will disclose more if their liquidity ratio is high, to distinguish themselves from other companies. On the other hand, according to agency theory, companies with low liquidity ratio may give more details to satisfy the needs of shareholders and creditors.

Several studies have examined the relationship between liquidity and the extent of disclosure, but they have conflicting findings. For instance, Wallace et al. (1994:50) found that companies with lower liquidity provide more information in their annual reports and accounts. They explained that high liquidity companies may believe that investors are satisfied and do not require any extra information, or companies do not want to offer extra information which will increase expectations of being provided in future years. Oyeler et al. (2003) found that liquidity is considered one of the primary determinants of internet financial reporting among New Zealand companies. There was a positive relationship between company liquidity and voluntary use of internet financial reporting. Other researchers (Owusu-Ansah, 1998; Abd El Salam, 1999; Wallace and Naser, 1995; Ahmed and Courtis, 1999) have found no association between liquidity and disclosure.

According to Wallace and Naser (1995:320), interested parties such as investors, regulatory bodies and others are concerned with the company's going concern and its ability to meet short term obligations without selling assets or ceasing operation. The inability of the company to meet its short term obligations may mean that the company

has to defer payment of interests and loans and it may lead to the company's liquidation. Therefore, companies that are able to meet their obligations tend to disclose more to alleviate the fears of interested parties.

In previous studies (Wallace et al., 1994; Owusu-Ansah, 1998; Abd El Salam, 1999), liquidity is measured as a ratio of current assets over current liabilities.

Thus the following hypothesis is tested:

H4: There is a positive relationship between the amount of disclosure of corporate information via the internet and the current ratio of Egyptian companies.

### **2.9.5 Industrial Sector**

Many studies have used industrial sector as a variable which might affect the level of disclosure. For example Lymer (1997a), Oyeler et al. (2003) Debreceeny et al. (2002), Brennan and Hourigan (1998), and Ismail (2002) found a significant association between the industry type and the extent of financial disclosure on the internet. On the contrary, Craven and Marston (1999:331) found no relationship between industrial classification and internet financial reporting. This may be due to a weakness in the classification of industry type, as a finer classification with larger sample size may give another result.

Debreceeny et al. (2002:379) explained that the earnings of high technology companies (for example, drugs, computers, electronics, communications) with soft assets, such as research and intellectual capital, human resources, R&D programmes, may not convey their future projection and growth potential. These firms are subject to rapid changes in the technology and business environment. Therefore, they need to disclose more and frequent information via the internet. They found that Pharmaceutical companies which

employ the highest level of technology among the various industrial groups use the highest level of internet financial reporting (Debreceeny et al., 2002:389). Oyeler et al. (2003:57) found that companies operating in the primary industry group sector such as oil and gas are more engaged in internet corporate disclosure than companies in other sectors.

Mimetic isomorphism and signalling theory explains that companies within the same industry tend to adopt the same level of disclosure. If a company within an industry fails to follow the same disclosure practices, including internet disclosures, as others in the same industry, then it may be interpreted as a bad market signal indicating that the company is hiding bad news (Craven and Marston, 1999:326). Oyeler et al. (2003:36) argued that the differences in disclosure levels among industries may be attributed to the high level of voluntary disclosure by one company within an industry because it dominates the market and therefore, the other companies consider it the leader and follow its disclosure policies. Companies in this study are classified into the following sectors: Construction, Chemicals, Communications, Financial Services, Food & Beverage, Entertainment, Textile & Clothing, Engineering & Mining, and Utilities

Some hard copy studies have found an association between industrial sector and disclosure. Examples include Ahmed and Courtis (1999), and Cooke (1992). Cooke found that manufacturing corporations disclose more information than non-manufacturing.

Therefore, the following hypothesis can be formed:

H5: There is an association between the industry membership of a company and financial disclosure on the internet.

### 2.9.6 Size of Audit Firm

According to Agency theory, auditing helps to alleviate the conflicts of interest between managers and investors (Xiao et al., 2004:200). Owusu-Ansah (1998:611-612) explained that there are three reasons for large audit firms to have a competitive advantage over small audit firms. The first reason is that large audit firms have many clients, their economic dependence on a certain client is less, and therefore, they are more likely to report any misstatements or errors. The second reason is related to their reputation; as large audit firms have many customers, therefore, damage to their reputation will incur great losses because their existing clients will switch to other audit firms or demand them to lower the fees. The third reason is that large audit firms' potential exposure to legal liability is greater because investors are more likely to depend on annual reports audited by large firms and to take legal action for negligence or misconduct on the part of audit firm.

Signalling theory suggests that engaging a big audit firm can be used as a signal of firm value (Hossain et al., 1995:74). Xiao et al. (2004:201) argued that innovation diffusion theory also supports the fact that international audit firms are more likely to facilitate the diffusion of innovative practices such as disclosure of corporate information via the internet. Large audit firms' reputation will provide some security for the financial information presented via the internet as they can serve as role models and provide implementation assistance. They (Xiao et al., 2004:201) explained that

*“PriceWaterhouseCoopers has developed EDGARSCAN which can be used to retrieve filings stored in EDGAR and allow automatic comparison of financial statements prepared by different companies.... The big 5 audit firms also are partners of XBRL (extensible business reporting language) initiated by AICPA and are likely to be better equipped than smaller auditors..... to advise their clients on IFD (Internet financial reporting)”.*

Institutional change theory can also explain that large audit firms can facilitate the adoption of an innovation (internet financial reporting and disclosure) as normative isomorphism can be applied. They can create standards and practices to be followed.

Several studies have investigated the relationship between the auditor's firm size and extent of disclosure whether it is hard copy or electronic and found that there is a positive relationship. Examples include Ahmed and Nicholls (1994), Raffournier (1995), and Xiao et al. (2004). On the contrary, Hossain et al. (1995), Abd El Salam (1999), and Wallace et al. (1994) found no significant association between type of auditor and extent of voluntary disclosure.

In order to measure this variable, most studies (Ahmed and Nicholls, 1994; Hossain et al., 1994; Raffournier, 1995; Hossain et al., 1995; Abd El Salam, 1999; Haniffa and Cooke, 2002) classified companies into two categories: companies that are audited by the four big audit firms, given the value of 1, and other companies that are audited by other firms, given the value of zero. The same approach is used in this study.

Therefore, the hypothesis is formulated as follows:

H6: The extent of internet corporate disclosure is greater among Egyptian companies audited by the big four international audit firms.

### **2.9.7 Foreign Listing**

International transactions in bonds and securities have grown quickly over the last 25 years (Debreceeny et al., 2002:378). Firms seek foreign listing to obtain capital at the lowest cost and to have other benefits such as wider marketing of products, boosting corporate image, and gaining political acceptance by projecting the firm as being "local" in the foreign market. The spreading of ownership across country boundaries



gives rise to geographic and temporal information asymmetry (Debreceeny et al., 2002:378).

Companies with a foreign listing face additional disclosure requirements and will provide more information than purely domestically listed companies to comply with the regulation of foreign stock markets if their requirements are greater than those of the domestic exchanges (Cooke, 1992:232). In addition, foreign listed companies have to disclose more information to reduce information asymmetries between domestic and foreign investors. Therefore, internet corporate reporting can be used to reduce information asymmetry by its immediate and wide reach (Debreceeny et al., 2002:378). Xiao et al. (2004:201) explained that agency theory and the forced-selection perspectives on innovation diffusion imply that firms with foreign listings would disclose more voluntary information.

Xiao et al. (2004) found a positive association between companies with foreign listing and internet financial reporting. Debreceeny et al. (2002:378) found that US listing is positively associated with internet financial reporting while foreign listing is negatively associated. The high standards of disclosure and regulations in US, for example, SEC's rule FD (fair disclosure) may have induced firms listed in the US to adopt internet financial reporting compared to other firms that are not listed in the US but which have foreign listings (Debreceeny et al., 2002:379). Oyeler et al. (2003) found no association between internet financial reporting and foreign listing. As for hard copy disclosure studies, they showed a positive association between multiple listing and the extent of voluntary disclosure of information; examples include Haniffa and Cooke (2002), Hossain et al. (1995; 1994), Meek and Gray (1989).

Oyeler et al. (2003:43) measured foreign listing status by a binary variable that took the value of 1 for a foreign listing and 0 for only domestic listing. The researcher used the same measure in this study. The hypothesis which can be tested here is:

H7: The extent of internet corporate disclosure is greater among Egyptian companies listed in foreign stock exchanges.

## **2.10 The Effects of Culture, Organisational Change and Demographic Characteristics on the Diffusion of Innovation**

Any innovation to be adopted and applied is affected by the culture, organisational change and demographic characteristics. The following section will examine how these factors affect the adoption of voluntary internet reporting and disclosure in Egyptian companies.

### **2.10.1 The Effect of Culture on the Diffusion of Innovation (on the Adoption of Internet Financial Reporting and Disclosure)**

As Hatem (2006:203) identified, among the factors which have shaped the Egyptian culture are a long history of French and British colonialism, several wars, and a strategic location. The economic system also has an effect on culture. During the 1950s and 1960s, Egypt adopted the socialist approach; enterprises were state-owned and decisions were centrally taken. This has affected the Egyptian mentality, personality and culture (Hatem, 2006:203). In the mid-70s, Egypt adopted an open-door policy which follows the Western culture through education, joint development programmes and joint venture agreements. In the early 1990s, an economic reform programme was started to reform the economy and promote privatization. Legislation was introduced to encourage private domestic and foreign investment.

Some studies, e.g. Hoffman and Hegarty (1993), and Veiga et al. (2001) have explored the effect of social culture on management's influence and acceptance of innovation.

Social or national culture represents the “*patterns of values, traits, or behaviour shared by people in a region*” (Hoffman and Hegarty, 1993:551). From a historical perspective, culture refers to “*the values, which are inherited in the population of a particular nation*” (Shahin and Wright, 2004:501). Organisational culture can be considered the set of values or beliefs that are shared by the members of an institution (Shahin and Wright, 2004:501). Hofstede’s approach to organisational culture depended on the idea that organisations are subcultures of larger cultural systems (Hatch and Cunliffe, 2006:181). According to this approach, the Egyptian culture can be expected to have affected Egyptian organisations’ acceptance and adoption of innovation. Hofstede (1991:5) defines culture as the “*collective programming of the mind that distinguishes the members of one category of people from those of another*”. He suggests that people share a collective national culture which represents their cultural programming that shapes their behaviour, assumptions, beliefs and expectations. Hofstede (1980; 1991) identified four main dimensions that can be used to analyse a national culture. They are: individualism versus collectivism, high versus low power distance, masculinity versus femininity, and high versus low uncertainty avoidance. Later he added long-term versus short term orientation (Hofstede and Bond, 1988).

### **1. High versus Low Power Distance**

Power distance refers to the level of inequality of the distribution of power, wealth and prestige that members of a culture are willing to accept (Hatch and Cunliffe, 2006:181). Organisations from high power distance cultures depend heavily on hierarchy; subordinates expect to be told what to do; superiors are expected to be autocratic. In organisations from low power distance cultures, subordinates expect to be consulted by their superiors and superiors are expected to be democratic (Hatch and Cunliffe, 2006:181-183).

Egypt is considered by Hofstede (1991) as a high power distance country. It is characterized by the acceptance of a superior's opinion simply because it comes from one's superior. Employees are frequently afraid to disagree with their superiors, who are often seen as autocratic or paternalistic (Parnell and Hatem, 1999:404). Hatem (2006:205) added that research findings show that because Egyptians operate in hierarchical culture which is characterised by centralized power and authority and managers tend to make unilateral decisions, any change in information technology should come from top management, otherwise resistance among employees might occur. In the case of new information technology, the need for top management support may be problematic because top management tend to be older and previous studies showed that age is negatively related to managerial support for information technology (Veiga et al., 2001:154).

## **2. High versus Low Uncertainty Avoidance**

Hatch and Cunliffe (2006:184) explained that the uncertainty avoidance dimension measures the degree to which members of a society can cope with ambiguity and risk. In low uncertainty avoidness cultures, people are more accepting of innovations, whereas in cultures with high uncertainty avoidance, these things are resisted. Hofstede (1991) reports that Egypt represents a culture with high uncertainty avoidance. Hatem (2006:206) confirmed that the Egyptian culture attempts to reduce uncertainty and ambiguity. Egyptians tend to view conflict and change as threatening and think that rules, regulations and procedures are needed. Older members in Egyptian organisations may well feel stress in the face of uncertainty or a new innovation. Therefore, they resist change and are less willing to adopt a new innovation and take risks.

### **3. Individualism versus Collectivism**

As Hatch and Cunliffe (2006:184) explained, this dimension represents the degree to which people in a society are expected to act as individuals independently of other members of the society. Relationships between individuals of individualistic cultures are loose. Individuals are expected to take care of themselves. As Hofstede claimed, tasks take the first priority over relationships in organisations from individualistic cultures, e.g. USA, whereas relationships prevail over tasks in organisations from collectivist cultures. Hofstede classified Arab societies such as Egypt to be more collectivist. According to Parnell and Hatem (1999:403-404), loyalty to one's group takes priority over the task requirements of the job. The duty of a friend to give help and perform favours to the best of his or her ability to his friends and relatives is very important. Selection and promotion practices in Egyptian organisations give more weight to friendship and relationship, and not to experience and knowledge. Not surprisingly, nepotism is common in many Egyptian organisations (Parnell and Hatem, 1999:404). Parnell and Hatem (1999:404) explained that in Egypt, one's primary duties are to parents, family then to friends, superseding those to work. Identity depends on the attributes of families and other groups more than on those of individuals.

### **4. Masculinity versus Femininity Dimension**

This dimension emphasizes the social roles of gender in a given culture; Hofstede (1991:82) described that in masculine cultures men are expected to be assertive, tough, and focused on material success, while women are expected to be more modest, tender, and concerned with quality of life. He added (Hofstede, 1991:82-83) that a culture has a higher femininity score when men tend to act less like the stereotypical man and exhibit higher degrees of feminine tendencies. In feminine societies, gender roles overlap; both men and women are modest, tender, and concerned with quality of life. The masculinity

index showed that the Arab countries including Egypt are among the masculine countries (Hofstede, 1991:84-85). This dimension, however, will not be considered as there was no support for this dimension in Egypt and it is “*the most difficult to conceptualize and validate*” (Veiga et al., 2001:146, Veiga et al., 1995:21).

## **5. Long-term versus Short term Orientation**

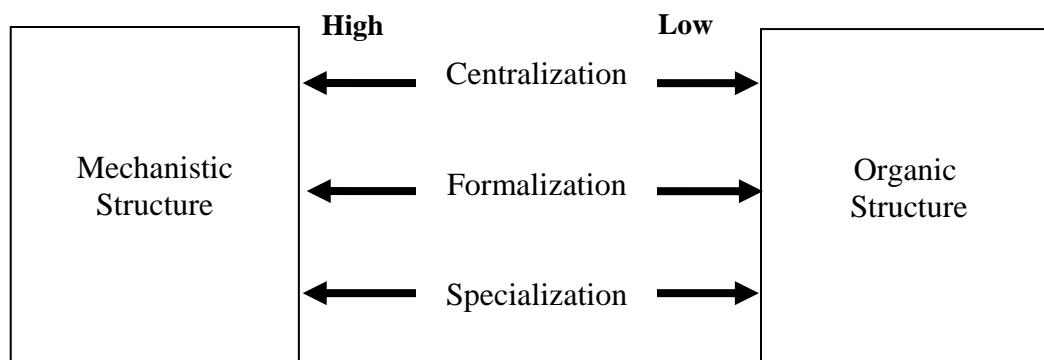
This feature is labelled as Confucian dynamism by Hofstede and Bond (1988). Hofstede (1991:165-166) explained that countries maintaining a long-term orientation recommend values of persistence and thrift, while in short-term oriented countries, values of personal steadiness and stability, protecting one’s face, and respect for tradition are advocated. He added that protecting one’s face would detract from pursuing the business at hand and too much respect for tradition hinders innovation (Hofstede, 1991:169). Egypt was not among the twenty-three countries that have been investigated to determine their long-term orientation score (Hofstede, 1991:166).

### **2.10.2 The Effect of Organisational Structure on the Diffusion of Innovation**

Hatch and Cunliffe (2006:101) defined social structure as “*relationships among people who assume the roles of the organisation and to the organisational groups or units to which they belong (departments, division)*”. Sul (2002:30) categorized organisational structure by continuums into formal versus informal, and mechanistic (bureaucratic) versus organic (adaptive). Burns and Stalker (1961), cited by Damanpour (1991:579), distinguished between mechanistic and organic structure organisations by using organisations’ patterns of adaptation to technological and commercial change. Hatch and Cunliffe (2006:111) added that organisations, in order to survive, need to innovate, and this requires knowledgeable employees to respond quickly to a changing environment. Hatch and Cunliffe (2006:111) explained that mechanistic organisations tend to limit innovation because they are characterized by high levels of hierarchical

control, highly specialized and defined roles and tasks, many rules, vertical communication (superior-subordinate) in the form of instructions, and centralized decision making, which impede flexibility and creativity. In contrast, organic organisations are characterized as informal, tasks and responsibilities are redefined depending on the situation, decentralized decisions are made by those with knowledge, there is a high degree of coordination and consultation across departments, they are not bound by strict rules and regulations, give greater discretion to employees performing tasks, decisions are pushed to lower levels of hierarchy, employees are hired for expertise and can use their skills to solve problems as they arise, people are practical and adaptable to changing circumstance, so the organisation tends to be innovative (Hatch and Cunliffe, 2006:111). The continuum of mechanistic – organic structure is illustrated in Figure 2.3. Therefore, adoption of innovation is easier when organisations have organic rather than mechanistic characteristics

**Figure 2.3 Mechanistic versus Organic Structure**



Source: Sul (2002:31)

Kennedy (1983:33) viewed the mechanistic organisational structure as not giving enough chance for individual growth and advancement, diminishing creativity and ignoring the role of informal communications within the firm.

Mullins (2005:643-644) argued that organisation structures can be mechanistic, organic or hybrid. A hybrid organisation structure is a mixture of both mechanistic and organic structures. Some activities within the organisation may be performed under mechanistic structure while others may be performed under an organic structure. A typical example of a hybrid organisation could be a university. The non-teaching staff work under a mechanistic structure within prescribed administrative systems or procedures, while the academics work better under an organic structure. In today's high technology environment, organic organisational structure will become increasingly important.

Egyptians operate in hierarchical social and organisational structures, supporting centralized power and authority. Unilateral decisions are made by managers and work does not bypass the chain of command (Hatem, 2006:205).

### **2.10.3 The Effect of Demographic Characteristics on Diffusion of Innovation**

Pfeffer (1983:303), as quoted by Goll and Rasheed (2005:999), defined demography as

*“the composition, in terms of basic attributes such as age, sex, educational level, length of service or residence, race, and so forth of the social entity under study”.*

There have been many studies which examined the role of demographic and behavioural characteristics of top managers and top management teams on the adoption of innovations. Examples include Damanpour and Schneider (2006), Howell and Higgins (1990), Bantel and Jackson (1989), Papadakis and Bourantas (1998), Sharma and Rai (2003) and Camelo-Ordaz et al. (2005). Three demographic characteristics, which are age, tenure, educational level, will be discussed, as they have a great impact on the adoption of innovation and they have been widely used in prior research (Goll and Rasheed, 2005; Finkelstein and Hambrick, 1990).



## **1. Age**

Damanpour and Schneider (2006:220-221) explained that younger managers tend to initiate and adopt more innovations than older managers because they are more receptive to new ideas and behaviour. They are more willing to take risks. They have been trained more in recent times and their technical information is more up to date. They have better cognitive abilities such as learning, reasoning and memory, which diminish with age. On the other hand, older managers are committed to prevailing organisational conditions and routines and they are less willing to change them.

## **2. Tenure**

Organisational decision making theory states that older managers, who have longer tenure, are less inclined to take risks and are less innovative than those who are younger and have shorter tenure (Sharma and Rai, 2003:393). Bantel and Jackson (1989:110) stated that although age and tenure are correlated, each should be considered alone because explanations differ for why age and tenure might be related to innovation. Age affects the cognitive ability but tenure is related to the psychological commitment to the organisation and organisational values. Sharma and Rai (2003) found that job tenure of Information System department leaders is negatively related to organisational adoption of information system innovation. Damanpour and Schneider (2006:221) and Finkelstein and Hambrick (1990:486) explained that new top managers in a position are more open to innovation because they bring a fresh perception to their job, and as they spend time in the organisation and especially if they are successful, they become convinced of their wisdom in management and they are more committed to their own prior actions. They accept the organisation as it is, so they will champion few innovations and support fewer changes. Therefore, tenure in position and management would inhibit the adoption of innovation.

### **3. Educational Level**

Camelo-Ordaz et al. (2005:687) and Papadakis and Bourantas (1998:94) explained that educational level reflects an individual's degree of knowledge and skills and his/her ability to generate creative solutions to solve complex problems. A higher educational level will result in a greater awareness of the importance of change and innovation, more understanding of information, and greater ability to analyse complex problems. Therefore, there is a positive relationship between manager's level of education and adoption of innovation.

### **2.11 Summary**

This chapter focused on internet reporting. A definition of internet reporting was provided and the importance, advantages and disadvantages of adopting voluntary financial internet disclosure were discussed. The advantages of low cost, timeliness, accessibility and enhanced presentation were set against possible unreliability and security issues. The current regulations for corporate internet disclosure (US, Canadian, UK and Egyptian systems of filing) were presented. Previous studies of voluntary internet disclosure were evaluated and key studies carried out accounting organisations and standard setters such as the FASB and IASB were discussed. The different theories which motivate internet disclosure were examined. These theories were divided into institution change theories which include coercive, mimetic and normative isomorphism, and economic based theories which incorporates agency, capital need, signalling and legitimacy theories and innovation diffusion theory. Using these theories, the effect of companies' characteristics such as firm's size, profitability, leverage, liquidity, industrial sector, size of audit firm and foreign listing were discussed and hypotheses were generated. The effects of organisational culture, demographic characteristics and organisational structure on the adoption of voluntary internet reporting and disclosure were elaborated. Using these three concepts, it was suggested

that the Egyptian companies' adoption of internet financial reporting and disclosure may be impeded by high power distance, low uncertainty avoidance, collectivism, short-term orientation, and mechanistic organisation structures, particularly where managers are older or less educated and this would slow down the adoption of internet financial reporting and disclosure.

## **Chapter Three**

### **The Role of Investor Relations and Auditors in the Provision of Internet Financial Reporting**

#### **3.1 Introduction**

The theory of Normative Isomorphism suggests that companies adopt a new innovation because they are strongly advised to do so by professionals (Carpenter and Feroz, 1992:621). According to the National Investor Relations Institute (NIRI) in the USA and the Investor Relations Society (IRS) in the UK, the responsibility of Investor Relations is to communicate the financial information of the company to its stakeholders and this could be done through publishing the financial information on the company's website. NIRI and IRS issued standards and guidelines for corporate disclosure. In addition, the auditors are responsible for issuing an audit report stating whether the financial statements show a true and fair view and whether they comply with accounting standards (Davis and Pain, 2002:245). Therefore, the fourth objective of this research is to explore the role of Investor Relations and auditors regarding internet financial reporting and disclosure in Egypt and whether their functions or procedures are affected. Therefore, the definition of Investor Relations, its importance, along with the different standards of practice, are discussed in section 3.2. The role of auditors in the provision of internet reporting, the differences between the printed and electronic audit report and the professional announcements are highlighted in section 3.3.

#### **3.2 The Role of Investor Relations in the Provision of Internet Financial Reporting**

The growth of Investor Relations is a result of the continuing increase in the complexity of the world capital markets (Marston, 1996:479). Investor Relations is considered a relatively novel phenomenon, which developed rapidly in the USA, followed by the UK

(Marston and Straker, 2001:82). Because of privatization, globalization and the development of the capital market in Egypt, the Egyptian Stock Exchange issued the Securities Listing & De-listing Rules. Article 15 of these rules states that listed companies should have an Investor Relations Officer (IRO) who will be in charge of contacting the Stock Exchange and answering shareholders' and investors' inquiries.

Halbrecht (1975:18) explained that in his opinion, because management do not fully understand the function of Investor Relations, either one of these situations could appear: (1) Companies that should have at least one full time professional Investor Relations officer do not. (2) In companies that do have such a position, the function is not as effective as it should be. Therefore, in the next section, the definition and role of Investor Relations and relevant standards in the USA and UK will be presented to be taken as a benchmark for the Egyptian companies to develop and evaluate their Investor Relations.

One of the most important tools for Investor Relations officers to perform their job efficiently is disclosure of the financial information of the company on its website. Regulation Fair Disclosure (Reg. FD) emphasized this by giving companies flexibility to choose an appropriate "reasonably designed" method of disclosure resulting in a broad and nonexclusionary distribution of information to the public. Therefore, according to Reg. FD, companies can use their Website to disclose financial information because they "are reasonably designed" and provide "broad, nonexclusionary distribution of information" (NIRI, 2004:24). A number of studies, such as Brennan and Hourigan (1998), Deller et al. (1999), Hedlin (1999), Brennan and Kelly (2000), Geerings et al. (2003), Rowbottom et al. (2005) and Bollen et al. (2006), assessed the Investor Relations of companies by evaluating companies' financial

reporting and disclosures on companies' websites. A summary of these studies is included in Appendix 1.

### **3.2.1 Importance and Definition of Investor Relations**

One obvious reason for the increasing attention to Investor Relations is the increasing market demand for information and transparency, the strong desire for private meetings and private information, especially after the Enron period (Imam, 2005:357). Investor Relations is an ongoing function, important in good and bad times. The presence of information technology and the internet, as well as the institution of the SEC's Regulation Fair Disclosure (Reg. FD), have made Investor Relations an "immediate function" (Harbert, 2002:58) which means that the job of Investor Relations is not only communicating information but communicating continuous information as soon as possible to a wide range of stakeholders. In the UK, Investor Relations gained more importance in 1988 when the London Stock Exchange's Conference for Industry focused on how to keep the market informed. Then in 1991 the Cadbury Committee was formed to address the financial aspects of corporate governance (Marston, 1996:478-480). Marston (1996:480) argues that, while the report of the Cadbury Committee encouraged Investor Relations without making detailed prescriptions, the awareness of good corporate governance made companies consider their Investor Relations. Marston and Straker (2001:82) noted that, although some academic research into Investor Relations has been carried out, there have not been many studies to date. It is given slight attention in the academic literature. The role of Investor Relations is misunderstood in many organisations and is not clear (Dolphin, 2003:99). However, professional associations were formed to develop this activity and keep it up to date through issuing recommendations and best practice standards to be followed.

The Investor Relations Society (2006b) in the UK defined Investor Relations as

*“the communication of the relevant and necessary information by which the investment community can consistently make an informed judgement about the fair value of a company’s shares and securities”.*

In the USA, Investor Relations is defined by the National Investor Relations Institute (NIRI, 2004:5) as

*“a strategic management responsibility that integrates finance, communication, marketing and securities law compliance to enable the most effective two-way communication between a company and the financial community and other constituencies, which ultimately contributes to a company’s securities achieving fair valuation”.*

Marketing does not mean selling companies’ securities to investors but identifying the target audience, providing them with accurate, complete and transparent information, and educating them about the present and potential value of securities to enable them to make educated investment decisions (NIRI, 2004:5). It is a two way communication channel as Investor Relations provides stakeholders with information about the company and provides senior management and the Board of Directors with information about the company’s mix of shareholders and their investment styles (NIRI, 2004:7). Feedback from the shareholders to senior management and the Board of Directors is essential to manage the company and to align management objectives with those of the shareholders (Marston and Straker, 2001:90) and to develop strategies welcomed by shareholders (Dolphin, 2003:31). It is the Investor Relations manager’s duty to talk to investors, not only when they buy a large number of shares, but also when they sell them (Harbert, 2002:61). The role of the Investor Relations officer depends on how s/he fits into the organisation structure (Dolphin and Fan, 2000:99) as *“the more senior the IR officer, the more important the company considers the function”* (Petersen and Martin, 1996:178).

As mentioned before, there has been little academic research that has focused on Investor Relations. However, there are some exploratory studies which examine the role of Investor Relations and its key features.

Kennedy and Wilson (1980) carried out a questionnaire survey to Investor Relations specialists and sell-side security analysts in USA with respect to the goals of an Investor Relations programme, the degree to which these goals are accomplished, the effect on stock price performance and the perceived quality of corporate information. Both groups agreed that the goal of a corporate investors programme should be to furnish timely and reliable information to the capital markets. They both gave relatively high marks to the accomplishment of this objective and considered that Investor Relations programmes have a positive effect on market prices. The analysts did not agree that maximizing stock price should be one of the goals of Investor Relations. They thought that the information provided by such programmes allowed them to understand the nature of corporations and their operating and financial risks but it did not allow them to estimate future earnings and investment value, which are essential in valuing the stocks.

Petersen and Martin (1996) carried out an explanatory study of chief executive officers in Florida non-banking public companies. They found that the Investor Relations function was seldom managed by Public Relations practitioners, not because their activities were different but because the chief executive officers “do not perceive Investors Relations to be part of Public Relations functions” (Petersen and Martin, 1996:173). Public Relations practitioners did not have adequate training and experience in business, management and law which would enable them to perform the activities of Investor Relations. Investor Relations was “most frequently treated as a financial function, both in terms of who is in charge, and what are qualifications for the job”,



(Petersen and Martin, 1996:204). Investor Relations departments were not adequately incorporated into the strategic communication activities of the companies. They existed separately, being managed mainly by the financial affairs department.

Marston (1996) carried out a survey by using a questionnaire of the top five hundred UK quoted companies. It was found that the chief executive and finance directors were more involved with the managing and execution of the Investor Relations function.

- 52% of the respondents had a designated Investor Relations officer.
- 79% used an external Investor Relations consultant,
- 19% had a written formal policy describing the objectives and responsibilities of Investor Relations function.

Multivariate analysis showed that large companies with foreign listings and finance directors with a favourable opinion of the value of analysts meetings were more likely to have Investor Relations officers. In addition, companies with higher specific risk and those which had been privatized by the government seemed to be more associated with the establishment of an Investor Relations officer.

Craven and Marston (1997) carried out a survey to investigate the practices of Investor Relations in the UK and to find out whether the Corporate Governance practices and companies characteristics' such as companies' size and gearing affect Investor Relations procedures. They found that measures of well organized and controlled Investor Relations were greatly associated with the size of the company and the presence of a non-executive chairman. The separation of the chairman and chief executive officer is a symbol of good corporate governance.

In 1996, Dolphin and Fan (2000) carried out unstructured interviews with top corporate communication executives in UK to examine their role and tasks, their status within the organisation structure and their impact on the formulation of corporate strategy. They discovered that almost all those interviewed were keen to promote their organisations' corporate identity and that they played an increasing role in the formulation of corporate strategy.

Marston and Straker (2001) examined the importance of Investor Relations functions within the top eighty continental European companies by using a postal questionnaire. They found that, because European companies rely on equity funding, Investor Relations practices were established and growing in importance and most companies were creating their own Investor Relations department.

Yoshikawa and Gedajlovic (2002) examined the effect of stable ownership\* and foreign listing on the quality of Investor Relations practice and performance of Japanese firms. They found that large foreign ownership and foreign listings were positively related to the quality of Investor Relations practices. Foreign listings were also positively associated with the performance of companies, measured by market value added. Stable ownership and group affiliation did not affect the quality of Investor Relations. Stable investors did not require active Investor Relations practices to get important information from their clients (Yoshikawa and Gedajlovic, 2002:531).

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\* Gedajlovic et al. (2005:9) explained that the majority of shares in Japanese companies are held by stable investors such as affiliated firms, banks and insurance companies. They have lending and commercial ties with the firm in which they own shares and there are cross-holdings of shares as well. These firms are not only shareholders but also creditors, buyers, suppliers and business partners as well. Therefore they are in a good position to monitor the firms' policies through their multiple and reciprocated trade, debt and equity ties and enforce their norms favouring growth and stability rather than objective profitability.

Dolphin (2003) conducted eighteen unstructured interviews followed by a questionnaire to find out the role of corporate communication executives and the extent to which large British companies adopted and implemented Investor Relations strategies. They found that Investor Relations facilitates communication between an organisation and its investors. An increasing number of companies had a separate Investor Relations department. Investor Relations can be handled by a communication executive, the financial director, the company secretary, a mix of the three or by an external consultant. The success of an Investor Relations strategy programme might be measured by a rising share price.

Marston (2004) surveyed the top 500 quoted European companies across 18 different countries and across 10 different sectors to find out the extent to which Investor Relations has become established and its effectiveness within leading European companies. She found that differences in IR practices were not related to the country of origin, and that larger companies and companies with lower market to book value had higher amount of IR activities. She also revealed that IR helps in price formation, reduces share price volatility, improves liquidity and lowers cost of capital. Imam (2005:358) criticised this research for investigating the companies' perspective and not the demand side of the market, i.e. analysts and fund managers, and argued that the discussion on the effectiveness of IR and how the information supplied affects the price of shares is too short.

Bushee and Miller (2005) carried out open-ended interviews and surveys with Investor Relations professionals in USA to investigate the process and consequences of Investor Relations activities and their effects on attracting increased following from investors and information intermediaries. It was found that the Investor Relations process focuses

on management access and company visibility as key drivers of the strategy's success while disclosure practices are not primary focus of IR, the IR strategy often must progress in stages, and the course of the IR strategy depends on prior visibility and can be limited in its success for small companies on less liquid exchanges. The survey of 184 companies showed that companies which hired IR firms to develop an Investor Relations strategy had significant increases in their disclosure, press coverage, trading activity, institutional investor ownership, analyst following, and market valuation after hiring the IR firm.

Laskin (2006) carried out a survey using both closed and open ended questions. It was found that Fortune 500 companies in USA were aware of the importance of the Investor Relations function, 65% of them had an Investor Relations department, 27% had their Investor Relations managed by finance/treasury department, and 7% had Investor Relations conducted by the Communications/Public Relations department. Respondents stressed the financial element of the IR function. Among the most important activities of Investor Relations were answering shareholders' and analysts' requests, having road shows, presentations and conferences, providing information to top management and other departments of the company, having one to one meetings, negotiations, ownership research and analysis and preparing reports. Most Investor Relations officers had business-related education in finance, accounting and management and MBA qualifications. The problems they faced in their companies were lack of management support, not being considered as a key function of the company, and being understaffed; most of their work was carried out by one or two persons.

## **3.2.2 Standards of Practice for Investor Relations**

### **3.2.2.1 NIRI Standards of Practice for Investor Relations (2004)**

The National Investor Relations Institute (NIRI) was founded in 1969 in the USA. It is a professional association of corporate officers and Investor Relations consultants. It was the first recognised IR body (Hockerts and Moir, 2004:52). It is devoted to develop the practice of Investor Relations and professional competence through setting the highest standards. In January 2004, it published the third edition of Standards of Practice for Investor Relations which include the following:

- Responsibilities of the corporate Investor Relations officers: they should participate in the evolution of corporate strategy to be able to speak credibly about the company's strategic direction and provide market intelligence to senior management and Boards of Directors. Market intelligence includes analysts' and investors' comments, information about competitors, market research on the industry and the companies' mix of shareholders (NIRI, 2004:6-7).
- Some corporate disclosure issues: such as reporting company information truthfully, accurately and completely; duty to correct and update material information in a timely manner; using Safe Harbor\* for providing forward-looking information with disclosing risk factors specific to those forecasts and not depending on generalized statements of risk; discussing volunteer information about the company's intangible assets and nonfinancial performance factors; insider trading policy for Senior Management and Boards of Directors (NIRI, 2004:8-15).
- The Role of Investor Relations Counsellors (officers): Counsellors are expected to be professional, competent and objective in exercising their profession. They should avoid situations where a conflict of interest could originate and should be cautious when speaking on behalf of the company (NIRI, 2004:16-20).

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\* Under SEC rules, safe-harbor provisions protect management from liability for making financial projections and forecasts made in good faith.

- Standards and Guidance for Corporate Disclosure: It includes some disclosure and information dissemination guidelines (NIRI, 2004:22-29). Companies can use technology such as e-mails, websites, conference calls as well as one to one meetings to disseminate information (NIRI, 2004:30-32). It is important to update and correct information on a company's website, whether orally or in a written statement.
- Guidelines covering relations between Corporate Issuers and Analysts/Investor.
- A sample corporate disclosure policy (Appendix A).
- Frequently asked questions about conference calls and Webcasts and Regulation G (Appendix B)
- Guidelines for improving the quality of earning announcements (Appendix C).
- NIRI Code of Ethics (Appendix D): Regular members of NIRI, Investor Relations officers should maintain their integrity and credibility; ensure their companies fairly disclose important information; provide stakeholders with fair access to corporate information; maintain the confidentiality of information acquired in the course of their work; not use confidential information for their personal advantage; exercise independent professional judgement in the conduct of their responsibilities; avoid any business relationship that may affect the ethical practice of Investor Relations; report to appropriate company authorities any fraudulent or illegal behaviour, recognised or suspected within the company; conduct themselves in a reputable and dignified manner.

### **3.2.2.2 The Investor Relations Society IR Best Practice Guidelines (2006a)**

The Investor Relations Society – the UK's professional body for Investor Relations practitioners was formed in 1980. Its objective is to promote excellence in Investor Relations through carrying out research, education and training; enhancing Investor

Relations techniques and best practice; exchanging members' views, knowledge and experiences through meetings; transmitting members' views to regulatory bodies, the investment community and government; and providing high professional and ethical standards in the practice of Investor Relations.

To help companies improve their online offering to investors, the IRS in December 2006 issued the Best Practice Guidelines, which should be considered as a source of guidance for companies to improve the quality of their communication to investors. These guidelines are based on observations of the best practice of listed companies. These guidelines are divided into:

- 1) **Website Guidelines:** These consist of three sections; the first is a description of the key principles, the second is the presentation style section; and the third is the content section. The presentation style section considers the way in which content is delivered and the content section concentrates on the actual information to be included on the companies' website. Table 3.1 includes a summary of these guidelines.
- 2) **Online Annual Reports Guidelines:** These provide information about the reasons for producing online reports, key principles, ways to make investors aware of the online annual reports, the design of annual reports, usability and accessibility, navigation, timing of providing information, content and feedback. Table 3.1 includes a summary of these guidelines.
- 3) **Online Presentation Guidelines:** As Table 3.1 shows, these guidelines include general principles; prior to the event; day of presentation; and after the event guidelines.

- 4) Annual Reports and Accounts Guidelines: These include the purpose of annual reports, some key principles, content, structure, design, corporate governance and corporate responsibility.



**Table 3.1 Investor Relations Society Best Practice Guidelines**

Website Guidelines	On Line Annual Report Guidelines	Online Presentations Guideline
<ul style="list-style-type: none"> <li>• The website is considered a primary means of communication. It provides investors with reasons to invest in the company.</li> <li>• All visitors have equal access to all information on the website.</li> <li>• Update the users with the developments of the website.</li> <li>• Review the site and its content.</li> <li>• Date the information to be relevant to investors.</li> <li>• Use audio or video webcasts to show Investor Relations officer presentations and shareholder meetings.</li> <li>• Review the sites of your peer group</li> <li>• Include qualitative and quantitative information on companies.</li> <li>• Set a monitoring system to find out what</li> </ul>	<ul style="list-style-type: none"> <li>• The report should have a unique URL (web address).</li> <li>• There should be an option of receiving a hard copy annual report.</li> <li>• The online annual report should be available in HTML and PDF with Excel downloads where appropriate.</li> <li>• The design should reflect the company and its values.</li> <li>• The report should be fully accessible to allow equal access to people with disabilities.</li> <li>• There should be access to both the full annual report and financial statements and the annual review and summary financial statements</li> <li>• Graphics, figures, and tables should be clear</li> <li>• There should be a search facility and site map</li> </ul>	<p><u>Prior to the event</u></p> <ul style="list-style-type: none"> <li>• The website should notify people about forthcoming events and financial calendars.</li> <li>• Provide investors with the ability to register their e-mail to receive email alerts.</li> </ul> <p><u>Day of presentation</u></p> <ul style="list-style-type: none"> <li>• Update the website’s hotspots to announce the presentation is available online and link to the web page which holds all the related information.</li> <li>• Email the subscription list to inform them the presentation is available.</li> <li>• Upload the information as soon as it is available. For example, if a press release is sent to the Stock Exchange, it should be available online at the same time.</li> <li>• Provide the direct web address to the</li> </ul>

Website Guidelines	On Line Annual Report Guidelines	Online Presentations Guideline
<p>type of information investors need and make the site flexible for expansion.</p> <ul style="list-style-type: none"> <li>• Make sure that the company’s website is easily accessed by all investors.</li> <li>• Facilitate navigation to all categories of information.</li> <li>• Provide information to all at the same time.</li> <li>• Provide up-to-date financial data, shareholder information and corporate governance.</li> </ul>	<p>to make it easy for users to find the information.</p> <ul style="list-style-type: none"> <li>• The online annual report should be available on the same day the printed document is available.</li> <li>• The content should include financial and non-financial information.</li> <li>• Links to the corporate website should provide the user with further relevant information.</li> </ul>	<p>presentation on all associated information to make it easy for investors to find the information.</p> <ul style="list-style-type: none"> <li>• Other areas of the website may also need updating to ensure a consistent message.</li> </ul> <p><u>After the event</u></p> <ul style="list-style-type: none"> <li>• If all information is not available on day of event due to time constraints, any related information should be available as soon as possible.</li> </ul>

### 3.2.2.3 IIF Investor Relations Best Practice (2005)

The Institute of International Finance (IIF), the global association of financial institutions, released a detailed report on the Investor Relations (IR) and data release practices of 30 leading emerging market borrowers. They focused on the availability, timeliness and periodicity of data in key areas related to central government operations, central government debt and external debt. Several criteria (which can be applied to public and private companies as well) were used to assess IR practices in the report. According to the IIF criteria, a successful Investor Relations programme incorporates the following, as included in Appendix A (IIF, 2005:265-270):

- **IRO/IR Staff:** The Investor Relations office (IRO) is the first and official point of contact between market members and authorities. It is a “one-stop shop” through which authorities can supply investors with relevant data and information.
- **IR Website:** To be effective, information should be presented on an IR website in a simple, well organized format, user-friendly, and easy to navigate mode.
- **Dissemination of Data:** The IRO is responsible for disseminating market-relevant data and information to investors through the IR website or by e-mailing their contact list.
- **IR Contact List:** The IRO should develop and keep a comprehensive list of contact information for investors, analysts, rating agencies, and other market participants
- **Feedback and Communication Channels:** Formal, regular channels should be formed by responding to questions from investors, encouraging feedback, and communicating information to key policymakers to enable them to make market-informed policy decisions. These channels could be established through teleconferences or webcasts with investors, bilateral meetings between investors and senior policymakers, phone or e-mail contacts via the IRO and interactive roadshows.

- **Regular Self-Assessment:** IROs should carry out annual evaluations to ensure they are providing the best possible services to policymakers and investors, including providing timely, accurate, and appropriate information, reaching all targeted investor groups, receiving and effectively processing feedback, and using optimal technology to reach out to investors. IRO staff can do self-assessments or use outside specialists such as the IIF's Sovereign Investor Relations Advisory Service (SIRAS). Investor surveys on the IRO website would be beneficial as well. To be effective, IRO activities can be benchmarked against IIF IR best practices or other guidance, such as corporate IRO best practices.

#### **3.2.2.4 Best practice Investor Relations: Guidelines for Australasian Listed Entity (AIRA, 2006)**

The Australasian Investor Relations Association issued best practice guidelines to assist Investor Relations officers to know what is required of them and how to go about organising the Investor Relations function. It explained key responsibilities of Investor Relations officers, Investor Relations objectives, skills required for Investor Relations officers, and disclosure procedures. Among the important issues that were discussed is the Investor Relations website, what should be included and that it should be updated regularly and historical data should be archived.

From the above, it is obvious that a company's website is a very important and key tool for Investor Relations officers to perform their duties and communicate effectively with different stakeholders

### **3.3 The Role of Audit in the Provision of Internet Financial Reporting**

Elliott (1992:61) states that “*information technology is changing everything in accounting*”. The audit profession therefore needs to prepare itself for the provision of audit services for internet financial information and to have standards imposed upon it by regulators (Lymer, 1999:297). Continuous auditing, including embedded audit modules, is to be used to meet internet financial reporting demands (Helms and Mancino, 1998). Embedded audit modules are an example of concurrent auditing techniques which “*continuously monitor transaction processing*”; they are perceived by auditors to be a “*very efficient method of auditing advanced computer based system*” (Groomer and Murthy, 1989:54).

*“A continuous audit is significantly different from an annual financial statement audit. In a continuous audit, auditors’ reports are issued at short intervals (for example, daily or weekly) or made available immediately. In the latter case, the report could take the form of an ‘evergreen report’ that is available whenever a user access a website. It contains the audited information, with the auditor’s report dated as at the time of user access. Alternatively, it could be a ‘report on demand’ which is similar to the evergreen report but available only if specifically requested by user”* (Shields, 1998:39).

As connectivity is easier now, Shields (1998:40) suggested that audit firms could be directly linked to the entity’s wide area network; the auditors would examine the controls over the automated process to update the information and the auditor’s report. The continuous information and related auditor’s report could appear on a website to be accessible by users. He concluded that the old model of auditing annual financial statements is becoming less relevant and continuous auditing appears to be the solution.

#### **3.3.1 Differences between Printed Audit and Electronic Audit Reports**

There are five main differences between printed and electronic audit reports which can be summarized as follows:

**1) Security of auditor's report:** Debreceeny and Gray (1999:340) argued that the level of confidence for a printed audit report which is included in a set of annual reports is high as information remains static; once published, it cannot be altered. However, electronic reporting occurs in a dynamic environment, where information can be updated, replaced or revised with no indication for this occurring. Therefore, for audit reports on the internet, it is possible to change the wording of the file with no identification of who has changed it. As long as users have access rights to the computer system, they can change files without leaving any mark. Therefore, there is a possibility that the client or any outside hacker can alter the auditor's report when placed on a client's computer system. Companies may create a fictitious auditors' report on the internet. In addition, hackers can access websites and create what is called TCP (Transmission Control Protocol) and DNS (Domain Name Server) spoofing, which is faking the sending address of a transmission so that one website appears to be another address. A DNS is really nothing more than a directory. A DNS is like a telephone operator which stores address and name pairs, so that when a user requests a website by name, it can send it directly to the correct address. Turban, King et al. (2002:556) explain that the process of DNS spoofing involves hackers modifying the DNS address tables or the router maps and rerouting the communications somewhere else (similar to moving a road sign). Then hackers could reroute the traffic from the actual website to the fraudulent site.

Debreceeny and Gray (1999) examined some auditors' reports and found that auditors' reports were placed in the client's website, which means that the client has more control over them. This problem can be solved through placing the auditor's report on the audit firm's own web server, which will help to remove the security problem. Another solution is that auditors discuss the issue of information security with management; they

have to make sure that their clients are using the appropriate security controls to ensure, not only that changes to the auditor's report or audited financial information are made with authority and approval, but also that all the changes can be detected (AARF, 1999).

**2) Date of audit report:** The printed annual report presents the financial position of a given entity at a balance sheet date. However, sometimes there are post balance sheet events which should be disclosed, such as diminution of value of property or investment and mergers which occur in the period between the close of the financial year and the issue of the audit report.

Debreceeny and Gray (1999:342) contend that Statement of Auditing Standards (SAS) 150 "Subsequent events" should extend to include websites; therefore, auditors should monitor their clients' websites up to the date of their report and must take appropriate action once they observe something on the website that could have an impact on previously audited financial statements. Therefore, the audit report on the web will need to provide guidance as to the extent and date of coverage.

**3) The auditors' responsibility for other information:** For printed annual reports, the auditor is responsible not only for the financial statements but also for other information in the annual report (Debreceeny and Gray, 1999:343). For example, Statements of Auditing Standards 160, "Other information in documents containing audited financial statements" gives examples of other information which is included in the annual reports. It includes "a directors" report required by statute, statements relating to corporate governance and directors' remuneration as required by the Listing Rules of the Stock Exchange, a chairman's statement, an operating and financial review, financial

summaries, employment data, planned capital expenditures, financial ratios and selected quarterly data (para. 3). Paragraph 6 states that

*“Auditors should read the other information. If as a result, they become aware of the apparent misstatement therein or identify any material inconsistencies with the audited financial statements, they should seek to resolve them”* (SAS160, 1999:para. 6).

Paragraph 8 (SAS160, 1999) emphasises that auditors should read other information in the light of knowledge they have acquired during the audit. They are not expected to verify any of the other information. They are required to read the other information to identify whether there are any significant misstatements or matters which are inconsistent with the financial statements. Paragraph 10 states that inconsistency exists when the other information contradicts the information contained in the financial statements and that inconsistency may raise doubts about the audit conclusions drawn from audit evidence and the auditor’s opinion on financial statements. Thus, the credibility of the financial statements and the related auditor’s report may be undermined (Debreceeny and Gray, 1999:343). The standard provides auditors with guidance on the handling of inconsistencies and misstatements. The general rule is that if an auditor finds any inconsistency, s/he discusses it with directors requesting them to amend either the financial statements or the other information. If directors refuse to make the appropriate changes, the auditor should include in the audit report an explanatory paragraph describing the apparent misstatement or material inconsistency (para. 12-15). In UK and Republic of Ireland, auditors have a statutory responsibility to consider whether the information given in the directors’ report is consistent with the accompanied financial statements (para.13). According to Section 235(3) of the Companies Act 1985, Article 243(3) of the Companies (Northern Ireland) Order 1986, and Section 15 of the Companies (Amendment) Act 1986, if the information is not consistent, auditors should state this fact in their report (SAS160, 1999:Appendix 1).



The printed auditor's report is considered a part of the annual report, and the audit report on the internet is part of the website of the client which contains additional information. The question that arises is what is the auditors' responsibility? In the UK, there are currently no rules or regulation addressing the responsibility of auditor of other information contained on the website of the company under audit. However, if SAS 160\* were to be applied to the audit reports on the internet, the auditor would have to read other information on the website to make sure that there were no inconsistencies with the financial statements.

In the USA, the AICPA recognized this potential problem and issued in March 1997 AU Section 9550, Interpretations of AU 550; "Other Information in Documents containing Audited Financial Statements". Paragraphs .17 and .18 state that

*"Electronic sites are a means of distributing information and are not 'documents', as that term is used in section 550, Other Information in Documents Containing Audited Financial Statements. Thus, auditors are not required by section 550 to read information contained in electronic sites, or to consider the consistency of other information (as that term is used in section 550) in electronic sites with the original documents. Auditors may be asked by their clients to render professional services with respect to information in electronic sites. Such services, which might take different forms, are not contemplated by section 550. Other auditing or attestation standards may apply, for example, agreed-upon procedures pursuant to AT section 201, Agreed-Upon Procedures Engagements, depending on the nature of the service requested".*

**4) Depth of reviewed information:** The environment of internet financial reporting may enable users to disclose more relevant disaggregated and incremental financial data in their websites such as weekly sales (Ashbaugh et al., 1999:249). Lymer and Debrecency (2003:108) argued that the audit function cannot give an acceptable level of verification on such disaggregated data as a part of the traditional audit engagement.

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\* It was stated in the footnote of page 1 in SAS 160 (1999) that 'SAS 160 is primarily directed towards the auditors' consideration of other information contained in an entity's published annual report. It is not intended to address issues which may arise if financial information is extracted from the document and published separately, or is published by the entity in a different format, for example on the Internet'.

**5) Integrity of the auditors' report:** Information provided within hard copies of annual reports is regarded as a more reliable source of information for users because they are audited (Allam and Lymer, 2003:15). The hard copy annual report is a stand alone document with everything in-between the front and back covers (FASB, 2000:24). However, online reporting may provide hyperlinks to unaudited information within the audited financial information (Allam and Lymer, 2003:15). Financial and nonfinancial information, corporate and non-corporate information, audited and unaudited information will be linked together in complicated ways. Therefore, the effectiveness of auditing will be impaired and the value of the audit report will be reduced, as users will not be able to know whether they are examining audited information or not.

Hodge (2001) obtained evidence that hyperlinking audited financial statements to unaudited information affects the investors' judgement. He undertook an experiment where investors assessed a firm's earnings potential by evaluating the firm's audited financial statements and a subsequent optimistic unaudited letter to shareholders from the firm's management. Investors who viewed hyperlinked materials on the Web misclassified more unaudited information as audited and assessed the credibility of the unaudited information as higher than did investors who viewed hardcopy materials. This study provides evidence that hyperlinking a firm's audited financial statements to unaudited information in a web-based environment leads investors to blend the unaudited information with the audited statements.

Those investors who assessed the unaudited information as more credible also judged the firm's earnings potential to be higher. Hodge (2001) also found that notifying users about whether the information has been audited or not would alleviate these effects. This evidence suggests that firms can influence financial report users' perceptions by

hyperlinking unaudited information to information in their audited financial statements, and that a simple disclosure rule reduces this influence.

Xiao et al. (2002:263) explained that it is difficult to distinguish audited from non-audited information in internet financial reporting as the audit report will exist with non-audited data. This will reduce the integrity of the audit report. However, a solution might be to limit the audit report to those elements specially labelled as audited, this might be achieved by using WebTrust seals to demarcate the audited and non-audited data. Portz et al. (2000:46) explained that the WebTrust was developed in 1997 by the AICPA to provide assurance for electronic commerce. It is considered a means for e-commerce businesses to indicate that their practices and policies, as stated in their advertising, have been attested to by a CPA. In a WebTrust engagement, a CPA examines three areas of a company's website: business practice disclosures, transaction integrity, and information protection. Allam and Lymer (2003:15-16) found that another technique called "Inside Annual Report" (IAR) is used by some companies to let users know that the information disclosed falls within the audited annual report section. They found that UK companies are the leaders in using IAR techniques, followed by Canada, USA, Australia and then Hong Kong. The FASB study (FASB, 2000:24) identified three techniques used by companies to let users know that accessing information inside the annual report. They include the usage of specific coloured or graphical borders, usage of background colours or graphics, and usage of a dialog pop up to tell the users that they are leaving the annual reports and ask if they wish to continue.

### **3.3.2 Professional Pronouncements**

Professional auditing regulators are aware of the rapid development of the internet as a medium for communicating financial information (Lymer and Debreceeny, 2003:109). However, up till now, the actual pronouncements made by various bodies around the

world still fall short in meeting the challenges that arise from internet reporting technologies (Lymer and Debreceeny, 2003:104). Below, the limited number of regulations and announcements are presented, addressing auditing internet financial reporting.

**1) AGS 1050:** In 1999, The Auditing & Assurance Standards Board (AuASB) of the Australian Accounting Research Foundation (AARF) issued an Auditing Guidance Statement \*(AGS 1050) "Audit Issues Relating to the Electronic Presentation of Financial Reports" to raise awareness of the effects and risks associated with electronic audit report (Oyeler et al., 2003:39). It noted that in July 2002, financial and nonfinancial information, corporate and non-corporate information, audited and unaudited information would be linked together in complicated ways (AASB, 2002). Hughes (2000) noted that AGS 1050 responded to changes caused by electronic reporting by applying existing reporting obligations to this new electronic environment. Reporting regulations and legislation clearly establish management's responsibility for the *preparation* and *presentation* of the financial report. Paragraph .04 (AASB, 2002:5) states that the responsibilities of management and the auditor remain unchanged whether financial information is presented in hard copy or electronically on a website. Therefore, it is the responsibility of management to ensure that the information on the website is accurate. Hughes (2000) states that presentation of financial information on the website may result in an inappropriate association of audited and unaudited information, and that audited financial information is generally recognised as providing higher quality information for decision making than unaudited information. This AGS specifies some matters which may be addressed by the auditor with management to

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\* Auditing Guidance Statements do not establish new Auditing Standards, do not amend existing Auditing standards, and are not mandatory. They are issued to provide guidance on procedural matters, guidance on entity or industry specific issues, or to clarify, explain and elaborate an underlying principle in an Auditing Standard (AARF, 2000).

reduce the risk of the audit report being associated with unaudited information. The entity's management needs to ensure that website users are able to clearly distinguish between audited financial information and other unaudited information. Paragraph .19 (AASB, 2002:17) clarifies that the following is to be stated in the engagement letter:

- a) the electronic presentation of the audited financial report and audit report is management's responsibility; and*
- b) the examination of the controls over the electronic presentation of audited financial information on the entity's website is beyond the scope of the audit of the financial report.*

Paragraph .20 (AASB, 2002:7) clarifies that providing assurance about the effectiveness of the controls and security over information on the entity's website is beyond the scope of the audit of a financial report. If the auditor is requested to provide these services, the terms should be agreed with management as a separate engagement.

The auditor may decide to issue a separate audit report for inclusion on the website, which includes additional information regarding the electronic presentation of the financial report. Appendix 4 of AGS 1050 includes an example of an audit report provided for the presentation on an entity's website. It is recommended that the Web-based audit report should include the following information:

- \* Specific reference to the audited statements by name;
- \* A declaration that the audit report does not offer an opinion on any other information hyperlinked to/from the audited financial report; and
- \* A statement suggesting that readers who are concerned with inherent risks arising from electronic data communications should back up Web-based financial statements with hard-copy versions.

Paragraph .29 C notes that in extreme circumstances, where significant concerns exist, the auditor may deny permission for the audit report to be included on the website.

AUS 212 “Other information in documents containing Audited Financial Reports” requires the auditor to read other information to ensure that there is no inconsistency with the audited financial report. Paragraph .36 (AASB, 2002:11) notes that all the principles and procedures identified in AUS 212 also apply when the audited financial report is included in an electronic format on a website. Paragraph .37 (AASB, 2002:11) states that the auditor should use his/her professional judgement to determine what other information presented with the annual report on the website is to be read with AUS 212.

The guidance provided in this AGS is not yet complete and the practices surrounding electronic financial reporting are still emerging. Therefore, the Auditing & Assurance Standards Board (AuASB) will continue to monitor developments in electronic financial reporting to issue further guidance when appropriate (Hughes, 2000).

**2) Bulletin 2001/1\*:** The UK Auditing Practice Board issued Bulletin 2001/1 “The Electronic Publication of Auditors’ Reports” in January 2001 (APB, 2001).

Bulletins in the UK are stronger than Auditing Guidance Statements in Australia, since they are more persuasive and have similar status to the explanatory material in SASs. In UK, the Companies Act 1985 (Electronic Communication Order) 2000 enables companies to meet their statutory reporting obligation to shareholders either by distributing annual financial reports electronically or by posting them on the company website and advising shareholders that this has been done (APB, 2001:para.2). Therefore, this Bulletin was issued to provide guidance to auditors on their responsibilities when the auditor’s report or when any other auditors’ reports such as review reports on interim financial information are published on the internet (Para.4 and

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\* Bulletins are issued to provide auditors with timely guidance on new or emerging issues. Practice Notes and Bulletins are persuasive rather than prescriptive. However, they are indicative of good practice and have similar status to the explanatory material in SASs, even though they may be developed without the full process of consultation and exposure used (APB, 2004).

5). Similar to AGS 1050, paragraph 7 mentions that providing assurance about the effectiveness of the controls and security over information on the entity's website does not constitute part of the normal audit engagement, and paragraph 8 indicates that the responsibilities of directors do not change whether the financial statements are produced in printed form or electronically. Paragraph 29 adds that in the case of an electronic version, it is recommended that directors state clearly their responsibility for the maintenance and integrity of the website in the statement of directors' responsibility or that the auditor adds in the electronic version of the auditor report a note stating that the maintenance and integrity of the website is the responsibility of the directors.

The Bulletin specifies that auditors should check that the financial information published via the internet is derived from the signed paper printed annual reports, is identical in content and that the conversion into electronic format has not distorted the overall presentation of the financial information (para. 13). Auditors are not expected to apply the same procedures to prior period financial information (para. 15). It is also recommended that auditors should keep a printout or disk of the final electronic version for future reference (para. 14). Auditors should consider the use of hyperlinks between audited and unaudited information and ensure the auditor's report is appropriately associated with other information. They should discuss with the directors and audit committee how the financial statements and auditors' report are presented on the website (Paras 22-24). If auditors are not satisfied with the presentation of audited financial statements and auditors' report and the presentation is not amended, they have the right to withhold the electronic release of their audit opinion (para. 24). The electronic audit report has the same date as the paper printed audit report (para. 26). Then paragraphs 32-34 explained that it would be beneficial for auditors to clarify the

directors' responsibilities and auditors' role in the engagement letter. Therefore, engagement letters:

- *acknowledge that the auditors recognise that the company may wish to publish its financial statements and the auditors' report on its website or distribute them by means such as e-mail,*
- *note that it is the responsibility of the directors to ensure that any such publication properly presents the financial information and any auditors' report,*
- *establish that the company should advise the auditors of any intended electronic publication before it occurs,*
- *state that the auditors reserve the right to withhold consent to the electronic publication of their report if the audited financial statements or the auditors' report are to be published in an inappropriate manner,*
- *note that the directors are responsible for the controls over, and the security of, the website,*
- *state that the examination of the controls over the maintenance and integrity of the entity's website is beyond the scope of the audit of the financial statements, and*
- *where applicable, state that the directors are responsible for establishing and controlling the process for electronically distributing Annual Reports and other financial information to shareholders and to the Registrar of Companies.*

**3) Bulletin 2001/2:** The UK Auditing Practice Board issued Bulletin 2001/2 'Revisions to the wording of auditors' reports on financial statements and the interim review' in January 2001 (APB, 2001). In paragraph 12, it mentions that it is desirable that auditors' reports on the website be consistent with the printed auditor report. It added that the following notes would be appropriate only to electronic audit reports and not to printed audit reports:

- 1. The maintenance and integrity of the [name of entity] website is the responsibility of the directors; the work carried out by the auditors does not involve consideration of these matters and, accordingly, the auditors accept no responsibility for any changes that may have occurred to the financial statements since they were initially presented on the website*
- 2. Legislation in the United Kingdom governing the preparation and dissemination of financial statements may differ from legislation in other jurisdictions.*

Paragraphs 13 and 14 state that if 'HTML' is used to publish the financial statement on the website, it would be difficult to use page numbers in the audit report to refer to the



financial statements being audited and thus, a more detailed description of what has been audited should be used. However, if 'PDF' is used to publish the financial statements on the website or if an entity does not intend to publish its financial statements on a website, page numbers can be used to refer to the audited financial statements. It is considered a more definitive way of describing what has been audited and is also briefer than a list of primary statements.

**4) AU Section 9550:** In 1997, the USA was the first country to issue guidance related to auditing internet financial information. Archambault and Gibson (1999) explained that websites of companies may include audited and unaudited, financial and nonfinancial information or information from outside sources and this information may also be continuously changing and there may be no clear boundaries between the audited financial statements and other financial information. Therefore, it is not only impractical, but almost impossible for an auditor to access all of the information that is on or linked to a client's website. As a result, the Audit Issues Task Force of the Auditing Standards Board issued an interpretation of SAS No. 8; a website is not considered to be a "document" as that term is used in AU section 550, it is just a means of distributing information and auditors are not required to read the information on a website or to consider whether it is consistent with information in original documents.

**5) Practice Alert 97-1:** It was prepared by the SEC Practice Section Professional Issues Task Force, based on the experience of the members and the matters arising from litigation and peer reviews (AICPA, 1999). It states that auditors may discuss with the client the security of information and safeguards utilized to protect their systems and data, and the possibility of marking each page of annual report information as being a part of the annual report or not (AICPA, 1999).

In short, the auditing standard setters in Australia, the UK, and the USA have responded to the new technology, but the pronouncements they have issued are limited in number and scope. The treatments of these pronouncements are inconsistent and vary according to each country's perspective of internet financial reporting. Although a large number of entities in the USA are adopting internet financial reporting, it was considered difficult to audit and consequently no professional pronouncement has been made related to it except for interpretation of SAS no. 8, according to which auditors are not even required to read the information on the website. The UK considers the web to be another form of disseminating information; it issued Bulletin 2001/1 and Bulletin 2001/2 which are persuasive, to discuss issues related to auditors' role regarding internet financial reporting, the changes recommended to be made in the engagement letter and the changes recommended in the words of the auditors' report if presented on the web. Australia's perspective is that new approaches are required for different types of reports and user interaction arising from internet technologies (Lymer and Debreceeny, 2003:113). AGS 1050 was issued. It provides some protection against subsequent misuse of electronic audit reports as it determines the responsibilities of auditors and management towards internet financial reporting. However, it is not mandatory.

### **3.4 Summary**

According to Normative Isomorphism, companies adopt a new innovation because they are advised to do so by professionals. Therefore, the roles of Investor Relations officers and auditors were examined, as they are the two professionals who could affect the adoption of internet financial reporting and disclosure and be affected by it as well. This chapter was divided into two parts. The first part introduced the concept, roles and functions of Investor Relations. Article 15 of the Egyptian Stock Exchange's Securities Listing & De-listing Rules states that listed companies should have an Investor Relations Officer (IRO) who will be in charge of contacting the Stock Exchange and

answering shareholders' and investors' inquiries. However, these rules do not include any job description. Therefore, the definition and role of Investor Relations and relevant standards in the USA, UK and Canada were presented to be taken as a benchmark for the Egyptian companies to develop and evaluate their Investor Relations and this will result in the development of internet financial reporting and disclosure in Egypt

The second part of the chapter focused on the role of audit in the provision of internet financial reporting, and the differences between printed and electronic audit reports were discussed. Issues were raised concerning website security, the dating of reports, auditors' responsibility for other information and possible inconsistencies with the financial report, verification of disaggregated data and possible confounding of audited and non-audited information. Professional pronouncements intended to address such concerns were discussed. However, these were shown to be limited in number and scope, inconsistent and varying according to each country's perspective of internet financial reporting.

# Chapter Four

## Research Methodology

### 4.1 Introduction

Research Methodology can be viewed as the way of studying any phenomenon (Silverman, 2000:86). Collis and Hussey (2003:55) define it as the entire approach of research, starting from the theoretical grounds and ending with the collection and analysis of data. Thus, the choice of methods in research and how each method is used reflect the “*overall research strategy*” (Masson, 1996:19).

This chapter aims to describe the procedures that will be followed in this thesis, starting from research design objectives and how data is gathered and analysed. It will follow the same research process as presented by Saunders (2003:83); it includes research philosophy, approaches, strategies, time horizon and data collection method. This chapter will focus on survey as the main research strategy because it includes the use of disclosure indexes, and interviews which will be used to achieve the objectives of this study. Survey in its broadest term can be defined as “*A methodology whereby a sample of subjects is drawn from a population and studied to make inferences about the population*” (Collis and Hussey, 2003:66). Bryman and Burgess (1999:48-49) argued that data can be collected for survey by questionnaire or by interviews on more than one case and at a single point in time in order to collect quantitative or qualitative data related to one or more variables, which are then tested to detect patterns of association.

### 4.2 Research Design Objectives

As stated in Chapter One, this research aims to achieve the following four objectives:

1. Identify the extent of internet corporate financial reporting of Egyptian companies.

2. Identify factors which influence Egyptian listed companies voluntarily to adopt internet based corporate financial reporting.
3. Evaluate the effectiveness of voluntary internet financial reporting and disclosure as perceived by selected groups of users.
4. Explore the role of Investor Relations officers and auditors regarding internet financial reporting and disclosure and whether their function or procedures are affected.

This research is considered basic research, since the main aim is to make a contribution to knowledge, usually for the general good to improve our understanding of a general issue rather than solving a specific, existing problem for a particular organisation (Collis and Hussey, 2003:13-14).

Research can be classified according to its purpose into exploratory, descriptive, and explanatory (Saunders et al., 2003:96-97). A detailed explanation is provided for each classification to demonstrate why this study is considered to have exploratory, descriptive, and explanatory dimensions.

#### **4.2.1 Exploratory Research**

The main objective of exploratory research is to look for ideas, patterns or hypotheses rather than testing a hypothesis, so the focus is on gaining insight of a subject area to be tested at a later stage (Collis and Hussey, 2003:10). Through exploration, researchers achieve a better understanding which enables them to create new theoretical links between concepts, to integrate new concepts into a given theoretical field, or to suggest innovative theoretical results (Charreire and Durieux, 2001:52). It rarely provides conclusive answers to problems or issues. It gives guidance on what future research, if any, should be conducted. Robson (1993:42) mentioned that in order to find out what is going on and to seek new insights, in-depth interviews will be helpful in exploratory

studies. Exploratory research is useful when there is little information and research questions are unclear. Part of this research will be exploratory, as it will examine the extent of internet financial reporting and disclosure in Egyptian companies, which is a relatively new phenomenon, especially in an Egyptian context.

For exploratory purposes, the researcher carried out an interview with two analysts working in one of the big Brokerage Companies in Egypt\*. One of them is a Chief Technical Analyst and the other one works in the Research department of the company. The researcher asked them about sources of information they depend on in evaluating a company. They informed the researcher that they depend on various sources, the most important being the annual reports released by Egypt for Information Dissemination (EGID), which is a subsidiary of the Cairo and Alexandria Stock Exchange (CASE). Its function is to transmit all information of the CASE listed companies to all recipients. Then they depend on information released by the Central Agency for Public Mobilization and Statistics, information released by the companies themselves, websites of the companies, press releases, information in the newspaper and financial magazines, information about sectors from competitors. They said that they do not deal with foreign shares, except within very narrow limits. They informed the researcher that the websites of big companies (they mentioned some companies by name) are very useful and advised the researcher to meet the Investor Relations professionals of these companies. The researcher had meetings with the Investor Relations professionals of three companies and asked them questions about who determines the content of internet financial reporting and its format and the association of external auditors with internet financial reporting. The Investor Relations professional of one big Construction Industries company stated that their office in London is responsible for internet

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\* For reasons of confidentiality, the companies' names have not been mentioned.

financial reporting; they send to the London office all the information required. The Investor Relations professional of a Telecom company stated that the contents of financial internet reporting is a combined act, it is determined by the Chief Financial officer and the Investor Relations department. Some information about the background of the company, its products and activities are determined by the Public Relations department. The Investor Relations professional of a communication company stated that it is the responsibility of their Investor Relations department only and they follow the rules of the National Investor Relations Institute (NIRI) whose website is (<http://niri.org>). All of the three Investor Relations managers denied the association of the external auditor with internet financial reporting. The researcher asked a banker as well; he replied that there is a technical office related to the Board of Directors who determines the contents of internet financial reporting and that auditors have nothing to do with it.

From these interviews, the researcher was able to conclude that analysts in Egypt depend on internet financial reporting as a source of information and that there is no unique department or person in all companies responsible for financial internet reporting and the auditors are not associated with internet financial disclosure.

#### **4.2.2 Descriptive Research**

The purpose of descriptive research is “*to portray an accurate profile of persons, events or situations*” (Robson, 1993:4). This may be an extension of exploratory research (Saunders et al., 2003:97). This research is considered to be descriptive as it will conduct a survey and use a disclosure index to illustrate the current practices of internet financial reporting and disclosure of the Egyptian companies. Most prior studies of internet-based financial reporting have been descriptive. Examples include Deller et al. (1999), Lymer (1997b), Pirchegger and Wagenhofer (1999), and others. All these

studies were conducted in countries (US, European countries, Canada, Australia, Hong Kong, Thailand, and China) other than Egypt. This study focuses on the current practices of internet reporting in Egypt.

### **4.2.3 Explanatory Research**

Collis and Hussey (2003:11) stated that the objective of explanatory research is to understand phenomena by establishing causal relationships. This research is considered to be explanatory in two respects: first, different theories have been used to explain voluntary financial reporting and disclosure via the internet; these theories may be relevant in the context of disclosure on the internet. They include innovation diffusion, institutional change and economic-based theories (See Chapter Two for a full discussion of these theories). Second, this study examined a number of explanatory variables for levels of internet reporting and disclosure, such as size, profitability, leverage, liquidity, industrial sector, size of the audit firm, and foreign listing.

Therefore, this research is considered to be exploratory, descriptive and explanatory, as the researcher looks at ideas, patterns and theories of innovation diffusion, institutional change and economics which seek to explain why firms adopt internet voluntary reporting and disclosure and explores how they affect the level and nature of disclosure. The researcher examined the extent of voluntary internet reporting and disclosure and the variables affecting it by using a disclosure index in an Egyptian context, followed up by semi structured interviews. Interviews were used to find out factors affecting companies' adoption of internet financial reporting, different stakeholders' perceptions and attitudes regarding the effectiveness of voluntary internet financial reporting and disclosure and to explore the role of Investor Relations and auditors regarding voluntary internet financial reporting and disclosure and whether their function or procedures are affected.

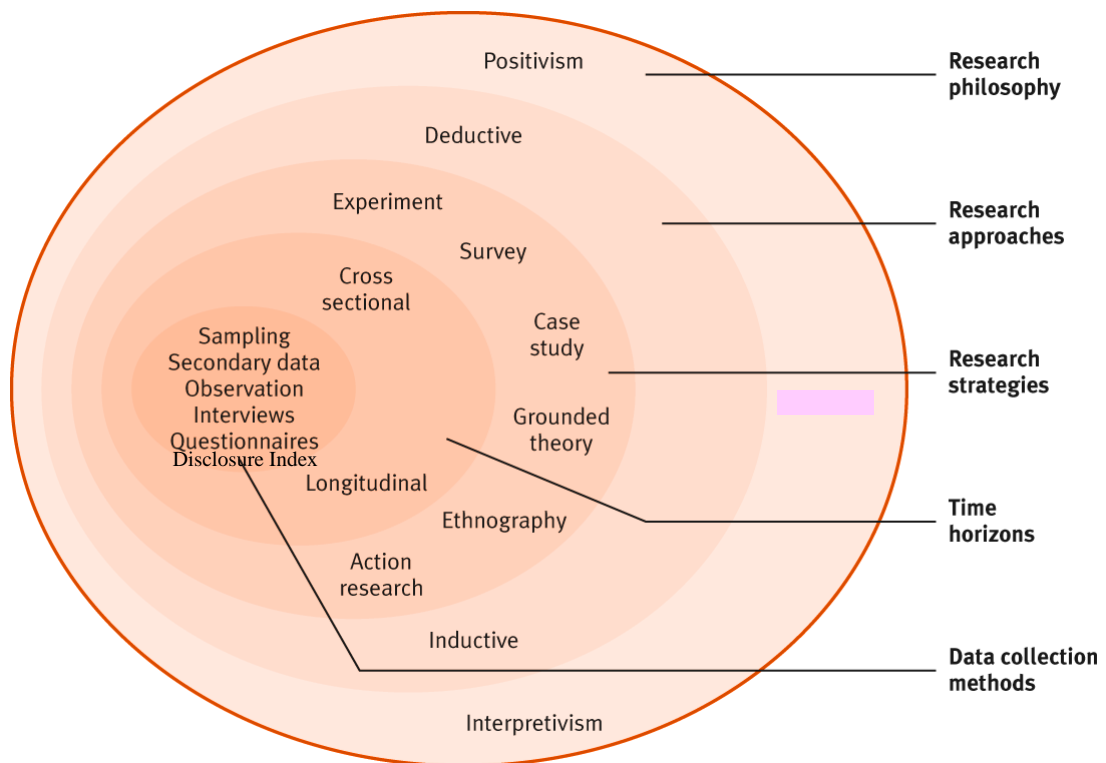


### 4.3 Research Philosophy

Research philosophy is concerned with how one thinks knowledge can be developed, (Saunders et al., 2003:83). There are two main research philosophies or paradigms, the positivist and the phenomenological, which are the qualitative and quantitative aspects of research. A brief discussion is devoted to each one.

**Figure 4.1 The Research Process**

Source: Adapted from Saunders et al. (2003:83)



#### 4.3.1 Positivistic Paradigm

Collis and Hussey (2003:253) defined the positivistic paradigm as

*“A paradigm based on the natural sciences which assumes the social reality is independent of us and exists regardless of whether we are aware of it. Therefore, the act of investigating reality has no effect on that reality and little regard is paid to the subjective state of the individual. It is usual to associate a positivistic paradigm with measurements”.*

Enke (2004:5) indicated that positivism considers that a statement does not have a meaning unless it is verified empirically or it is logically or mathematically derived from verifiable premises. Therefore, he contended that accountants, whose primary concern is to communicate financial data, tend to employ positivistic thinking.

### **4.3.2 Phenomenological Paradigm**

According to Collis and Hussey (2003:53), the phenomenological paradigm is concerned with “*understanding human behaviour from the participant’s own frame of reference*”. Collis and Hussey (2003:353) define qualitative research as

*“a subjective approach which includes examining and reflecting on perceptions in order to gain an understanding of social and human activities”.*

Creswell (2003:181-182) suggested that qualitative research has the following characteristics:

1. The natural setting is the direct source of data; the researcher goes to the participant’s place of work to conduct the research.
2. Qualitative data are collected in the form of words or pictures
3. Qualitative research is not tightly prefigured but is emerging. New questions may arise during the interviews or collection process.
4. The researcher makes personal interpretation of the data.
5. Researchers are interested in understanding how things occur. They focus on the process that is occurring as well as the outcome (Creswell, 2003:199)
6. Qualitative research focuses on participants’ perceptions and experiences.

Qualitative methods permit the researcher to study selected issues in depth and in detail (Patton, 1990:13). The researcher seeks answers to questions that emphasise how social experience is created and given meaning. According to Easterby-Smith et al. (1991:32),

the phenomenological paradigm has some advantages summarized as: 1) understanding people's meanings, 2) adjusting new issues to study which means that if there is a new issue into the research, the researcher can address it, 3) contributing to the development of new theories and 4) looking at the changes which occur over time. However, he noted some weakness such as 1) the time consumption of data collection, 2) the difficulty of the analysis and interpretation, and 3) the low credibility with which it is viewed.

### **4.3.3 Methods Triangulation**

Triangulation is defined as the use of different research approaches and techniques in the same study (Collis and Hussey, 2003:78). The overall approach of this study is a combination of qualitative and quantitative research. The application of both qualitative and quantitative methods is not conflicting in itself. Glaser and Strauss (1967) reasoned that both forms of data are useful and can supplement each other to increase the understanding of what is being studied. Flick (1998:229) stated that the use of multiple methods reflects an attempt to secure an in-depth understanding of the phenomenon. He added that the combination of multiple methodological practices, empirical materials, perspectives, and observers in a single study is best understood as a strategy that adds rigor, breadth, complexity, richness, and depth to any inquiry (Flick, 1998:231). Kvale (1996:69) considers the whole research process as an interaction between quantitative and qualitative methods. He explained that in order to predict the effect of television series, both research types could be used. Quantitative methods (frequency of viewing) and Qualitative methods (Linguistic and narrative analyses of the plot).

In this study, qualitative methods were conducted after undertaking quantitative methods. Therefore, mixed methods (method triangulation) was used because the researcher wanted to be familiar with both quantitative and qualitative forms of

research, and to help overcome problems of reliability, validity and bias by converging and confirming findings from different data sources (Creswell, 2003:210).

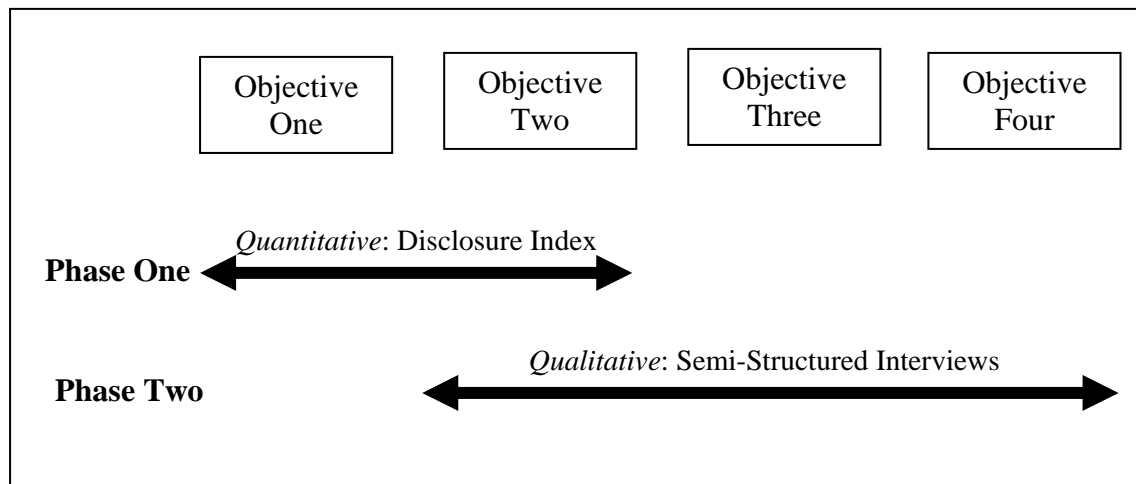
In addition, Bryman and Bell (2003:486-489) clarified that both methods could be used if the researcher can not rely on one method alone and should support the findings resulting from one of them. Researchers may wish to adopt quantitative research to explore specific issues in which they are interested and qualitative research to gain access to the perspectives of the participants. In this study, the researcher aimed to study different aspects of a phenomenon.

This research study used a sequential explanatory strategy, which is characterized by the collection and analysis of quantitative data followed by the collection and analysis of qualitative data (Creswell, 2003:215). Creswell (2003:215) explained that this strategy is used to assist in explaining and interpreting findings of the quantitative study. He added that this strategy is easy to implement because the steps fall in two separate phases with the results combined in a final discussion. However, its weakness is the length of time involved in data collection and analysis. Tashakkori and Teddlie (2003:227-228) explained that researchers can focus more on one phase or give equal weight to the quantitative and qualitative phases.

In this research, as seen in Figure 4.2, data collection and analysis were employed in order to achieve the first and second objectives, which are related to measuring internet financial reporting and disclosure level, analyse the relationship between disclosure and company characteristics. Thus, quantitative methods were used by constructing a disclosure index, developing and testing hypotheses and using the SPSS statistical computer program in order to present and interpret results. After that, qualitative data

collection and analysis were used for objectives two, three and four. Interviews with different related parties (Investor Relations officers, audit partners, financial analysts, and managers in Egyptian Stock Exchange) were analysed using a general analytical approach. The findings of these interviews were used to support and enhance the findings of the quantitative approach. Other complementary factors which affected internet disclosure were revealed. For the third and fourth objectives, qualitative methods were employed to evaluate the effectiveness of voluntary internet financial reporting and disclosure as perceived by selected groups of users and to explore the role of Investors Relations officers and auditors regarding internet financial reporting and disclosure and whether their functions or procedures are affected. The results of semi-structured interviews revealed new issues which were not considered at the beginning of the research, such as the effects of culture, organisational change on the adoption of internet financial reporting and disclosure, the role of Investor Relations in the provision of internet financial reporting.

**Figure 4.2 Phases of Research**



Therefore, it could be concluded that for this research one method is not sufficient for the whole research process.

*“We can not find out everything we might want to know using only one approach, and we can often increase the scope, depth and power of research by combining the two approach” (Punch, 1998:243)*

This is the first time - as far as the researcher is aware - that a methodological triangulation approach has been used for internet reporting and disclosure studies. As shown in Chapter Two, The Literature Review, no previous internet reporting and disclosure studies combined both quantitative and qualitative methods. The focus was on quantitative methods in these studies. Hence, this study will provide deeper understanding of internet reporting and disclosure issues.

## **4.4 Research Approaches**

When conducting any research; there are two different research approaches to be followed; the deductive or the inductive approach.

### **4.4.1 The Deductive Approach**

The deductive approach represents the positivistic paradigm (Easterby-Smith et al., 1991). Saunders et al. (2003:85) explained that deductive research involves developing a hypothesis and collecting quantitative data to test the hypothesis.

Robson (1993b:19) identified four main phases through which a deductive research should progress:

1. Deducing a hypothesis about a relationship between two or more variables from theory.
2. Expressing the hypothesis in operational terms to indicate exactly how the variables are to be measured.
3. Testing this operational hypothesis using a suitable form of empirical inquiry.
4. Examining the findings of the inquiry will lead either to confirmation of the theory or its modification.

#### 4.4.2 The Inductive Approach

The inductive approach represents the phenomenological paradigm (Easterby-Smith et al., 1991). Saunders et al., (2003:87) explained that inductive research involves collecting qualitative data and developing theory as a result of data analysis. Saunders et al. (2003:89) have summarised some of the main differences between the deductive and inductive approaches (Table 4.1).

**Table 4.1 Major Differences between Deductive and Inductive Approaches to Research**

Deduction emphasises	Induction emphasis
<ol style="list-style-type: none"> <li>1. Scientific principles</li> <li>2. Moving from theory to data</li> <li>3. The need to explain causal relationships between variables.</li> <li>4. The collection of quantitative data</li> <li>5. The application of controls to ensure validity of data</li> <li>5. The operationalisation of concepts to ensure clarity of definition</li> <li>6. A highly structured approach.</li> <li>7. A researcher independence of what is being researched</li> <li>8. The necessity to select samples of sufficient size in order to generalise conclusions</li> </ol>	<ol style="list-style-type: none"> <li>1. Gaining an understanding of the meanings humans attach to events</li> <li>2. A close understanding of the research context</li> <li>3. The collection of qualitative data</li> <li>4. A more flexible structure to permit changes of research emphasis as the research progresses</li> <li>5. A realisation that the researcher is part of the research process</li> <li>6. Less concern with the need to generalise</li> </ol>

Source: Adapted from: Saunders et al. (2003:89).

#### 4.4.3 Choosing a Research Approach

Saunders et al. (2003:88) recommend combining the deductive and inductive approaches within the same piece of research. However, Tashakkori and Teddlie (2003:196) believe that the theoretical drive of any research may be inductive for

discovery or deductive for testing. It cannot be neutral or both deductive and inductive. If the driving force of the research is to test a hypothesis, to determine relationships, then the theoretical drive of the research is deductive, although it may include inductive elements as well. Therefore, the research design might be one of these

- 1) *QUAN + qual for a quantitative and a qualitative method used simultaneously with a deductive theoretical drive*
- 2) *QUAN + qual for a quantitative and a qualitative method used sequentially with a deductive theoretical drive*

In this research, the second research design was adopted. The theoretical drive of the research is deductive, to test hypotheses, to find relations, to find out factors which affect internet financial reporting and disclosure in Egypt. A disclosure index was used, followed by interviews. The inductive approach was adopted by using semi structured interviews. The results of semi-structured interviews revealed new issues which were not considered at the beginning of the research, such as the effects of culture, organisational change on the adoption of internet financial reporting and disclosure, the role of Investor Relations in the provision of internet financial reporting. A model of the factors affecting internet financial reporting and disclosure in Egypt was developed. The semi structured interviews were used to evaluate the effectiveness of voluntary internet financial reporting and disclosure as perceived by selected groups of users and to explore the role of auditors regarding internet financial reporting and disclosure and whether the audit function or procedures are affected.

## **4.5 Research Strategies**

### **4.5.1 Experiment**

In financial accounting, experiments can be used to test the disclosure credibility of an item or to test the presentation of financial information by using either archival or experimental data. Mercer (2004:186-187) pointed out that archival data is concerned



with historical data, such as company disclosures, or stock prices, while experimental data refers to data which is created by an experimenter.

Experimental methods enable the researcher to provide all participants with the same information, varying some aspect of the disclosure's credibility. These methods tend to be good at isolating causal influences, but are not as useful in estimating the magnitude of such influences. For example, when a participant rates disclosure credibility on a seven-point scale, the researcher cannot confidently ascertain how a one-point difference on this scale translates into a real-world setting. Moreover, it is very difficult to get an analyst or accountant to participate in an experiment. For those reasons, the researcher did not undertake an experiment.

#### **4.5.2 Case Study**

The objective of case study is to explore, investigate, describe and comprehend a participant's situation (Abdolmohammadi and McQuade, 2002:46). Case studies are quite commonly used in accounting research, especially in management accounting (Ryan et al., 2002:142). However, case studies are rarely used in financial reporting and disclosure studies, for the following reasons:

- 1) Case studies deal with a small number of organisations and accounting authors claim that the size of the sample is considered a problem in generalizing the findings (Ryan et al., 2002:148).
- 2) It is difficult to get access to organisations (Collis and Hussey, 2003:70) and obtain accounting information because of the issues of confidentiality (Ryan et al., 2002:159).

#### **4.5.3 Grounded Theory**

In this study, the researcher did not use the grounded theory because its purpose is to *“build theory that is faithful to and which illuminates the area under investigation”*

(Collis and Hussey, 2003:73). Strauss and Corbin (1998) as cited in Saunders et al. (2003:93) emphasized that grounded theory is an inductive approach, where theory emerges from the process of data collection and analysis. However, the researcher has identified a body of literature and theories to support her study, form and test hypotheses.

#### **4.5.4 Action Research**

Action research assumes that “*the social world is changing and the researcher and research itself are parts of this change*” (Collis and Hussey, 2003:66-67). The main aim of action research is to bring a change in the organisation and monitor the results. The researcher should be a part of the organisation and there should be a close cooperation between researcher and practitioners (Collis and Hussey, 2003:67). They should learn from each other and develop their competency. Action research is subject to the criticism that it looks closer to journalism and consultancy (Gummesson, 1991:102).

The researcher did not adopt action research in this study because the research was not focused upon a specific organisation to bring about change. In addition, issues of confidentiality prevented the access needed for action research in such an accounting context.

#### **4.5.5 Ethnography**

Ethnography refers to a social scientific description of people and their cultural basis (Vidich and Lyman, 2000:40). Tedlock (2000:455) states that ethnography is not related to the production of new information, but a method to transfer the information into written or visual form. As previously mentioned, accounting information is confidential; so the researcher could not be part of the organisation. Therefore, ethnography was not considered appropriate.

#### **4.5.6 Survey**

Survey is a methodology whereby a sample of subjects is drawn from a population and studied to make inferences about the population (Collis and Hussey, 2003:356). Survey research is a very popular and practical tool used in accounting studies (Abdolmohammadi and McQuade, 2002:120). It was used by Moyes et al (2001) to identify the relative importance of 38 factors in revising analysts' estimate of earnings in UK and US. A number of authors have carried out surveys to establish the extent of internet reporting by companies in different countries (Flynn and Gowthorpe, 1997; Lymer, 1997a; Lymer and Tallberg, 1997). A survey was carried out in Egypt to identify the extent of internet reporting and the characteristics of companies adopting internet reporting.

In the next section, disclosure indexes and interviews will be discussed in detail, as they are the main types of data collection to support the survey research strategy.

### **4.6 Data Collection Methods**

#### **4.6.1 Disclosure Index**

##### **4.6.1.1 Introduction**

A disclosure index can be employed in order to achieve the following objectives:

1. Identify the extent of internet corporate financial reporting.
2. Identify factors which influence Egyptian listed companies voluntarily to adopt internet based corporate financial reporting.

Wallace (1987:431) as cited in Cooke and Wallace (1989:51) pointed out that

*“Financial disclosure is an abstract concept that cannot be measured directly. It does not possess inherent characteristics by which one can determine its intensity or quality like the capacity of a car, it is therefore essential, whatever scale one adopts to quantify disclosure, to provide*

*evidence that the measures are valid and reliable by specifying the scoring procedure”.*

Therefore, it is important to find out how disclosure can be quantified. One way is to use a disclosure index approach to investigate whether some predetermined items are disclosed (Abd El Salam, 1999:131). Hossain et al. (1995:76) stated that a disclosure index can be used as a proxy to determine the extent of information disclosed by firms. Coy and Dixon (2004:79) defined disclosure indices as an applied method in accounting research, mainly used in studies of disclosures of annual reports to provide a single-figure summary indicator of the entire contents of companies' annual reports or of a specific group of items included in these reports; an examples include voluntary or environmental disclosures.

Disclosure index studies specify *ex ante* a list of items and search the text for their presence, ignoring sections of the text that do not relate to this list. Many internet corporate disclosure studies used a disclosure index (sometimes called disclosure checklist) to show the level of disclosure via the internet (Pirchegger and Wagenhofer, 1999; Xiao et al., 2004; Allam and Lymer, 2003; Kerckhoven, 2002; Davey and Homkajohn, 2004). Marston and Shrivies (1991:195) stated that a disclosure index can be used to show compliance with regulations, or to measure the level of voluntary disclosure. This was feasible to be done within an Egyptian context.

For the purpose of the study, a disclosure index was used to determine the relationship between the extent of internet corporate disclosure and the companies' characteristics.

#### **4.6.1.2 Reliability and Validity of Index Score**

Collis and Hussey (2003:58-59) explained the concepts of reliability and validity. Reliability is concerned with the credibility of the findings of the research in so far as

the research findings can be repeated, whereas validity is the extent to which the test measures what the researcher thinks or intends to be measuring. In relation to this study, no particular disclosure index is predominant, because most researchers use indices which meet their own perceived requirements (Marston and Shrives, 1991:198). The mixed results of prior disclosure index studies may be due to differences in socio-economic and political environments between countries, organisational structures, different research settings, and differences in index construction (Ahmed and Courtis, 1999:36). The researcher contends that disclosure indices used are different because they must take into consideration that different countries have different cultures and environments which affect their disclosure. In addition, scoring an index, giving weight to various items and treatment of non-disclosure items are major issues related to the reliability of the index. Cooke and Wallace (1989) consider the problems of devising an index appropriate for cross national studies and agree that it is difficult to obtain an internationally agreed perception of disclosure items.

Marston & Shrives (1991:197) explained that there are three problems related to awarding index scores to companies which would affect the reliability of the disclosure index. These problems could be summarized in the following points

- 1) the problem of giving each item in the checklist a partial or different score.

Marston & Shrives (1991:197) explained that Wiseman's (1982) scoring system was subjective because he assigned a score of three to items disclosed in quantitative terms, two to items presented in non- quantitative terms and one to items mentioned only in general terms or comments and it is not necessarily the case that a number is worth three times a comment.

- 2) the problem of penalising the companies for inapplicable items as non-disclosed items, and

- 3) the problem of weighing each item in the checklist according to its importance.

To alleviate these problems, the following steps were undertaken:

- 1) The dichotomous approach has been employed to code whether an item was disclosed or not, so as to avoid subjectivity in assessing whether partial disclosure occurred.
- 2) In calculating the index score for a specific company, the actual score of disclosure obtained by a company is divided by the maximum score possible for that company (Marston and Shrivess, 1991:204). This would eliminate the problem of penalising the companies for inapplicable items as non-disclosed items.
- 3) An unweighted disclosure index was used, because the weighted index usually reflects the importance of each item as determined by selected users of financial reporting by asking them to indicate the degree of importance they regard each item according to a given scoring scale. This process is often a subjective process as different users give different weights to different items, and usually it reflects the perspectives of specific groups of users not the entire population (Cooke, 1989c).

In this research, the validity of the disclosure index implies the ability to measure various variables and to achieve the research goals. Marston and Shrivess (1991:198) consider the index to be valid if it expresses what the researcher intended.

Four types of validity are applicable to this study (Neuman, 2006:192-193):

1- Face validity: considers whether the disclosure index appears to measure the extent of internet financial disclosure for Egyptian companies to experts. The disclosure index

in this study was reviewed academically and professionally by the researcher's first supervisor and two Egyptian accountants who work for one of the Big Four audit firms.

2- Content validity: considers whether the disclosure index capture all the aspects of disclosure in this study. This study depended on the disclosure index of Xiao et al. (2004) which was amended to suit the Egyptian companies. All the websites of the Egyptian companies were checked, financial information or items relevant to this study which were available on the websites of the Egyptian companies and not included in Xiao et al.'s index were added to the index and items which were not available on the websites were removed from the index. Therefore the disclosure index in this study captures all the aspects of internet disclosure for the Egyptian companies.

3- Criterion validity: considers whether the disclosure index used some standards or criterion to measure the disclosure extent accurately. This kind of validity includes concurrent and predictive validity:

A- Concurrent validity: considers whether the disclosure index agrees with pre-existing indices. The correlation with firm characteristics was already tested by previous studies. The disclosure index of Xiao et al. (2004) was used as a base for this research. It was amended to adopt the Egyptian environment. The disclosure index in this study included 76% of the items included Xiao et al's index.

B- Predictive validity: considers whether the disclosure index can predict future aspects related to disclosure issues in Egypt which means that the disclosure index can be utilized by future studies in order to investigate the development of internet financial reporting and disclosure in Egypt and whether it is affected by other companies'

characteristics. In addition, this model is useful in predicting the level of internet financial disclosure and reporting if a new company joins the most active 100 Egyptian companies.

4- Construct validity: considers whether the disclosure index in this study measures what it purports to measure. The disclosure index in this study contains 2 groups of items: 59 content items and 31 presentation format items. Botosan (1997:335) used Cronbach's Coefficient alpha, a measure of internal consistency to prove the validity of her disclosure index. In this study, Tables 5.15 and 5.16 show the results of Cronbach's alpha for all the dependent variables of the content and presentation format items. A variable is considered as reliable if the Cronbach alpha is both positive and greater than 0.7 (Pallant, 2001:83).

#### **4.6.1.3 Construction of a Disclosure Index**

The first step in the construction of a disclosure index is the determination of items to be included. Since the number of items to be selected can be very large, some criteria are needed for making the choice (Marston and Shrives, 1991:201).

From previous research, four approaches for constructing or selecting the disclosure index can be found:

1. Focus on the needs of certain user group: Marston and Shrives (1991:201) explained that different users view different items as important, therefore the index can be constructed to serve a certain group. For example, financial analysts will be interested more in information related to financial performance and earnings, while employees are interested in employment conditions and remuneration. Wallace (1988:353-355) stated that "*the choice of the items to be investigated is informed by their perceived relevance to the relevant user-group*" and in order to examine the relevance of disclosure, a perception survey may be conducted through questionnaire to determine the level of



importance of each item in the index. Chow and Wong-Boren (1987:535-536) generated a preliminary list of financial items that firms may disclose. This list was reviewed and amended by the credit department heads of eight banks, then it was distributed to loan officers in sixteen banks, who were asked to indicate the importance of each item in the list.

On the other hand, some researchers have constructed a general purpose disclosure index not directed to a specific user group (Hossain et al., 1994; Abd El Salam, 1999; Haniffa and Cooke, 2002). Most indices developed for internet corporate reporting studies are not directed to a specific group.

2. Use an existing index: Marston and Shrivies (1991:203) stated that to use an existing disclosure index has the benefit of being capable of comparing the results with previous studies. They gave an example that Marston (1986) used Barrett's (1976) index in carrying out a comparison of financial disclosure in the UK and India.

3. Construct a new index: Abd El Salam (1999:133-135) decided not to use an existing disclosure index because most of the disclosure indices tended to ignore many items which were required by the Egyptian regulations and International Accounting Standards at that time. Therefore, she constructed the disclosure index based on the requirements of Companies Act, Capital Market Law and applicable International Accounting Standards in Egypt.

4. Modify an existing index to meet the needs and requirements of the study: Hossain et al. (1995:76) constructed an index based on previous studies. They amended it by referring to the New Zealand accounting standards to derive an index of discretionary

items, then they held a discussion with three practising accountants to examine the relevance and extensiveness of the index

The researcher applied the fourth approach: Xiao et al.'s (2004) disclosure index was used as a base for this research. The index of Xiao et al. (2004:203) consists of 82 items based on the framework of web-based disclosure suggested by Debreceeny et al. (2001), Deller et al. (1999), Pirchegger and Wagenhofer (1999), and Marston and Polei (2004). The list consists of 58 items of disclosure content and 24 items of presentation format, which is related to how information is presented and how easy it is to access and use. This disclosure list was modified to adapt to the Egyptian environment. During the analysis of the websites of the Egyptian companies, if any item was found in the websites and not included in the disclosure list, it was added to the list with an explanation of the reason for its being added, and if any item was included in the list and not found in any website, it was omitted from the list with justification of its omission.

Advantages of using Xiao et al.'s (2004) disclosure index are:

1. It is comprehensive because it is based on four internet corporate disclosure studies which are themselves based on other studies.
2. It includes not only items to be disclosed but the presentation format as well.
3. The results of this disclosure index can be compared to other studies.
4. This disclosure index has not been extensively criticized by other researchers.

Table 5.5 compares the disclosure index items of this study and the disclosure index items of Xiao et al. (2004) study and Section 5.3 "The Disclosure Index" explains how

the disclosure index of Xiao et al. (2004) was modified to meet the Egyptian environment.

#### **4.6.1.4 Weighting of Items**

After constructing the disclosure index, a scoring sheet should be developed to evaluate the extent of voluntary disclosure (Hossain et al., 1995:77). Two approaches can be used; the weighted versus the unweighted approaches. Under the unweighted index, dichotomous scores are used, where 0 is given if an item is not disclosed and 1 is given if the item is disclosed (Cooke, 1992:233). The unweighted disclosure index assumes that each item of disclosure is equally important (Hossain et al., 1995:77). The weighted index, however, is based on the ranking a user of the annual report attaches to the information disclosure item (Naser and Nuseibeh, 2003:46). Previous studies have used both approaches. Malone et al. (1993) used the weighted approach, while Cooke (1989c; 1992), Ahmed and Nicholls (1994), Raffournier (1995), Hossain et al.(1995), Owusu-Ansah (1998), Abd El Salam (1999), Ferguson et al. (2002), Haniffa and Cooke (2002) used the unweighted approach. Most internet corporate reporting studies which employed disclosure indices used the unweighted approach, for example, Bonson and Escobar (2002:35), Pirchegger and Wagenhofer (1999), Ettredge et al. (2001), Ismail (2002), Kerckhoven (2002), whereas Xiao et al. (2004) used both approaches.

The following tables shows the previous studies and methods employed.

**Table 4.2 Weighted and Unweighted Approaches in Previous Disclosure Studies**

<b>Variables</b>	<b>Previous Studies of Hard Copy Corporate Disclosure</b>	<b>Previous Studies of Internet Corporate Disclosure</b>
Weighted Approach	Malone et al. (1993)	Xiao et al. (2004), Bollen et al. (2006)
Unweighted Approach	Cooke (1989c,1992), Ahmed and Nicholls (1994), Raffournier (1995), Hossain et al.(1995), Owusu-Ansah (1998), Abd El Salam (1999), Ferguson et al. (2002), Haniffa and Cooke (2002)	Bonson and Escobar, (2002), Pirchegger and Wagenhofer (1999), Ettredge et al. (2001), Ismail (2002), Kerckhoven (2002),
Weighted and Unweighted Approaches	Chow and Wong-Boren, (1987), Robbins and Austin (1986), Naser and Nuseibeh (2003)	Xiao et al. (2004)

Under a weighted disclosure index, weights are either given “*subjectively by the researcher(s) alone or by the researcher(s) using weights elicited from surveys of users’ perceptions*” (Wallace et al., 1994:42). For example Malone et al. (1993:258) constructed a disclosure index containing 129 items. They sent a questionnaire to financial analysts to assess the importance of each item. They used a scale of 0-2; 0 means the item is not important, 1 means the item is important while 2 means the item is very important.

Xiao et al. (2004:204,218) used an unweighted score and each item was assigned a score of 1 (for present) and 0 (for absent). They repeated the analysis using a weighted approach, assuming that content items are, alternately, one-and-a-half and two times

more important than presentation items. However, there was no significant change to the results. Then they did the same with current versus past years' information; since current year information is more important than the past years', they halved the weights given for past year information and no significant differences in the results were produced.

Naser and Nuseibeh (2003:47) used two indices; as for the weighted disclosure index, the weights were based on a questionnaire survey mailed to a sample of annual reports users. The sample included individual investors, institutional investors, academics, auditors, government officers, bank credit officers, and financial analysts. The disclosure index was then weighted by the mean and the median of the users' ranking of the importance of each of the items that made up the index. Due to variations in the importance that various individual user groups give to different disclosure items, the result of this study are in conflict with the results reported by Chow and Wong-Boren (1987) and Robbins and Austin (1986), who obtained similar results under the unweighted and weighted indexes.

Ferguson et al. (2002:135) argued that the unweighted disclosure index eliminates the subjectivity innate in evaluating the relative importance of each disclosure item across all potential user groups (e.g. investors, regulators, creditors, etc); therefore, an unweighted index is more appropriate when the research focus is on all, rather than a specific user group.

In this study, the unweighted index approach was used for the following reasons:

1. Since this study does not focus on a single user group, an unweighted index is considered to be appropriate. Bonson and Escobar (2002:35) stated that the use of a

weighted index “*demands the determination of the relative importance of items to different users. Therefore, to avoid the arbitrariness inherent to this process*” an unweighted index should be used. Cooke (1989b:182) considers that unweighted indices are suitable as a research instrument to be used in disclosure studies when the research is focused on all users of corporate annual reports rather than the requirements of any specific user group.

2. Previous studies employing both weighted and unweighted indices had substantially similar results (Chow and Wong-Boren, 1987; Robbins and Austin, 1986; Xiao et al., 2004).
3. Assigning different weights for different items in the list may be misleading because the relative importance of each item varies from company to company, industry to industry and time to time (Abd El Salam, 1999:152).

This research applied the “unweighted dichotomous disclosure index”. Therefore if a company disclosed an item of information which is included in the index on the internet, it received a score of one and if the company did not disclose an item, it took a score of zero. Such an approach was adopted by Cooke (1992:233).

The disclosure index for each company was calculated by dividing the actual scores awarded by the maximum possible scores appropriate for the company. Therefore the disclosure index ( $I_j$ ) for each firm was calculated as follows:

$$I_j = \frac{\sum_{i=1}^{n_j} X_{ij}}{n_j}$$

Where  $n_j$  = number of relative items applicable to company  $j$

$X_{ij} = 1$  if the item is disclosed

$= 0$  if the item is not disclosed

So that  $0 \leq I_j \leq 1$

This model assumes that each item of the disclosure index is equally important and that the study does not focus on a certain user group but is directed to all users of financial reports.

In calculating the index score for a specific company, Marston and Shrikes (1991:204-205) argued that there would be a problem because certain items of disclosure may not be applicable to a specific company; however, this problem was alleviated in the above equation because the actual score of disclosure obtained by a company is divided by the maximum score possible for that company. The whole website was read to make a suitable judgement as to whether an item was not disclosed or was irrelevant to that company.

#### **4.6.1.5 The Independent Variables Hypotheses**

To achieve the first two objectives of this research, namely to identify factors that influence Egyptian listed companies to voluntarily adopt internet based corporate (financial) reporting and to identify the extent of internet corporate financial reporting, it is important to measure the explanatory variables and to determine whether there are any relationships between these variables and the extent of internet corporate disclosure. According to the theories which were discussed in Chapter Two, the firm's specific characteristics may affect the level of internet corporate disclosure. The next section will show the hypotheses which were tested for each variable.

##### **1. Firm Size**

H1: There is a positive relationship between the amount of disclosure of corporate information via the internet and the size of Egyptian companies.

This hypothesis can be divided into two sub-hypotheses:

H1a: There is a positive relationship between the amount of disclosure of corporate information via the internet and the total assets of Egyptian companies.

H1b: There is a positive relationship between the amount of disclosure of corporate information via the internet and the total sales of Egyptian companies.

## **2. Profitability**

H2: There is a positive relationship between the amount of disclosure of corporate information via the internet and the profitability of Egyptian companies.

This hypothesis can be divided into two sub-hypotheses;

H2a: There is a positive relationship between the amount of disclosure of corporate information via the internet and the return on assets of Egyptian companies.

H2b: There is a positive relationship between the amount of disclosure of corporate information via the internet and the return on equity of Egyptian companies.

## **3. Leverage**

H3: There is a positive relationship between the amount of disclosure of corporate information via the internet and the leverage of Egyptian companies.

This hypothesis can be divided into two sub-hypotheses:

H3a: There is a positive relationship between the amount of disclosure of corporate information via the internet and the ratio of total debt/total assets.

H3b: There is a positive relationship between the amount of disclosure of corporate information via the internet and the ratio of long term debt/owners' equity.

## **4. Liquidity**

H4: There is a positive relationship between the amount of disclosure of corporate information via the internet and the current ratio of Egyptian companies.



## **5. Industrial Sector**

H5: There is an association between the industry membership of a company and financial disclosure on the internet.

## **6. Size of Audit Firm**

H6: The extent of internet corporate disclosure is greater among Egyptian companies audited by the big four international audit firms.

## **7. Foreign Listing**

H7: The extent of internet corporate disclosure is greater among Egyptian companies listed in foreign stock exchanges.

The following table shows the proxies used for independent variables and the expected signs of the association with the extent of voluntary internet corporate reporting and disclosure.

**Table 4.3 Independent Variables Proxies**

<b>Hypothesis</b>	<b>Expected sign</b>	<b>Proxies</b>
Firm size	+	H1a : Total assets H1b : Total sales
Profitability	+	H2a : Return on assets (Net profit / Total assets) H2b : Return on equity (Net profit / Equity)
Leverage	+	H3a : Total debt / Total assets H3b : Long term debt / Owners' equity
Liquidity	+	H4 : Current ratio (Current asset / current liability)
Industrial Sector	+ or -	1= Construction 2= Chemicals 3= Communications 4= Financial Services 5= Food & Beverage 6= Entertainment 7= Textile & Clothing 8= Engineering & Mining 9= Utilities
Size of audit firm	+	H6: Dummy variable (1) for four big international audit firms in Egypt and (0) for other firms.
Foreign Listing	+	H7: Dummy variable (1) for firms with foreign listing and (0) for otherwise.

**4.6.1.6 Sample Size**

A pilot study was conducted, searching for the websites of all 767 companies registered in Cairo and Alexandria Stock Exchange. A list of the names of the 100 most actively traded companies was obtained from the Egyptian Stock Exchange as well. The search

revealed that companies which had websites were included among the most actively traded 100 companies. Only active firms are likely to have websites and disclose financial information on the websites. Therefore it was decided to focus upon the most active companies traded in the Egyptian Stock Exchange. They include the most active companies in all sectors. Therefore, this study has focused upon the most active 100 companies listed on the Egyptian Stock Market in terms of number of transactions during the period January to June 2005. Four approaches were used to determine the internet presence:

- 1) Searching the internet using a certain search engine such as The MetaCrawler search engine was used, as it includes Google, Yahoo Search, MSN Search, Ask Jeeves, About, MIVA, LookSmart and others.
- 2) Searching the website of “Misr for Clearing, Settlement and Central Depository”<sup>\*</sup> as it includes the addresses of web pages of some Egyptian listed companies
- 3) Finding the website through publications issued by Egypt for Information and Dissemination (EGID) where companies’ name, telephone number and sometimes website address are included.
- 4) Contacting companies by phone to find out whether they have websites.

#### **4.6.1.7 Time Horizons**

The researcher carried out cross section analysis of some annual reports of different companies published via the internet. Longitudinal and trend analysis were not used because internet financial reports are a relatively recent phenomenon in Egypt.

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<sup>\*</sup> Misr for Clearing, Settlement and Central Depository Company was established within the framework of the planned program approved by the Capital Market Authority to develop the mechanism of stock market in accordance with the international standards in this field (<http://www.mcsd.com.eg/mcdr/>).

## 4.6.2 Questionnaires

Questionnaires within the interviews were used to achieve the second, third and fourth objectives of this study, which is to evaluate the effectiveness of voluntary internet financial reporting and disclosure.

The main research questions are:

- What is the extent of internet financial reporting of the Egyptian companies?
- What are the factors which influence the Egyptian listed companies voluntarily to adopt internet financial reporting?
- What are the perceptions of selected groups of users regarding the effectiveness of voluntary internet financial reporting and disclosure?
- What are the roles of Investor Relations officers and auditors regarding internet financial reporting and disclosure and are their functions or procedures affected?

Questionnaires are used to obtain data that cannot be easily observed or are not already available in written or electronic form (Remenyi et al., 1998:150). Many previous studies have used questionnaires for investigating the usefulness of the information in corporate reports and users' perception. Examples include Naser and Nuseibeh (2003) and Bartlett and Chandler (1997). Saunders et al (2003:282) indicate that questionnaire design differs according to its administration and the amount of contact the researcher has with the respondents. Therefore, there are two types of questionnaire design: self-administered (self completion) and interviewer administered questionnaire.

Self administered questionnaires are usually completed by respondents. They can be delivered to respondents electronically by use of e-mails, by post or through hand

delivery and collection (Bryman and Bell, 2003:141). Electronic or online questionnaire is characterized by its relatively low cost, ease of administration, elimination of interview bias, fast data collection and analysis. However, it has some significant disadvantages; the sample is restricted only to users of networks using the e-mail or internet, the designing and programming of the questionnaire is complex and is characterized by low response rate.

Mail questionnaire allows large samples with wide coverage and relatively low cost, but at the same time it has low response rates and the researcher can not be sure who has responded. It requires a highly structured questionnaire with predominantly closed-ended questions.

Interviewer-administered questionnaires are recorded by the researcher on the basis of each respondent's answer, either by using the telephone or having a face-to-face interview. Using the telephone has some advantages as it is cheaper and quicker to administer. Moreover, the interviewer can have less influence on the respondents because s/he is not physically present. However, it has some limitations, summarized in the inability of the researcher to observe the respondent and it is difficult to ascertain by telephone whether the correct person is replying (Bryman and Bell, 2003:120-121).

To have a face-to-face interview with the respondents has the advantage of clarifying any doubts that the respondents might have concerning any questions. It gives the researcher the opportunity to introduce the research topic and to encourage the respondents to answer the questionnaire. It enables the researcher to ensure that the right respondent will complete the questionnaire. It has a high response rate compared to other methods. However, it has a limitation of being difficult to get access to the right

respondents, the unwillingness of some organisations to allow the use of work hours for data collection and the time and cost incurred by the researcher.

#### **4.6.3 Secondary data (Records)**

The researcher will depend on secondary data such as annual reports and information included on the websites of Egyptian companies.

#### **4.6.4 Observation**

Observation is not viewed as a very important tool of data collection in quantitative research because it is too time consuming to conduct a large sample. In addition, different observers will record different observations (Silverman, 2000:89).

#### **4.6.5 Interviews**

Interviews involve the researcher “speaking” to the respondent directly, asking questions and recording answers (Punch, 1998:175). Punch (1998:176) explained that there are many types of interviews which depend on the type of research process and questions. For example, types of interviews used in qualitative research are different than those used in quantitative research; qualitative researchers rarely use a structured interview approach, which is considered typical of quantitative research (Bryman and Burgess, 1999:XVIII)

##### **4.6.5.1 Types of Interviews**

Interviews can have different classification. However, in general, they vary from being tightly structured and standardized to being unstructured and open ended (Punch, 1998:175-176). Therefore, they can be classified into structured, semi structured and unstructured interviews.

#### **4.6.5.1.1 Structured Interviews**

The interviewer uses a predetermined and standardized set of questions which are asked in exactly the same way (Punch, 1998:176). Saunders et al. (2003:246) added that the interviewer has pre coded answers; s/he reads the question and then records the response on a standardized schedule. There are many problems associated with structured interviews. They include the effect and influence the researcher (interviewer) has on respondents (Bryman and Bell, 2003:115) and the constraints this approach imposes on respondents, as it does not allow the researcher to collect further information which may be helpful in the research process (Brewerton and Millward, 2001:70).

#### **4.6.5.1.2 Semi-structured Interviews**

Saunders et al. (2003:246-247) explained that in semi-structured interviews, the researcher prepares a list of questions and themes to be covered in the interview. These questions and themes may vary from one interview to another. Some questions can be omitted in certain interviews if the interviewer consider them irrelevant; additional questions can be added if they are required during the interview to clarify a certain point or to add something new which will benefit the research. The order of the questions varies depending on the flow of conversation. Brewerton and Millward (2001:70) argued that this type of interview is generally easy to analyse, quantify and compare, allowing respondents to explain their answers and to provide more in-depth information where necessary. However there are some disadvantages summarized in the temptation to spend too much time on peripheral themes or the danger of losing control to the respondent or the reduction in reliability when using non-standardized approaches to interview each respondent.

#### **4.6.5.1.3 Unstructured Interviews**

Saunders et al. (2003:246-347) states that unstructured interviews are informal; the interviewees are given the opportunity to talk freely about events and beliefs related to a

certain topic. The researcher does not prepare a list of questions but should have a clear idea about the aspects that need to be explored. The researcher conducts these interviews without following an interview sequence. Questions and their order are not fixed and are allowed to evolve during the interview. This enables the researcher to elicit information by engaging the interviewee in a free and open discussion on the topic of interest (Brewerton and Millward, 2001:70). However, data obtained through unstructured interviews are difficult to compare and to analyse, but at the same time they have rich and salient meaning (Brewerton and Millward, 2001:70).

#### **4.6.5.2 Using Semi Structured Interviews as a Preferred Approach**

This research study used interviews, rather than a questionnaire, because the researcher considered that the interview approach would be more effective. Many people do not appreciate the importance of scientific research and tend not to cooperate with researchers and do not answer questionnaires honestly. Due to work pressure, ignorance, fear and misconceptions about research studies, they ignore the questionnaire or complete it unwillingly or just mark answers without even reading and/or understanding the questions. In addition to that, many participants prefer to be interviewed instead of filling a questionnaire (Saunders et al., 2003:250). Therefore, using interviews was considered appropriate as it was thought respondents would pay greater attention as a result of face to face, direct contact.

Regarding the type of interview to be used, Saunders et al. (2003:248) explained that in exploratory studies, in depth (unstructured) interviews are more frequently used to find out what is happening and search for new insight, while in descriptive studies, structured interviews are used more to identify general patterns and in explanatory studies, semi structured interviews are frequently used in order to understand the relationships between variables. Therefore, semi structured interviews were used in this



study to explore and explain ideas which emerged from the use of quantitative methods, and to validate their findings.

Using semi-structured interviews in this research provided opportunities for interviewees to present fairly their perceptions. Each interviewee was able to talk from his/her own perspective and job experience; therefore the questions used were not the same for all groups. For example, the researcher could not ask the auditors about whether analysts and investors depend on the financial information published on the Egyptian companies' websites. Each group of interviewees were asked questions related to their occupation and how they regarded internet reporting and disclosure and how to improve it. Interviews allowed the researcher to ask complex questions and ask related follow up questions to discover additional issues not covered by using an initial questionnaire. New themes were discovered during these interviews which were not taken into account before the interviews, such as the Investor Relations concept, demographic characteristics, and organisational structure.

#### **4.6.5.3 Construction of the Interview Schedule**

It was decided to use semi-structured interviews consisting of 17 main questions to cover the research objectives. In constructing the schedule, the advice of Collis and Hussey (2003:178), as to the general rules that should be followed, were borne in mind. These are keeping the questions simple, not using unnecessary jargon or specialist language, phrasing questions so that the meaning is clear, not asking negative questions because they are easy to misinterpret, asking one question at a time, including questions that serve as cross checks on the answers to other questions, and avoiding leading or value laden questions.

In order to achieve the second objective of the research, which is to identify the factors which influence Egyptian listed companies to voluntarily adopt internet financial reporting, the following questions were asked:

- Why do some listed Egyptian companies disclose their financial information on their websites while others do not?

This question was used to test the innovation diffusion theory and institutional change theories which include coercive, mimetic and normative isomorphism. However, the researcher could not ask the participants, “What do you think about how the innovation diffusion and institutional change theories affect the adoption of internet financial reporting and disclosure in Egyptian companies?” because these terms are complicated and the participants would not be likely to comprehend them.

- Which of the following company characteristics affect the amount of internet disclosure? Could you please explain why?
  1. Size
  2. Profitability
  3. Leverage
  4. Liquidity
  5. Industry membership
  6. Being audited by big international audit firms
  7. Being listed in foreign stock exchange

This question was used to test the economic-based theories (Agency- Capital need and Signalling theories)

- Do you think that companies within the same industrial sector imitate each other regarding disclosure of their financial information on their websites?

This question was used to test mimetic isomorphism. However, the researcher could not ask the participants “Do you think companies apply mimetic isomorphism?” because this terminology is difficult and the participants would not understand it.

In order to achieve the third objective of the research, which is to ascertain the perceptions of different stakeholders regarding internet financial reporting, the following questions were asked:

- Do analysts and investors depend on the financial information published on the companies’ website when analysing the companies’ financial position?
- What do you think is the most important financial information that should be included on the website of the company?
- Do you think internet financial reporting should complement printed material, substitute for printed material, or include new offering and tools?
- Do you think that company website should include summarized financial statements or full financial statements? Give reasons.
- Who - from your point of view - should be responsible for internet financial reporting and disclosure in the companies and decide upon its contents?
- What do you think is the best language (PDF, HTML, EXCEL, and XBRL) that should be used to present the financial information on the internet? Why is it better?
- What do you think about providing links to the pages of financial analysts analysing all the financials of the company on the company’s website?

- How can internet financial reporting and disclosure in Egypt be developed and improved?

In order to achieve the fourth objective of the research, which is to find out how the Investor Relations and audit function or procedures are affected by internet financial reporting, the following questions were derived from Chapter Three which deals with the role of Investor Relations and audit in the provision of internet financial reporting and disclosure. These questions examine normative isomorphism and how professional practices and pronouncements affect internet financial reporting and disclosure in Egypt.

- What do you think is the responsibility of Investor Relations regarding internet financial reporting?
- What do you think is the responsibility of the external auditor regarding internet financial reporting?
- What do you think is the responsibility of the internal auditor regarding internet financial reporting?
- Should the wording of the audit report on the internet be modified and how?
- Should the wording of the engagement letter be modified and how?
- What do you think about continuous audit?
- What about e-signature?

#### **4.6.5.4 Quality (Reliability and Validity) of Qualitative Data**

Hammersley (1990:57) stated that validity means “ truth: interpreted as the extent to which an account accurately represents the social phenomena to which it refers”.

Validity is regarded as a “strength of qualitative research”, as it is used to determine if the findings are accurate from the point of view of the participants, the researcher and

the reader of an account (Creswell, 2003:195-196). Creswell (2003:196) suggested eight strategies to check the accuracy of the findings, from which researchers can choose one or two. These strategies are:

1. Triangulate different data sources and use it to build justification for themes
2. Use member-checking to ensure the accuracy of the findings. This is done by taking the findings back to some participants or e-mailing them to the participants to make sure that they are accurate and to see whether they conform to their own experience.
3. Presenting negative information, even if they oppose the theme because life is composed of different views that do not always come together and this adds to credibility of the theme.
4. Usage of thick and rich description of the findings to take readers to the setting and make them share the researcher experience.
5. State and explain the bias the researcher might impose on the study.
6. Spend prolonged time in the field so that the researcher increases her understanding of the phenomenon under study.
7. Use peer debriefing by locating a person to review and ask questions about the qualitative study
8. Use of external auditor to review the entire research and provide an assessment through out the process of the research or at the end of it.

The researcher chose to use the first three strategies; she used qualitative techniques to explain the outcomes of the quantitative one, the findings obtained from quantitative and qualitative methods are compared, she e-mailed the findings to some participants to ensure their accuracy and she presented positive and negative information because presenting contrary information adds to the credibility of the research.

In addition, the researcher during the interviews repeated what the participants were trying to say, to make sure that the message was received correctly. During transcription, the researcher discovered that some answers were vague and not clear, so she telephoned the participants to ask them to explain what they meant.

Creswell (2003:195) indicated that for qualitative research, reliability can be used to test consistent patterns of theme development among different investigators on a team. However, overall, reliability and generalizability play a minor role in qualitative research. This study was conducted by one investigator only.

Similarly, Mason (1996:145) argued that reliability measures are more applicable to quantitative research, as they measure the consistency with which the same methods of data collection produce the same results. The logic behind reliability is if the same phenomenon is measured more than once, using the same instrument, the same results should be obtained. Therefore, qualitative researchers will not be able to perform simple reliability tests, because the data generated will not have the form of clearly standardized set of measurements. As a result, Mason considers that reliability in qualitative research could be achieved by ensuring and demonstrating to others that the generation and analysis of data are not only appropriate to the research questions and objectives but also they are thorough, careful, honest and accurate. Researchers should demonstrate that they are not careless in their recording and analysis of data and that the data was not invented or misrepresented.

#### **4.6.5.5 Sampling Size of Interviews**

Patton (1990:184-185) explained that in qualitative research, there are no specific/absolute rules for sample size. The size of the sample depends on the type of information researchers want. If researchers require in depth information, therefore, a

sample size with a small number of participants would be valuable, especially if the participants are information rich and have good knowledge and experience in their fields. However, if researchers require less depth of information because they want to explore a phenomenon and try to understand variations or document diversity, they will require a large number of participants. The validity, importance and insights generated from qualitative techniques have to do with the information richness of the participants and the analytical capabilities of researchers, rather than with sample size.

To answer the research questions and to meet research objectives for this study, the researcher used non-probability sampling techniques based on the researcher's judgement (Saunders et al., 2003:170). The researcher used purposive as well as snowballing sample techniques. Saunders (2003:175) emphasized that purposive sampling allows the usage of the researcher's judgement to select the participants who will best enable the researcher to meet the research objective and answer its question. It is called judgemental sampling as well.

The researcher followed what Lincoln & Guba (1985:202) suggested as cited in Patton (1990:185):

*“In purposeful sampling the size of the sample is determined by informational considerations. If the purpose is to maximize information, the sampling is terminated when no new information is forthcoming from new sampled units; thus redundancy is the primary criterion”*

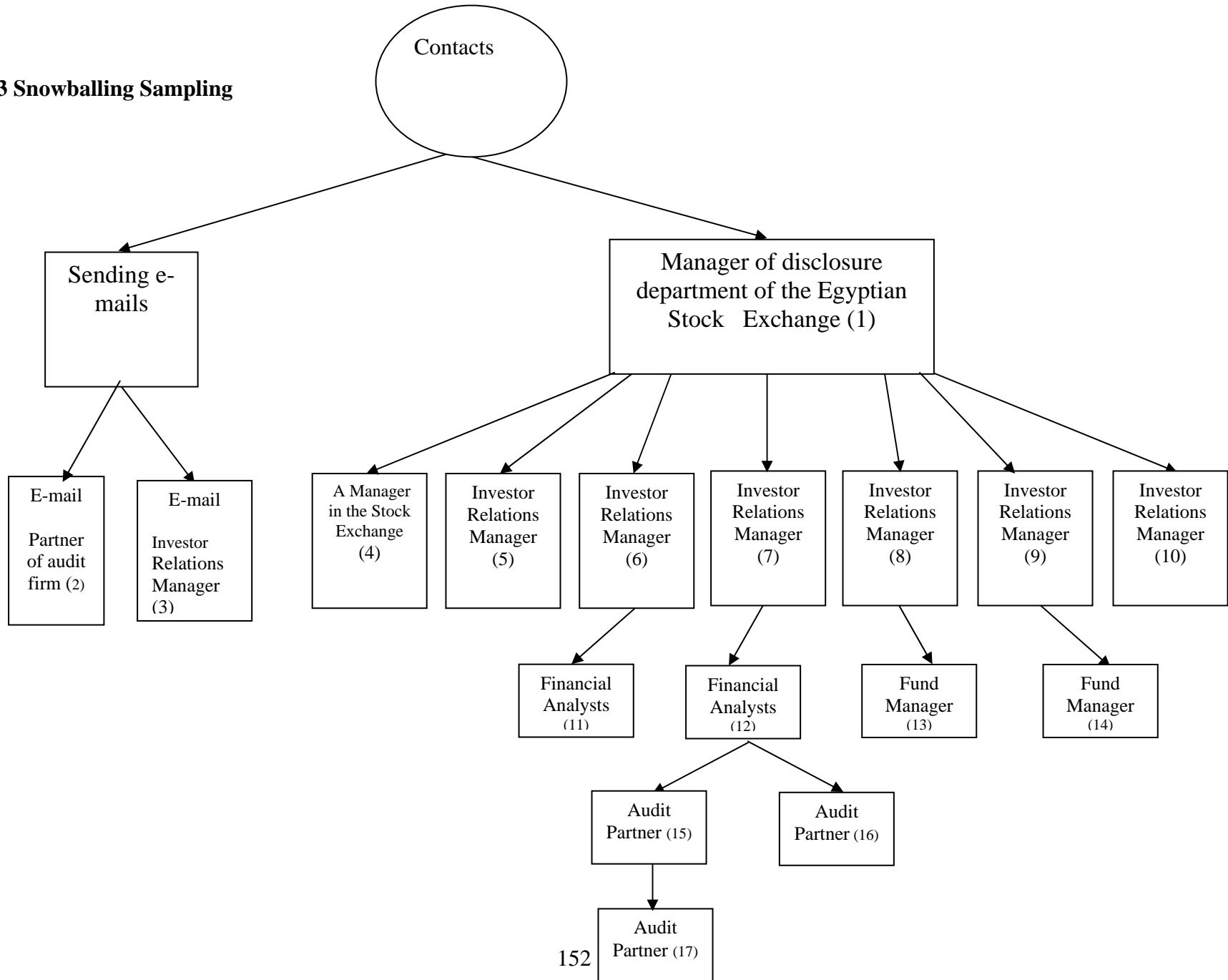
The researcher interviewed some participants, and when the information received from participants was repeated, the researcher shifted to another group of participants. For example, the researcher contacted the Investor Relations officers of companies with very good online financial reporting and disclosure. The information obtained from the first two interviews was new, but the information gathered from the last two interviews

was repeated, so the researcher shifted to the other group, who were Investor Relations officers with no internet financial reporting and disclosure.

The researcher also used a snowball sampling technique. Saunders et al (2003:176) explained that the researcher just makes contact with one or two cases and asks them to identify further cases. The researcher just made the initial contact and then she asked the participant to identify others. Only two cases (audit partner of one of the big four audit firms and an Investor Relations officer) were contacted by e-mail. The researcher contacted the manager of the disclosure department of the Egyptian Stock Market. This manager helped the researcher to contact the Investor Relations of Egyptian companies and another manager in the Egyptian Stock Exchange. Some Investor Relations managers helped the researcher to reach financial analysts and fund managers. One of the financial analysts assisted the researcher to reach two audit partners from two different big audit firms, and then one of these audit partners helped the researcher to reach another audit partner in one of the big four audit firms.



Figure 4.3 Snowballing Sampling



The researcher conducted 17 interviews:

- Four interviews with Investor Relations officers from four listed companies having very good internet financial reporting and disclosure on their company websites. The researcher knew that these companies had good internet financial reporting and disclosure from the disclosure index, where they had high scores and from interviewing the manager of the disclosure department of the Egyptian Stock Exchange.
- Three interviews with Investor Relations Officers from three listed companies which did not have internet financial reporting and disclosure, although these companies were big companies and they were among the 100 active traded companies in Egypt. One of them did not have a website.
- Four interviews with four audit partners of big international audit firms.
- Two financial analysts.
- Two fund managers.
- Two key personnel from the Egyptian Stock Exchange.

The researcher needed to interview people with diverse and good knowledge about the research questions, so relying on one group was not considered to be sufficient.

The researcher chose to interview seven Investor Relations Officers from the 100 most actively traded companies in Egypt because they are responsible for communicating financial information of their companies to different stakeholders and to the Egyptian Stock Exchange. Article 15 of the Securities Listing & De-listing Rules of Cairo & Alexandria Stock Exchanges says that listed companies should have an Investor Relations Officer. The company shall appoint an Investor Relations Officer (IRO) who

will be in charge of contacting the Stock Exchange and answering shareholders' and investors' inquiries.

Four partners of the big four international audit firms (KPMG, PricewaterhouseCoopers, Deloitte and Touche, and Ernst and Young) were interviewed as these firms tend to audit large companies and know these firms' policies regarding internet financial disclosure and what are the responsibilities of external auditors towards internet financial reporting. The researcher did not interview any partners from local Egyptian companies because most of the 100 most actively traded companies in Egypt are audited by these big international firms. Partners in international firms have good knowledge and experience and all of them are CPAs (Certified Public Accountants) and have extensive training. Egypt is a developing country and accountants in local firms have limited experience and knowledge.

Analysts and fund managers were interviewed to find out their perception, regarding internet financial reporting, whether analysts depend on the websites of the companies to obtain financial information and whether the financial information supplied by the websites is sufficient and secure. Analysts are sophisticated users of financial information. They act as intermediaries who receive and process financial information, in order to advise individual investors and investor institutions. They are among the primary users of financial accounting information; and have the necessary expertise to interpret it. The provision of useful information via websites of companies will assist them in rational analysis, providing information or advice for investment decisions in the Egyptian stock market and performing their duties.

Two key personnel from the Egyptian Stock Exchange were interviewed because staff of regulatory and observatory bodies have an important role in determining disclosure. They determine the compliance of listed companies with the rules and regulations and are responsible for enforcing the rules and regulations of disclosure. Cooke (1989c:92) emphasized that Securities Market regulators can have a significant influence over the disclosure of financial information to users. Therefore, the researcher wanted to investigate their perceptions regarding internet financial disclosure and reporting.

#### **4.6.5.6 Data Collection Strategy**

Initially, the researcher sent e-mails to Investor Relations managers and partners in the big four audit firms, asking for an appointment for an interview. Only two of them respond to the e-mails and fixed an appointment. Whenever the researcher reached a person who agreed to be interviewed, the researcher called him/her to make an appointment and explained the purpose of the research and the themes to be covered. This was an appropriate procedure because it allowed the participants to consider the information being requested and enabled them to prepare any supporting documentation which may help the researcher. Audit partners in the big four audit firms prepared photocopies of engagement letters and give them to the researcher (with the names of the firms and client deleted) to show the researcher their firm policy and how they deal with internet financial disclosure and reporting.

At the start of each interview, the researcher covered the following issues:

- The participant was thanked for agreeing to the meeting.
- The researcher introduced herself, the purpose of the research and that it is funded by the Egyptian government, and explained the progress of the research.
- The researcher showed the participant a letter from Hull University explaining the purpose of the interview was for research purpose only.

- To establish rapport, the researcher showed interest in the participants by asking them about their role within their organisation.
- The researcher stated the themes to be covered during the interview.
- Permission was asked to tape record the interview
- The researcher explained to the participants that their confidentiality would be protected. Their names would not be revealed in the PhD thesis. Only their ideas, perceptions and suggestions would be reported.
- The researcher emphasized that that the participant had the right not to answer any question, and to stop the interview at any time.

Interviews were tape recorded and transcripts made at a later stage. In addition, Easterby-Smith et al. (2000:92) stated that tape recording the interview has some advantages and disadvantages. The advantages are that it allows the researcher (interviewer) to concentrate on questioning and listening, and allows direct quotes to be used. The disadvantages are that the interviewee may focus on the recorder, which may inhibit interviewee responses and lead to reduced reliability, there is a possibility of technical problems, disruption can be caused when tapes are changed and it takes a long time to transcribe the tape. The researcher tried to avoid these problems by using a tape recorder. The researcher used a thirty-two hour audio recorder so there were no problems of changing tapes. In addition, the researcher kept an additional recorder to be used if there were any technical problems. The researcher informed the participants that if they wanted to say anything and did not want it to be recorded, the recorder could be switched off, thus eliminating the problem of participants being deterred from saying something because of the recorder.

The researcher carried out 17 interviews during August and September 2006. All interviews were taped except one, where the participant refused. In this case, the researcher took notes of the important points. Interview time ranged between thirty and eighty minutes. The participants were at a senior managerial level and had limited time. Some said that they could give only fifteen to twenty minutes because they were busy and had meetings. The researcher faced an additional problem during the first interview as it took place in the participant's office, and whenever the participant started to talk, the phone rang, or the participant's mobile rang or the participant's employees came into his office because they needed his signature or wanted to ask him questions. The researcher apologized and asked the participant if the interview could be carried out in a conference or a meeting room or be postponed till after office hours or early in the morning before office hours. The interview was then carried out the following day after office hours. After that, whenever the researcher called any participant to arrange an appointment, she asked the participant to have the interview in a quiet place in order not to be interrupted, and most interviews were carried out in a meeting room.

The researcher transcribed the interviews, two of them were in English and the rest were in Arabic. The researcher translated all answers that were in Arabic into English. The translation took a long time because exact meanings are difficult to reproduce in a second language which has evolved in a different cultural context. If there were answers which were not clear, the researcher telephoned the participants to clarify these points. Then the researcher asked one of her colleagues to review the translation of a sample of the transcripts to ensure the validity of the translation.

#### 4.6.5.7 Interview Analysis

There is no accepted set of conventions for qualitative data analysis (Robson, 1993:370). The challenge of qualitative analysis is transforming massive amounts of data into knowledge and findings and no absolute rules exist except that the researchers do their best with their full intellect to represent the data and communicate what the data reveal, given the purpose of the study (Patton, 1990:371-372). However, Collis and Hussey (2003:254) stated that there are two frequently used methods of analysing qualitative data; Quantifying Methods and Non-quantifying methods. Quantifying Methods are used when researchers wish to count the frequency of certain events or certain reasons or references to a phenomenon (Saunders et al., 2003:402). Since this research is more concerned with in-depth analysis and exploration of meaning rather than breadth analysis, the researcher used non-qualifying methods and the general analytical procedures suggested in the following steps (Collis and Hussey, 2003:262):

1. All interviews were transcribed; the researcher added some thoughts and reflection which would help during the analysis in a separate column.
2. The materials collected from interviews were well referenced. The reference indicated who was involved, date and time.
3. Data was coded which helped in storing the data, retrieving and reorganising it in a variety of ways. Fielding and Lee (1998:87) explained that  
*The role of coding in qualitative analysis is to stimulate the identification of analytic themes, to organize the data so that the strength of its support for those themes can be determined, to illustrate those themes by providing quotable material, and to support data reduction by representing its keys features and identifying redundant, peripheral or irrelevant data*
4. The codes were grouped into smaller categories according to patterns or themes which emerged.
5. The findings were summarized and recorded, putting the researcher's thoughts on paper to help with the analysis.

6. Data were interpreted and findings were compared with information gleaned from the literature and existing theories.

Data storage, coding, retrieval, comparing and linking can be done using software programs or manually. Software programs do not analyse qualitative data; however, they speed the process of coding, grouping data in categories and comparing passages in transcript (Patton, 2002:442-443).

The use of computer assisted qualitative data analysis software (CAQDAS) such as Nvivo offers a number of advantages; the researcher used it for the following reasons (Bryman and Bell, 2003:447, John and Johnson, 2000:394):

1. CAQDAS enables researchers to deal with large amounts of qualitative data.
2. It reduces the amount of time required for manual handling of data
3. It makes the process of coding and retrieval more efficient and faster. Researchers are more flexible to change their coding system; codes can be developed, merged, deleted and moved as the research project progresses
4. It enhances the ability to link, annotate and create relationships and therefore facilitates the development of explanations.
5. It can be used to count the frequency of occurrence of a certain viewpoint in interviews. It may reveal patterns not noticed if manual handling of data was used.
6. It has the ability to create models that are linked to the items they represent.

#### **4.6.5.8 Ethical Considerations**

Punch (1998:281-282) states that all social research involves ethical issues and this is especially so for qualitative approaches, because it involves collecting data from people and about people. He summarized the main ethical issues which can arise in research as harm, consent, deception, privacy and confidentiality of data. The ethical procedures for



research in the Hull University Business School, which were issued in November 2005, were followed.

At the beginning of the interview, the researcher informed the interviewee about the purpose and benefits of the study so that they understood the nature of the research. The researcher informed them about the procedures of the study and the type of questions that would be asked and reminded them that they had the option not to answer any question they did not wish to answer. The researcher obtained their permission to tape their answers. The researcher told them that they had the right to obtain a copy of the results and have their privacy respected. The researcher gave the interviewees a letter from Hull Business School, saying that she was a PhD student and that she was doing research about voluntary internet financial reporting and disclosure in Egypt. The researcher did not obtain written informed consent from the participants because they did not want to reveal their identity.

During the interview, the researcher explained to the interviewees that the information obtained was only for academic purposes, and emphasised that it would be treated confidentially, that giving personal information was optional and that their real names would not be mentioned. The researcher emphasized that nobody would hear the tape recording, except herself, A tape recorder would be used to make sure that the interviewee's views were properly recorded and when their views were typed from the tape into the computer, these notes would be used only by the researcher. Their names would be kept separately from their notes, tape and their place of work would not appear in any report or document. Additionally, the researcher did not attempt to prolong any discussion when it was apparent that the interviewee needed to attend to the

next part of their daily schedule and the researcher did not press the interviewee for a response to a question the interviewee did not wish to answer.

In addition, Creswell (2003:66-67) indicated that ethical issues should be considered also during data analysis and interpretation and during the actual writing and dissemination of the final research report. During data analysis, the researcher should disassociate names from responses to protect the secrecy of the interviewees. Once analysed, the researcher should discard data so that it does not fall in hands of other people who may misuse it. Also, a validation strategy should be used to check the accuracy of the data with interviewees. During writing, the researcher should not use language or words that are biased against persons because of gender, sexual orientation, racial or ethnic group, and findings should not be falsified or invented to meet the researcher's need. All these principles were scrupulously observed in this study.

#### **4.7 Summary**

This chapter described the study as exploratory, descriptive and explanatory. This study is characterized by the usage of method triangulations because it used both the qualitative and quantitative methods. It used a disclosure index and statistical analysis, which are considered quantitative, to achieve the first two objectives. In addition, semi structured interviews, which are considered qualitative, were used to achieve the second, third and fourth objectives.

The construction of the disclosure index was described, in particular the weighting and scoring of such an index. In addition, the hypotheses concerning the independent variables were presented in order to examine the relationship between the extent of voluntary internet disclosure and the explanatory variables. This study focused upon the

most active 100 companies listed on the Egyptian Stock Market in terms of number of transactions during the period January to June 2005.

Methods of testing the hypotheses and analysing the data, including the statistical techniques will be explained in the next chapter.

# Chapter Five

## Descriptive Analysis

### 5.1 Introduction

The purpose of this chapter is to pursue one of the major objectives of this study, which is to determine the extent of financial information disclosed on the websites of listed Egyptian companies. Comprehensive descriptive statistics will be used in order to evaluate internet financial reporting and disclosure. This evaluation will be conducted at two levels; the first deals with the extent of internet disclosure for each company, the second deals with the extent to which each group of items of information is disclosed and then the extent of disclosure of each individual item within each group.

The next two chapters will cover the second objective of the study, which is to identify the different factors that affect the level of voluntary internet disclosure among the different Egyptian companies. This evaluation will be conducted in two stages. At the first stage, an analysis of the effect of each independent variable on the extent of voluntary internet disclosure will be undertaken. At the second stage, all the variables will be incorporated in a regression model to determine their joint effect in explaining variation in the extent of voluntary disclosure among companies.

### 5.2 Source of Information, Population, and Sample

This study covers the evaluation of voluntary internet reporting of companies listed on the Egyptian Stock Market. According to Article 12 of Cairo & Alexandria Stock Exchanges Membership Rules,

*“A member shall submit the annual financial reports to the Stock Exchange no later than 90 days following the end of the fiscal year and quarterly financial reports no than 45 days following the end of the quarterly period”.*

The overwhelming majority of Egyptian companies use the calendar year as their accounting year. Therefore the researcher means by “current annual reports” those issued in 2005 for the year ended December 2004 and by “current quarterly reports” those issued in 2005. So, 2004 is considered a typical year.

A pilot study was conducted, searching for the websites of all 767 companies registered on the Cairo and Alexandria Stock Exchange. A list of the names of the 100 most actively traded companies was obtained from the Egyptian Stock Exchange as well. The search revealed that companies which had websites were included among the most actively traded 100 companies. Only active firms are likely to have websites and disclose financial information on the websites. Therefore it was decided to focus upon the most active companies traded in the Egyptian Stock Exchange in all sectors. Therefore, this study has focused upon the most active 100 companies listed on the Egyptian Stock Market in terms of number of transactions during the period January to June 2005 because it is the only available information in Egypt. Some researchers focused upon all companies registered in the stock exchange; for example Oyeler et al.(2003), Pirchegger and Wagenhofer (1999), and Fisher et al. (2004) while others focused on the largest listed companies in terms of total assets, for example Xiao et al. (2004) or in terms of market capitalization, for example Craven and Marston (1999), Allam and Lymer (2003), and Davey and Homkajohn (2004).

In order to find the websites of the companies, the following procedures were used:

- 1) The MetaCrawler search engine was used, as it includes Google, Yahoo Search, MSN Search, Ask Jeeves, About, MIVA, LookSmart and others. Therefore, the outcomes are the results of a combined pool of the world's leading search engines.

- 2) Reference was made to the website of “Misr for Clearing, Settlement and Central Depository”, a company whose main mission is to undertake the clearing and settlement of the dealings resulting from the traded transactions performed on the stocks in the Egyptian Capital Market. In addition, it takes intermediate possession of stocks traded in the market and transfers them from the physical form into book entries to facilitate shareholders’ dealings. Its website includes information about members and affiliates and particularly information about the issuing companies such as Name, Security number, Isin Code which is the international securities identifying number, Names of Board of Directors members, Address, Telephone and Fax numbers, Webpage, E-mail, Quantity of shares, par value and the value of shares.
- 3) Publications issued by Egypt for Information and Dissemination (EGID) were used, for example the Disclosure book (Cairo and Alexandria Stock Exchanges, 2005) and 100 Most Active Companies Guide (Cairo and Alexandria Stock Exchanges, 2003), in which companies’ name, telephone number and sometimes websites are included.
- 4) Finally, the researcher contacted the remaining companies by phone to find out whether they have websites.

Two insurance companies were excluded from the study, although they had websites and their websites included financial information, because they were specialized in nature and were subject to different regulations, tax and accounting rules. For example, the financial statements of Egyptian Insurance companies are prepared in accordance with the Egyptian Accounting standards related to Insurance and reinsurance and law number 10 of 1981 supervision and control of Insurance in Egypt and its executive regulations.

Data collection started during October 2005 and continued until the end of January 2006. As websites differed in design and layout, collecting the data was not a routine process. These websites were revisited in February 2006 as a validity check of the whole data. There was no change in the companies' websites during this period. In the case of companies whose websites were under construction, it was confirmed that they were still under construction up to the end of February.

By using the above search tools, the researcher found, as shown by Table 5.1, that of the 98 companies, 71 companies had websites: However the websites of 9 of those companies included no information, as these websites were under construction, and 27 companies had no websites at all.

**Table 5.1 Number of Companies Having Websites**

All Companies	100%
Less: Insurance Companies	(2%)
Less: Companies with no websites	(27%)
Less: Companies whose websites are under Construction	(9%)
Companies with websites	62%

Table 5.2 shows that of the 62 companies which had websites, only 35 (56%) companies disclosed financial information on their websites.

**Table 5.2 Websites Disclosing Financial Information**

	No. of Companies	Percent
No disclosure of Financial information	27	43.5
Disclosure of Financial information	35	56.5
Total	62	100.0

Table 5.3 shows the type of industries to which these companies belonged. Most of the companies (48%) belonged to the construction and financial services sector. Only one company belong to the utilities sector.

**Table 5.3 Type of Industry (Sector)**

Type of Industry	Number of Companies	Percent
Chemical	11	11.2
Communication	5	5.1
Construction	24	24.5
Engineering & Mining	7	7.1
Entertainment	8	8.2
Financial Services	23	23.5
Food & Beverage	14	14.3
Textile & Clothing	5	5.1
Utilities	1	1.0
Total	98	100.0

Table 5.4 shows the number and percentage of companies within each industrial sector which had websites, which did not have websites or whose websites were under construction. All 100% of the communication companies and 91% of the financial services companies had websites. The only company in the utilities sector had a website, but no financial information was disclosed on it.



**Table 5.4 Number and Percentage of Companies Having or not Having Websites for Each Sector**

Sector	Has Website		Has No Website		Website Under Construction	
	No. of companies	Percent	No. of companies	Percent	No. of companies	Percent
Chemical	6	54.5	4	36.4	1	9.1
Communication	5	100	0	0	0	0
Construction	10	41.7	8	33.3	6	25
Engineering & Mining	5	71.4	2	28.6	0	0
Entertainment	6	75	2	25	0	0
Financial Services	21	91.3	2	8.7	0	0
Food & Beverage	5	35.7	7	50	2	14.3
Textile & Clothing	3	60	2	40	0	0
Utilities	1	100	0	0	0	0

### 5.3 Disclosure Index

This study made use of a disclosure index of 90 items based on the framework of Web-based disclosure proposed by Xiao (2004) which is based on Debreceeny et al. (2001), Deller et al. (1999), Pirchegger and Wagenhofer (1999), and Marston and Polei (2002). The index encompassed 59 items of disclosure content, and 31 presentation items. The content items show what the companies disclose on their websites, while the presentation format items deal with how the information is presented.

Items unique to the Egyptian environment, such as the availability of Arabic websites, were added to the index and items unique to the Chinese environment in Xiao et al. (2004), such as resolutions of the Board of Directors and shareholder meetings, were excluded from the study. To emphasize the reliability of accounting information published on the websites of companies, the researcher included the presence/absence of auditor and chairman names and signatures. In addition, the researcher distinguished between current year information and past year information in the same way as Xiao et

al. (2004) to determine whether companies had a continued loyalty to internet disclosure. Table 5.5 compares the items included in this study and that of Xiao et al. (2004).

**Table 5.5 Comparison between Items of This Study and Items of Xiao et al. (2004)**

<b>Items included in this study</b>	<b>Items included in Xiao et al's study</b>
English Web Pages	English Web Pages
Arabic Web Pages	
Quarterly Report of Current Year	Quarterly Report of Current Year
Quarterly Reports of Past Years	Quarterly Report of Past Years
Semi Annual Report of Current Year	Half-Year Report of Current Year
Semi Annual Report of Past Years	Half-Year Report of Past Years
Audit Review Report	
Current Year Financial Statements	
Historical Financial Statements	
Current Year Annual Reports	Annual Report of Current Year (Full Text)
Annual Reports of Past Years	Annual Report of Past Years (Full Text)
Excerpts of Financial Reports or Statements	Annual Report of Current Year (Excerpt)
	Annual Report of Past Years (Excerpt)
Letter From The Chairman or CEO	Management Report/Analysis in Current Year
Chairman or CEO's Signature or Printed Name	CEO's Signature in Report
Auditor's Report of Current Year	Auditor's Report of Current Year
Auditor's Report of Past Years	Auditor's Report of Past Years
Auditor's Signature	Auditor's Signature in Current Year Report
	Auditor's Signature in Past Years
Auditor's Name Printed	
Note on Language Translation and Audit	Note on Language Translation and Audit
Current Year Balance Sheet	Balance Sheet of Current Year
Balance Sheet of Past Years	Balance Sheet of Past Years
Summarized Balance Sheet	
Current Year Income Statement	Income Statement of Current Year
Income Statement of Past Years	Income Statement of Past Years
Summarized Income Statements	
Current Year Statement of Cash Flow	Cash Flow Statement of Current Year

<b>Items included in this study</b>	<b>Items included in Xiao et al's study</b>
Past Years' Statements of Cash Flow	Cash Flow Statement of Past Years
Summarized Statement of Cash Flow	
Appropriation Statement (Statement of Proposed Dividend)	
Statement Of Changes in Stockholders' Equity	Changes in Stockholders' Equity in the Current Year
Notes to Financial Statements of Current Year	Notes to Financial Statements of Current Year
Notes to Financial Statements of Past Years	Notes to Financial Statements of Past Years
Usage of Comparative Figures	
Summary of Financial Data Over a Period of at Least 3 Years	Summary of Financial Data Over a Period of at Least 3 Years
Segmental Reporting by Line of Business (Revenue)	Segmental Reporting by Line of Business in Current Year
Segmental Reporting by Sector (Revenue)	Segmental Reporting by Region in Current Year
GAAP Basis in the Year Reported	GAAP Basis in the Current Year
Disclosure of Risk or Risk Management	
Earnings Per Share	
Other Ratios	
Background or History of the Organisation	
Forward Looking Information	Earnings or Sales Forecast
Supplement or Amendment to Current Year Annual Report	Supplement or Amendment to Current Year Annual Report
Past Year Material Events	Past Year Material Events
Current Year Material Events	Current Year Material Events
Corporate Governance	
Press Releases	Current Press Releases or News
Financial Calendar	Financial Calendar
Top 10 Stockholders in Current Year	Top 10 Stockholders in Current Year
List of BOD Names	
List of Key Executives Names and Phone No.	
Historical Share Prices	Historical Share Prices
Current Share Prices	Current Share Price
Share Price Performance in Relation to Stock Market Index	Share Price Performance in Relation to Stock Market Index
Services or Products Provided	
Sales of Key Products	Sales of Key Products
Market Share of Key Products	Market Share of Key Products
Monthly or Weekly Sale or Operating Data	Monthly or Weekly Sale or Operating Data
Mailing List	Mailing List
Contact Us	
E-Mail	
Postal Address	
Telephone Number	

<b>Items included in this study</b>	<b>Items included in Xiao et al's study</b>
One Click To Get to Investor Relations or Financial Information	One Click to Get to Investor Relations Information
E-Mail to Investor Relations or Financial Control Manager	E-Mail to Investor Relations Direct E-Mail Hyperlink to Investor Relations
Investor Relations Phone Number	Phone Number to Investor Relations
Investor Relations Postal Address	Postal Address to Investor Relations
Frequently Asked Questions	Frequently Asked Questions
Internal Search Engines	Internal Search Engine
Link to The Stock Exchange Web Sites	Link to CSRC, Shanghai (Shenzhen) Stock Exchange Web Sites
Link to Securities Companies' Websites	
Link to Parent or Subsidiary	
Table of Content/Sitemap	Table of Content/Sitemap
Hyperlinks Inside the Annual Report	Hyperlinks Inside the Annual Report
Powerpoint or Presentation of Financial Data	
Financial Data in Excel	Financial Data in Processable Format (Such As Excel)
Financial Data in PDF Format	Annual Report in PDF-Format
Financial Data in HTML	Annual Report in Html-Format
Financial Data in Word	
Graphics or Diagrams	Graphic Images
Pull-Down Menu	Pull-Down Menu
Click-Over Menu	Click-Over Menu
Financial Info. Found in More Than One Place	
Conference Calls	
Ratings	
	Information on the Latest Update
Disclaimer	Disclaimer
	Summary of Key Ratios Over a Period of at Least 3 Years
	Chat Room
	Flashes
	Sound Files
	Video Files
	Help Information
	Next/Previous Bottoms to Navigate Sequentially
	Online Investor Information Order Service
	Past Year Resolutions of Shareholders' Meeting
	Past Year Resolutions of the Board of Directors

Items included in this study	Items included in Xiao et al's study
	Past Year Resolutions of The Supervisory Board
	Company's Charter in the Current Year
	Current Year Resolutions of Shareholders' Meeting
	Current Year Resolutions of The Board Of Directors
	Current Resolutions of The Supervisory Board
	Text Only Alternative Available
	Notice Book
Contact to the Webmaster	Contact to the Webmaster
Use of Frames	Use of Frames
One Click to Get to Press Releases or News	One Click to Get to Press Releases or News
Clear Boundaries for Annual Reports	Clear Boundaries for Annual Reports

As shown in the above Table 5.5, in this study, some items were added, removed or modified to make the index suitable for Egyptian companies, as follows:

- Arabic webpage: The country of origin is Egypt and its native language is Arabic, so the researcher wanted to know whether these websites were directed towards local investors or only towards foreign investors and/or both.

- The researcher wanted to examine whether companies in Egypt published only the financial statements or full annual reports. According to IAS 1 (1997:Section 8), a complete set of financial statements includes the following components

*“(a) balance sheet;  
(b) income statement;  
(c) a statement showing either:  
- all changes in equity; or  
- changes in equity other than those arising from capital transactions with owners and distributions to owners;  
(d) cash flow statement; and  
(e) accounting policies and explanatory notes”.*

Reports that are presented outside of the financial statements -- including financial reviews by management, environmental reports, and value added statements -- are

outside the scope of IFRSs (International Financial Reporting Standards) (IAS 1, 1997: Sections 9 and 10).

The FASB (2001:1) defined financial business reports as

*“the information that a company provides to help investors with capital allocation decisions about the company ... Business reporting is more than financial statements; it includes a number of different elements such as operating data, performance measures, analysis of data, forward-looking information, and information about the company, its management and shareholders”.*

Article 12 of Cairo and Alexandria Stock Exchange Membership rules focuses on annual reports; it states that members should submit the annual reports to the Egyptian Stock Exchange no later than 45 days following the end of quarterly period and that all reports should be prepared according to Egyptian Accounting Standards. Paragraph 2 of the Egyptian Accounting Standard number 1 “Disclosure of Accounting policies” explains that financial statements include Balance sheets, Income statements or profit and loss accounts and statements of cash flow and notes or any other statements or explanatory data considered complementary to financial statements (EAS, 2006:10).

The Annual Reports are wider than the financial statements. They give more information to investors. However, some Egyptian companies publish only their financial statements on their websites, while others publish only the Balance Sheet and Income Statement. Therefore if the company publishes current or past year balance sheet, income statement, cash flow, and statement of stockholders equity, then it publishes the financial statement on the internet and if it publishes other information such as financial reviews by management, environmental reports, and value added statements then it publishes its Annual Report.

- Review Report: The researcher added Review of Interim Financial information because it is capable of increasing investors and users' trust in the quality of the financial reporting process. Article 20 of the Listing and Delisting Rules at CASE (Cairo Alexandria Stock Exchange) states that “ *companies have to provide the Egyptian Stock Exchange and the CMA (Capital Market Authority) a copy of the quarterly financial statements and the limited audit review report within 45 days from the end of this quarter*”. The Egyptian Auditing Standard No. 240: "Review of Financial Statements" addresses all the procedures that should be carried out by the auditor and what should be included in this report.

Raedy and Helms (2002) pointed out that there are many benefits of reviewing quarterly financial statements. These include: 1) enhancement of the quality of quarterly reporting; 2) identifying and addressing the potential problems in internal controls and the reporting process prior to year end, thus, improving the quality and efficiency of annual audits. The quality of the client's annual financial statements could improve as well and the audit may be completed more quickly after year end, resulting in more timely financial information. As long as there is a continuous presence of the auditor, this will improve the overall control over the client's financial accounting and reporting process which, in turn, will increase the client's confidence in financial reporting.

- Summary annual reports: On navigating the websites of Egyptian companies, the researcher discovered that all public banks in Egypt which are 100% owned by the government present their summary annual reports on the internet. They include summarized balance sheet, summarized income statement, summarized cash flow and the auditor report on these summarized statements. However, these public banks are beyond the scope of this study, which focuses only on companies listed on the Cairo

and Alexandria Stock Exchange. There are many laws addressing summarized annual reports in UK, USA and Egypt.

The 1989 Companies Act allowed public quoted companies to offer a summarized version of the Report and Accounts (Ward, 1998:249). Egyptian Auditing Standard number 220 “The Independent Auditor’s Report on Special Purpose Audit Engagements” (2000) states that auditors should review the summarized annual reports and should give an opinion about whether the information in the summarized financial statements is consistent with the audited financial statements from which it was derived. A search of the websites of Egyptian companies revealed that auditor’s reports on summarized financial statements were not disclosed. Therefore, this item was not included in the disclosure index.

- Auditor’s name printed: The auditor’s identity can give more security to users and mainly the web trust or digital signature. Law No. 15/2004 on E-signature and Establishment of the Information Technology Industry Development Authority (ITIDA) deals with e-signature, e-transactions and IT activities. However, e-signature was not used by auditors. Examination of the auditors’ reports on the internet revealed that, auditors either used their firm’s logo or printed their names at the end of the report with no signature, although some reports were signed. Most companies used the Acrobat’s file security features to grant users rights to download and print the audit report but not the ability to modify it.

- Appropriation Statement (statement of proposed Dividend): On searching the websites of the Egyptian companies, it was found that most companies which disclosed



financial information included this statement, although it is not required by the Egyptian Accounting Standards or by law. It is considered a voluntary disclosure.

- **Comparative Figures:** Jooste (2004:23) states that the financial statements of any entity must be comparable over time in order to identify trends in its financial position and performance. One of the methods to enhance the comparability of financial statements is to present comparative figures of preceding periods. Usage of comparative figures is beneficial mainly when there is a restatement revising previously issued financial statements to reflect correction of an error or a change in accounting principle.

- **Earning per Share:** IAS 33 as well as FRS 133, state that an enterprise should present basic and diluted earnings per share on the face of the income statement. Therefore, the researcher differentiates between Earning per Share and other ratios.

- **Other Ratios:** Ratio analysis is an important area of performance review. It can be more useful than using absolute amounts. As indicated by Davis and Pain (2002:153), ratios may be used for subjective assessment of the company or its constituent parts, as a more objective way to aid decision-making, to provide cross-sectional analysis and inter-firm comparison, and to predict company failure (Altman, 1968). Therefore, the researcher decided to include it, to examine whether companies were helping investors in making decisions by providing ratios.

- **Corporate Governance:** Some companies now are adding a page on their website about Corporate Governance, as it has become a global pursuit. Two companies, Egyptian Company for Mobil Services (Mobinil) and Orascom Construction Industries, had a separate page for Corporate Governance where they stated the purpose of

adopting corporate governance principles or guidelines and introduced the different committees and their responsibilities. Shahid (2001:57) suggested that listed companies should be required to disclose in the annual report their governance practices and the degree of compliance with those rules.

- Background or History of the Organisation, Contact us, E-mail, Address, Telephone number: All these items furnish investors and customers with information about the organisation and enable them to communicate with it. Therefore, if a company does not include the financial information on its website or if it has no investor relations section on its website, stakeholders need to communicate with the company and ask for the required information.

- Link to Stock Exchange Websites: If a company is registered in the Cairo and Alexandria Stock Exchange and the London Stock exchange and it has a link to one or both of them, this can be used to help the stakeholders to find out the prices of its shares and other information provided by the Stock Exchange. For example, Orascom Construction Industries had a link to the London Stock Exchange.

- Link to Securities Companies Websites: Some companies have links to analysts' or securities companies and include the analysts' briefings or reports about their performance on their websites. An example is Raya Holding Company, whose website had a link to some brokerage companies' websites where a complete analysis of Raya's Performance was available.

- Presentation of financial data: Some companies use PowerPoint in presenting the financial data to focus users' attention on the perceived important aspects which affect their share prices.

- Financial information is found in more than one place: On navigating the websites of companies, the researcher found that some companies disclosed financial information in more than one place, in the "About us" section and the "Investor relations" section. Examples include Orascom Construction Industries and Egyptian company for Mobil Services. Sometimes financial information such as annual reports or quarterly reports is found on the investor relations section as well as the news or press releases section. An example is Commercial International Bank.

- Ratings: It means the inclusion of Standard and Poor's, Fitch, Moody's Investor Services and Capital intelligence credit rating reports on company websites. For example the CIB (Commercial International Bank) website included these reports.

- Resolutions of General Assembly and Board of Directors: There was no information about resolutions of shareholders' meetings and resolutions of the Board of Directors or Supervisory Board disclosed on Egyptian companies' websites. Therefore, the researcher decided to remove it from the disclosure index.

- Conference calls: Some companies have transcripts of conference calls; they simplify disclosure requirements by providing audio and visual versions of speeches and calls, for example, 'Vodafone Company'. Many US and UK companies now have their conference calls online and provide transcripts of the calls soon thereafter (for example, see [www.vcall.com](http://www.vcall.com)). There are also predictions that in the next few years,

firms will use the internet to publish their financial results in real time. Their use of this unprecedented prospective is likely to have a great effect on future investing patterns and populations (Ettredge et al., 2001:55).

Investors and analysts can get access to live events through conference calls regardless of their location as long as they have an internet connection. Replays of these events are also made available as part of an archive of data for those unable to see the live broadcasts (Allam and Lymer, 2003:12). This is a good example of utilising audio or video technology in internet financial reporting.

- Flashes, sound files and video files: They are included indirectly in the disclosure index. internet financial reporting includes all paper-based content (e.g. annual reports, press releases, etc.) as well as additional content, e.g. live and recorded analyst meetings and annual stockholders meetings, and conference calls (Debreceeny et al., 2002:372). Video files are a good method of providing documentation about analyst and annual shareholder meetings.

- Chat room, help information, online investor information order service, information on the latest update, Notice Book, and company's charter in the current year are not included on websites of Egyptian companies. Therefore, they were removed from the index.

- Text only alternative available: Despite the benefits derived from providing a plain text version of the websites for those who do not have fast internet access, it is not popular and requires extra time and energy to maintain the two versions, the plain text

The following items were included in the disclosure index .The researcher will clarify the meaning of each term.

- Disclaimer: It means that that the company will not be legally responsible for the information given on its website nor for any use thereof or reliance placed thereupon by any person. The FASB (2000:72) suggested that disclaimers are among the strategies to be used to reduce legal risks from electronic disclosures. Some companies such as Orascom Construction Industries used the term, legal statement while others, such as Commercial International Bank, used the term, user agreement.

- Clear boundaries of financial statement: Gray and Debreceeny (2001) stated that investors can easily identify the beginning and end of paper-based annual reports. However, this may be difficult on the website because users may find hyperlinks inside annual reports that take them outside the annual report and there is no warning that they have left the annual report. At the same time, there may be hyperlinks outside the annual report which take them inside the annual report. The financial reports are considered a relatively small part of the company's overall website, which includes other materials. Therefore it can be difficult for users to know whether or not they are inside the annual report. The entire report may be a few pages within the investor relations WebPages which includes a broad mixture of unaudited financial statements, forward looking information as well as press releases and other materials. Unless the borders are clearly labelled, a user may misinterpret the scope of the auditors' report that accompanies the financial statements. According to Debreceeny and Gray (2001:55),

finding information by following hypertext links from the corporate home page can be difficult as corporations take different approaches. The terminology used for quarterly and financial reports varies widely among corporations. Navigation support also is highly individualistic. In many cases the boundaries between the audited financial information (which are prepared according to specific standards) and the rest of the corporate pages (which are not audited or prepared according to specific standards) are blurred (Debreceeny et al., 2002:374). Marston and Polei (2004:302) explained that some companies use a special icon on audited pages on their websites.

Lymer et al. (1999:62-63) suggested that the International Accounting Standard Committee (ISAC) and other similar organisations should develop a code of conduct for web-based business reporting and consider the following:

*“Boundaries of IAS financial statements: The boundaries of the complete set of IAS financial statements should be clearly recognisable on an enterprise’s Web site, so that a user will know when he/she has moved out of the IAS financial statement area. IAS 1 provides guidance on identification of financial statement*

*Boundaries of the financial report: Users should be given clear indication when a departure point has been reached from the financial report – that is, audited financial statements and related operating and financial data”*

Clear boundaries of financial statements are defined as whether it can be recognized through browsing the companies’ website, if the financial information is audited or not.

- Frames: According to Cooke (1999:204), frames are used to split an HTML\* page into two or more pages, so that more than one page can be seen at the same time. It divides the browser window into mini-windows, each containing a different HTML document (Niederst, 2003:442). For example, the frame on the right or at the top may

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\* HTML: Hyper Text Markup Language; the format of web documents

display the contents of a webpage containing a list of hyperlinks, while the frame on the right or the bottom may display a webpage with product information.

Although frames enable the users to manage large volumes of information, they complicate websites (Amernic, 1998:93). They are not recommended to be used for the following reasons (Lymer et al., 1999:30):

1. The framed pages cannot be printed properly. Usually a single frame is printed.
2. It is difficult for content in frames to be found by search engines.
3. It is difficult to bookmark frames as the URL (Uniform Resource Locator)\* is hidden.

In Egypt, few companies use frames within their websites. These WebPages cannot be printed properly. Only the frame which includes the contents is printed, while the others are not. Therefore, if the company is using HTML and frames in disclosing financial information, this financial information cannot be printed. Examples include Commercial International Bank, and Egyptian American Bank. However, Similar to Xiao et al. (2004), the researcher included Use of Frames in the disclosure index because it enables the user to manage a large volume of data at the same time.

## **5.4 Evaluation of Egyptian Companies' Websites**

To evaluate the voluntary internet disclosure practices of the companies, a scoring sheet was used for every website. The scoring sheet included a list of the 90 items comprising the index. A relative disclosure index was calculated for each company by dividing the actual number of items disclosed by each company by 90 which is the maximum number of items applicable to the companies, and multiplying them by 100. Therefore,

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\* URL (uniform Resource Locator: It is the full address of a webpage on the internet.

a company which had no website would have a percentage of zero and if a company had all the items on its website, it would achieve 100%. The disclosure index of each company represents the dependant variable for this study. Although some Egyptian companies did not disclose financial information on their websites, they still received a disclosure score because they included on their websites information about the background of the company, shareholders, Board of Directors, their activities and the products and service they offered. Even though this information is not financial, nevertheless it helps stakeholders in making investing decisions.

In the next section, companies which had no websites are excluded, as their disclosure index was zero. The researcher measured the disclosure index and a ranking was given to companies with websites only and companies which had websites and were disclosing financial information.

### ***1. Companies Having Websites***

Table 5.6 provides the voluntary internet disclosure scores received by each of the 62 companies which had websites, ranked in descending order. Table 5.7 summarizes the results and Table 5.8 shows the frequency distribution of the disclosure scores between the companies. As seen in Table 5.7, the highest and lowest scores were 73.3% and 7.8%, a range of about 65.5%, and on average, a company disclosed 30% of the 90 items included in the index. In addition, Table 5.8 shows that only 12 out of the 62 companies (19.4%) received disclosure scores of 50% or more. Thus, there was a considerable variation in the level of voluntary internet disclosure between companies because some Egyptian companies did not disclose financial information on their websites and still had a disclosure score. They included on their websites, information about the background of the company, shareholders, Board of Directors, their activities



and the products and services they offered. Even though this information is not financial, nevertheless it potentially helps stakeholders in making investment decisions.

**Table 5.6 Internet Disclosure Scores of Companies Having Websites**

Company Name	Disclosure Score	Rank
Orascom construction Industries	66	1
Vodafone	66	1
Orascom Telecom Holding	65	3
Egyptian Company for Mobile Services (Mobinil)	63	4
Raya Holding Company	58	5
Lecico	57	6
EFG-Hermes	56	7
Misr International Bank	56	7
Telecom Egypt	56	7
Egyptian American Bank	55	10
Arab Banking Corporation Bank	48	11
Commercial International Bank	48	11
National Societe General Bank	45	13
Arab African International Bank	44	14
Al Watany Bank of Egypt	43	15
Egyptian Commercial Bank	42	16
Egypt Kuwait Holding Company	36	17
Misr Romanian Bank	36	17
Alexandria Commercial & Maritime Bank	35	19
Faisal Islamic Bank of Egypt	34	20
Misr Iran Development Bank	34	20
Olympic Group For Financial	34	20
Orascom Hotels and Development	32	23
Suez Canal Bank	31	24
Misr America International Bank	30	25
Paint & Chemicals Industries (Pachin)	28	26
Oriental Weavers	26	27
Egyptian Finance & Industry	25	28
Societe Egyptienne D'enterprise Mouktar Ibrahim	24	29
Amoun Pharmaceutical Co.	23	30
Housing and development bank	23	30
Egyptian Iron & Steel	20	32
Egyptian Saudi finance Bank	19	33
National Bank for development	19	33
Egyptian International Pharmaceuticals (EIPICO)	18	35
North Cairo Mills	15	36
Misr Cement (Qena)	14	37
Egyptian Media Production City	13	38
Egyptian Satellites (NileSat)	13	38
Delta Sugar	12	40
Egypt Free Shop	12	40
Egyptian Chemical Indudtry KIMA	12	40

Egyptian Gulf Bank	12	40
Egyptian Electrical Cables	11	44
Sidi Kerir Petrochemicals	11	44
Canal Shipping Agencies	10	46
El Nasr Clothes & Textiles (Kabo)	10	46
MIDOR	10	46
Misr Beni Suef Cement	10	46
Misr Hotels Company (Hilton)	10	46
The Arab Ceramic Co. Aracemco	10	46
ASEC For Cement Co.	9	52
Bisco Misr	9	52
Egyptian Italian Spanish Sanitary-ware	9	52
General Silos & Storage	9	52
Natural Gas & Mining Project (Egypt Gas)	9	52
Pyramisa Hotels	9	52
Delta Industries (IDEAL)	8	58
Egypt Aluminium	8	58
El Shams Housing & Urbanization	8	58
Golden Pyramids Plaza	8	58
Cairo Poultry group	7	62

**Table 5.7 Summary of the Disclosure Index**

Mean (%)	S.D. (%)	Median (%)	Min. (%)	Max. (%)	Range (%)
30.1	20.8	23.9	7.8	73.3	65.5

**Table 5.8 Frequency distribution of Voluntary Internet disclosure between Companies**

Disclosure Score %	Frequency	Percent
less than 10	11	17.7
10-20	17	27.4
20-30	8	12.9
30-40	10	16.1
40-50	4	6.5
Greater than 50	12	19.4
Total	62	100.0

## ***2. Companies Having Websites and Disclosing Financial Information***

Table 5.9 displays the voluntary internet disclosure scores of the 35 companies which had websites and disclosed financial information, ranked in descending order. Table 5.10 summarizes the results and Table 5.11 shows the frequency distribution of the disclosure scores between the companies. As seen in Table 5.10, the highest and lowest

scores were 73.3% and 20%, a range of about 53.3%. On average, a company disclosed 44.3% of the 90 items included in the index. In addition, Table 5.11 shows that only 12 out of the 35 companies (34.3%) received disclosure scores of 50% or more. Thus, there was a considerable variation in the level of voluntary internet disclosure between companies.

**Table 5.9 Internet Disclosure Scores of Companies Having Websites and Disclosing Financial Information**

Company Name	Disclosure Score	Rank
Orascom construction Industries	66	1
Vodafone	66	1
Orascom Telecom Holding	65	3
Egyptian Company for Mobile Services (Mobinil)	63	4
Raya Holding Company	58	5
Lecico	57	6
EFG-Hermes	56	7
Misr International Bank	56	7
Telecom Egypt	56	7
Egyptian American Bank	55	10
Arab Banking Corporation Bank	48	11
Commercial International Bank	48	11
National Societe General Bank	45	13
Arab African International Bank	44	14
Al Watany Bank of Egypt	43	15
Egyptian Commercial Bank	42	16
Egypt Kuwait Holding Company	36	17
Misr Romanian Bank	36	17
Alexandria Commercial & Maritime Bank	35	19
Faisal Islamic Bank of Egypt	34	20
Misr Iran Development Bank	34	20
Olympic Group For Financial	34	20
Orascom Hotels and Development	32	23
Suez Canal Bank	31	24
Misr America International Bank	30	25
Paint & Chemicals Industries (Pachin)	28	26
Oriental Weavers	26	27
Egyptian Finance & Industry	25	28
Societe Egyptienne D'enterprise Mouktar Ibrahim	24	29
Amoun Pharmaceutical Co.	23	30
Housing and development bank	23	30
Egyptian Iron & Steel	20	32
Egyptian Saudi finance Bank	19	33
National Bank for development	19	33
Egyptian International Pharmaceuticals (EIPICO)	18	35

**Table 5.10 Summary of the Disclosure Index**

Mean (%)	S.D. (%)	Median (%)	Min. (%)	Max. (%)	Range (%)
44.3	16.9	40.0	20.0	73.3	53.3

**Table 5.11 Frequency Distribution of Voluntary Internet Disclosure between Companies**

Disclosure Score %	Frequency	Percent
less than 10	0	0
10-20	1	2.9
20-30	8	22.8
30-40	10	28.6
40-50	4	11.4
Greater than 50	12	34.3
Total	35	100.0

Table 5.12 compares both groups, companies with websites and companies with websites and disclosing financial information. The highest disclosure scores for both of them are the same, as the maximum score will be obtained by companies which have a website and disclose financial information on their websites. However, the lowest scores are different, because companies with websites might not disclose financial information. The range for companies having websites is greater because there are companies which might or might not disclose financial information, but for the second group of companies, the range is narrower because all companies disclose financial information and the minimum disclosure score is higher. The average disclosure score differs and is higher for companies disclosing financial information. The number of companies receiving a disclosure score of more than 50% is the same, although their percentages are different. Companies with websites and disclosing financial information are a subset of companies with websites.

**Table 5.12 Comparison between Companies Having Websites and Those Having Websites and Disclose Financial Information**

	<b>Companies with websites</b>	<b>Companies with websites and disclosing financial information</b>
Number of companies	62	35
Highest Disclosure Score	73.3%	73.3%
Lowest Disclosure Score	7.8%	20.0%
Range	65.5%	53.3%
Average Disclosure rate	30.1%	44.3%
Number of companies receiving a score of 50% or more	12	12
Percentage of companies receiving a score of more than 50%	19.4%	34.3%

## **5.5 Evaluation of Disclosure Item Groups**

The disclosure index includes 90 items; 59 are content items while 31 are presentation format items. In the following paragraphs, the researcher will group these content and format items, as analysis of the items in each group will highlight the importance of each group in explaining the extent of internet financial disclosure and the formatting used in the Egyptian companies.

*“The reader is encouraged to make an item-by-item examination of the exhibit to get some indication of the approximate importance to analysts of the various information items.” (Stanga, 1976:47)*

Moreover, Suwaidan (1997:136) pointed out that such an item by item analysis provides an alternative tool to evaluate the disclosure practices among companies. The next subsections will discuss the grouping of disclosure index and the extent of disclosure among the groups of information which constitute the disclosure index.

### **5.5.1 Grouping of Items of Disclosure Index**

Factor Analysis was considered in grouping the items of the disclosure index; it is a multivariate procedure, which looks at the patterns of correlations. It is useful when

there are many variables and the researcher wishes to reduce them to a smaller, more manageable, number of factors, sometimes known as “super-variables” (Howitt and Cramer, 1997:169). Because of the small number of sample size (98 companies), factor analysis was not feasible. Comrey and Lee (1992) as cited in Tabachnick and Fidell (2001:588) stated that a sample size of 50 is regarded as very poor, 100 as poor, 200 as fair, 300 as good, 500 as very good, and 1000 as excellent. Therefore, it is desirable to have at least 300 cases for factor analysis. Consequently, the researcher did not use factor analysis and categorized the items depending on logic and the literature. The grouping of items was reviewed by two Egyptian accountants, and a member of the University of Hull staff from the Accounting and Finance Department. Then the reliability of these groups was tested statistically, as reported in section 5.5.1.3.

#### **5.5.1.1 Grouping of Content Items**

Table 5.13 shows the different groups of content items. The first group includes all items related to financial statements according to the Egyptian Accounting Standard Number One. The auditor’s signature is included as well, as it can help assure the users of the integrity of the signed documents. The second group includes all items related to interim reporting. The third group is about the business; on navigating the websites of companies, there is an icon about the business and it includes all these items. The fourth group is related to sales of key products, market share and segmental revenue. The fifth group includes share prices, whether current or historical, and their performance in relation to the stock market index. Earning per share and other ratios are grouped together as group six. The seventh group includes items related to annual reports, including reports that are presented outside the financial statements. One important document which is included in the annual report is the letter from the chairman or CEO, sometimes called Management Discussion and Analysis. Bryan (1997:285-286) stated that the Securities and Exchange Commission (SEC) requires publicly traded firms to

add to GAAP mandated disclosures an unaudited, narrative disclosure, called Management Discussion and Analysis (MD&A). Bryan (1997:286) added that the SEC (1987) \* explained the rationalization for this requirement as follows:

*“The Commission has long recognized the need for a narrative explanation of the financial statements, because a numerical presentation and brief accompanying footnotes alone may be insufficient for an investor to judge the quality of earnings and the likelihood that past performance is indicative of future performance. MD&A is intended to give the investor an opportunity to look at the company through the eyes of management by providing both a short and long-term analysis of the business of the company”..*

The eighth group is related to summarized financial statements. The auditor’s report on summarized financial statements is not included, since there is no Egyptian company presents this report on the internet. Only Public Egyptian Banks which are not registered in Cairo and Alexandria Stock Exchange and which are beyond the scope of the study present the auditor’s report on summarized financial statements. All other items which could not be classified in any group were gathered in one group called additional information.

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\* U.S. Securities & Exchange Commission (SEC) 1987 Securities Act Release no 6711 (April 24)

**Table 5.13 Grouping of Content Items**

Groups	Items
1 <sup>st</sup> group: Financial statements	<ol style="list-style-type: none"><li>1. Current year financial statements</li><li>2. Historical Financial Statements</li><li>3. Auditor's report of current year</li><li>4. Auditor's report of past years</li><li>5. Auditor's name printed</li><li>6. Auditor's Signature</li><li>7. Current year balance sheet</li><li>8. Current year income statement</li><li>9. Balance sheet of past years</li><li>10. Income statement of past years</li><li>11. Current year statement of cash flow</li><li>12. Past years' statements of cash flow</li><li>13. Notes to financial statements of current year</li><li>14. Notes to financial statements of past years</li><li>15. GAAP basis in the year reported</li><li>16. Usage of Comparative Figures</li><li>17. Statement of changes in stockholders' equity</li></ol>
2 <sup>nd</sup> group: Interim Reports	<ol style="list-style-type: none"><li>1. Quarterly report of current year</li><li>2. Quarterly reports of past years</li><li>3. Semi-annual report of current year</li><li>4. Semi-annual report of past years</li><li>5. Audit review report</li></ol>
3 <sup>rd</sup> group: About the Business	<ol style="list-style-type: none"><li>1. Excerpts of financial reports or statements</li><li>2. Background or history of the Organisation</li><li>3. Top 10 stockholders in current year</li><li>4. List of names of key executives and their phone no.</li><li>5. Services or product provided</li><li>6. Ratings</li><li>7. List of names of BOD</li></ol>
4 <sup>th</sup> group: Sales	<ol style="list-style-type: none"><li>1. Segmental reporting by line of business (Revenue)</li><li>2. Segmental reporting by sector (Revenue)</li><li>3. Sales of key products</li><li>4. Market share of key products</li><li>5. Monthly or weekly sale or operating data</li></ol>
5 <sup>th</sup> group: Share prices or share performance	<ol style="list-style-type: none"><li>1. Historical share prices</li><li>2. Current share prices</li><li>3. Share price performance in relation to stock market index</li></ol>
6 <sup>th</sup> group: Financial Ratios	<ol style="list-style-type: none"><li>1. Other ratios</li><li>2. Earnings per share</li></ol>
7 <sup>th</sup> group: Annual Reports	<ol style="list-style-type: none"><li>1. Current year annual reports</li><li>2. Annual reports of past years</li><li>3. Letter from the Chairman or CEO</li></ol>



Groups	Items
	<ol style="list-style-type: none"> <li>4. Chairman or CEO signature or printed name</li> <li>5. Appropriation statement (Statement of proposed Dividend)</li> </ol>
8 <sup>th</sup> group: Summarized Financial Statements	<ol style="list-style-type: none"> <li>1. Summarized balance sheet</li> <li>2. Summarized income statements</li> <li>3. Summarized statement of cash flow</li> <li>4. Summary of financial data over a period of at least 3 years</li> </ol>
9 <sup>th</sup> group: Additional Information	<ol style="list-style-type: none"> <li>1. Disclosure of risk or risk management</li> <li>2. Forward looking information</li> <li>3. Supplement or amendment to current year annual report</li> <li>4. Past year material events</li> <li>5. Current year material events</li> <li>6. Corporate Governance</li> <li>7. Conference calls</li> <li>8. Press releases</li> <li>9. Financial calendar</li> <li>10. Notes on language translation.</li> <li>11. Disclaimer or legal notice</li> </ol>

### **5.5.1.2 Grouping of Presentation Format Items**

There are four groups, as shown in Table 5.14. The first group deals with how the financial information is presented; whether it is presented in Arabic or English, in Pdf, Word, Excel or Html. The second group deals with how to communicate the company, ask questions and how to search for certain kind of information. The third group deals with ways of contacting investor relations. The fourth group deals with the different links. Link to auditor's website is not included because there was no Egyptian company linked to their auditor's website.

**Table 5.14 Grouping of Presentation Format Items**

Groups	Items included
1 <sup>st</sup> group: Presentation Format	<ol style="list-style-type: none"><li>1. English Web pages</li><li>2. Arabic Web pages</li><li>3. Financial data in PDF format</li><li>4. PowerPoint or presentation of financial data</li><li>5. Financial data in word</li><li>6. Financial data in Excel</li><li>7. Financial data in HTML</li><li>8. Pull-down menu</li><li>9. Click-over menu</li><li>10. Graphics or diagrams</li><li>11. Use of Frames</li><li>12. Clear Boundaries of Financial Information</li></ol>
2 <sup>nd</sup> group: Communication	<ol style="list-style-type: none"><li>1. Frequently asked questions</li><li>2. Table of content/sitemap</li><li>3. Internal search engines</li><li>4. Contact us</li><li>5. Telephone number</li><li>6. Postal Address</li><li>7. e-mail</li><li>8. Mailing List</li><li>9. Contact to Webmaster</li></ol>
3 <sup>rd</sup> group: Investor Relation	<ol style="list-style-type: none"><li>1. One click to get to investor relations or financial information</li><li>2. Postal address to investor relations</li><li>3. Phone number to investor relations</li><li>4. E-mail to investor relations or Financial Control manager</li></ol>
4 <sup>th</sup> group: Links	<ol style="list-style-type: none"><li>1. Link to the Stock Exchange web sites</li><li>2. Hyperlinks inside the annual report</li><li>3. Link to securities companies' websites</li><li>4. Financial information found in more than one place</li><li>5. Link to parent or subsidiary</li><li>6. One click to press releases</li></ol>

### 5.5.1.3 Assessment of Categories' Reliability

As indicated above, grouping of the content and formatting items depending on logic and literature resulted in nine groups for the 59 content items and four groups for the 31 format items. The reliability of these groups was tested statistically. The word reliability indicates “*how free it is from random error*” (Nielsen, 2000). Pallant (2001:6) added that there are two aspects of reliability. The first is test-retest and the second is internal consistency. Internal consistency means the degree to which all items hang together and measure the same underlying attribute. Internal consistency can be measured in several ways. The most commonly-used measure is Alpha Cronbach's coefficient, which provides an indication of the average correlation among all of the items that make up the scale. Values range from 0 to 1, with higher values indicating greater reliability.

Tables 5.15 and 5.16 show the reliability test results for all the dependent variables of the content and presentation format items. A variable is considered as reliable if the Cronbach alpha is both positive and greater than 0.7 (Pallant, 2001:83).

**Table 5.15 Cronbach's Alpha for Content Item Groups**

	N of items	Cronbach's Alpha
1 <sup>st</sup> Group: Financial statements	17	.980
2 <sup>nd</sup> Group: Interim Reports	5	.939
3 <sup>rd</sup> Group: About the Business	7	.859
4 <sup>th</sup> Group: Sales	5	.735
5 <sup>th</sup> Group: Share prices or share performance	3	.814
6 <sup>th</sup> Group: Additional Information	10	.814
7 <sup>th</sup> Group: Financial Ratios	2	.753
8 <sup>th</sup> Group: Annual Reports	5	.846
9 <sup>th</sup> Group: Summarized Financial Statements	4	.870
Total	59	.978

**Table 5.16 Cronbach's Alpha for Format Item Groups**

	N of items	Cronbach's Alpha
1 <sup>st</sup> Group : Presentation format	12	.755
2 <sup>nd</sup> Group: Communication	9	.879
3 <sup>rd</sup> Group: Investor Relations	4	.830
4 <sup>th</sup> Group: Links	6	.745
Total	31	.925

The values of Cronbach's Alpha of all groups are greater than 0.7 which means that items within each group are highly correlated and the groups are reliable.

### **5.5.2 Extent of Disclosure of Content Item Groups**

Table 5.17 shows the extent of disclosure of each group of the content items. "About the Business" items were disclosed by 71.8 % of companies which disclosed their financial information on their websites and by 56.9% of the companies which had websites. This group of content items attained the highest ranking because it includes information about the background of the organisation and services or products provided. Companies provide information about their products and services because they want the general public to know about their activities. It is a kind of advertising of services and products in order to carry on e-commerce as well as internet disclosure for investors.

The second group of items disclosed was the financial statements, then the ratio group. Most of the Egyptian companies computed earning per share at the end of the income statement or profit and loss account. The fourth group of items presented on the website of companies was the interim financial reports. The group of items for which disclosure was lowest was the sales group, as companies seemed more reluctant to present detailed information about their revenues. They might consider this private information. In the next paragraph, disclosure of each item within each group is evaluated.

**Table 5.17 Mean Percentage of Disclosure of the Content Item Groups**

Groups	Mean percentage of 62 companies which had website	Mean percentage of 35 companies which disclosed financial information	Rank
About the Business	56.9	71.8	1
Financial statements	34.8	61.7	2
Ratios	33.0	58.6	3
Interim Reports	22.6	40.0	4
Annual Reports	21.6	36.0	5
Additional Information	15.3	27.1	6
Summarized Financial Statements	11.3	20.0	7
Share prices or share performance	11.3	19.0	8
Sales	11.0	18.9	9

**1. About the Business**

Table 5.18 shows that the item most disclosed in this group was the services or product provided. All the companies which disclosed financial information on their websites and 96.8% of the companies which had websites disclosed this item. The least disclosed item in this group was the Rating Reports. Only five (14.3%) companies which disclosed their financial information on their websites presented their rating reports.

**Table 5.18 Extent of Disclosure of “About the Business” Items**

Items included	Number of Companies disclosing the item	Percentage of the 62 companies which had websites	Percentage of the 35 companies which disclosed financial information
Services or product provided	60	96.8	100
Background or history of the Organisation	59	95.2	94.3
List of names of BOD	37	59.7	88.6
Excerpts of financial reports or statements	29	46.8	77.1
Top 10 stockholders in current year	33	53.2	65.7
List of names of key executives and their phone no.	24	38.7	62.9
Ratings	5	8.1	14.3

## 2. Financial statements

Table 5.19 shows that the item most often disclosed was the Usage of Comparative Figures, because some companies disclosed comparative figures of historical financial statements only, while others disclosed comparative figures of current financial statements. Of companies disclosing financial information on their websites, 71.4% presented historical financial statements while 68.6 % presented current financial statements. Although companies should include a full set of financial statements and notes to increase the integrity of statements (FASB, 2000:72), a smaller percentage of companies disclosed notes to financial statements. All companies which disclosed current year financial statements disclosed their current and past year income statements and balance sheets. Of companies disclosing their financial information on their websites, 54.3% had the name of their auditor printed, while 25.7% had the signature of their auditor.

**Table 5.19 Extent of Disclosure of “Financial Statements” Items**

Items included	Number of Companies disclosing the item	Percentage of the 62 companies which had websites	Percentage of the 35 companies which disclosed financial information
Usage of Comparative Figures	34	54.8	97.1
Historical Financial Statements	25	40.3	71.4
Current year income statement	24	38.7	68.6
Current year balance sheet	24	38.7	68.6
Balance sheet of past years	24	38.7	68.6
Income statement of past years	24	38.7	68.6
Current year financial statements	24	38.7	68.6
Current year statement of cash flow	23	37.1	65.7
GAAP basis in the year reported	23	37.1	65.7
Statement of changes in stockholders' equity	22	35.5	62.9
Past years statements of cash flow	20	32.3	57.1
Notes to financial statements of current year	20	32.3	57.1
Notes to financial statements of past years	20	32.3	57.1
Auditor's name printed	19	30.6	54.3
Auditor's report of current year	16	25.8	45.7
Auditor's report of past years	16	25.8	45.7
Auditor's Signature	9	14.5	25.7

### 3. Financial Ratios

Table 5.20 shows that 65.7% of companies disclosing financial information disclosed earning per share. Most Egyptian companies compute Earning per share at the end of the income statement or profit and loss account. Therefore, Earnings per share are presented more than other ratios. Allam and Lymer (2003:20) explained that although companies should disclose comparable performance measures such as financial ratios and other non-financial efficiency measures to maximize the value of online reports to stakeholders, there is no statutory requirement to disclose such information.

**Table 5.20 Extent of Disclosure of “Ratios” Items**

Items included	Number of Companies disclosing the item	Percentage of the 62 companies which had websites	Percentage of the 35 companies which disclosed financial information
Earnings per share	23	37.1	65.7
Other ratios	18	29	51.4

**4. Interim Reports**

Table 5.21 shows that 51.4% of companies which disclosed financial information on their websites presented Quarterly report of current year and only 34.3% of the companies which disclosed its financial information on the website presented their audit review report.

**Table 5.21 Extent of Disclosure of “Interim Reports” Items**

Items included	Number of Companies disclosing the item	Percentage of the 62 companies which had websites	Percentage of the 35 companies which disclosed financial information
Quarterly report of current year	18	29	51.4
Quarterly reports of past years	14	22.6	40
Semi Annual report of current year	13	21	37.1
Semi Annual report of past years	13	21	37.1
Audit review report	12	19.4	34.3

**5. Annual Reports**

As shown in Table 5.22, 60% of companies which disclosed financial information on their websites presented a Letter from the Chairman or CEO. Most companies in Egypt appear to focus more on their financial statements and not on their annual reports; they want only to fulfil the legal requirements and issue the statements required by law.



**Table 5.22 Extent of Disclosure of “Annual Report” Items**

Items included	Number of Companies disclosing the item	Percentage of the 62 companies which had websites	Percentage of the 35 companies which disclosed financial information
Letter from the Chairman or CEO	23	37.1	60
Chairman or CEO signature or printed name	18	29	45.7
Appropriation statement ( Statement of proposed Dividend)	10	16.1	28.6
Current year Annual reports	9	14.5	25.7
Annual reports of past years	7	11.3	20

## **6. Additional Information**

As shown in Table 5.23, 74.3 % of companies which disclosed financial information on their websites issued press releases and disclosed them on their websites. Risk and risk management was disclosed by 62.9% of companies which disclosed financial information on their websites. Although Conference Calls are one of the tools of the Investor Relations function, this item was presented by only 8.6% of companies which disclosed financial information on their websites. Conference calls were used by the three communication companies, Egyptian Company for Mobile Services (Mobinil), Orascom Telecom Holding, and Vodaphone.

**Table 5.23 Extent of Disclosure of “Additional Information” Items**

Items included	Number of Companies disclosing the item	Percentage of the 62 companies which had websites	Percent of the 35 companies which disclosed financial information
Press releases	26	41.9	74.3
Disclosure of risk or risk management	22	35.5	62.9
Current year material events	9	14.5	25.7
Disclaimer or legal notice	7	11.3	20
Forward looking information	6	9.7	17.1
Past year material events	6	9.7	17.1
Corporate Governance	6	9.7	17.1
Note on language translation and audit	4	6.5	11.4
Financial calendar	4	6.5	11.4
Conference Calls	3	4.8	8.6
Supplement or amendment to current year annual report	2	3.2	5.7

## 7. Summarized Financial Statements

Bartlett and Chandler (1997:245) explained that summarized financial data is considered one of the most used sections of the annual reports, particularly among small investors. However, not many of the surveyed companies disclosed summarized financial information on their websites, as seen in Table 5.24. Only 28.6% of companies which disclosed financial information on their websites presented summarized financial data and only 8.6% of these companies presented the summarized statement of cash flow. This may be because not all companies in Egypt are accustomed to produce statements of cash flow.

**Table 5.24 Extent of Disclosure of “Summarized Financial Statements” Items**

Items included	Number of Companies disclosing the item	Percentage of the 62 companies which had websites	Percentage of the 35 companies which disclosed financial information
Summary of financial data over a period of at least 3 years	10	16.1	28.6
Summarized income statements	8	12.9	22.9
Summarized Balance Sheet	7	11.3	20
Summarized statement of cash flow	3	4.8	8.6

**8. Share Prices or Share Performance**

Table 5.25 shows that only 22.9% of the companies, which disclosed their financial statements on their websites, presented their historical and current share prices, while 11.4% of these companies presented share price performance in relation to the stock market index.

**Table 5.25 Extent of Disclosure of “Share Prices or Share Performance” Items**

Items included	Number of Companies disclosing the item	Percentage of the 62 companies which had websites	Percent of the 35 companies which disclosed financial information
Historical share prices	8	12.9	22.9
Current share prices	8	12.9	22.9
Share price performance in relation to stock market index	5	8.1	11.4

**10. Sales**

This Category, as shown in Table 5.26, was the group least disclosed by the Egyptian companies, because they seem reluctant to present detailed information about their revenues. Only one company presented information about monthly sales and operating data.

**Table 5.26 Extent of Disclosure of “Sales” Items**

Items included	Number of Companies disclosing the item	Percentage of the 62 companies which had websites	Percent of the 35 companies which disclosed financial information
Sales of key products	14	22.6	37.1
Segmental reporting by line of Business (Revenue)	10	16.1	28.6
Market share of key products	5	8.1	14.3
Segmental reporting by sector (Revenue)	4	6.5	11.4
Monthly or weekly sale or operating data	1	1.6	2.9

### 5.5.3 Extent of Usage of Presentation Format Item Groups

As for the presentation format items, Table 5.27 shows that the most important group was the communication group, as most companies seem to recognize the importance of encouraging e-commerce. Therefore, they presented on the internet a number of means of contacting them. The least used group of items was the link group. In the next paragraphs, all items within the presentation groups will be analysed.

**Table 5.27 Mean Percentage of the Presentation Format Items Grouping**

	Mean percentage of 62 companies which had websites	Mean percentage of 35 companies which disclosed financial information	Rank
Communication	57.5	62.2	1
Presentation Format	35.6	47.1	2
Investor Relations	27.4	45.0	3
Links	16.1	25.7	4

#### 1. Communication

Companies in Egypt were interested in disclosing contact information, mainly phone numbers, postal address and then e-mail, as part of their efforts to encourage e-commerce and export their products and services. 62.9 % of those companies having websites and 80% of those companies which disclosed their financial information on their websites had a table of contents/sitemap to facilitate the knowledge of information

available. According to Wikipedia - the free encyclopaedia (<http://en.wikipedia.org/wiki/Webmaster>), the webmaster is the agent or person who reads user feedback and complaints about the technical aspects of the websites. Only four companies in Egypt had “Contact to webmaster”.

**Table 5.28 Extent of Usage of “Communication” Items**

Items included	Number of Companies disclosing the item	Percentage of the 62 companies which had websites	Percentage of the 35 companies which disclosed financial information
Telephone number	59	95.2	97.1
Contact us	59	95.2	94.3
Postal Address	55	88.7	88.6
Table of content/sitemap	39	62.9	80
e-mail	51	82.3	74.3
Mailing List	36	58.1	68.6
Internal search engines	14	22.6	37.1
Frequently asked questions	4	6.5	11.4
Contact to Webmaster	4	6.5	8.6

## 2. Presentation Format

Table 5.29 shows the way companies in Egypt disclosed the information. All companies having websites used English language for their websites. Only 29% of the companies having websites disclosed the information in Arabic as well.

More companies tended to use click over menu than pull-down menus, even though pull-down menus provide a greater number of links in a small space. They are commonly used on the top pages of websites and have a lot of content. However, if the user does not click on the mouse, the list of links will not appear and they can be hidden

with the slightest movement of the mouse, even if the user is in the middle of reading the list.

Consistent with Cook (1999), FASB (2000) and Allam & Lymer (2003), HTML and PDF are found to be the most popular formats for the purposes of presenting the companies' financial information on the internet. Of the companies surveyed in this study, 57.1% used PDF and 45.7% used HTML. Three companies of the 20 which presented their financial information in PDF used HTML as well. According to FASB (2000:22) PDF has some advantages; when files are printed, they will look similar to the printed documents on which they were based, they are very easy to create from original documents and documents cannot be inadvertently changed by users. In addition, Lymer et al. (1999) and Allam & Lymer (2003) noted that Acrobat files may be relatively large, and such a file takes a long time to download before it can be viewed.

HTML has several advantages: it can be viewed directly in the browser, it requires no plug-in and it is easily to hyperlink into and out of a HTML page. However, the documents printed will probably not look like the original documents (FASB, 2000:22). Two companies used Excel and two companies used Word in presenting the financial information. Only four (11.4%) companies highlighted the important financial information and presented it on PowerPoint slides.

**Table 5.29 Extent of Usage of “Presentation Format” Items**

Items included	Number of Companies disclosing the item	Percentage of the 62 companies which had websites	Percentage of the 35 companies which disclosed financial information
English WebPages	62	100	100
Click-over menu	45	72.6	74.3
Graphics or diagrams	24	38.7	62.9
Clear Boundaries of Financial Information	21	33.9	60
Financial data in PDF format	20	32.3	57.1
Financial data in HTML	16	25.8	45.7
Pull-down menu	15	24.2	37.1
Arabic Web pages	18	29	31.4
Use of Frames	16	25.8	22.9
PowerPoint or presentation of financial data	4	6.5	11.4
Financial data in Excel	2	3.2	5.7
Financial data in Word	2	3.2	5.7

### **3. Investor Relations**

There were two companies which did not disclose financial information on the web, that provided e-mail to the Investor Relations department and one company provided the phone number to Investor Relations.

**Table 5.29 Extent of Usage of “Investor Relations” Items**

Items included	Number of Companies disclosing the item	Percentage of the 62 companies which had websites	Percentage of the 35 companies which disclosed financial information
One click to get to investor relations or financial information	31	50	85.7
E-mail to investor relations or Financial Control manager	16	25.8	40
Phone number to investor relations	13	21	34.3
Postal address to investor relations	8	12.9	20

#### **4. Links**

Table 5.30 shows that there were three companies which did not provide financial information on the internet had links to their parent and subsidiary companies. Only one Egyptian company used hyperlinks inside the annual report. Hedlin (1999:377) explained that the main reason for the low usage of hyperlinks is that the financial statements are presented often in PDF or in scanned images and these formats are incompatible with the use of hyperlinks.

Of the companies which disclosed financial information on their websites, 51.4% facilitated access to their press releases. Stakeholders will not exert an effort in searching for a company’s press releases. In addition, 37.1% of these companies facilitated the access to their financial information by enabling their users to have the access from different places. Only 17.1% of companies which had websites had links to securities companies’ websites, because of fear of litigation. Users may make decisions depending on the information included in these links, assuming that it is published by the company itself and that it is responsible for such information.



**Table 5.30 Extent of Usage of “Links” Items**

Items included	Number of Companies disclosing the item	Percentage of the 62 companies which had websites	Percent of the 35 companies which disclosed financial information
One click to press releases	20	32.3	51.4
Financial info. found in more than one place	13	21	37.1
Link to parent or subsidiary	15	24.2	34.3
Link to securities companies' websites	6	9.7	17.1
Link to the Stock Exchange web sites	5	8.1	11.4
Hyperlinks inside the annual report	1	1.6	2.9

## 5.6 Conclusion

This chapter has discussed the sources of information, population and sample. This study covered the 100 most actively traded Egyptian companies listed on the Cairo and Alexandria Stock Exchange. Then the items of the disclosure index were discussed. The researcher used the disclosure index of Xiao et al. (2004), with some alterations to suit the Egyptian context of this study. The index included 59 items of disclosure content and 31 presentation format items, which the researcher grouped according to logic and the literature. The grouping was shown to be reliable by using Alpha Cronbach's coefficient. Then the extent of disclosure of each group and item of the disclosure index was examined. Average disclosure rates were 30.1% for companies having websites, and 44.3% for those disclosing financial information. The most frequently disclosed content groups were About the Business, Financial Statements and Ratios, while Sales information was least often provided, and there were wide disparities in the extent of disclosure of individual items within groups. In terms of presentation-related items, the communication items were the most common, and links the least frequently used. In the next chapter, univariate analysis will be presented in an attempt to explain the variations in disclosure practice observed among the investigated companies.

# **Chapter Six**

## **Univariate Analysis**

### **6.1 Introduction**

Chapter Four reported the descriptive analysis of voluntary internet disclosure of the most actively traded companies in Egypt. It showed that there were significant variations among the Egyptian companies in the level of voluntary internet reporting. This requires further investigation to determine the factors that might explain internet disclosure of financial information. Chapter Two introduced some theories regarding how company characteristics may explain such variations. This current chapter seeks to examine the relationship between internet financial disclosure practices and company characteristics. The hypotheses are tested using univariate analysis. Univariate analysis explores the single relationship between an explanatory variable and voluntary internet disclosure. It is not designed to reflect the interrelationships among the variables in explaining the variation in the amount of voluntary internet disclosure of financial information. The following chapter (Chapter Seven) will examine the relationship between the explanatory variables and internet disclosure of financial information using multivariate analysis.

### **6.2 Dependent and Independent Variables**

Statistically, the first important step to begin the analysis is to identify the dependent and independent variables. The dependent variable is the amount of internet financial disclosure in Egyptian companies (disclosure index). The disclosure index includes items which are related to the content of the websites and their format. The content of the websites includes both financial information and other non-financial information which help in making investment and other decisions. The presentation format includes

items which help in identifying how easy it is to access the financial information. Most studies of internet financial reporting and disclosure consider the amount of internet financial disclosure to encompass both content and presentation format items. However, Marston and Polei (2004) have two disclosure indexes; one for the content and the other for the formatting. In this study, each test will be conducted twice for two dependent variables. The first dependent variable is a disclosure index incorporating the content items only. Following other studies, the second dependent variable is a disclosure index that includes all the items of content and presentation format.

The independent variables in this study are the Egyptian companies' characteristics (size, profitability, leverage, liquidity, industry membership, being audited by the big four international audit firms, and being listed on a foreign stock exchange). These independent variables and their proxy measures are listed in Table 6.1.

**Table 6.1 The Proxy Measures of Independent Variables**

<b>The Independent Variable</b>	<b>The Proxy Measures</b>
1. Company Size	Total Assets Total Sales
2. Company Profitability	Return on assets Return on equity
3. Company Leverage	Total debt/total assets Long term debt/total assets
4. Company Liquidity	Current ratio
5. Industry Type	Nine Industry Type
6. Type of Auditor	Big Four International audit Firms
7. Foreign Listing	Being Listed in Foreign Stock Exchange

The second essential step in the analysis is to choose and apply an appropriate statistical technique to these dependent and independent variables. The choice of appropriate

statistical analysis should be based on the type of measurement scale and whether the data are parametric or non parametric.

### 6.2.1 Type of Measurement Scale

The current independent variables can be classified under two types of measurement scale, namely continuous (ratio and interval) variables and categorical (nominal) variables\*. The following Table 6.2 shows the type of measurement scale for each proxy measure of the independent variables. As for the measurement scale of the dependent variable, the amount of internet disclosure in the Egyptian companies is considered to be continuous. The disclosure index score of companies having website ranges between 7 (7.8 %) to 66 (73.3 %) and from 18 (20 %) to 66 (73.3 %) for companies having websites and disclosing financial information. This was shown in Tables 5.6, 5.7, 5.9 and 5.10.

**Table 6.2 The Type of Measurement Scale**

<b>The Independent Variable</b>	<b>The Proxy Measures</b>	<b>Type of measurement Scale</b>
1. Company Size	Total Assets Total Sales	Continuous
2. Company Profitability	Return on assets Return on equity	Continuous
3. Company Leverage	Total debt/total assets Long term debt/total assets	Continuous
4. Company Liquidity	Current ratio	Continuous
5. Industry Type	Nine Industry Type	Categorical
6. Type of Auditor	Big Four International audit Firms	Categorical
7. Foreign Listing	Being Listed in Foreign Stock Exchange	Categorical

\* Another type of measurement is ordinal (ranking). However, none of the independent variables conform to this scale.

## **6.2.2 Parametric versus Non-Parametric Techniques**

It is very important to determine whether the data are parametric or not, in order to decide which statistical techniques should be used. If parametric tests are used when the data are not parametric, then the results are expected to be unreliable (Field, 2005:63). There are some assumptions of parametric tests which should be checked before deciding upon the appropriate test. According to Field (2005:64), the assumptions of parametric tests are as follows:

1. The data distribution; all variables must be normally distributed
2. Homogeneity of variance
3. The measurement scale of the data
4. The number of variables that will be used in the analysis at the same time

These criteria are very important to determine whether the data are parametric or non-parametric (Field, 2005:64). Therefore, Pallant (2001:256) claimed that non-parametric statistical tests should be employed when the data have violated the assumptions of parametric analysis.

### **6.2.2.1 Normality of Distribution**

Several approaches can be employed to assess the normality of a data distribution, such as plotting histograms, using skewness and kurtosis, using the Kolmogorov-Smirnov and Shapiro-Wilk tests.

Kolmogorov-Smirnov (K-S) and Shapiro-Wilk tests compare the scores in the sample to a normally distributed set of scores with the same mean and standard deviation. The K-S test (sometimes termed the KS Lilliefors test for Normality) is a test of goodness of fit. That is, it is used to determine how well a sample of data fits a normal distribution using the following hypotheses (Field, 2005:93):

Ho: Data assumed to be normally distributed

H1: Data assumed not to be normally distributed

If the test is significant ( $p < .05$ ), then the distribution is not normal and the null hypothesis is rejected and if the test is insignificant ( $p > .05$ ), then the distribution is considered normal and the null hypothesis is not rejected (Field, 2005:93). Tables 6.3 and 6.4 test the normality of the disclosure index. The first variable includes the content items alone, while the other one is the total score; it includes both the content items and the format items. This test was done for 98 companies which were identified as the most active companies on the Egyptian Stock Exchange: 62 companies which had websites, 63 companies which did not disclose financial information on the internet and 35 companies which disclosed financial information on their websites. These tables include the test statistics, and the degree of freedom (which should equal the sample size). If the significance level is at  $p < .05$ , then the scores are not normally distributed. For all the independent variables, except for the content and total score for 35 items, the K-S test is highly significant, indicating that all distributions are not normally distributed.

The advice from SPSS is to use the Shapiro-Wilk's statistic for normality when sample sizes are small ( $n < 50$ ) (Innes, 2007). Therefore, with fewer than 50 cases the Shapiro-Wilks statistic for normality was used.

**Table 6.3 Tests of Normality of the Content Dependent Variables**

Number of companies	Kolmogorov-Smirnov			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
98	.287**	98	.000	.736**	98	.000
62	.191**	62	.000	.846**	62	.000
35	.121	35	.200	.928*	35	.024
63	.349**	63	.000	.757**	63	.000

\*\* Significant at the 0.01 level;

\* Significant at the 0.05 level.

**Table 6.4 Tests of Normality of the Total Score Dependent Variables**

Number of companies	Kolmogorov-Smirnov			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
98	.203**	98	.000	.817**	98	.000
62	.175**	62***	.000	.866**	62***	.000
35	.137	35	.095	.936*	35	.044
63	.369**	63	.000	.738**	63	.000

\*\*\* One company had assets but no short or long term debt

\*\* Significant at the 0.01 level;

\* Significant at the 0.05 level.

Tables 6.5, 6.6, 6.7, and 6.8 test the normality of the independent variables: Total Assets, Total Sales, Return on Assets, Return on Equity, Total Debt/Total assets, Long Term Debt/Total Assets and Current Ratio for sample sizes of 98, 62, 63 and 35 companies.

Tables 6.5, 6.6, and 6.7 show significance levels of  $P < .05$ , indicating that the variables are not normally distributed, except for the variables Return on Equity for 98 companies and Return on Assets, Return on Equity, and Leverage (Total Debt/Total Assets) for 63 companies where  $p > .05$  which are normally distributed.

**Table 6.5 Tests of Normality of Independent Variables for 98 Companies**

	Kolmogorov-Smirnov			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Total Assets	.290**	98	.000	.574**	98	.000
Total Sales	.361**	98	.000	.334**	98	.000
leverage	.122**	98	.001	.956*	98	.003
ROA	.132**	98	.000	.937**	98	.000
ROE	.085	98	.077	.951**	98	.001
CA/CL	.181**	97***	.000	.693	97***	.000
Ldbt/OE	.304**	98	.000	.558**	98	.000

\*\*\* One company had assets but no short or long term debt

\*\* Significant at the 0.01 level;

\* Significant at the 0.05 level.

**Table 6.6 Tests of Normality of Independent Variables for 62 Companies which had Web-Sites**

	Kolmogorov-Smirnov			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Total Assets	.262**	62	.000	.647**	62	.000
Total Sales	.359**	62	.000	.368**	62	.000
leverage	.152**	62	.001	.901**	62	.000
ROA	.123*	62	.022	.920**	62	.001
ROE	.178**	62	.000	.927**	62	.001
CA/CL	.122*	62	.023	.916**	62	.000
Ldbt/OE	.300**	62	.000	.543**	62	.000

\*\* Significant at the 0.01 level;

\* Significant at the 0.05 level.

**Table 6.7 Tests of Normality of Independent Variables for 35 companies which Disclosed Financial Information**

	Kolmogorov-Smirnov			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Total Assets	.210**	35	.000	.769**	35	.000
Total Sales	.369**	35	.000	.458**	35	.000
leverage	.217**	35	.000	.839**	35	.000
ROA	.164*	35	.018	.878**	35	.001
ROE	.285**	35	.000	.830**	35	.000
CA/CL	.207**	35	.001	.823**	35	.000
Ldbt/OE	.324**	35	.000	.598**	35	.000

\*\* Significant at the 0.01 level;

\* Significant at the 0.05 level.



**Table 6.8 Tests of Normality of Independent Variables for 63 Companies which did not Disclose Financial Information**

	Kolmogorov-Smirnov			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Total Assets	.288**	63	.000	.600**	63	.000
Total Sales	.308**	63	.000	.456**	63	.000
leverage	.101	63	.174	.967	63	.088
ROA	.085	63	.200	.973	63	.179
ROE	.075	63	.200	.987	63	.735
CA/CL	.198**	62***	.000	.630**	62	.000
Ldbt/OE	.309**	63	.000	.556**	63	.000

\*\*\* One company had assets but no short or long term debt

\*\* Significant at the 0.01 level;

\* Significant at the 0.05 level.

Skewness and Kurtosis normality tests and histograms for each of the dependent and independent variables were also carried out. They also show that the dependent and independent variables were not distributed normally.

#### **6.2.2.2 Homogeneity of Variance**

Levene's test is used to test homogeneity of variance for groups of data. If Levene's test is significant at ( $P \leq 0.5$ ), then the assumption of homogeneity of variance between the groups is rejected. If, however, Levene's test is non-significant ( $P \geq 0.5$ ) then the assumption of homogeneity of variance between the groups is accepted (Field, 2005:98).

Table 6.9 uses Levene's test to test the homogeneity of the dependent and independent variables for two groups of companies: those which disclose financial information and those which do not disclose financial information. Levene's test is denoted by the letter  $F$  and there are two degrees of freedom. For the dependent variables Total Content  $F(1,95)= 133.354$  and Total Score  $F(1,95)= 69.523$ , and the independent variables total

assets  $F(1,95)= 48.398$ , total sales  $F(1,95)= 16.83$ , and Long term debt / owners equity  $F(1,95)= 5.169$ . Since all the Levene statistic are significant at ( $P \leq .05$ ), variances are significantly different and the assumption of homogeneity of variance has been violated. A low significance value (generally less than 0.05) indicates that the variance differs significantly between groups.

For the other independent variables (Return on assets, Return on equity, Leverage, Current asset/current liability), the Levene statistic is not significant ( $P \geq 0.5$ ) and the assumption of homogeneity of variance between the groups is accepted.

**Table 6.9 Test of Homogeneity of Variance Based on Mean**

	Levene Statistic (F)	df1	df2	Sig.
Total Assets	48.398**	1	95	.000
Total Sales	16.833**	1	95	.000
Return on assets	.088	1	95	.768
Return on equity	.101	1	95	.752
Leverage	2.281	1	95	.134
Long term debt / owners equity	5.169*	1	95	.025
Current asset/current liability	.061	1	95	.805
Total format	3.743	1	95	.056
Total content	133.354**	1	95	.000
Total score	69.523**	1	95	.000

\*\* Significant at the 0.01 level;

\* Significant at the 0.05 level.

### 6.2.2.3 Level of Measurement

Each of the parametric approaches assumes that the dependent variable is measured at the interval or ratio level, i.e., using a continuous scale (Pallant, 2001:171). In this study, the dependent variables, Total Score, Total Content, and Total Format were measured on a continuous scale.

#### 6.2.2.4 Independence

Independence means that the data from different participants are independent; therefore the behaviour of one participant does not affect the behaviour of another (Field, 2005:64). Pallant (2001:171) added that the observations that make up the data should be independent of one another. This assumption is not satisfied by this study. Table 7.1 presents the correlation coefficients between the independent variables. Pallant (2003:120) explained that a correlation of 0 means there is no relation and a correlation of 1 means a perfect relation which may be positive or negative according to the sign. The correlation coefficient between Return on Assets and Return on Equity is considered high (0.74). Also, the correlation coefficient between Return on Assets and Return on Equity is considered high (0.71). In addition, although the correlation coefficient between total debt/total assets and long term debt/ total assets is .49, which is still a problem, since they measure one thing, which is leverage. Hair et al. (1998:188) state that multicollinearity occurs even at relatively low levels of .30 or so.

#### *Conclusion*

As the four assumptions of parametric tests, and particularly the first two, normality tests and homogeneity of variance, were not satisfied completely, it was decided to use non-parametric tests, which many statisticians (Field, 2005; Pallant, 2001; Howitt and Cramer, 1997; Dancey and Reidy, 2002) have recommended to be used in such cases. For instance, Pallant (2001:255) stated that:

*“Non-parametric techniques are ideal for use when you have data that is measured on nominal (categorical) and ordinal (ranked) scales. They are also useful when you have very small samples, and when your data does not meet the stringent assumptions of the parametric techniques”.*

## **6.3 Testing the First Four hypotheses**

### **6.3.1 Mann-Whitney U Test**

When testing for differences between two groups, the independent samples t-test comes naturally to mind. However, in spite of its power, simplicity and robustness, the independent-samples t test is inappropriate since the assumptions of parametric tests are not met. The t-test for independent samples can be meaningfully applied only insofar as the two samples are independently and randomly drawn from the source population(s); the scale of measurement for both samples has the properties of an equal interval scale; and the source population(s) can be reasonably supposed to have a normal distribution. Therefore, it is necessary to consider using the non-parametric procedures designed to test for the significance of the difference between two groups, because they make no assumptions about the parameters of a distribution, nor do they presume that any particular distribution is being used; they are distribution-free tests (Pallant, 2001:255).

One of the most popular non-parametric tests is the Mann-Whitney test. It is a non parametric version of the parametric t-test that deals with two samples which are independent and may be of different size (Pallant, 2001:260; Field, 2005:737). This test can be conducted to test for significant associations or differences between the dependent and independent variables. This test also assumes that, in addition to independence within each sample, there is mutual independence between the samples and that the scale used should be at least ordinal (Conover, 1999:272). Other assumptions are that the data consist of a random sample of observations, the variable observed is a continuous random variable and the distribution functions of the two populations differ only with respect to location, if they differ at all (Daniel, 1978:82). The advantage over the independent samples t-test is that the Mann-Whitney test does not assume normality and can be used to test ordinal variables as well.

The Mann-Whitney test has been used in this study to determine whether there are significant differences between two groups of companies: companies that disclose financial information on the internet and those that do not. In Egypt, among the most active 100 companies in the Egyptian Stock Exchange, 35 companies disclosed financial information on the internet and 63 companies did not. Hypotheses such as that there are no significant differences among companies' size, profitability, leverage, and liquidity between companies that disclosed financial information on the internet and companies which did not, have been tested. The rejection or acceptance of the null hypothesis is based on whether there were significant differences.

The results of the Mann-Whitney U test are presented in Table 6.10. The results show that there are statistically significant differences between the two groups of companies, those which disclosed financial information on the internet and those which did not, with respect to total assets and total sales (as proxies for company size) as the probability values for them are significant ( $P < 0.05$ ). In addition, there are statistically significant differences between the companies which disclosed financial information on the internet and those which did not with respect to Total debt/Total assets and Long term debt/total assets, which were used to measure the companies' leverage, as the probability values for them are significant ( $P < 0.05$ ). In contrast, there are no significant differences between companies which disclosed financial information on the internet and those which did not, with respect to profitability (return on assets and return on equity) and liquidity (Current assets/current liability) as the probability values calculated were not significant ( $P > 0.05$ ).

**Table 6.10 Mann Whitney Test Results**

	Total Assets	Total Sales	Return on assets	Return on equity	Total debt/Total assets	Long term debt/total assets	Current assets/current liabilities
Mann-Whitney U	306.000	624.000	898.500	1080.500	552.000	825.500	861.000
Wilcoxon W	2322.000	2640.000	1528.500	3096.500	2568.000	2841.500	1491.000
Z	-5.905	-3.548	-1.513	-.163	-4.082	-2.065	-1.683
Asymp. Sig. (2-tailed)*	.000	.000	.130	.870	.000	.039	.092
Exact Sig. (2-tailed)	.000	.000	.131	.873	.000	.039	.093
Exact Sig. (1-tailed)	.000	.000	.066	.436	.000	.019	.047
Point Probability **	.000	.000	.000	.001	.000	.000	.001

\* Statistically significance results are indicated by "Asymp. Sig.[nificance]" values below .05.

\*\* The portion of the probability distribution which has a P-value equal to the observed P-value (Weisstein, 2007).

### **6.3.2 Kendall's rank Correlation**

Kendall's rank correlation was chosen because it is a better estimate of the correlation in the population, more accurate generalization can be drawn from Kendall's statistic than from Spearman's (Field, 2005:131) and it has been used in similar studies. For example, Al-Htaybat (2005:205) used Kendall's rank correlation coefficient to examine the association between the level of financial disclosure on the internet and company size. Suwaidan (1997:143) used Kendall's rank correlation to examine the association between voluntary disclosure in Jordan and companies' size, number of shareholders effect, and institutional ownership ratio effect.

#### **6.3.2.1 Companies' Size**

Company size was proxied by total assets and total sales to examine the relationship between company size and the level of disclosure. As mentioned before, the disclosure index consists of contents items and format items. Most researchers examined the relationship between companies' characteristics and level of internet financial reporting. The level of internet disclosure is measured by the total score of content and format items. However, in this study, the relationship between the companies' characteristics and the level of internet financial reporting represented by the content, format and total score will be examined.. Then the researcher will examine the relationship between companies' characteristics and format items. These relationships will be examined for the 98 companies and for the 62 companies which had websites. Al-Htaybat (2005) as well as Suwaidan (1997) used Kendall's rank correlation to examine the relationship between companies' size and level of disclosure.

Table 6.11 examines the relationship between the companies' total assets and level of internet financial reporting. It exhibits a significant and positive relationship between

the companies' size and the amount of voluntary internet financial reporting, which means that the larger the company, the more financial information it discloses on the internet, as the correlation is significant at the 0.01 level (1-tailed). To be more specific, larger companies used more formatting items to make information more easily accessible. Therefore, both Mann Whitney and Kendall's tau lead us to accept the first sub-hypothesis H1a, that there is a positive relationship between the amount of disclosure of corporate information via the internet and the total assets of Egyptian companies.

**Table 6.11 Results of Kendall's tau correlation between Internet Financial Reporting and the Size of Egyptian Companies Measured by Total Assets**

Results	Content	Content	Total Score	Total Score	Total Format	Total Format
Correlation Coefficient	.451**	.413**	.439**	.386**	.418**	.334**
Sig. (1-tailed)	.000	.000	.000	.000	.000	.000
No of Companies	98	62	98	62	98	62

\*\* Correlation is significant at the 0.01 level (1-tailed).

Table 6.12 examines the relationship between the companies' total sales and level of internet financial reporting. It shows a significant and positive relationship between the companies' size and the amount of voluntary internet financial reporting, which means that the larger the company, the more financial information it disclosed on the internet, as the correlation is significant at the 0.01 level (1-tailed). In addition, larger companies used more formatting items to make information more easily accessible. Therefore, both Mann Whitney and Kendall's tau lead us to accept the second sub-hypothesis H1b, that there is a positive relationship between the amount of disclosure of corporate information via the internet and the total sales of Egyptian companies.



**Table 6.12 Results of Kendall's tau correlation between Internet Financial Reporting and the Size of Egyptian Companies Measured by Total Sales**

Results	Content	Content	Total Score	Total Score	Total Format	Total Format
Correlation Coefficient	.262**	.323**	.248**	.291**	.239**	.268**
Sig. (1-tailed)	.000	.000	.000	.000	.001	.001
No of Companies	98	62	98	62	98	62

\*\* Correlation is significant at the 0.01 level (1-tailed).

The Mann-Whitney test indicated that there were significant differences between companies' total assets for companies which disclosed financial information on the internet and companies which did not. Kendall's rank correlation shows that there is a significant and positive relationship between companies' size and the amount of voluntary internet financial reporting and disclosure. Size is significantly correlated with total score, content and format. Therefore, H1 which states that there is a positive relationship between the amount of internet financial reporting and the size of Egyptian companies is accepted at the 1% level of significance.

Comparing this result with those of previous studies of internet financial disclosure, the results were consistent with Craven and Marston (1999), Marston (2003), Ashbaugh et al. (1999), Debreceeny et al. (2002), Brennan and Hourigan (1998), Oyeler et al. (2003), Marston and Polei (2004) and Al-Htaybat (2005); they all found that the website disclosure level was positively related to firm size. Ettredge et al. (2002) found that size has significant correlations with total score, content and format. Marston and Polei (2004:305) indicated that firm-specific characteristics like size are related to the amount of information disseminated at corporate websites and to a lesser extent to the way this information is presented. However, Xiao et al. (2004) discovered that size is positively and significantly associated with all internet corporate disclosure measures.

Pirchegger and Wagenhofer (1999) found that companies' size affected internet corporate disclosure of Austrian companies but did not affect German companies and they failed to provide an explanation for this difference. The findings are also in line with the findings of studies of hard copy based corporate disclosure; Ahmed and Nicholls (1994), Cooke (1991), Hossain et al. (1995), Meek et al. (1995), Owusu-Ansah (1998), Wallace and Naser (1995), Ahmed and Curtis (1999) and Suwaidan (1997).

### **6.3.2.2 Companies' Profitability**

Two measures of profitability were used in this study. The two measures are:

$$\text{Return on Assets} = \frac{\text{Net Income After Tax}}{\text{Total Assets}} \times 100$$

$$\text{Return on Equity} = \frac{\text{Net Income After Tax}}{\text{Shareholders' Equity}} \times 100$$

In order to test the second hypothesis H2, concerning the degree of association between the profitability variable and the voluntary internet disclosure, Kendall's tau correlation coefficient was again used. The results shown in Table 6.13 indicate that there is no association between the return on assets and the content and formatting of internet financial reporting. This was emphasized by the Mann-Whitney U test result presented in Table 6.10. It indicates that there is no significant difference in return on assets of companies which disclosed financial information on the internet and companies which did not, as the probability value calculated (.130) was not significant ( $P > 0.05$ ). Consequently, H2a which states that there is a positive relationship between the amount of disclosure of corporate information via the internet and the return on assets of Egyptian companies is rejected.

**Table 6.13 Results of Kendall's tau correlation between Financial Reporting and the Profitability of Egyptian Companies Measured by Return on Assets**

Results	Content	Content	Total Score	Total Score	Total Format	Total Format
Correlation Coefficient	-.086	-.035	-.061	.022	-.035	.085
Sig. (1-tailed)	.119	.346	.199	.402	.314	.172
No of Companies	98	62	98	62	98	62

Table 6.14 indicates there is no significant relationship between Egyptian companies' return on equity and the amount of internet financial reporting; return on equity has no significant correlation with total score, content and formant. Conversely, there is a positive association between return on equity and total score of internet financial reporting for companies having a website. However, the correlation is significant at only the 5% level (tau =.151, one-tailed  $p=.044$ ). This is because there is a significant relationship between return on equity and the formatting of companies having a website. This was confirmed by the Mann-Whitney U test results presented in Table 6.10. It showed that there is no significant difference between return on equity of companies which disclosed financial information on the internet and companies which did not, as the probability value calculated (.130) was not significant ( $P>0.05$ ). Accordingly, H2b which states that there is a positive relationship between the amount of disclosure of corporate information via the internet and the return on equity of Egyptian companies is rejected at the 1% level of significance.

**Table 6.14 Results of Kendall's tau correlation between Internet Financial Reporting and the Profitability of Egyptian Companies Measured by Return on Equity**

Results	Content	Content	Total Score	Total Score	Total Format	Total Format
Correlation Coefficient	.000	.120	.013	.151*	.040	.219**
Sig. (1-tailed)	.497	.089	.427	.044	.289	.007
No of Companies	98	62	98	62	98	62

\*\* Correlation is significant at the 0.01 level (1-tailed).

\* Correlation is significant at the 0.05 level (1-tailed).

Based on the results of Mann Whitney and Kendall's tau tests, H2 which states that there is a positive relationship between the amount of disclosure of corporate information via the internet and the profitability of the Egyptian companies is rejected. This result is consistent with Ashbaugh et al. (1999), Ettredge et al. (2002), Marston and Polei (2004) and Oyeler et al. (2003) who found that internet financial reporting is not associated with profitability. Pirchegger and Wagenhofer (1999), however, found that whereas firm profitability affected the internet corporate disclosure of Austrian companies, it did not affect German companies' internet corporate disclosure choices.

In comparison, studies which examined the association between profitability and extent of hard copy based voluntary disclosure yielded mixed results. For example, there are some studies which have found a positive relationship between profitability and disclosure (Owusu-Ansah, 1998; Raffournier, 1995; Haniffa and Cooke, 2002). Other studies have found no relationship (McNally et al., 1982; Meek et al., 1995; Dumontier and Raffournier, 1998), or a negative relationship (Wallace et al., 1994).

### **6.3.2.3 Leverage**

To test H3, two ratios were used to measure the companies' leverage: total debt to total assets and Long Term Debt/Total Assets. Kendall's tau was used to evaluate the association between the leverage variables and the amount of voluntary internet disclosure. The results in Table 6.15 show that there is a positive relationship between the amount of internet disclosure and companies' leverage. This association is significant at 1% for the 98 most actively traded Egyptian companies and at 5% for companies having websites. These findings were supported by Mann-Whitney tests; Table 6.10 shows that there are statistically significant differences between companies which disclose financial information on the internet and those which do not with respect to Total debt/Total assets, as the probability values for them are significant ( $P < 0.05$ ).

Thus H3a, which says there is a positive relationship between the amount of disclosure of corporate information via the internet and the ratio of total debt to total assets, is accepted.

**Table 6.15 Results of Kendall's tau correlation between Internet Financial Reporting and the Leverage of Egyptian Companies Measured by Total Debt/Total Assets**

Results	Content	Content	Total Score	Total Score	Total Format	Total Format
Correlation Coefficient	.151*	.275**	.136*	.239**	.115	.190*
Sig. (1-tailed)	.019	.001	.029	.003	.057	.017
No of Companies	98	62	98	62	98	62

\*\* Correlation is significant at the 0.01 level (1-tailed).

\*Correlation is significant at the 0.05 level (1-tailed).

Table 6.16 shows that there is a positive relationship between the amount of internet disclosure and companies' Long Term Debt/Total Assets. This association is significant at the 1% level for the 98 most actively traded Egyptian companies. However, no such relationship is found for companies having websites as the correlation is insignificant ( $P > 0.05$ ). These findings were supported by the Mann-Whitney test; Table 6.10 shows that there are statistically significant differences between companies which disclosed financial information on the internet and those which did not with respect to Long term debt/Total assets, as the probability values for them are significant ( $P < 0.05$ ). Thus H3b, which states that there is a positive relationship between the amount of disclosure of corporate information via the internet and the ratio of long term debt to total assets, is accepted.

**Table 6.16 Results of Kendall's tau correlation between Internet Financial Reporting and the Leverage of Egyptian Companies Measured by Long Term Debt/Total Assets**

Results	Content	Content	Total Score	Total Score	Total Format	Total Format
Correlation Coefficient	.164*	.147	.157*	.131	.146*	.105
Sig. (1-tailed)	.013	.052	.017	.072	.025	.126
No of Companies	98	62	98	62	98	62

\* Correlation is significant at the 0.05 level (1-tailed).

By using Mann Whitney and Kendall's tau, H3, that there is a positive relationship between the amount of disclosure of corporate information via the internet and the leverage of Egyptian companies is accepted. This result is consistent with Xiao et al. (2004) but it contradicts the findings of Debreceeny et al. (2002), and Oyeler et al. (2003); they found that leverage was not associated with internet financial reporting.

Hard copy disclosure studies have also provided inconsistent results on the effect of leverage on disclosure. For example, Wallace et al. (1994), Hossain et al.(1995), Ahmed and Courtis (1999) found that highly leveraged companies disclose more. Meek et al. (1995), and Zarzeski (1996) found that disclosure decreases with leverage.

#### **6.3.2.4 Liquidity**

Hypothesis H4, which states that there is a positive relationship between the amount of internet financial reporting and liquidity of Egyptian companies, will be evaluated using Kendall's tau. Companies' liquidity is measured by the ratio of current assets over current liability. As shown in Table 6.17, the results of Kendall's rank correlation coefficient indicated that there is no significant relationship between Egyptian companies' liquidity and internet financial reporting. The results of Kendall's rank correlation coefficient are consistent with the results of Mann Whitney that there is no significant differences between companies which disclosed financial information on the internet and those which did not with respect to liquidity (Current assets/current

liability) as the probability value calculated was not significant ( $P > 0.05$ ). Therefore, Hypothesis H4 which states that there is a positive relationship between the amount of internet financial reporting and liquidity of Egyptian companies is not accepted.

This result is inconsistent with the results of Debrecey et al. (2002) and Oyeler et al. (2003) who found that internet financial reporting practices are highly dependent on liquidity. Companies with greater levels of liquidity are also more likely to engage in internet financial reporting. Hard copy disclosure studies have obtained conflicting results as well. Wallace et al. (1994) found that companies with lower liquidity provide more information while others found no association between liquidity and disclosure (Owusu-Ansah, 1998; Wallace and Naser, 1995; Ahmed and Curtis, 1999).

**Table 6.17 Results of Kendall's tau correlation between Internet Financial Reporting and the Liquidity of Egyptian companies Measured by Current Assets/Current Liability**

Results	Content	Content	Total Score	Total Score	Total Format	Total Format
Correlation Coefficient	-.079	-.134	-.069	-.109	-.058	-.084
Sig. (1-tailed)	.138	.067	.170	.107	.214	.174
No of Companies	97	62	97	62	97	62

#### 6.4 Testing the last three hypotheses

The first four hypotheses were tested using Mann-Whitney and Kendall's rank correlation as the independent variables were continuous (ratio and interval). The next three hypotheses; industry type, type of auditor, and foreign listing are categorical. Kruskal Wallis and Mann-Whitney are used to examine the relation between the industry type and disclosure of financial information on the website. Pearson Chi square and Mann-Whitney are used to test the last two hypotheses, concerning the association between each of the type of auditors' firm and foreign listing and the disclosure of financial information on the internet.

### **6.4.1 Industry type**

Industry types in Egypt are not related to specific and detailed standard industry codes as is the case in some developed countries such as the UK and USA. Companies listed in Cairo and Alexandria Stock Exchange are officially classified into 22 groups. However, the industry of the companies which were included in this study, were examined and the companies were categorized accordingly into 9 groups. These groups are Construction, Chemicals, Communications, Financial Services, Food & Beverage, Entertainment, Textile & Clothing, Engineering & Mining, and Utilities. Investigation of voluntary internet disclosure of different sectors may reveal that one sector is associated more with disclosure of financial information on the internet. This may be attributed to the application of Mimetic isomorphism (as discussed in Chapter Two) which occurs when organizations model themselves after others and there is a dominant firm with high levels of voluntary disclosure of financial information which other companies in the sector to follow.

Table 6.18 presents the descriptive statistics of the data. It shows the mean scores of the voluntary internet disclosure index: Total Score (all items), Total Content and Total Format. From this table, the mean index (Total Score, Total Content, Total Format) for Communication companies is the highest of the nine sectors. For companies disclosing financial information on the internet, the mean indexes of the Construction and Entertainment sectors are the lowest. It is also noted that communication companies have lower standard deviation and lower ranges than other companies which disclosed financial information on the internet. For instance, 100% of the communication companies had disclosure scores over 50% (Table 6.19 and Table 6.20). Tables 6.19 and 6.20 show the distribution of disclosure total scores and disclosure contents according to industry type.



**Table 6.18 Descriptive Statistics for Industry Type**

	Construction	Chemical	Communication	Financial services	Food & Beverage	Entertainment	Textile & Clothing	Engineering & Mining	Utilities
Number of companies	24	11	5	23	14	8	5	7	1
Percentage of companies having websites	41.7%	54.5%	100%	91.3%	35.7%	75%	60%	71.4%	100%
Percentage of companies disclosing financial information	16.7%	36.4%	100%	87%	0%	12.5%	20%	0%	0%
Mean of total Score of disclosure	9.458	10.364	61.00	33.696	3.714	10.5	9.6	7	10
Standard deviation	17.515	11.351	4.472	15.856	5.455	9.725	10.714	4.899	0
Range	66	28	11	56	15	31	26	11	0
Minimum	0	0	55	0	0	0	0	0	10
Maximum	66	38	66	56	15	31	26	11	10
Mean of total content of disclosure	5.167	5.091	43.200	21.696	0.929	3.3750	4	1.8571	2
Standard deviation	11.623	6.172	4.147	11.699	1.328	4.897	5.339	1.464	0
Range	44	15	10	40	3	15	13	4	0
Minimum	0	0	37	0	0	0	0	0	2
Maximum	44	15	47	44	3	15	13	4	2

	Construction	Chemical	Communication	Financial services	Food & Beverage	Entertainment	Textile & Clothing	Engineering & Mining	Utilities
Mean of total Format of disclosure	4.291	5.273	17.8	12	2.786	7.125	5.6	5.143	8
Standard deviation	6.328	5.405	3.114	4.954	4.173	5.276	5.595	3.579	0
Range	22	14	7	21	12	16	13	8	0
Minimum	0	0	14	0	0	0	0	0	8
Maximum	22	14	21	21	12	16	13	8	8

**Table 6.19 Distribution of Voluntary Internet Disclosure (Total Score) According to Industry Type**

Disclosure Score (%)	Construction	Chemical	Communication	Financial services	Food & Beverage	Entertainment	Textile & Clothing	Engineering & Mining	Utilities	Total
0	14	5	-	2	9	2	2	2	-	36
1-10	3	1	-	-	3	2	-	2	-	11
10-20	3	2	-	2	2	3	2	3	1	17
20-30	2	2	-	2	-	-	1	-	-	7
30-40	-	1	-	8	-	1	-	-	-	10
40-50	-	-	-	4	-	-	-	-	-	4
More than 50	2	-	5	5	-	-	-	-	-	12
<b>Total</b>	<b>24</b>	<b>11</b>	<b>5</b>	<b>23</b>	<b>14</b>	<b>8</b>	<b>5</b>	<b>7</b>	<b>1</b>	<b>98</b>

**Table 6.20 Distribution of Voluntary Internet Disclosure (Total Content) According to Industry Type**

Disclosure Score	Construction	Chemical	Communication	Financial services	Food & Beverage	Entertainment	Textile & Clothing	Engineering & Mining	Utilities	Total
0	14	5	-	2	9	2	2	2	-	36
0-10	5	2	-	1	5	5	2	5	1	26
10-20	3	1	-	2	-	-	-	-	-	6
20-30	-	3	-	1	-	1	1	-	-	6
30-40	-	-	-	6	-	-	-	-	-	6
40-50	-	-	-	5	-	-	-	-	-	5
More than 50	2	-	5	6	-	-	-	-	-	13
<b>Total</b>	<b>24</b>	<b>11</b>	<b>5</b>	<b>23</b>	<b>14</b>	<b>8</b>	<b>5</b>	<b>7</b>	<b>1</b>	<b>98</b>

To test H5, which states that there is an association between the industry membership of a company and financial disclosure on the internet, a one-way analysis of variance (Kruskal-Wallis test) was used to test whether more than two independent groups significantly differ from each other (Field, 2005:736). It is a non-parametric alternative to one way ANOVA. It is used when the data do not meet the assumptions required for the parametric ANOVA (Dancey and Reidy, 2002:532). As mentioned by Pallant (2001:263) it is similar to a Mann Whitney test but it allows comparison to be made among more than one group. Scores are converted into ranks and the mean rank for each group is compared. In this study Kruskal Wallace was used because there are nine groups of industries and the data do not meet the assumptions of parametric tests.

**Table 6.21 Kruskal Wallis Test to examine the Association between Industry Membership and Internet Financial Disclosure**

	Disclose financial information
Chi-Square	53.188
Df	8
Asymp. Sig.	.000

a Kruskal Wallis Test

b Grouping Variable: Industrial sector

The results of the test revealed that there is a significant difference between the nine industries at the 5% level and 1% level and 8 degrees of freedom (Chi-Square= 53.188,  $p=.000$ ). Therefore, H5 which states that there is an association between the industry membership of a company and financial disclosure on the internet is accepted. These results are consistent with previous research which found industry type to be a significant explanatory variable. For example, Bonson and Escobar (2002), Ettredge et al. (2001), Oyeler et al. (2003) and Haasbroek (2002) found an association between industry and the extent of financial information provided on corporate websites. Xiao et al. (2004) and Debreceeny et al. (2002) found a significant positive association between Internet disclosure and information technology industry. Xiao et al. (2004) added that

companies in the information technology industry disclose more and have more extensive and elaborate presentation formats. Therefore, technology is a significant determinant of internet financial reporting presentation. On the other hand, Craven and Marston (1999) did not find any relationship between industry type and extent of internet corporate disclosure.

While the above test established that there is a significant association between voluntary internet disclosure and industry type, it did not specify which pairs of the nine industries have significantly different means. To determine that, a Mann-Whitney U test was used for significant differences between the means of the 36 possible pairs of combination. The results of the test, as shown in Table 6.22, indicate that there are significant differences between each of Financial Services and Communications and the other sectors. Further, there is also a significant difference between the Chemicals sector and Food and Beverage ( $Z = -2.412$ ,  $P = .016$ ) at the 5% level. However, there are no significant differences between the Financial Services and Communications sector ( $Z = -.839$ ,  $P = .401$ ) at the 5% level.

In this study, statistical tests may be unreliable due to the small sample size and the large number of industry classifications. A smaller number of industry classification is better, as too many industry sectors are likely to cause problems with statistical testing leading to insignificant results. Following Craven and Marston (1999), the researcher tried to use chi square tests to test for an association between internet disclosure and industrial classification, however, 10 cells (55.6%) had expected count less than 5. This represents a violation of the assumptions of Chi-square which states that the lowest expected frequency in any cell should be 5 or more (Pallant, 2001:257).

**Table 6.22 Mann Whitney to Test the Differences between Different Pairs of Industries**

	Construction	Chemical	Communication	Financial services	Food & Beverage	Entertainment	Textile & Clothing	Engineering & Mining	Utilities
Construction		-1.270	-3.600 *	-4.767 *	-1.593	-.277	-.176	-1.139	-.436
Chemical			-2.303 *	-2.984 *	-2.412 *	-1.135	-.634	-1.758	-.707
Communication				-.839	-4.243 *	-2.958 *	-2.449 *	-3.317 *	-2.236 *
Financial services					-5.077 *	-3.817 *	-3.077 *	-4.201 *	-2.236 *
Food & Beverage						-1.323	-1.673	.000	.000
Entertainment							-.350	-.935	-.354
Textile & Clothing								-1.183	-.447
Engineering & Mining									.000

\* Z is significant at the 0.05 level (2-tailed).

#### **6.4.2 Type of Audit Firm**

The sixth hypothesis states that the extent of internet corporate disclosure is greater among Egyptian companies audited by the four international accountancy firms namely KPMG, Ernst & Young, PricewaterhouseCoopers and Deloitte Touche. To test this hypothesis, Chi-Square tests were used. The Chi-Square ( $\chi^2$ ) test for independence is used to determine if two categorical variables are related (Pallant, 2001:256). Pallant (2001:257) emphasised that each of these variables can have two or more categories. In this study, both variables have two categories, whether companies disclose or not and whether companies are audited by a big accountancy firm or not. There are three assumptions for Chi Square test (Howitt and Cramer, 1997:143-144):

1. Random samples
2. Independent observation; for the test to be meaningful, each case can be counted only once; they cannot appear in more than one group
3. The expected frequency should be greater than 5.

The Central Auditing Organization Law 144/1988 governs the auditing of government departments and agencies, public sector enterprises, and companies in which ownership interest of public investment is not less than 25 percent (World Bank Report, 2002:4). The Central Bank also requires banks to file annual, semi-annual, and quarterly reports, including financial statements. Regulations, which aim at ensuring audit quality, state that two licensed auditors must audit bank financial statements, and individual auditors cannot sign audit reports for more than two banks per year (World Bank Report, 2002:3). In addition to banks, some companies are audited by two audit firms. Therefore, some Egyptian companies are audited by one or two audit firms or by the Central Auditing Organization or by both.

The cross tabulation table (Table 6.23) contains the number of cases that fell into each combination of categories. In total, 63 companies did not disclose financial information on the internet (64.3% of the total) and of these 46 were audited by either small local firms or the Central Authority of Accountancy or both (73% of the total companies which did not disclose financial information on the internet). Seventeen companies were audited by big international accountancy firms (27% of the total companies which did not disclose financial information on the internet). Thirty-five companies disclosed financial information on the internet, which represents 35.7% of the total number of the companies. Of those companies which disclosed financial information on the internet, 10 companies were audited by small local firms or the Central Authority of Accountancy or both (28.6% of the total companies which disclose financial information on the internet) and 25 companies were audited by big international foreign accountancy firms (71.4% of the total which disclosed financial information via the internet). For companies that were audited by big international accountancy firms, 40.5% did not disclose financial information on the internet while 59.5% disclosed financial information on the internet. Similarly for those companies audited by small local firms, 82.1% did not disclose on the internet while 17.9% did. In summary, companies audited by big international companies tended to disclose financial information on the internet more than companies audited by small local firms or the Central Authority of Accountancy or both.



**Table 6.23 Cross Tabulation of Type of Audit Firm and Companies' Disclosure of Financial Information on the Internet**

			Type of Audit Firm		Total
			Small Local Firms	Big International Firms	
Disclose financial information	No Disclosure	Count	46	17	63
		% within Disclose financial information	73.0%	27.0%	100.0%
		% within Type of Audit Firm	82.1%	40.5%	64.3%
		% of Total	46.9%	17.3%	64.3%
	Disclosure	Count	10	25	35
		% within Disclose financial information	28.6%	71.4%	100.0%
		% within Type of Audit Firm	17.9%	59.5%	35.7%
		% of Total	10.2%	25.5%	35.7%
Total		Count	56	42	98
		% within Disclose financial information	57.1%	42.9%	100.0%
		% within Type of Audit Firm	100.0%	100.0%	100.0%
		% of Total	57.1%	42.9%	100.0%

The Pearson Chi Square statistic tests whether two variables are independent. If the significance value is small enough (Sig <0.05) then we reject the hypothesis that the variables are independent and accept the hypothesis that they are in some way related (Field, 2005:691). As shown in Table 6.24, the value of the Chi-Square statistic is 18.148. This value is highly significant (P<.001), indicating that type of audit firm had a significant effect on whether companies disclosed their financial information on their website. Continuity correlation and likelihood ratio confirm the results from the main chi-square result (Field, 2005:692). There are no expected frequencies less than 5, which means that the assumption is fulfilled and the Chi square statistic is reliable.

**Table 6.24 Chi-Square Tests to Examine the Association between Auditor’s Types and Internet Financial Disclosure**

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	18.148(b)	1	.000	.000	.000
Continuity Correction(a)	16.379	1	.000		
Likelihood Ratio	18.500	1	.000	.000	.000
Fisher's Exact Test				.000	.000
Linear-by-Linear Association	17.963(c)	1	.000	.000	.000
N of Valid Cases	98				

a Computed only for a 2x2 Table

b 0 cells (.0%) have expected count less than 5. The minimum expected count is 15.00.

c The standardized statistic is 4.238.

The results of the Chi-Square were confirmed by using the Mann-Whitney U test. Table 6.25 shows (Z= -4.238, p= .000). This high level of significance suggests that the type of audit firm may have a considerable influence on the level of voluntary internet reporting of Egyptian companies. Therefore, the hypothesis H6 that the extent of internet corporate disclosure is greater among Egyptian companies audited by the four international accountancy firms can be accepted at the 1 % level of significance. This result is consistent with that of Xiao et al.(2004).

**Table 6.25 Mann-Whitney Test to Examine the Association between Auditor's Types and Internet Financial Disclosure**

	Type of Audit Firm
Mann-Whitney U	612.500
Wilcoxon W	2628.500
Z	-4.238
Asymp. Sig. (2-tailed)	.000

### 6.4.3 Foreign Listing

The seventh and final hypothesis, that the extent of internet corporate disclosure is greater among Egyptian companies listed in foreign stock exchanges can be tested using Chi square and Mann Whitney as the independent variable is categorical.

As shown in Table 6.26, of the 63 companies which did not disclose financial information on the internet (64.3% of the total), two were registered in foreign stock exchanges (3.2 % of the total companies which did not disclose financial information on the internet). Sixty one companies were registered in the Egyptian stock exchange (96.8 % of the total companies which did not disclose financial information on the internet). Thirty-five companies disclosed financial information on the internet, which represents 35.7% of the total number of the companies. Of those companies which disclosed financial information on the internet, 26 companies were registered in the Egyptian stock exchange (74.3% of the total companies which disclosed financial information on the internet) and nine companies also were registered on a foreign stock exchanges (25.7% of the total which disclosed financial information via the internet). For companies that were registered on a foreign stock exchanges, 18.2% did not disclose financial information on the internet while 81.8% disclosed financial information on the internet. Similarly for those companies that were registered solely on the Egyptian stock exchange, 70.1% did not disclose on the internet while 29.9% disclosed it. In summary,

companies which had a foreign listing tended to disclose financial information on the internet more than companies listed on the Egyptian Stock Exchange only.

**Table 6.26 Cross Tabulation of Foreign Listing and Companies' Disclosure of Financial Information on the Internet**

			Foreign Listing		Total
			Not Listed	Listed	
Disclose financial information	No Disclosure	Count	61	2	63
		% within Disclose financial information	96.8%	3.2%	100.0%
		% within Foreign Listing	70.1%	18.2%	64.3%
		% of Total	62.2%	2.0%	64.3%
	Disclosure	Count	26	9	35
		% within Disclose financial information	74.3%	25.7%	100.0%
		% within Foreign Listing	29.9%	81.8%	35.7%
		% of Total	26.5%	9.2%	35.7%
Total		Count	87	11	98
		% within Disclose financial information	88.8%	11.2%	100.0%
		% within Foreign Listing	100.0%	100.0%	100.0%
		% of Total	88.8%	11.2%	100.0%

Before moving on to look at the test statistics, it is essential to check the assumptions for Chi-Square (Field, 2005:691). The expected counts in the cross tabulation should be greater than 5. However, the smallest expected count was 3.9 for companies listed in foreign stock exchanges and disclosing financial information on their websites. 25% of the cells had an expected frequency of less than 5, but it can be disregarded because Dancey and Reidy (2002:270) stated that the test is reliable if not more than 25% of the cells have an expected frequency of less than 5 and no cell contains less than one. Therefore, the conclusion is that there is an association between foreign listing and disclosing financial information on the internet.

**Table 6.27 Chi-Square to Test the Association Between Foreign Listing and Internet Financial Disclosure**

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)	Point Probability
Pearson Chi-Square	11.471(b)	1	.001	.001	.001	
Continuity Correction(a)	9.321	1	.002			
Likelihood Ratio	11.193	1	.001	.001	.001	
Fisher's Exact Test				.001	.001	
Linear-by-Linear Association	11.354(c)	1	.001	.001	.001	.001
N of Valid Cases	98					

a Computed only for a 2x2 Table

b 1 cells (25.0%) have expected count less than 5. The minimum expected count is 3.93.

c The standardized statistic is 3.370.

The results of Chi-Square were confirmed by using the Mann-Whitney U test. Table 6.25 shows ( $Z = -3.370$ ,  $p = .0001$ ). This high level of significance suggests that foreign listing of companies may have a considerable influence on the level of voluntary internet reporting of Egyptian companies. Therefore, hypothesis H7 which states that the extent of internet corporate disclosure is greater among Egyptian companies listed in foreign stock exchanges can be accepted at the 1 % level of significance.

**Table 6.28 Mann-Whitney U to Test the Association Between Foreign Listing and Internet Financial Disclosure**

	Foreign Listing
Mann-Whitney U	854.000
Wilcoxon W	2870.000
Z	-3.370
Asymp. Sig. (2-tailed)	.001
Exact Sig. (2-tailed)	.001
Exact Sig. (1-tailed)	.001
Point Probability	.001

a Grouping Variable: Disclose financial information

This result is consistent with Xiao et al. (2004) who found a positive association between companies with foreign listing and internet financial reporting on websites, but it is inconsistent with Oyeler et al. (2003) who found no association. In addition, this result is inconsistent with Debreceny et al. (2002:378). They found a negative relationship between internet financial reporting and foreign listing.

## 6.5 Conclusion

In this chapter the results of the univariate analysis of the Egyptian companies' internet disclosure of financial information were reported. This chapter examined the research hypotheses (as stated in Chapter Four, and explained the variation (as discussed in Chapter Five), in the level of voluntary internet accounting disclosure practices among the most actively traded 100 companies in the Cairo and Alexandria Stock Exchange. This was done by reporting the initial results of the univariate association between the dependent and each of the explanatory variables separately. Support was found for the impact of size, leverage, industry type, size of audit firm, and foreign listing. All were significant at least at the 5% level. Based on the statistical significance, it can be concluded that companies which are expected to have voluntary internet disclosure are those which are large in size (whether measured by total assets or total sales), have a high leverage (whether measured by total debt/total assets or long term debt/total

assets), belong to a certain industry (Communications or Financial Services), are audited by the big four international companies, and are listed in foreign stock exchanges as well as the Egyptian stock exchange. Univariate analysis explored the single relationship between an explanatory variable and voluntary internet disclosure. It did not reflect the interrelationships among the variables in explaining the variation in the amount of voluntary internet disclosure of financial information. Therefore, the following chapter (Chapter Seven) will examine the relationship between the explanatory variables and amount of internet disclosure of financial information using multivariate analysis.



# Chapter Seven

## Multivariate Analysis

### 7.1 Introduction

The descriptive and univariate analysis showed the variations in internet financial disclosure among the most 100 actively traded Egyptian companies. The associations between the dependant and independent variables were examined using different statistical techniques. In this chapter, the relationship between the characteristics of the Egyptian companies and amount of internet disclosure will be examined using one of the multivariate analysis methods, multiple regression.

### 7.2 Sample Size

Numerous rules have been suggested for determining the number of subjects needed to carry out multiple regression analysis (Green, 1991:499). Field (2005:173) argued that in most regression models, researchers test the overall fit which is the multiple correlations and the contribution of individual predictors which is called the partial correlation. Tabachnick and Fidell (2001:117) explain that the sample size required for multiple regressions depends on a number of issues, such as desired power, alpha level, number of predictors, and expected effect sizes. They indicated that a sample size of  $N \geq 50 + 8m$  (where  $m$  = the number of independent variables) is adequate for testing multiple correlation and  $N \geq 104 + m$  for testing individual predictors. These rules assume a moderate correlation between the dependent and independent variables, given  $\alpha = .05$  and  $\beta = .20$ . Green (1991:509) recommended computing the sample size according to the above rules used by Tabachnick and Fidell and using the largest one. Pallant (2001:136) argued that it is better to get a large sample in order to generalize the results.

In the context of disclosure study, data collection is often onerous. In this study, the number of companies was only 98. If the rule is applied, the sample size is too small. However, this sample size is considered acceptable if compared to sample sizes in other disclosure studies. A small sample size is a characteristic of many disclosure studies (Cooke, 1998:213). For example Wallace et al. (1994) sampled 50 non-financial Spanish firms, Leventis and Weetman (2000) tested 87 companies listed on the Athens Stock Exchange (ASE), and Owusu-Ansah (1998) used 49 listed companies in Zimbabwe. All these studies used multiple regression. Therefore, the researcher decided to carry out the regression on the 62 companies which had websites and the 35 companies which disclosed financial information on their websites\*.

### **7.3 Data Examination and Transformation**

Before running the multiple regression, the assumptions of multiple regression should be checked.

#### **7.3.1 Checking the Assumptions of Multiple Regression**

1. Normality: This assumption was checked in Chapter Six; Kolmogorov-Smirnov and Shapiro-Wilk were used. It was shown that both the dependent and independent variables were not distributed normally.
2. Non-multicollinearity: There should be no multicollinearity, i.e. strong correlation between two or more independent variables in a regression model (Field, 2005:174). If the variables are obviously measuring the same thing, then a high multicollinearity may appear (Dancey and Reidy, 2002:399). Field (2005:174) proclaimed that the presence of multicollinearity represents a threat to multiple regression, for the following reasons:

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\* OLS multiple regression was not run for the 98 total number of companies, because the dependent variable would include 36 zeros for companies which had no websites and this would bias the results of multivariate analysis as the technique is designed to measure the extent rather than the presence of financial disclosure. For companies which had websites, there were no zeros, because these companies had some information about their companies, their activities and performance which could assist in making some investment decisions.

- Type II error will exist because as collinearity increases, standard errors of b-coefficients will increase which may affect the significance of these coefficients. Therefore, a good independent variable may be found to be statistically insignificant and rejected from the model.
- If the independent variables are highly correlated then it would be difficult to know which variable is more important, as the regression model could include either one.
- Multicollinearity increases the variance of regression coefficients, which results in unstable equations and the estimated values of the regression coefficient (the b-values) will be unstable from one sample to another.
- The overall variance  $R^2$  in the outcome accounted for by two highly correlated predictors is little more than if one predictor is used. The contribution of each independent variable is difficult to determine because their effects are mixed (Hair et al., 1998:189).

Dancey and Reidy (2002:399) suggest that a correlational matrix be drawn up before multiple regression is carried out, to examine the correlations. They added that variables are highly correlated with each other if they have correlations of 0.8 and above.

Table 7.1 presents the correlation coefficients between the independent variables. The correlation coefficient between Return on Assets and Return on Equity is considered high (0.74). Also, the correlation coefficient between Return on Assets and Return on Equity is considered high (0.71). In addition, although the correlation coefficient between total debt/total assets and long term debt/ total assets equals .49, it is still a problem, since they measure a similar fact, leverage. Hair et al. (1998:188) state that multicollinearity occurs even at relatively low levels of .30 or so. Therefore it was decided that each independent variable would be measured by one proxy only, to avoid the problem of multicollinearity. Hence, total assets is chosen to measure company size,

return on equity to measure profitability and total debt/total assets to measure leverage. They were chosen because these proxy measures have high and significant correlation with the three dependent variables (total content, total score and total format) as shown in Table 7.2 and were used to measure these variables in previous studies. Al-Htaybat (2005) used total assets to measure company size, and return on equity to measure profitability. There are other methods which can detect collinearity as well, such as the variance inflation factor (VIF); it shows whether or not there is a high correlation between the independent variables. If it exceeds 10, then there is a problem of multicollinearity (Neter et al., 1983:392). In this study, VIF for all variables, while running the regression models, remained below 10, which indicated the absence of a multicollinearity problem. Moreover, Field (2005:175) explained that tolerance, which is the reciprocal ( $1/VIF$ ), should be above 0.1 or 0.2 to avoid multicollinearity. All values of tolerance in the regression models that were run were above these values.

**Table 7.1 Correlation Matrix of Independent Variables**

	Total Assets	Total Sales	ROA	ROE	LEVERG	LDBT_OE	CA_CL	Type of Audit Firm	Foreign Listing	Industrial sector
Total Assets	1									
Total Sales	.717 **	1								
ROA	-.147	.068	1							
ROE	.115	.267 **	.747 **	1						
LEVERG	.279 **	.105	-.416 **	.025	1					
LDBT_OE	.113	-.048	-.275 **	-.093	.493 **	1				
CA_CL	-.075	-.090	.246 *	.062	-.323 **	-.105	1			
Type of Audit Firm	.126	.073	-.123	-.045	.160	.058	-.092	1		
Foreign Listing	.504 **	.475 **	.127	.190	-.070	-.054	.126	-.068	1	
Industrial sector	-.075	-.080	-.124	-.238 *	-.231 *	-.200 *	.023	.192	-.198	1

\*\* Correlation is significant at the 0.01 level (2-tailed).

\* Correlation is significant at the 0.05 level (2-tailed).

**Table 7.2 Correlation Between Dependent Variables and Some Independent Variables**

	Total score	Content	Format
Total Assets	.562 **	.594 **	.434 **
Total Sales	.374 **	.390 **	.299 **
ROA1	-.002	-.003	.001
ROE1	.211 *	.240 *	.128
LEVERG1	.281 **	.306 **	.195
LDBT_OE1	.083	.095	.049

\*\* Correlation is significant at the 0.01 level (2-tailed).

\* Correlation is significant at the 0.05 level (2-tailed).

3. Homoscedasticity of Variance: Refers to residuals at each level of the independent variable being similar (Field, 2005:170). As indicated in Chapter Six, Levene's test is used to test homogeneity of variance for groups of data. If Levene's test is significant at ( $P \leq 0.5$ ), then the assumption of homogeneity of variance between the groups is rejected. If, however, Levene's test is non-significant ( $P \geq 0.5$ ) then the assumption of homogeneity of variance between the groups is accepted (Field, 2005:98). In Chapter Six, it was shown that variances were significantly different and the assumption of homogeneity of variance was violated. Tabachnick and Fidell (2001:79) believed that homoscedasticity of variance is related to the assumption of normality. Therefore, if the assumption of normality is not met, the assumption of homoscedasticity will not be met either.

4. Independence of errors: Tabachnick and Fidell (2001:121) explained that the errors of prediction should be uncorrelated or independent. The Durbin-Watson test can be used to test the correlation between errors (Field, 2005:170). The test statistic varies between 0 and 4, and a value of 2 indicates uncorrelation of errors. Negative correlation

occurs if the value of the test is significantly above 2, while positive correlation occurs if the value is significantly below 2 (Field, 2005:170).

5. Outliers: Multiple regression is very sensitive to outliers. They are the values that can have a remarkable influence on the correlation coefficient particularly in small samples, because they are significantly lower or higher than other values in the data set (Pallant, 2001:111). They can under - or over - estimate the value of  $r$  the correlation coefficient. Therefore, scatter plots were used to check for outliers and this problem was found in the current data set.

*Conclusion:* The assumptions of multiple regression were not met and particularly the normality and homogeneity of variance. There was also a problem of outliers; therefore the data needed to be transformed before performing the multiple regression.

### **7.3.2 Transformation of Data**

Cooke (1998:210) stated that data transformation is beneficial if problems of linearity, normality and homoscedasticity of variance exist. Transformation of data is useful if the assumptions of Standard Ordinary Least Square (OLS) are not entirely fulfilled. OLS is not preferable because of the non-normality of the distribution of most of the dependent and independent variables. Cooke (1998:209) added that a recent development in dealing with such problems is to transform the data and use Rank Regression rather than conventional OLS. Rank regression has been used recently in a number of accounting disclosure studies (Cooke, 1998:209). Examples include Lang and Lundholm (1993;1996), Wallace et al. (1994), Wallace and Naser (1995), Cooke (1998), Abd El Salam (1999) and Al-Htaybat (2005). This method transforms data into ranks and then applies the regression technique.

Rank Regression is beneficial for the following reasons;

1. When accounting datasets show non-linear monotonic relations between independent and dependent variables, it yields distribution-free test statistics (non-parametric) which is potentially useful (Cooke, 1998:209).
2. It is insensitive to outliers (Cheng et al., 1992:588).
3. Its results are similar to the ones that can be achieved from ordinal transformation (Wallace et al., 1994:47).
4. It alleviates the effects of measurement errors, outliers and residual heteroscedasticity on the regression results (Wallace et al., 1994:47).
5. When there is non-linearity with data concentration, rank scores disperse that concentration (Cooke, 1998:214).
6. The transformed data are ordinal and the tests are non-parametric and this may be essential when dealing with small sample size—a characteristic of many disclosure studies (Cooke, 1998:213).

Cooke (1998:213-214) noted, however, that despite all the advantages of rank regression; it has the following weaknesses:

1. The regression coefficients ( $\beta_j$ ) from Rank Regression are difficult to interpret for most values.
2. Since ranks are distribution-free, testing for significance using the F and t-tests is not appropriate.
3. The structure of errors cannot be normal and the transformation of individual observations to ranks is to some extent arbitrary.
4. Another characteristic of using ranks is that the transformed data are ordinal and not interval and therefore the tests are non-parametric, which are weaker than parametric tests.



Cooke (1998:214, 219) suggested that the normal score transformation approach can be used as an extension of the rank approach for the following reasons:

1. It eliminates some of the weaknesses of the rank transformation approach and retains the advantages.
2. Normally distributed dependent variables entail the same property for the distribution of the errors.
3. Significance levels can now be determined; they are meaningful and have greater power than when using ranks.
4. The F and t-tests are meaningful.
5. The power of the F and t-tests may be used.
6. The regression coefficients derived using normal scores are meaningful.

The normal score transformation approach was adopted by Haniffa and Cooke (2002), Marston and Polei (2004), Al-Htaybat (2005), and Abd El Salam (1999). It has been decided for the purpose of this study, and following Al-Htaybat (2005), and Abd El Salam (1999) to use both approaches, the rank score approach and the normal score approach, in the regression analysis.

### **7.3.2.1 Rank Score Approach**

Iman & Conover (1979) as cited in Al-Htaybat (2005:220) clarified that in rank transformation, data are simply ranked in order; rank one is assigned to the smallest observation and rank N for the largest one. Afterwards, one of the following formulae is applied on the ranked data:

- $\frac{N}{n+1}$                   Where  $N$  = the ranked scores  
    $n$  = Number of observations (Companies)

Cheng et al. (1992) and Al-Htaybat (2005) used this formula. Cheng et al. (1992:588) explained that the ranked variables will have a maximum value of  $N/(n+1)$  and a minimum value of  $1/(n+1)$ . According to this formula, ranks are standardized by the number of observations plus 1. Thus, the coefficient produced will have the desirable property of being independent of the observation.

- $Percentile Rank = \frac{N-1}{n-1}$     Where  $N =$  the ranked scores  
 $n =$  Number of observations (companies)

This formula was adopted by Abd El Salam (1999:159), Lang and Lundholm (1993:264), and Wallace and Naser (1995:332). They explained that the maximum rank value is one and the lowest rank is zero. Percentile ranks are used in the regression because they are independent of the maximum rank and, thus, are more general.

### **7.3.2.2 Normal Score approach**

Cooke (1998) was the first to apply this approach in disclosure studies (Abd El Salam, 1999:158). Cooke (1998:214) explained that the ranks are substituted by scores on the normal distribution. Therefore, the normal score approach is considered an extension of the rank approach. This method is referred to as the Van der Waerden approach\*. The transformation is done by dividing the normal distribution by the number of observations plus one region, on the basis that each region has equal probability.

## **7.4 Ordinary Least Squares Regression**

OLS (Ordinary Least Squares Regression) is a common statistical technique used in many disclosure studies, for example Xiao et al. (2004), Nikolaev and Lent (2005), Chan and Wickramasinghe (2006), Marston and Polei (2004), and Al-Htaybat (2005). It

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\* The SPSS package includes ranking based on normal scores where the Van der Waerden Method can be selected.

is used to “examine the incremental explanatory power of the variables” as the “theoretically correct form of the relation between the disclosure indexes and independent firm characteristics is not known” (Wallace and Naser, 1995:332). OLS regression was used in this study as it is a powerful tool for modelling continuous data, mainly when used with dummy variables, coding and data transformation (Hutcheson and Sofroniou, 1999:55-56).

Three dependent variables were used for internet financial reporting and disclosure, namely, content, format and total score (which includes both the content and format). This was done not only to examine the kind of information that was disseminated on the web but also how this information was presented and which technological choices were used to make the webpage friendly, easy to navigate and enable the investor to find the information s/he wants. Marston and Polei (2004) used only two dependent variables, content and format. Xiao et al. (2004) used five dependent variables, which were total score, content, format, required items and items not required by China Securities Regulatory Commission. Other studies such as Al-Htaybat (2005) included only the total score as the dependent variable.

As mentioned before in Chapter Six, there are two main types of independent variables, continuous and categorical for each regression model. The continuous variables are company size, profitability, leverage, and liquidity. The categorical (dummy) variables are foreign listing, auditor type or size and industry type. Auditor type takes the value of 1 if audited by one of the big four international audit firms and 0 otherwise. Foreign listing takes 1 if the company is listed in the local and foreign stock exchanges and 0 otherwise. As for industry type, there were nine sectors. Since only one company belonged to the utilities sector, this sector was not included. This left eight sectors and

eight dummy variables, of which one needed to be excluded, since the number of dummy variables should be one less than the number of levels of the nonmetric variables (Hair et al., 1998:144). One dummy variable is not used as it would overlap completely with the variation explained by the other dummy variables and this would result in multicollinearity, which should be avoided in multiple regression (Howitt and Cramer, 1997:421). The exclusion of this one dummy variable will not result in omission of information as it has already been accounted for by the other dummy variables (Howitt and Cramer, 1997:422). Therefore, it was decided in this study to exclude Engineering and Mining from multiple regression. The seven dummy variables of industries are Construction, Chemicals, Communications, Financial Service, Food and Beverage, Entertainment, and Textile & Clothing. Each variable was given the value of 1 if the company belonged to this particular industry and 0 otherwise. Therefore, three multiple regression models with three dependent variables and 13 independent variables were built for this study, for each sample size.

$$\begin{aligned}
 DI \text{ (Total Score, Content, Format)} = & \\
 & \beta_0 + \beta_1 \text{ Size (Total Assets)} + \beta_2 \text{ Profitability (Return on Equity)} + \beta_3 \text{ Leverage} \\
 & \left( \frac{\text{Total Debt}}{\text{Total Assets}} \right) + \beta_4 \text{ Liquidity} \left( \frac{\text{Current Assets}}{\text{Current Liabilities}} \right) + \beta_5 \text{ Type of Audit Firm} \\
 & + \beta_6 \text{ Foreign Listing} + \beta_7 \text{ Construction} + \beta_8 \text{ Chemical} + \beta_9 \text{ Communication} \\
 & + \beta_{10} \text{ Financial Service} + \beta_{11} \text{ Food \& Beverage} + \beta_{12} \text{ Entertainment} \\
 & + \beta_{13} \text{ Textile \& Clothing} + \varepsilon_1
 \end{aligned}$$

Where:  $DI$  = Disclosure Index,  $\beta_0$  = the intercept and  $\varepsilon_1$  = the residual

## 7.5 Choice of Models

Following Al-Htaybat (2005) and Cooke (1998), standard OLS multiple regression was used. Howitt and Cramer (1997:322) explained that in standard multiple regression with a single stage entry ('enter method' in SPSS), all independent variables are employed, irrespective of whether they are good predictors. Hair et al. (1998:131) illustrate that all

independent variables are entered into the regression model equation at once. Each independent variable is assessed according to its ability to predict the dependent variable irrespective of the predictive ability afforded by all the other independent variables.

There are five statistics which are of prime importance to the interpretation of regression results.

1. The F statistic: Indicates whether an overall model is significant.
2. The coefficient of determination  $R^2$ : Measures the goodness of fit of a linear model. It represents the proportion of the variation in the dependent variable that can be explained by the variation in the independent variables.
3. Adjusted  $R^2$ : Is used to compare between equations with different numbers of independent variables, different sample size, or both (Hair et al., 1998:142).
4. The 't' coefficient: Indicates whether or not an independent variable contributes significantly in explaining variations in the dependent variable at a chosen significance level.
5. Beta: The standardized beta values determine the importance of each independent variable in the model. They are measured in a standard deviation model and thus make it easier to compare the different independent variables in the model (Field, 2005:193).

## **7.6 Ranked and Normal Score OLS Regression Analysis**

Full rank and normal score OLS regression models were run for each of the dependent variables - total score, total content and total format - for companies which were active and had web sites (62 companies) and for companies which were amongst the most active companies and disclosed financial information on their websites (35 companies). There were thirteen independent variables and the forced entry method ('Enter method' in the SPSS) was used to include these variables. These tests were used to explain the

variability of the disclosure scores, as in most disclosure studies, as prediction is not the purpose of such studies (Cooke, 1998:215).

Histograms and normal distribution plots were employed once more to evaluate the normality of the residual distribution. For all models, the rank residual was normally distributed. Also the value of leverage indicated no influence of outliers on the rank regressions models. The Durbin-Watson statistic was calculated for all models and its value was close to 2. The Durbin-Watson statistic is used to test whether the assumption of independent error is tenable; the closer the value to 2, the better, as it means that the assumption has been met (Field, 2005:189). The variance inflation factor was inspected for models to ensure that the problem of multicollinearity did not exist. The VIF should be lower than 10 and tolerance should not be below 0.2 (Field, 2005:196) which was the case with all the models after using rank and normal regression.

Tables 7.3 and 7.6 report a summary of the rank regression analysis results of total score, for 62 and 35 companies respectively. Tables 7.4 and 7.7 report a summary of the rank regression analysis results of total content, for the 62 and 35 companies respectively. Tables 7.5 and 7.8 report a summary of the rank regression analysis results of format, for the 62 and 35 companies respectively.

Furthermore, Tables 7.9, and 7.12 report a summary of the normal score regression analysis results of total score, for the 62 and 35 companies respectively. Tables 7.10 and 7.13 report a summary of the normal score regression analysis results of total content, for 62 and 35 companies respectively. Tables 7.11 and 7.14 report a summary of the normal score regression analysis results of total format, for the 62 and 35 companies respectively.

Tables 7.6, 7.7, 7.8, 7.12, 7.13, 7.14 reported the regression analysis results of total score, content and format for the 35 companies which disclosed financial information on their websites. The Food and Beverage variable was excluded from multiple regressions because no company in this sector was disclosing financial information on its websites. In addition, SPSS excluded the financial service variable from the multiple regressions because its entry would not contribute significantly to the variance accounted for.

**Table 7.3 Full Rank Regression Model of Total Score for 62 Companies**

<b>R</b>	<b>R Square</b>	<b>Adjusted R Square</b>	<b>Std. Error of the Estimate</b>		<b>R square Change</b>	<b>F Change</b>	<b>Sig. F</b>
.853	.727	.653	.17395		.727	9.837	.000
<b>Coefficients</b>	<b>B</b>	<b>Std. Error</b>	<b>Beta</b>	<b>t</b>	<b>Sig.</b>	<b>Tolerance</b>	<b>VIF</b>
<b>Constant</b>	.031	.119		.256	.799		
<b>Total Assets</b>	.091	.113	.091	.801	.427	.442	2.264
<b>Return on Equity</b>	.204	.092	.204	2.207	.032*	.665	1.503
<b>Tdbt/TA</b>	.069	.141	.069	.487	.629	.284	3.517
<b>CA/CL</b>	.064	.104	.064	.612	.544	.520	1.923
<b>Foreign Listing</b>	.191	.088	.229	2.176	.035*	.512	1.951
<b>Audit firm type</b>	.054	.060	.092	.908	.369	.551	1.813
<b>Construction</b>	.107	.101	.134	1.060	.294	.354	2.821
<b>Chemicals</b>	.112	.108	.113	1.038	.305	.482	2.075
<b>Communications</b>	.519	.138	.482	3.762	.000**	.346	2.889
<b>Financial Services</b>	.358	.106	.579	3.372	.001**	.193	5.184
<b>Food &amp; Beverage</b>	-.063	.113	-.059	-.556	.581	.512	1.955
<b>Entertainment</b>	.074	.104	.075	.711	.480	.517	1.934
<b>Textile &amp; Clothing</b>	.144	.127	.105	1.135	.262	.661	1.512

\*\* Significant at the 0.01 level;

\* Significant at the 0.05 level.



**Table 7.4 Full Rank Regression Model of Total Content for 62 Companies**

<b>R</b>	<b>R Square</b>	<b>Adjusted R Square</b>	<b>Std. Error of the Estimate</b>		<b>R square Change</b>	<b>F Change</b>	<b>Sig. F</b>
.872	.760	.694	.16273		.760	11.662	.000
<b>Coefficients</b>	<b>B</b>	<b>Std. Error</b>	<b>Beta</b>	<b>t</b>	<b>Sig.</b>	<b>Tolerance</b>	<b>VIF</b>
<b>Constant</b>	-.008	.112		-.075	.941		
<b>Total Assets</b>	.170	.106	.171	1.608	.114	.442	2.264
<b>Return on Equity</b>	.149	.086	.150	1.730	.090	.665	1.503
<b>Tdbt/TA</b>	.049	.132	.049	.369	.714	.284	3.517
<b>CA/CL</b>	.063	.098	.063	.642	.524	.520	1.923
<b>Foreign Listing</b>	.138	.082	.167	1.690	.098	.512	1.951
<b>Audit firm type</b>	.097	.056	.166	1.742	.088	.551	1.813
<b>Construction</b>	.174	.094	.219	1.845	.071	.354	2.821
<b>Chemicals</b>	.193	.101	.196	1.920	.061	.482	2.075
<b>Communications</b>	.532	.129	.496	4.123	.000**	.346	2.889
<b>Financial Services</b>	.358	.099	.580	3.596	.001**	.193	5.184
<b>Food &amp; Beverage</b>	-.005	.106	-.005	-.046	.964	.512	1.955
<b>Entertainment</b>	.026	.097	.026	.265	.792	.517	1.934
<b>Textile &amp; Clothing</b>	.199	.118	.147	1.684	.099	.661	1.512

\*\* Significant at the 0.01 level;

\* Significant at the 0.05 level.

**Table 7.5 Full Rank Regression Model of Total Format for 62 Companies**

<b>R</b>	<b>R Square</b>	<b>Adjusted R Square</b>	<b>Std. Error of the Estimate</b>		<b>R square Change</b>	<b>F Change</b>	<b>Sig. F</b>
.801	.641	.544	.19891		.641	6.596	.000
<b>Coefficients</b>	<b>B</b>	<b>Std. Error</b>	<b>Beta</b>	<b>t</b>	<b>Sig.</b>	<b>Tolerance</b>	<b>VIF</b>
<b>Constant</b>	.061	.136		.449	.656		
<b>Total Assets</b>	.025	.130	.025	.190	.850	.442	2.264
<b>Return on Equity</b>	.298	.106	.299	2.819	.007**	.665	1.503
<b>Tdbt/TA</b>	.121	.161	.122	.750	.457	.284	3.517
<b>CA/CL</b>	.021	.119	.021	.173	.863	.520	1.923
<b>Foreign Listing</b>	.278	.100	.335	2.770	.008**	.512	1.951
<b>Audit firm type</b>	.029	.068	.050	.430	.669	.551	1.813
<b>Construction</b>	.032	.115	.041	.281	.780	.354	2.821
<b>Chemicals</b>	.048	.123	.049	.393	.696	.482	2.075
<b>Communications</b>	.372	.158	.347	2.360	.022*	.346	2.889
<b>Financial Services</b>	.290	.122	.469	2.382	.021*	.193	5.184
<b>Food &amp; Beverage</b>	-.073	.130	-.068	-.564	.575	.512	1.955
<b>Entertainment</b>	.151	.119	.153	1.269	.211	.517	1.934
<b>Textile &amp; Clothing</b>	.098	.145	.072	.680	.500	.661	1.512

\*\* Significant at the 0.01 level;

\* Significant at the 0.05 level.

**Table 7.6 Full Rank Regression Model of Total Score for 35 Companies**

<b>R</b>	<b>R Square</b>	<b>Adjusted R Square</b>	<b>Std. Error of the Estimate</b>		<b>R square Change</b>	<b>F Change</b>	<b>Sig. F</b>
.853	.727	.597	.19117		.727	5.577	.000
<b>Coefficients</b>	<b>B</b>	<b>Std. Error</b>	<b>Beta</b>	<b>t</b>	<b>Sig.</b>	<b>Tolerance</b>	<b>VIF</b>
<b>Constant</b>	.161	.184		.874	.391		
<b>Total Assets</b>	-.031	.155	-.031	-.203	.841	.495	2.021
<b>Return on Equity</b>	.249	.133	.249	1.870	.074	.670	1.493
<b>Tdbt/TA</b>	-.043	.178	-.044	-.244	.809	.374	2.673
<b>CA/CL</b>	.269	.169	.269	1.594	.125	.416	2.402
<b>Foreign Listing</b>	.101	.112	.149	.906	.374	.437	2.291
<b>Audit firm type</b>	.141	.101	.215	1.395	.176	.499	2.004
<b>Construction</b>	-.029	.131	-.031	-.225	.824	.606	1.651
<b>Chemicals</b>	-.408	.151	-.437	-2.707	.013*	.455	2.197
<b>Communications</b>	.371	.151	.438	2.464	.022*	.376	2.659
<b>Entertainment</b>	-.149	.229	-.084	-.650	.522	.716	1.396
<b>Textile &amp; Clothing</b>	-.281	.234	-.158	-1.199	.243	.686	1.459

\*\* Significant at the 0.01 level;

\* Significant at the 0.05 level.

**Table 7.7 Full Rank Regression Model of Total Content for 35 Companies**

<b>R</b>	<b>R Square</b>	<b>Adjusted R Square</b>	<b>Std. Error of the Estimate</b>		<b>R square Change</b>	<b>F Change</b>	<b>Sig. F</b>
.833	.694	.548	.20251		.694	4.743	.001
<b>Coefficients</b>	<b>B</b>	<b>Std. Error</b>	<b>Beta</b>	<b>t</b>	<b>Sig.</b>	<b>Tolerance</b>	<b>VIF</b>
<b>Constant</b>	.116	.195		.594	.558		
<b>Total Assets</b>	.095	.164	.095	.579	.568	.495	2.021
<b>Return on Equity</b>	.208	.141	.208	1.478	.153	.670	1.493
<b>Tdbt/TA</b>	-.055	.188	-.055	-.293	.772	.374	2.673
<b>CA/CL</b>	.272	.179	.273	1.525	.141	.416	2.402
<b>Foreign Listing</b>	.059	.119	.087	.499	.623	.437	2.291
<b>Audit firm type</b>	.157	.107	.239	1.467	.156	.499	2.004
<b>Construction</b>	-.065	.138	-.070	-.473	.641	.606	1.651
<b>Chemicals</b>	-.323	.159	-.347	-2.028	.054	.455	2.197
<b>Communications</b>	.377	.160	.445	2.366	.027*	.376	2.659
<b>Entertainment</b>	-.168	.243	-.095	-.694	.495	.716	1.396
<b>Textile &amp; Clothing</b>	-.287	.248	-.161	-1.158	.259	.686	1.459

\*\* Significant at the 0.01 level;

\* Significant at the 0.05 level.

**Table 7.8 Full Rank Regression Model of Total Format for 35 Companies**

<b>R</b>	<b>R Square</b>	<b>Adjusted R Square</b>	<b>Std. Error of the Estimate</b>		<b>R square Change</b>	<b>F Change</b>	<b>Sig. F</b>
.832	.693	.546	.20191		.693	4.720	.001
<b>Coefficients</b>	<b>B</b>	<b>Std. Error</b>	<b>Beta</b>	<b>t</b>	<b>Sig.</b>	<b>Tolerance</b>	<b>VIF</b>
<b>Constant</b>	.274	.194		1.411	.172		
<b>Total Assets</b>	-.226	.163	-.227	-1.381	.181	.495	2.021
<b>Return on Equity</b>	.407	.140	.410	2.902	.008**	.670	1.493
<b>Tdbt/TA</b>	-.022	.188	-.022	-.117	.908	.374	2.673
<b>CA/CL</b>	.129	.178	.130	.723	.477	.416	2.402
<b>Foreign Listing</b>	.236	.118	.349	1.995	.058	.437	2.291
<b>Audit firm type</b>	.063	.107	.096	.586	.564	.499	2.004
<b>Construction</b>	.000	.138	.000	.002	.999	.606	1.651
<b>Chemicals</b>	-.439	.159	-.473	-2.764	.011*	.455	2.197
<b>Communications</b>	.188	.159	.223	1.183	.249	.376	2.659
<b>Entertainment</b>	.099	.242	.056	.411	.685	.716	1.396
<b>Textile &amp; Clothing</b>	-.133	.247	-.075	-.536	.597	.686	1.459

\*\* Significant at the 0.01 level;

\* Significant at the 0.05 level.

**Table 7.9 Normal Score Regression Model of Total Score for 62 Companies**

<b>R</b>	<b>R Square</b>	<b>Adjusted R Square</b>	<b>Std. Error of the Estimate</b>		<b>R square Change</b>	<b>F Change</b>	<b>Sig. F</b>
.834	.696	.614	.5858892		.696	8.453	.000
<b>Coefficients</b>	<b>B</b>	<b>Std. Error</b>	<b>Beta</b>	<b>t</b>	<b>Sig.</b>	<b>Tolerance</b>	<b>VIF</b>
<b>Constant</b>	-.713	.261		-2.733	.009		
<b>Total Assets</b>	.072	.120	.073	.603	.550	.436	2.294
<b>Return on Equity</b>	.235	.096	.237	2.449	.018*	.677	1.478
<b>Tdbt/TA</b>	.051	.133	.052	.384	.702	.350	2.855
<b>CA/CL</b>	.052	.109	.053	.477	.635	.522	1.914
<b>Foreign Listing</b>	.618	.298	.233	2.074	.043*	.503	1.990
<b>Audit firm type</b>	.101	.200	.054	.506	.615	.553	1.808
<b>Construction</b>	.341	.338	.134	1.008	.318	.357	2.798
<b>Chemicals</b>	.214	.361	.068	.592	.557	.485	2.060
<b>Communications</b>	1.660	.474	.484	3.499	.001**	.332	3.014
<b>Financial Services</b>	1.030	.339	.521	3.037	.004**	.215	4.650
<b>Food &amp; Beverage</b>	-.353	.379	-.103	-.931	.356	.519	1.926
<b>Entertainment</b>	.200	.350	.063	.572	.570	.516	1.938
<b>Textile &amp; Clothing</b>	.476	.424	.109	1.124	.267	.670	1.493

\*\* Significant at the 0.01 level;

\* Significant at the 0.05 level.

**Table 7.10 Normal Score Regression Model of Total Content for 62 Companies**

<b>R</b>	<b>R Square</b>	<b>Adjusted R Square</b>	<b>Std. Error of the Estimate</b>		<b>R square Change</b>	<b>F Change</b>	<b>Sig. F</b>
.874	.764	.700	.5066906		.764	11.941	.000
<b>Coefficients</b>	<b>B</b>	<b>Std. Error</b>	<b>Beta</b>	<b>t</b>	<b>Sig.</b>	<b>Tolerance</b>	<b>VIF</b>
<b>Constant</b>	-.878	.226		-3.892	.000		
<b>Total Assets</b>	.222	.103	.228	2.150	.037*	.436	2.294
<b>Return on Equity</b>	.151	.083	.155	1.820	.075	.677	1.478
<b>Tdbt/TA</b>	.002	.115	.002	.017	.986	.350	2.855
<b>CA/CL</b>	.073	.094	.075	.773	.443	.522	1.914
<b>Foreign Listing</b>	.322	.258	.124	1.250	.217	.503	1.990
<b>Audit firm type</b>	.342	.173	.187	1.978	.054	.553	1.808
<b>Construction</b>	.600	.293	.241	2.051	.046*	.357	2.798
<b>Chemicals</b>	.571	.312	.184	1.829	.074	.485	2.060
<b>Communications</b>	1.758	.410	.522	4.284	.000**	.332	3.014
<b>Financial Services</b>	1.000	.293	.516	3.410	.001**	.215	4.650
<b>Food &amp; Beverage</b>	.059	.328	.017	.179	.859	.519	1.926
<b>Entertainment</b>	-.051	.303	-.017	-.169	.866	.516	1.938
<b>Textile &amp; Clothing</b>	.684	.366	.160	1.867	.068	.670	1.493

\*\* Significant at the 0.01 level;

\* Significant at the 0.05 level.

**Table 7.11 Normal Score Regression Model of Total Format for 62 Companies**

<b>R</b>	<b>R Square</b>	<b>Adjusted R Square</b>	<b>Std. Error of the Estimate</b>		<b>R square Change</b>	<b>F Change</b>	<b>Sig. F</b>
.777	.604	.497	.6665766		.604	5.635	.000
<b>Coefficients</b>	<b>B</b>	<b>Std. Error</b>	<b>Beta</b>	<b>t</b>	<b>Sig.</b>	<b>Tolerance</b>	<b>VIF</b>
<b>Constant</b>	-.571	.297		-1.926	.060		
<b>Total Assets</b>	-.013	.136	-.013	-.096	.924	.436	2.294
<b>Return on Equity</b>	.311	.109	.314	2.847	.006**	.677	1.478
<b>Tdbt/TA</b>	.110	.152	.111	.722	.474	.350	2.855
<b>CA/CL</b>	.026	.124	.027	.212	.833	.522	1.914
<b>Foreign Listing</b>	.899	.339	.340	2.651	.011*	.503	1.990
<b>Audit firm type</b>	.105	.228	.056	.462	.646	.553	1.808
<b>Construction</b>	.028	.385	.011	.074	.942	.357	2.798
<b>Chemicals</b>	.033	.411	.011	.081	.935	.485	2.060
<b>Communications</b>	1.054	.540	.308	1.952	.057	.332	3.014
<b>Financial Services</b>	.803	.386	.408	2.081	.043*	.215	4.650
<b>Food &amp; Beverage</b>	-.393	.431	-.115	-.911	.367	.519	1.926
<b>Entertainment</b>	.424	.399	.134	1.063	.293	.516	1.938
<b>Textile &amp; Clothing</b>	.297	.482	.068	.616	.541	.670	1.493

\*\* Significant at the 0.01 level;

\* Significant at the 0.05 level.



**Table 7.12 Normal Score Regression Model of Total Score for 35 Companies**

<b>R</b>	<b>R Square</b>	<b>Adjusted R Square</b>	<b>Std. Error of the Estimate</b>		<b>R square Change</b>	<b>F Change</b>	<b>Sig. F</b>
.836	.699	.556	.6122265		.699	4.866	.001
<b>Coefficients</b>	<b>B</b>	<b>Std. Error</b>	<b>Beta</b>	<b>t</b>	<b>Sig.</b>	<b>Tolerance</b>	<b>VIF</b>
<b>Constant</b>	-.429	.310		-1.385	.179		
<b>Total Assets</b>	-.095	.153	-.096	-.622	.540	.548	1.826
<b>Return on Equity</b>	.261	.139	.260	1.876	.073	.679	1.473
<b>Tdbt/TA</b>	.000	.164	.000	.002	.999	.476	2.099
<b>CA/CL</b>	.204	.175	.206	1.167	.255	.421	2.375
<b>Foreign Listing</b>	.369	.345	.178	1.070	.296	.471	2.124
<b>Audit firm type</b>	.469	.324	.234	1.445	.162	.499	2.005
<b>Construction</b>	.051	.420	.018	.121	.905	.601	1.664
<b>Chemicals</b>	-1.191	.504	-.418	-2.364	.027*	.417	2.397
<b>Communications</b>	1.089	.468	.421	2.328	.029*	.400	2.503
<b>Entertainment</b>	-.426	.711	-.078	-.599	.555	.763	1.310
<b>Textile &amp; Clothing</b>	-.522	.740	-.096	-.706	.488	.705	1.419

\*\* Significant at the 0.01 level;

\* Significant at the 0.05 level.

**Table 7.13 Normal Score Regression Model of Total Content for 35 Companies**

<b>R</b>	<b>R Square</b>	<b>Adjusted R Square</b>	<b>Std. Error of the Estimate</b>		<b>R square Change</b>	<b>F Change</b>	<b>Sig. F</b>
.828	.686	.536	.6243182		.686	4.577	.001
<b>Coefficients</b>	<b>B</b>	<b>Std. Error</b>	<b>Beta</b>	<b>t</b>	<b>Sig.</b>	<b>Tolerance</b>	<b>VIF</b>
<b>Constant</b>	-.367	.316		-1.163	.257		
<b>Total Assets</b>	.039	.156	.039	.248	.806	.548	1.826
<b>Return on Equity</b>	.237	.142	.237	1.670	.108	.679	1.473
<b>Tdbt/TA</b>	.000	.168	.000	.003	.998	.476	2.099
<b>CA/CL</b>	.208	.178	.210	1.168	.255	.421	2.375
<b>Foreign Listing</b>	.320	.352	.155	.909	.373	.471	2.124
<b>Audit firm type</b>	.409	.331	.205	1.238	.228	.499	2.005
<b>Construction</b>	-.263	.428	-.093	-.615	.544	.601	1.664
<b>Chemicals</b>	-.961	.514	-.338	-1.872	.074	.417	2.397
<b>Communications</b>	1.160	.477	.449	2.432	.023*	.400	2.503
<b>Entertainment</b>	-.451	.725	-.083	-.623	.540	.763	1.310
<b>Textile &amp; Clothing</b>	-.628	.754	-.116	-.833	.413	.705	1.419

\*\* Significant at the 0.01 level;

\* Significant at the 0.05 level.

**Table 7.14 Normal Score Regression Model of Total Format for 35 Companies**

<b>R</b>	<b>R Square</b>	<b>Adjusted R Square</b>	<b>Std. Error of the Estimate</b>		<b>R square Change</b>	<b>F Change</b>	<b>Sig. F</b>
.809	.655	.490	.6516796		.655	3.974	.003
<b>Coefficients</b>	<b>B</b>	<b>Std. Error</b>	<b>Beta</b>	<b>t</b>	<b>Sig.</b>	<b>Tolerance</b>	<b>VIF</b>
<b>Constant</b>	-.366	.330		-1.109	.279		
<b>Total Assets</b>	-.275	.163	-.279	-1.685	.106	.548	1.826
<b>Return on Equity</b>	.361	.148	.363	2.440	.023*	.679	1.473
<b>Tdbt/TA</b>	.013	.175	.013	.074	.942	.476	2.099
<b>CA/CL</b>	.103	.186	.104	.553	.586	.421	2.375
<b>Foreign Listing</b>	.719	.367	.349	1.958	.063	.471	2.124
<b>Audit firm type</b>	.295	.345	.148	.854	.402	.499	2.005
<b>Construction</b>	.249	.447	.088	.558	.582	.601	1.664
<b>Chemicals</b>	-1.259	.536	-.445	-2.348	.028*	.417	2.397
<b>Communications</b>	.568	.498	.221	1.140	.266	.400	2.503
<b>Entertainment</b>	.235	.757	.043	.310	.759	.763	1.310
<b>Textile &amp; Clothing</b>	-.099	.788	-.018	-.126	.901	.705	1.419

\*\* Significant at the 0.01 level;

\* Significant at the 0.05 level.

## 7.7 Discussion of Regression Analysis Results

### 1. For Companies Having Websites:

The results of the ranked OLS regression model for the 62 companies which had websites are shown in Tables 7.3, 7.4 and 7.5. The ranked score regression of the total score model explained around 65.3%, measured by adjusted  $R^2$  with an F-ratio of 9.837, which is significant with a probability less than .001. The ranked score regression of the content model explained around 69.4%, measured by adjusted  $R^2$  with an F-ratio of 11.662, which is significant with a probability less than .001. The ranked score regression of the total format model explained around 54.4%, measured by adjusted  $R^2$  with an F-ratio of 6.596, which is significant with a probability less than .001. The t test showed that the independent variables, return on equity which is a measure of profitability, foreign listing and industrial sector (communications and financial services sectors) had a significant association with the amount of internet financial reporting (total score and format). However, only the industrial sector (communications and financial services sectors) was significant for the content.

Tables 7.9, 7.10 and 7.11 illustrate the results of the normal score OLS regression model for the 62 companies which had websites. The first model, total score, explained 61.4% measured by adjusted  $R^2$  with an F-ratio of 8.453, which is significant with a probability less than .001. The second model, total content, explained 76.4% measured by adjusted  $R^2$  with an F-ratio of 11.941, which is significant with a probability less than .001. The third model, format, explained 49.7% measured by adjusted  $R^2$  with an F-ratio of 5.635, which is significant with a probability less than .001. For the first and last models, the t tests showed that profitability (Return on Equity), foreign listing and industrial sector had a significant relationship with the amount of internet disclosure of financial information (total score and format) at the 5% level. However, the type of business,

mainly construction, communications and financial services, significantly affects the content of disclosure of financial information of the internet, as well as total assets.

## 2. For Companies Disclosing Financial Information on the Internet:

The results of the ranked OLS regression model for the 35 companies which disclosed financial information on their websites are shown in Tables 7.6, 7.7 and 7.8. The ranked score regression of the total score model explained 59.7%, measured by adjusted  $R^2$  with an F-ratio of 5.577, which is significant with a probability less than .001. The ranked score regression of the total content model explained 54.8%, measured by adjusted  $R^2$  with an F-ratio of 4.743, which is significant with a probability of .001. The ranked score regression of the total format model explained around 54.6%, measured by adjusted  $R^2$  with an F-ratio of 4.720, which is significant at a probability of .001. The t test showed that the two independent variables, Chemicals and Communications, contributed significantly to the explanation of the total score; while Return on Equity which is a measure of profitability, and Chemicals sector were the only variables which had a significant relationship with the format of financial information. Only the communication sector significantly affected the content of financial information disclosed by the Egyptian companies on their websites.

Tables 7.12, 7.13 and 7.14 display the results of the normal score OLS regression model for the 35 companies which disclosed financial information on the internet. The first model, total score, explained 55.6 % measured by adjusted  $R^2$  with an F-ratio of 4.866, which is significant with a probability of .001. The second model, total content, explained 53.6% measured by adjusted  $R^2$  with an F-ratio of 4.577, which is significant with a probability of .001. The third model, format, explained 49% measured by adjusted  $R^2$  with an F-ratio of 3.974, which is significant with a probability of .003. The t test showed that Communications significantly affected the total score and

content, while chemicals sector affected the total score and format. On the other hand, profitability (ROE) had a positive and significant relationship with the format.

## **7.8 Summary of Multiple Regression Models**

Table 7.15 provides a summary of ranked and normal score regression analysis. It can be deduced from this table that some types of business significantly affects the contents, format and total score of companies and this is consistent with the univariate analysis. The communication and financial services business are significant for the 62 companies while Chemicals and to a lesser extent Communications are significant for the 35 companies.

There is a positive relationship between the profitability (ROE) of the Egyptian companies which have websites and the formats they use to disclose the financial information on their websites; companies that are more profitable use more formatting techniques to simplify the acquisition of the information from their websites. At the same time, foreign listing affects the formats companies use, as well; companies that are listed in more than one stock exchange, make it easier for stakeholders to acquire the information from their websites. They display the information in more than one place with different formatting to make it easier to download or save. In addition, the type of business sector (communication and financial services) affect the amount and formatting of financial information displayed on their websites.

## **7.9 Conclusion**

This chapter presented the assumptions for multiple regression analysis and it showed that the current data did not meet those assumptions. Transformation using full rank and normal scores was therefore used. Standard OLS multiple regressions were run using the Enter method for two sample sizes; the first included the most actively traded listed

companies which had websites and the second sample consisted of the most active companies that voluntarily disclosed financial information on their websites. For each sample size, there were three dependent variables, the content, format and total score. Two regressions were run for each dependent variable, one using the rank and the other using the normal score. It was concluded that profitability, industrial sector (communications and financial services) and foreign listing are the important factors affecting the amount and presentation format of financial information disclosed on Egyptian companies' websites.

**Table7.15 Summary of the Ranked and Normal OLS Regression Results**

	62 companies						35 companies					
	Total Score		Total Content		Format		Total Score		Total Content		Format	
	R	N	R	N	R	N	R	N	R	N	R	N
Table number	6.6	6.15	6.7	6.16	6.8	6.17	6.9	6.18	6.10	6.19	6.11	6.20
<b>Total Assets</b>				√								
<b>Return on Equity</b>	X	√			X	√					X	√
<b>Tdbt/TA</b>												
<b>CA/CL</b>												
<b>Foreign Listing</b>	X	√			X	√						
<b>Audit firm type</b>												
<b>Construction</b>				√								
<b>Chemical</b>							X	√	X		X	√
<b>Communication</b>	X	√	X	√	X		X	√		√		
<b>Financial Services</b>	X	√	X	√	X	√						
<b>Food &amp; Beverage</b>												
<b>Entertainment</b>												
<b>Textile &amp; Clothing</b>												





# **Chapter Eight**

## **Results and Analysis of the Semi Structured Interviews**

### **8.1 Introduction**

Semi-structured interviews were used to fulfil the second, third and fourth objectives of this research, namely, to identify the factors which influenced Egyptian companies voluntarily to adopt internet financial reporting; to ascertain stakeholders' perceptions on internet financial reporting and disclosure; and to find out the role of Investors Relations officers and auditors in relation to internet financial reporting and disclosure. The main themes that emerged in relation to each objective are reported in successive sections of the chapter.

For reporting purposes, participants were classified according to their job status into Investor Relations managers of companies with internet financial reporting and disclosure (IRs1), Investor Relations officers of companies with no internet financial reporting and disclosure (IRs2), audit partners (AP), analysts and fund managers (An) and key managers from the Egyptian Stock Exchange (ESE).

Each individual interviewee is identified by his or her group code, followed by a digit representing his or her serial number within that group. For example, An-1 means Analyst number one; IRs1-2 means the second respondent within the Investor Relations (companies with internet financial reporting and disclosure) group.

Nvivo software was used to analyse the data. The researcher imported the interview transcripts written in word files into Nvivo to be ready for exploration. Then each file is assigned an attribute which is related to work status. The researcher used the basic

coding where she reviewed data documents line by line, developing or applying codes to represent themes, patterns, categories. The codes were saved within the Nvivo database as 'free nodes' that could then be reordered, duplicated, merged or removed, to help visualise and locate analytical items or categories. Then the researcher combined related free nodes which represented a certain theme into 'tree nodes'. This is similar to grouping the codes (free nodes) into smaller categories according to patterns or themes which emerged. Appendix Two shows that there were 39 free nodes, which combined into 19 tree nodes and then reduced into three tree nodes (Appendix 3). Some interview quotations are repeated in different nodes because they include more than one theme. In this chapter, the researcher presents all the opinions of the interviewees, even if they were repeated, to reflect the importance of each theme. For each topic, Nvivo presents a schedule (Matrix Query) showing how many interviewees talked about a certain theme. An analysis of the interview findings and results and linkage with relevant literature will be carried out in the next chapter.

## **8.2 Factors Influencing Adoption of Internet Disclosure**

The second objective of this research was to identify the factors which have influenced Egyptian listed companies to adopt voluntary internet financial reporting. After analysing the interview data and using the Nvivo software, it is shown that there are six main factors affecting companies' disclosure of financial information on the internet:

1. Companies' characteristics
2. Management style
3. Amount of paper-based disclosure
4. Imitation
5. Rules and regulations
6. Number of analysts covering the company

Each of these themes or factors encompasses other factors which will be discussed in detail in the next section.

### 8.2.1 Companies' Characteristics

The interview participants raised some factors which have an effect on the amount of internet financial disclosure and reporting, such as size, profitability, liquidity, capital structure, foreign listing and industrial sector. They thought that the factors which most affect internet disclosure and reporting are size, foreign listing, industrial sector and capital structure. On the other hand, profitability and liquidity were thought not to affect the amount of voluntary internet financial reporting and disclosure. Tables 8.1 and 8.2 show the number of participants who talked about each of the companies' characteristics.

**Table 8.1 Number of Participants from Each Category Discussing Each Company's Characteristics**

Work Status Company Characteristics	IRs Officers of Companies with internet F. disclosure	IRs Officers of Companies with no internet F. disclosure	Audit partners	Analysts	Managers from Egyptian Stk Exchange
Size of company	4 (100%)	1 (33%)	1 (25%)	0	1 (50%)
Profitability	1 (25%)	1 (33%)	0	1 (25%)	2 (100%)
Liquidity	1 (25%)	0	0	0	0
Industrial Sector	1 (25%)	0	0	2 (50%)	2 (100%)
Foreign listing	2 (50%)	0	1 (25%)	1 (25%)	1 (50%)

As shown in the Table 8.1, of the four Investor Relations managers of companies with internet financial reporting and disclosure, all four talked about the size of the companies, while one of them mentioned the industrial sector, one of them referred to

liquidity, two of them talked about foreign listing and only one of them talked about profitability.

### **8.2.1.1 Size of the Company**

Not all participants agreed that the size of the company is an important determinant of voluntary internet reporting and disclosure. Three of the Investor Relations officers of the companies with good internet reporting and disclosure stated that there is a positive relationship between the size of companies and voluntary internet financial reporting. One of them emphasized that big companies need more finance so they will disclose more. On the contrary, the fourth one stated that there is no relationship between the size of the company and voluntarily internet financial reporting and disclosure.

*“It depends on so many things such as the size of the companies; some companies believe that they are not big enough to have a website”... IRs1-1*

*“The bigger the company is, the more diverse its staff would be, in education background, work experience, and so on, so the more ideas they will start to generate”... IRs1-2*

*“Definitely, I agree that the bigger you go, the greater your need to disclose more information by all means because you need to reach more people. In addition to that, it depends on the companies’ horizon.....we can conclude that bigger companies, when have more shareholders, which have higher technology, which have international shareholders, will have to disclose more”... IRs1-3*

*“It is not related to the size, profitability, or anything, it is related to the culture of the organisation”... IRs1-4*

At the same time; the IRs officer of one of the big companies which does not disclose its financial information on the internet believed that it is not the size of the company which affects voluntary internet financial disclosure and reporting; she reported

*“No it is not, our company is large, and the profitability is great. To tell the truth, it is the difference between the old and new beliefs” ...IRs2-1*

One of the audit partners assumed that the size of the company affects whether a company discloses its financial information on the internet or not.

*“I think it is the size of the company...Therefore, I think whether a company publishes on the internet depends on its size and whether it has a website or not”... AP-3*

One of the managers of the Egyptian Stock Exchange believed that size does not affect internet financial disclosure and reporting.

*“To tell the truth, not the company's size or profitability, it is the management of the company that affects the disclosure and corporate governance”...ESE-2*

From the above, it can be seen that some of the participants agreed that the size of the company affects voluntary internet financial reporting and disclosure while others believed that it has no effect.

### **8.2.1.2 Profitability of Listed Companies**

All the participants who talked about profitability had the same opinion, which is, that profitability of listed Egyptian companies has no effect on the adoption of voluntary internet financial reporting and disclosure. One of the managers of the Egyptian Stock Exchange supported his view that profitability has no effect, by giving an example of a company whose profits had decreased and which had closed one of its premises because of war, but was still disclosing this on its website.

*“XXX [A name of a listed company] has a good website and publishes financial information, even though its profit has fallen. So if the company discloses information on its website, it will publish whether it has a positive or negative growth. XXX is considered one of the best companies in meeting the disclosure requirements. This company disclosed information that it has closed its factory in Lebanon because of the war” ... ESE-1*

*“To tell the truth, it is not the company's size or profitability, it is the management of the company that affects the disclosure and corporate governance”... ESE-2*

At the same time; the IRs officer of one of the big companies which do not disclose its financial information on the internet believed that it is not the profitability of the company which affects voluntarily internet financial disclosure and reporting; she commented

*“No it is not, our company is large, and the profitability is great. To tell the truth, it is the difference between the old and new beliefs” ...IRs2-1*

Other comments, by an IR officer of one of the big companies which discloses its financial information on its website as well as an analyst, asserted that profitability has no influence on whether companies use internet reporting and disclosure or not.

*“It is not related to the size, profitability, or anything, it is related to the culture of the organisation”...IRs1-1*

*“It has nothing to do with being profitable or not” ...An-3*

From the above, it can be seen that none of the participants thought that the profitability of Egyptian companies affects voluntary internet financial reporting and disclosure.

### **8.2.1.3 Liquidity of Listed Companies**

Only one IR officer of one of the big companies which discloses its financial information on its website, stated that liquidity affects voluntary internet financial disclosure and reporting.

*“It depends on so many things such as 1) The size of the companies ...2) liquidity of the company” ... IRs1-2*

#### **8.2.1.4 Industrial Sector**

An IRs Officer of a big company which provides internet financial reporting and disclosure states there are industry norms and benchmarks that should be followed and that the financial information that is published should be comparable to those of the companies' competitors:

*“These are the benchmarks that you have to add to your website: your audited financial statements on a quarterly basis; Investor Relations presentation, annual and quarterly releases. It is something that is governed by industry norms...This is what I have to include to be comparable to my competitors and the industry norms”...IRs1-4*

Analysts commented that big companies belonging to same sectors, and especially the banking and communication sectors, disclose financial information on their websites.

*“The banking sector discloses more because they are required to disclose more by the Central Bank... They already have the information which should be disclosed. Banks disclose their financials on the web in a good format and their Investor Relations officer answers our questions sent by mail ...Communication companies have international investors so they publish more on the internet”...An-2*

*“Only big sectors which have foreign investors, e.g. communication companies and bank s disclose on their websites”... An-4*

The two managers of the Egyptian Stock Exchange, too, emphasized that in Egypt, companies belonging to the banking and communication sectors are more likely to disclose their financial information on their companies' websites, because of various sector- specific characteristics:

*“As for the banking sector, they have websites and disclose financial information on their websites, this may be because they are not only required by the rules of disclosure of the Egyptian Stock Market but they are required to meet the disclosure requirement of the Central Bank as they are under the supervision of the Central Bank and this makes Banks more committed. This is the point which makes the banking sector different from other sectors, that they are under the supervision of the central bank ...*



*Therefore, you notice the difference between the interference of the Central Bank as another factor which obligates the companies it supervises to disclose more information”... ESE-1*

*“This is because the communication companies are new companies, they did not exist 5 or 6 years ago. The Management are different ... These companies began from where the other companies ended. As for the banking sector; it is the richest sector. They can spend on their infrastructure and speed their development. They are aware of the value of disclosure. If you look at small companies or companies whose shares are owned by the government, you will find the process is much slower”... ESE-2*

From the above, it appears that industry sector is one of the major determinants of voluntary internet financial reporting and disclosure and this was emphasized in the disclosure index (see Chapter 5). Companies within the same sector tend to follow each other. In particular, companies within the banking and communication sector in Egypt use internet financial reporting and disclosure.

#### **8.2.1.5 Foreign Listing**

Five of the participants discussed how foreign listing affects voluntary internet financial reporting and disclosure. Some of them thought that this factor is not one of the determinants of internet financial reporting, while others took the opposite view. Among the participants were two IR officers of companies which are foreign listed and have a good financial disclosure and reporting on their companies' websites, as was shown by the disclosure index. The first one said that it is important that companies which have foreign investors disclose their financial information on their website because providing financial information on the company's website makes it easier for foreign investors to reach the information.

*“Absolutely, it becomes essential for any company that has GDRs or ADRs\* to have websites because the movement of GDRs and ADRs is affected by*

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\* GDR stands for Global Depositary Receipts while ADRs are American Depositary Receipts. ADRs are typically traded on a U.S. national stock exchange, such as the [New York Stock Exchange](#) (NYSE) or the [American Stock Exchange](#), while GDRs are commonly listed on European stock exchanges such as the London Stock Exchange. Both ADRs and GDRs are usually denominated in U.S. dollars, but can also be denominated in Euros.

*many things, among them is the website. It is not easy for a foreign investor to call the Investor Relations manager or an official to ask for a piece of information. But if there is a website it would be easier and makes the shares easily traded”... IRs1-1*

The second Investor Relations manager, however, pointed out that even if the companies are not foreign listed, they should disclose the financial information on their website, to be fair to their local shareholders as well.

*“We would still do it. Foreign listing is not the cause of our internet reporting. We would like to be fair to all our shareholders whether local or foreigners”... IRs1-3*

Other participants were convinced that foreign listing is considered one of the factors which affects companies’ disclosure of their financial information on their websites.

*“ Large companies listed in other foreign Stock Exchanges, have GDR and they discovered that they have to meet new requirements so they increased the disclosure and they have good Investor Relations officers who know what they are doing.” ... ESE-2*

*“Companies which have good websites and publish their information on the internet are listed in the International Stock Exchange and full disclosure is one of the elements of transparency, they care about their investors, lenders and financial analysts”... AP-1*

In contrast, an analyst asserted that foreign listing is not a major determinant of internet financial disclosure and reporting, as demonstrated by the fact that one of the big Egyptian companies that has a foreign listing does not disclose its financial information on its website:

*“If you look at companies which have a foreign listing such as XXX [the name of the company], if they are supposed to publish their annual financial statements within 3 months after the end of the year, they publish it after 6 or 7 months. They issue very few press releases. They do not publish on the internet”... An-2*

From the above, it can be seen that some of the participants agreed that foreign listing affects voluntary internet financial reporting and disclosure while others believed that it

has no effect and that companies should disclose their financial information on their websites whether they are foreign listed or not.

### 8.2.1.6 Capital Structure

Participants emphasized that capital structure is one of the most important determinants of voluntary internet financial disclosure and reporting. This factor was partially taken into consideration when the researcher compiled the disclosure index. Shareholders' information was included among the dependent variables of the disclosure index. If the company disclosed any information about its shareholders, it was given the value of one, if it did not disclose, it was given the value of zero.

Analysis of respondents' comments shows that there are three interrelated issues related to capital structure; foreign investors, Governmental ownership and number of shareholders. As shown in Table 8.2, the three issues were discussed by IRs officers of companies providing internet financial disclosure. These companies are listed in London Stock Market as well. IRs officers of companies which do not provide internet financial reporting and disclosure made no mention of foreign investors. Each of these points will be dealt with in detail.

**Table 8.2 Number of Participants from Each Category Discussing Components of Company's Capital Structure**

Work Status Company Characteristics	IRs Officers of Companies with internet F. disclosure	IRs Officers of Companies with no internet F. disclosure	Audit partners	Analysts	Managers from Egyptian Stk Exchange
foreign Investors	3 (75%)	0	0	2 (50%)	0
Governmental Ownership	1 (25%)	2 (67%)	0	1 (25%)	1 (50%)
No. of shareholders	2 (50%)	1 (33%)	0	0	0

### **8.2.1.6.1 Foreign Investors**

IRs Officers of Companies providing internet financial disclosure and Analysts agreed that if the company has foreign investors, it should disclose its financial information on its website. One of the analysts added that disclosure of financial information is not beneficial for the local shareholders as few have no internet access.

*“Companies disclose on the internet because they need to be transparent to all stakeholders; foreign investors can reach the information easily”...IRs1-1*

*“It is not easy for a foreign investor to call the Investor Relations manager or an official to ask for a piece of information. But if there is a website it would be easier and makes the shares easily traded” ...IRs1-2*

*“An important question to ask is; Are these companies attractive to international investors or not?...we can conclude that bigger companies, when have more shareholders, which have higher technology, which have international shareholders, will have to disclose more”... IRs1-4*

*“There is internet illiteracy in Egypt. Companies with only foreign investors have sites to act as a marketing tool and to provide transparency. These companies need to have sophisticated websites to encourage foreign investment and to have good relations with their investors”...An-2*

*“Only big sectors which have foreign investors, e.g. Communication companies and Banks disclose their financial information on their websites”... An-4*

Therefore, companies which seek foreign investors have to disclose their financial information on their website to make it easier for foreign investors (institutional or individuals) to obtain information on an ongoing and timely basis.

### **8.2.1.6.2 Governmental Ownership**

The participants explained that an important determinant of providing internet reporting and disclosure by companies is governmental ownership of the company's shares. If the government currently owns some shares of the company or if the company had previously been totally owned by the government and privatized, its managers are used

to a 'governmental way of thinking' (e.g. difficult for them to change and accept a new technological innovation).

*“Are they private or are they owned and managed by the government or in an old management style? Definitely the technology and internet are tied up with the management style that you see in each company, of having dynamic environment, of having in general a moderate average age among its employees” ... IRs1-4*

*“Although now we are considered a private company, the government owns the majority of shares. We do not disclose everything” ... IRs2-1*

*“Because most or all these companies were public and then they were privatized, they don't disclose their financial information on their website” ... IRs2-2*

*“Only big sectors which have foreign investors, e.g. communication companies and Banks disclose their financial information on their websites... Most of these companies, they are private, I mean the government does not own shares in them” ... An-4*

*“If you look at small companies or companies whose shares are owned by the government, you will find the process is much slower” ... ESE-2*

Process means adopting new innovation and the application of internet financial reporting and disclosure on their websites.

Therefore, we can conclude that governmental ownership of shares affects voluntary internet financial disclosure and reporting because most of these companies had been government owned and then privatized, however they are still managed using a governmental mentality and managers could not easily accept the adoption of new innovation easily.

#### **8.2.1.6.3 Number of Shareholders**

IRs officers of companies with internet financial disclosure believed that the number of shareholders is one of the factors which affects the companies' willingness to have internet financial reporting and disclosure.

*“It depends on so many things such as ... Capital structure of the company, for example, may be just 2 or 3 investors own the company and they are not interested to communicate information to anybody except to the stock exchange...companies would lose interest in building a website as it will not have any benefits and will not attract new investors”... IRs1-2*

*“We can conclude that bigger companies, which have more shareholders, which have higher technology, which have international shareholders, will have to disclose more. Whenever the level of investors who are engaged with the company is higher, then they will require more information and more disclosure and this could be done on its website”... IRs1-4*

An IRs officer of one of the big companies, which does not provide internet financial disclosure, explained that that they need to disclose their financial information on their website because the number of investors has grown and it is inefficient to send them copies of the company's financial statements.

*“We are thinking now of having a website and putting all the information on it. Our original capital was 11 million and the company's activities were limited to [a certain activity], this was 4 or 5 years ago. The number of shareholders was only 199. 7 people owned more than 80% of its capital and the rest of the shareholders were employees, because we were a public company. Then it was privatized, and the capital increased. It is now 925 million pounds; there are more than 40,000 shareholders. So now we may need a website and maybe the Board of Directors are thinking about that... Before, because of the ownership structure, a website or disclosing the information was useless. We just photocopied the financial statement and sent it to the shareholders, because there were so few. But now we cannot send the financial statements to this large number of shareholders”...IRs2-2*

It can be concluded that capital structure affects internet financial disclosure and reporting. There are positive relationships between each of foreign investors and number of shareholders and internet financial reporting and disclosure. Conversely, governmental ownership negatively affects internet financial reporting and disclosure because these companies, despite having been privatized, are still governed by the same people as when these companies were governmental so it is difficult for them to accept new technological innovations.

## 8.2.2 Management Style

The majority of participants thought that management style and mentality is the most important factor which affects voluntary internet financial reporting and disclosure. Adopting internet financial reporting and disclosure depends upon management discretion and their understanding of the importance of disclosure and transparency. The analysis of the interviews shows that there are several themes within the area of Management style; they are Management approach, Culture, Organisational structure, Demographic characteristics, and Technical abilities and presence of the internet. Table 8.3 shows the number of participants who discussed each of these issues.

**Table 8.3 Number of Participants from Each Category Discussing Different Management Style Themes**

Theme \ Work Status	IRs Officers of Companies with internet F. disclosure	IRs Officers of Companies with no internet F. disclosure	Audit partners	Analysts	Managers from Egyptian Stk Exchange
Management Approach	2 (50%)	1 (33%)	1 (25%)	2 (50%)	1 (50%)
Culture, Organisational structure	3 (75%)	3 (100%)	0	0	1 (50%)
Demographic characteristics	2 (50%)	2 (67%)	0	0	1 (50%)
Technical abilities and presence of internet	2 (50%)	0	0	0	1 (50%)

### 8.2.2.1 Management Approach [Management Strategy and Mentality]

Interviewees explained that management strategy has an important influence on the adoption of internet financial reporting and disclosure. Providing financial information on the companies' website depends on managerial beliefs, and understanding of the importance of disclosure, as there are no laws or regulations which require companies to have websites.

*“What their [Management] strategy is, what kind of shareholding base they are seeking; are they seeking a more liquid share or a stable share? Do they want more individual shareholders or more institutional shareholders? Accordingly they decide upon whether the credibility of disclosure and having a website to disclose its financial information is an important matter or not” ... IRs1-2*

*“It depends on the companies’ horizon” ... IRs1-4*

*“No it is not, our company is large, and the profitability is great. To tell the truth, it is the difference between the old and new beliefs, ideas and thoughts. Somebody who does everything manually and is used to it, will refuse to use the computer or new technology” ... IRs2-1*

*“To tell the truth, it depends on the mentality of the management, because there are no requirements to publish on the internet” ... AP-3*

*“I think it is all about the management style. There is the old style management, their mentality; they do not care about investors and so on. It is all about they do not even have an Investor Relations department. When you visit these companies you will find that the Managing Director does not have a PC on his desk. He does not have a computer, so how would he have a website or disclose the financials on the website?” ... An-1*

*“One of the most important issues is that the management of the company is not convinced about disclosing. They consider it unimportant. Corporate governance or shareholders make no difference to them... I think it all depends on management and on the view of management. Do they want to have a dialogue between them and investors or not?” ... An-2*

*“To tell the truth, it is not the company's size or profitability, it is the management of the company that affects the disclosure” ... ESE-2*

From the above, it was discovered that management approach, strategy and mentality affects voluntary internet financial disclosure and reporting. This includes their comprehension of the idea of disclosure and transparency; their view regarding relationship with investors, the type of shareholders they are seeking and their usage of technology. There are some other factors which affect management style and hence the adoption of internet financial reporting and disclosure; they include Culture, Organisational structure, Demographic characteristics and Technical abilities and presence of the internet.



### 8.2.2.2 Culture and Organisational Structure

The majority of participants agreed that one of the essential factors which affect the adoption of internet financial reporting and disclosure is the culture of the company. One of the participants explained the meaning of culture and stressed that culture should be changed and that disclosure of financial information and transparency should become an attitude and part of the organisation's culture.

*“It is part of the culture of the company that we are technologically developed and therefore, the company discloses the financial information on the website.....It is not related to the size, profitability, or anything , it is related to the culture of the organisation”... IRs1-1*

*“The culture of any organisation, we said transparency and data disclosure eventually should become an attitude then it would be rooted in the culture of this institution. I mean by culture the set of norms, values, understandings and assumptions shared by employees of the organisation. A culture should come top down. A change should happen in the culture. To change the culture, you should understand it first. When you try to change ,there will be resistance because of the lack of understanding, assessment, uncertainty, self interest. There are tools to avoid resistance, such as bargaining, top management support, education & training, mainly if it needs more skills and involvement” ... IRs1-2*

*“You have a lot of listed companies; their management does not understand that investors are shareholders who have rights. So I think it has something to do with the background of the people”... IRs1-3*

One of the participants explained that governmental culture still prevails in some companies which had been owned by the government and subsequently privatized, with the government retaining some shares. These companies are managed by the governmental way of thinking.

*“The government thinking gives too much weight to things which are unimportant. In other words, they are not convinced about the culture of disclosure and transparency...The major problem is that these companies lack the culture and knowledge of disclosure and they work with the policy called “ trembling hands”, which means that these people are afraid all the time, they want to obey the government. A guy works from graduation and all he has to do is to obey his bosses in any way, whether he is the head of the department, Chairman of the sector, managing director, or the chairman of the Board of Directors. The most important thing is that everything is okay. The problem is that people who are raised on this way of thinking will continue in this way, even when they reach the age of 50 or 60. When you try to convince them to do anything, they will never accept a change unless*

*the person has a good mentality by nature, understands new things, accepts changes, and understands the meaning of the role of the registered companies in the stock exchange, the meaning of the stock exchange... You discover that people are not flexible and you can not deal with them. They are scared”...IR2-3*

In addition, one of the Egyptian Stock Exchange managers emphasized that in the past, the prevailing culture among companies was to hide information and some companies are still affected and tend to hide financial information. They just publish the minimum amount of information required by the Egyptian Stock Market.

*“The main reason [for not disclosing on the internet] is the mentality of the company, Investor Relations; in the past, companies which published financial statements faced lots of troubles and taxes. There was a prevailing culture among the companies that it was better to hide information rather than to disclose it. Now this culture is changing mainly in large companies which disclose financial information on their websites”...ESE-2*

These respondents agreed that the Egyptian culture is to hide information. People are afraid of disclosing financial information, because of the governmental culture which prevailed in previous years and which is deep-rooted.

As for the organisational structure, the participants explained that Investor Relations managers can not make decisions; all decisions should be made by the Chairman of the Board of Directors, so the organisation structure which prevails in these companies is the mechanistic one and there is a large power distance.

*“There is an important point to take into consideration, that not all people have access to the internet. Maybe the chairman of the sector refuses to disclose information on the internet. In our company we do not have access to the internet, only the chairman of the Board of Directors and his secretaries. There is a special department which is responsible for the website; they execute the orders of the chairman of the Board of Directors”...IRs2-1*

*“In our company, the chairman does or makes all decisions such as whether to have a website, or whether to disclose financial information”.*  
**IRs2-2**

An IRs officer of a company with good internet financial reporting and disclosure system tried to explain how culture, organisational structure and organisational strategy are interrelated and could affect internet financial reporting and disclosure and went on to propose a solution. He stated:

*“There is an important point; strategy should follow the structure, strategy should reflect the culture and strategy should fit the technology.*

- *Strategy should follow the structure: If I have a strategy, then the organisational structure should support this strategy. I cannot have a strategy of superior customer service and be responsive to the market if the organisational chart is tall, centralized and has many hierarchical levels. This will not result in flexibility or fast response or anything. Therefore, the organisational chart in this case should be more flat.*
- *Strategy should reflect the culture: I can't have a responsive flexible strategy and tell my employees not to disclose anything.*
- *Strategy should fit the technology: If I want to provide internet reporting, I should have the proper IT, software and skilled personnel” ...IRs1-2*

### **8.2.2.3 Demographic Characteristics**

Demographic characteristics refer to education, age and tenure. Each of these factors affects the adoption of voluntary internet financial disclosure and reporting. According to participants' responses it can be seen that companies within the banking and communication sectors recruit qualified skilled personnel who have studied an English-medium MBA courses and who are aware of the importance of disclosure and this is why companies within these sectors provide their financial information on their website. Older members of boards of directors and/or staff can find it hard to accept new innovation. Doing a job in a certain way for a long period makes people refuse to accept change.

*“It is not related to the size, profitability, or anything, it is related to the culture of the organisation (age of employees, how many are holders of MBA ...)” ... IRs1-1*

*“It is no surprise that banks and communication companies which are full of MBA graduates understand what corporate disclosure is; understand best practice in the world” ...IRs1-2*

*“All the members of the BOD of my company are over 60 years old. They cannot adapt to the new change” ...IRs2-3*

*“The second point is the staff; some companies have old staff that do not have these thoughts, this culture, the required skill, and some companies have newly qualified personnel” ...ESE-2*

*“I think again that these companies [which do not disclose their financial information on the internet] have existed for a long time, they are old big companies, have their own names, their staff have been used to doing things for a long period of time since these companies were governmental in the first place. However, the companies within the communication sector disclose on their website because it is a new sector” ...IRs2-1*

Older staff with long tenure are accustomed to doing their jobs in a certain way and resist change. Therefore, age, tenure and education are among the demographic characteristics which affect internet financial reporting and disclosure in Egypt.

#### **8.2.2.4 Technical Abilities and Presence of the Internet**

The participants identified that some companies as yet have no websites or if they do, they lack the personnel required to update their websites, and this is the reason for not having internet financial reporting and disclosure. On the other hand, companies which are technologically developed have websites and provide their financial information on their websites.

*“It is part of the culture of the company that we are technologically developed and therefore, the company discloses the financial information on the website” ...IRs1-1*

*“Definitely the technology and internet are tied up with the management style that you see in each company, of having a dynamic environment... It has different norms and standards of management ...we can conclude that ...companies ... which have higher technology ... will have to disclose more” ...IRs1-4*

*“There is another problem, which is the capability. Not all companies have websites and have the personnel necessary to update the website continuously and publish the financial information. They just fulfil the minimum requirement” ...ESE-2*

Therefore, the technological capabilities of companies and having the required skills are one of the most important determinants which affects internet financial reporting and disclosure.

### 8.2.3 Traditional Disclosure

Analysis of the interviews showed that there are three interrelated factors which are; credibility and transparency, amount of paper-based disclosure and cheapest, easiest and quickest means of dissemination. The company wants to create credibility, and provide transparency, so it will increase the amount of disclosures. The cheapest, easiest and quickest way to disseminate the information is to disclose this information on its website. Table 8.4 shows the number of participants who dealt with each point.

**Table 8.4 Number of Participants from Each Category Discussing Some Factors Which Affects Internet Financial Disclosure**

Themes \ Work Status	IRs Officers of Companies with internet F. disclosure	IRs Officers of Companies with no internet F. disclosure	Audit partners	Analysts	Managers from Egyptian Stk Exchange
Feasibility and transparency	3 (75%)	1 (33.3%)	0	2 (50%)	0
Amount of paper based disclosure	0	1 (33.3%)	0	1 (25%)	1 (50%)
Cheapest, easiest and quickest means of dissemination	2 (50%)	0	0	2 (50%)	0

#### 8.2.3.1 Credibility and Transparency

In view of the majority of participants, companies which disclose their financial information on the internet want to create credibility and provide transparency.

*“We consider the internet the first “port of call” or the first contact basis. The investor can reach the company he needs and finds all the information required. Therefore if there is an investor or a potential investor, analyst, researcher, shareholder, if there is press or media, who want to know some information about a company, whether it is local or international, the first and easiest way is to search on the internet...It is important for the*

*company that wants to create credibility and be seen and be known to anybody to disclose its financial information on its website so that anybody who needs information can contact the company... All people try to follow the rules of disclosure and data transparency but there are some institutions, for example, The National Investor Relations Institute, that encourage disclosure beyond what is required by regulations, because this will create credibility for the company. We know very well that the market hates good surprises as well as bad surprises. Therefore complementary information should be disclosed as well, to avoid any kind of surprises, in order to create credibility and build a good relationship between the company and the investor”...IRs1-2*

*“Companies disclose on the internet because they need to be transparent to all stakeholders; foreign investors can reach the information easily”...IRs1-1*

*“Our duty is to make sure that everybody receives information at the same time. The amount of information, that’s our choice, then we decide to be as transparent as we can so that the people have confidence about what is happening”... IRs1-3*

*“It is more transparent and efficient”...An-1*

*“Companies with only foreign investors have sites to act as a marketing tool and to provide transparency”...An-2*

*“Companies should comprehend the meaning and idea of disclosure first. Then we can talk about whether this disclosure should be on the internet or in the papers or by the circulation or data screen of the Egyptian Stock Exchange or by any other facilities”...IRs2-3*

Therefore, to be more transparent and visible, companies should disclose more financial information and disseminate it on their websites.

### **8.2.3.2 Amount of Paper based Disclosure**

Participants noted that companies which do not provide their financial information on their websites are those whose level of normal (paper-based) disclosure is very low. Because banks are required to meet more disclosure requirements, as they are under the supervision of the Egyptian Stock Exchange and Central Bank, their normal (paper-based) level of disclosure is high and they disclose their financial information on their websites.

*“You will find that companies which do not disclose their financial information on the internet, their normal disclosure by other means is not at the required level. At the same time, you will find that companies which disclose on the internet disclose well by any means”...IRs2-3*

*“The normal disclosure level of companies which do not have websites is usually low”...An-4*

*“So, when there are more disclosure requirements, disclosure of companies is greater, therefore companies will disclose the financial information on the internet... As for the banking sector, they have websites and disclose financial information on their websites, this may be because they are not only required by the rules of disclosure of the Egyptian Stock Market but they are required to meet the disclosure requirement of the Central Bank as they are under the supervision of the Central Bank and this makes Banks more committed” ..ESE-1*

As a result we can conclude that there is a positive relationship between the amount of paper printed disclosure and internet financial reporting and disclosure.

### **8.2.3.3 Cheapest, Easiest and Quickest Means of Dissemination**

Participants considered the internet to be the cheapest, easiest and quickest means of disseminating financial information.

*“It is the easiest and most convenient way to do it; it is the most reachable, we cannot send it out to each and every individual who is interested in our financials. ...This... reduces the cost, my obligation, administration headache that you might have; everyone who needs something calls you. The data is just there...if an investor heard about XXX in USA, he will not call me; he will use the internet to gather information about XXX. That will happen if this individual is in England, Australia or even in Egypt. He will visit our website, and if he requires further discussion, he will call me” ... IRs1-4*

*“The cheapest, easiest and quickest is to look at the companies’ website on the internet”...An-1*

*“If there is an investor or a potential investor, analyst, researcher, shareholder, if there is press or media, who want to know some information about a company, whether it is local or international, the first and easiest way is to search... for the company on the internet using Google or any search engine. The company’s website includes all the fundamental information of the company”... IRs1-2*

An analyst explained that dissemination of companies’ financial information on the internet will provide stakeholders with

*“More accessibility. To attain simultaneous disclosure, it is the most accessible way for people who are interested in the companies’ financial information... Another important point is the timing. Once the company posts it to the stock exchange, it will be disclosed on the internet. Then it is simultaneous and accessible to everyone...When investors request a copy of annual report of any company, they should be asked to access the company's website”...An-3*

Therefore, disclosing the companies’ financial information on their websites is considered the easiest, cheapest and quickest method of disseminating financial information.

#### **8.2.4 Imitation**

One of the Investor Relations officers of companies which provide internet financial disclosure and reporting explained that before developing their website they looked at the websites of different companies as an example to guide them about what information to be included in their website. He said:

*“When we went as a public company, listed on the stock market... we looked at what everybody did in Egypt and we said that we should have a standard and... if we can find a way to do it better, then we will try. We looked at XXX and XXX [listed companies in Egypt which provide very good internet financial reporting and disclosure], ... We see what everybody does and we try to do as well as the best in every area.”...IRs1-3*

An analyst was convinced that competitors imitate each other and that companies within the same sectors imitate each other. He explained

*“If you look at companies which have a foreign listing such as [Name of Egyptian listed company], if they are supposed to publish their annual financial statements within 3 months after the end of the year, they publish it after 6 or 7 months. They issue very few press releases. They do not publish on the internet. It may be because there are no similar competitive companies in the same sector. Of course imitating competitors is a very important issue. If one company issues a press release, then another company within the same sector will imitate it” ...An-2*

Companies tend to imitate each other, to be competitive and attract shareholders.

Companies need a benchmark to follow when applying internet financial reporting and disclosure.



## 8.2.5 Rules and Regulations

The Rules and Regulations affect the companies' internet reporting and disclosure. From the participants' responses, the researcher classified the rules and regulations into three categories as shown in Table 8.5; the first one is related to the rules and regulations imposed by the Central Bank of Egypt; the second is related to the rules and regulations of the Egyptian Stock Exchange and the third is related to the Investor Relations' rules. Table 8.5 shows the number of times each issue was raised by each group of respondents.

**Table 8.5 Number of Participants from Each Category Discussing Some Factors Which Affects Internet Financial Disclosure**

Regulations \ Work Status	IRs Officers of Companies with internet F. disclosure	IRs Officers of Companies with no internet F. disclosure	Audit partners	Analysts	Managers from Egyptian Stk Exchange
Central Bank Regulations	0	0	0	0	1
Disclosure via the Egyptian Stock Exchange	2	2	3	2	1
Investor Relations	0	1	0	0	0

### 8.2.5.1 Central Bank Regulations

As mentioned previously, companies in the banking sector disclose their financial information on their websites because in general they have to follow more disclosure rules and regulations, which are imposed by the Central Bank of Egypt. This greater level of disclosure in general makes the banks more inclined to disclose information voluntarily on their websites.

*“As for the banking sector, they have websites and disclose financial information on their websites, this may be because they are not only required by the rules of disclosure of the Egyptian Stock Market but they are required to meet the disclosure requirement of the Central Bank as they are under the supervision of the Central Bank and this makes Banks*

*are more committed. This is the point which makes the banking sector different from other sectors, that they are under the supervision of the central bank ... Therefore, you notice the difference between the interference of the Central Bank as another factor which obligates the companies it supervises to disclose more information”... ESE-1*

Therefore, imposing more rules and regulations of disclosure will increase companies' adoption of internet financial reporting and disclosure.

### **8.2.5.2 The Egyptian Stock Exchange Regulations**

The majority of participants explained that there are no rules or regulations which force companies to disclose its financial information on the internet and that disclosure of financial information on the companies websites is voluntary.

*“I think that this is one of the drawbacks in the Egyptian business mentality. Companies which are not financial are not very much involved in financial analysis and financial disclosure issues. They stick to the basics. They just report to the stock exchange whatever they think important and that's it and even if they have a website it would be about their product, their product features. They do not really disclose more information that would really be of interest to the national community, or complementary information, at all”... IRs1-2*

*“The biggest factor is that you are listed on the Egyptian Stock Exchange; if you are not listed then you have no obligation to give information to anybody about your financials. There is no requirement to publish on the company's website. We publish the information to give potential customers a level of comfort with our business and part of it, of course, is to promote our business”... IRs1-3*

*“Disclosure on the company's website is not mandatory in Egypt. However, there are the rules of disclosure of the Egyptian Stock Exchange and I think that companies' financial information is available on the site of the Commission”... AP-1*

*“There rules and regulation of the Egyptian Stock Exchange require companies to publish their quarterly reports in the newspaper, but there are no requirements to publish on its website” ... AP-2*

*“there are no requirements that companies publish their financial statements on the internet. Companies are required to publish in at least two daily newspapers”... AP-3*

*“Also, this information will be available on the website of the stock exchange, because it one of the requirements of the stock exchange.....There is no requirement by the Egyptian Stock Exchange that companies should*

*disclose on the internet. However, the site of the Egyptian Stock Exchange includes very important and good information about the listed companies so the companies which have no internet or website presence are present through CASE, so people can double check the information, or CASE should ask the companies which have a website to add an icon to CASE” ...An-2*

*“However the website of the Egyptian Stock Market provides financial information on listed companies. However to tell the truth, the website of the stock exchange is very slow. I think having a website is part of communication strategy of companies. There are no requirements which tell you that you have to have a website” ...An-3*

*“Make sure that if the company is registered in the Egyptian Stock Exchange so all the information is available through the website of the Egyptian Stock Exchange or through the Egyptian Company for Information Dissemination...There are no rules or laws from the Stock Exchange which force companies to have websites or determine their form, or what information is to be published; there are no laws. The stock exchange has forms to be filled by the companies and the information is available on its website, all its information, capital structure, financials, modifications or changes in the company’s structure are also available...So far, as I told you, we do not have any obligatory rules or regulations to make these companies publish their financial information on its website” ...ESE-1*

Investor Relations Officers of companies which do not use internet financial reporting and disclosure gave as a reason for not disclosing on their websites that the Egyptian Stock Exchange discloses on its website the financials of all listed companies.

*“The Egyptian Stock Exchange discloses our financials and any important event on its website. So investors can rely on the Egyptian Stock Market website, they do not require our website to find out financial information about the company” ... IRs2-1*

*“All information about the company is available in Cairo and Alexandria Stock Exchange (financial statements, Board of Directors meetings, important news, and substantial information) and the stock exchange discloses it on its website on the internet” ... IRs2-2*

Therefore, some listed companies do not disclose on their websites because there are no obligatory rules or regulations which force companies to disclose the financial information on their websites and/or some companies depend on the Egyptian Stock Exchange for disclosing their financial information on its website.

### **8.2.5.3 Rules and Regulations Related to Investor Relations**

An Investor Relations officer of a company which did not provide internet financial reporting and disclosure explained that the reason is that the role and responsibilities of Investor Relations officer are not well understood. Although the Egyptian Stock Exchange stipulated that all listed companies should have an Investor Relations officer, it did not specify the roles and responsibilities of such officers and did not mention that among their responsibilities is disclosing the financial information on the companies' websites.

*“Another point is that some people do not know what the role of Investor Relations department is. This job was created by the new...Listing & De-listing Rules of Cairo & Alexandria Stock Exchanges ...Article 15 of the rules say that you should have an Investor Relations manager ...However, the stock exchange did not state that the person who works as Investor Relations manager must do this job only, and not be occupied in any other job... People inside the companies, from the management, do not know the role of Investor Relations because they do not understand...Because some events can happen and they (top management, the financial department of the company) do not tell the Investor Relations manager...Some companies do not have even an Investor Relations Officer and they are not convinced that this is a full time job” ... IRs2-3*

The overall message is that more obligatory disclosure rules and regulations like those of the central banks have a positive impact on companies' voluntary internet disclosure and reporting. The Egyptian Stock Market's disclosure of companies' financial information made some companies rely on this and they did not disclose their financial information on their websites. Also, failure to specify the role and responsibilities of Investor Relations officers in the rules of Egyptian Stock Exchange left some companies unaware that disclosure of their financial information on the company's website could be considered one of their responsibilities.

### **8.2.6 Number of Analysts Covering the Company**

Only two participants raised the issue of number of analysts covering the company. They explained that there is a positive relationship between the number of analysts

covering a company and the disclosure of its financial information on its website. An IRs officer of a company which provided good internet financial reporting and disclosure said that having internet financial disclosure may depend on the number and nature (local or international) of analysts covering the company and cited this example:

*“For example, XXX Company is covered by 11 analysts (11 international companies) such as GP Morgan, HSBC, and city group. Because many analysts are covering this company, the company has to be in continuous contact with them. This can be mainly through the website”... IRs1-4*

An analyst made a similar point:

*“If there are 10 analysts covering the company, then the company’s disclosure is good. So whenever a number of analysts cover the company, then the company has good disclosure and they do not hide any kind of information. And if there is only one analyst covering it, or nobody, then you think that there is a black area that we do not know about...”... An-2*

The same respondent said failure to provide sufficient information could be a cause of analysts dropping a company and suggested:

*“Some analysts drop some companies because their Investor Relations officer does not give them sufficient information. I think that it is more beneficial for listed companies to include the name of the companies which analyse it with the contact persons because it shows the public that their company is not small and it is being covered by many analysis companies. It sends the message, (I have no information to hide. My disclosure and transparency are very good)”... An-2*

Therefore, if there are many analysts covering the company, it is better for the company to provide them the financial information through their website and to mention their names.

### **8.3 Stakeholders’ Perception on Internet Financial Reporting**

In order to achieve the third objective of the research, which is to ascertain the perceptions of different stakeholders regarding internet financial reporting and disclosure using Nvivo software. the researcher classified participants’ responses into seven main points:

1. Internet financial reporting responsibility
2. Language of disclosure
3. Links to analysts' webpage
4. Security of information
5. Types of financial information to be included on companies website
6. How to improve internet financial reporting

Table 8.6 shows how many participants in each category raised these themes. For example; three Investor Relations officers of companies providing internet financial disclosure, two Investor Relations officers of companies which did not provide internet financial disclosure, two audit partners, three analysts and one manager from the Egyptian Stock Exchange talked about internet financial reporting responsibility.

**Table 8.6 Number of Participants from Each Category Discussing Certain Themes Related to Their Perceptions**

Theme \ Work Status	IRs Officers of Companies with internet F. disclosure	IRs Officers of Companies with no internet F. disclosure	Audit partners	Analysts	Managers from Egyptian Stk Exchange
Internet Financial Reporting Responsibility	3 (75%)	1 (33%)	2 (50%)	3 (75%)	1 (50%)
Language of Disclosure	3 (75%)	0	2 (50%)	2 (50%)	2 (100%)
Links to Analysts' Webpage	2 (50%)	0	0	2 (50%)	1 (50%)
Security of Information	2 (50%)	0	0	1 (25%)	1 (50%)
Types of Financial Information to be Included on Companies' Websites	4 (100%)	1 (33%)	2 (50%)	2 (50%)	1 (50%)
How to Improve Internet Financial Reporting	3 (75%)	1 (33%)	1 (25%)	2 (50%)	1 (50%)

### 8.3.1 Internet Financial Reporting Responsibility

Some IRs Officers of companies which provide internet financial disclosure thought that the Investor Relations officer, together with either the CFO and CEO or the

chairman of the board of directors should determine the financial information to be published on the company's website.

*"The financial information to be published on the internet is determined by the company policy, Investor Relations, CFO and CEO...Internal auditors have no relation with the information to be published" ...IRs1-1*

*"Senior Management, because they are the people who make decisions" ...IRs1-2*

*"I make the decision together with my father (Chairman of Board of Directors) and the board of the company, based on what we consider the best practice. Our goal here is to make sure that all investors, the principal or potential investors have enough information, not just so that we ticked the box that we did what's legally required but to understand what is happening in our business and feel as comfortable as possible trying to make estimates and decisions about where we are going, how we are going to perform" ... IRs1-3*

An IRs officer of a company which did not provide internet financial disclosure thought that other managers should keep the Investor Relations officer updated with all the information because he is the one who should be responsible for this information.

*"It should be the Investor Relations manager if there is a flow of information. I mean, if the company provides him with the information. Because some events can happen and they (top managers and the financial department of the company) do not tell the Investor Relations manager. The law should include the duties and responsibilities of the Investor Relations manager to force the Board of Director to disclose" ...IRs2-3*

As for audit partners, one of them (AP-3) thought that the "CFO & CEO" should be responsible for the financial information on the companies' website. Another (AP-4) thought that companies should take advice from their lawyers before publishing any financial information on their website.

*"Job description differs from one company to the other. I think this is related to corporate governance and also the lawyers of the companies should be involved. I think that companies should consult their lawyers before publishing anything on the internet. Legal aspects should be taken into account. Therefore, they should take legal advice" ...AP-4*

All audit partners agreed that auditors are not responsible for the financial information that is published on the companies' website.

The majority of financial analysts thought that Investor Relation officers are responsible for the financial information published on the companies' website and should determine its content as well.

*“Investor Relations officer and top management” ... An-3*

*“It is one of the Investor Relations manager's responsibilities. Actually it is IT that deals with the release of the webpage. However; the financials, structure and the formatting should be the responsibility of the Investor Relations manager, together with the financial department” ...An-1*

*“The internal auditor has nothing to do with that. I think it is the Investor Relations officer. In the Egyptian Stock Exchange, there is a rule that listed companies should have an Investor Relations officer. Therefore, some companies have a department called Investor Relations and give it importance and weight” ... An-2*

A manager of the Egyptian Stock Exchange thought that

*“The Company's management is responsible for the financial information that is published on the website of the company”...ESE-1*

As a result, according to participants' responses, Investor Relations officers are largely responsible for the contents of financial information which is published on the internet, together with the CFO of the company. Therefore the responsibilities of Investor Relations officers are discussed in section 8.4 to satisfy the fourth objective of the research.

### **8.3.2 Language of Disclosure**

Most of the participants did not know XBRL and they preferred PDF as it looks like the real documents and it does not allow changes, so it is safe. One of the analysts explained that he preferred the financial statements on Excel because it is easier to copy the financial statements in their own format when they analyse a company. The participants thought that in the future they would upgrade to a higher tech format and use XBRL.



*“I do not know this XBRL. We mainly use PDF because it is available to everybody and it means your document cannot be altered and then your documents are secure. People cannot manipulate the information. It is a good, safe way. Also in PDF, it looks the same as in printed papers; it is a marketing presentation issue” ...IRs1-3*

*“We are using PDF. I do not know what XBRL is” ...IRs1-4*

*“I think PDF is very suitable for financial information and for any kind of report about the financials because, to remind you, a lot of users are in Egypt and they do not necessarily have the required tech backgrounds to deal with different software, so PDF is the norm. It is easy for the time being. However, in the future as Investor Relations becomes more and more understood and digested by people, we can upgrade to a higher tech format. It is a matter of, going forward we have to upgrade because we have the means but we need the audience to be prepared as well, so that we are reaching a wider audience base that can really handle the content and material available on the website” ...IRs1-2*

*“Only PDF is available in Egypt” ...AP-2*

*“PDF is better and more protective, nobody can change it” ...AP-3.*

*“It is better to find the statements such as Balance Sheet and income statement on Excel. We spread these statements on Excel in our own format in our company, we copy and paste, so there will be no error in rewriting the numerical amounts and it will take less time . Then we can have PDF not HTML because it is better in printing. The print of HTML is not easy and it is not as easily saved as PDF”... An-2*

The other analyst thought that PDF is better and he mentioned the reasons

*“PDF because people cannot alter it. It is more safe and secure. Any other languages are editable so anyone can enter and change what he wants. And it is easier to print and it has the same format as of paper documents”... An-3*

*“XBRL is not available in Egypt at all; it may be in the future when companies have more knowledge and when they understand that foreign investors need this”...ESE-1*

*“We received some documents about XBRL a few weeks ago and we will start to do some research about it. Up till now, nobody in Egypt knows it”. ...ESE-2*

Therefore, PDF was used and preferred by the Egyptian listed companies and other stakeholders as it is not editable and therefore safer. Analysts preferred Excel because it

is easier to use when analysing the financial statements. Now, the Egyptian Stock Exchange knows about XBRL and will study the possibility of using it.

### **8.3.3 Links to Analysts' Webpages**

Some companies include the analysts' report of their company or their analysts' name in their website; others have links to analysts' webpages. Some Investor Relations officers thought that this creates more confidence in their financial information included in their websites as stakeholders can double check the information by looking into the analysts' reports or websites. Others, however, did not want to include the analysts' report or to provide a link to analysts' websites, in order not to be responsible for the information included in these reports or the other link.

*“There is a strong supervision on this website... There is authorized information on our website because it comes from big international rating agencies. If this information is wrong we will pay fines to these rating agencies, as they will take legal action. The reports of international rating companies such as Standard & Poors, Fitch, Moody's Investor Services and Capital Intelligence are on the internet and they are an authorized source of information for people seeking the information”...IRs1-2*

*“We publish the analysts' contact details on our company's website. We do not publish their reports..., if someone who has no proper training acts on it [ information included in analysts report], they can argue that they were tricked because they obtained information from our website and there was a recommendation to buy our company and they bought the shares and then their price fall because we did not do what the analysts thought we would do ...Therefore we would not do it, from this perspective... we only publish the contacts, so that investors can find the analysts and talk to them”...IRs1-3*

*“It is a very good idea; I will consider it in the future”...An-1*

One of the analysts explained that if the company is followed by more than one analyst, this means that the company has a good disclosure system and is not hiding information. Therefore most companies which provide financial information on their websites are covered by more than one analyst.

*“I think that it is more beneficial for listed companies to include the name of the companies which analyse it with the contact persons because it shows the public that their company is not small and it is being covered by many analysis companies. It sends the message, [I have no information to hide. My disclosure and transparency are very good]” ... An-2*

A manager from the Egyptian Exchange Stock Market explained that their website had links to the websites of listed companies.

*“On the Egyptian Stock Exchange website, any company that has a website, its address is available on our disclosure system and it is available at the company which is responsible for disseminating information”... ESE-1*

Participants did not agree upon the benefits derived from including the analysts report in their websites or having a link to the analysts websites. Some participants thought it would be beneficial to investors in to know the analysts covering the companies, so they can contact them. It gives investors more confidence that the company is disclosing all financial information. On the other hand some Investor Relations officers did not want to be responsible for the information included in these analysts’ reports or websites.

### **8.3.4 Security of Information**

As for the security of the information, Investor Relations officers of companies which provide internet financial information were sure that their information is reliable and secure. One of them stated that all the financial information published on their websites are true and fair because they never publish any information before sending it to the Egyptian Stock Exchange and obtaining their approval.

An analyst thought that companies would not include false financial information on their websites.

*“Before publishing financial information on our website, I send it to the Egyptian Stock Market”... IRs1-1*

*“Our website is extremely secure and is limited to certain persons. They are authorized, having passwords and having electronic supervision. If any information is published on the website, more than one person reviews it,*

*to make sure that the information is correct. They keep track of it all the time to make sure that everything is okay and nothing has been changed and nothing is outdated...There is authorized information on our website because it comes from big international rating agencies. If this information is wrong we will pay fines to these rating agencies, as they will take legal action”...IRs1-2*

*“It depends on the communication strategy of the company. I do not think that any company will include false information on its website”...An-3*

One of the managers of the Egyptian Stock Exchange explained that companies should send the financial information to be published on their websites to the disclosure department of the Egyptian Stock Exchange. The Egyptian Stock Exchange has a monitoring system which monitors all information that is published on the internet whether on the company’s website or on any other website. He then explained the actions that would be taken by the Egyptian Stock Exchange if any company published false information on the internet.

*“The Egyptian Stock Exchange visits the websites of companies on a daily basis; we have an internal computer program which detects all new information published on its website or on any website which publishes any information about any registered company. All new information or any modifications to the information related to the registered companies are detected. This program has a list of the names of the active companies. Whenever this program finds the name of the company or part of it on any advertisement, whether on the website of the company itself or on any other company which discloses information on the website, it gives me an alert. So the Egyptian Stock Exchange or the disclosure department has to make sure whether the information disclosed was sent first to the Egyptian Stock Exchange and whether it was public information or not. Consequently, there are some procedures the Stock Exchange takes against companies which disclose information that affects the investors’ decisions without informing the Egyptian Stock Exchange...*

*Our procedures are:*

- *Print out to the news related to the company*
- *Send the company a copy of it with a covering letter*

*The management of the company has to inform the Stock Exchange whether the information is true or not. If it is true, it sends the supporting documents to the Egyptian Stock Exchange, and in this case, there are other procedures the Stock Exchange takes against the company as a consequence of disclosing information before informing the Stock Exchange”...ESE-1*

### 8.3.5 Types of Financial Information to be Included on Companies' Website

Two of the analysts stated that they depend on the financial information which is published on the companies' websites as a source of information

*"Yes, I visit the companies' websites on a regular basis and get the information. Every quarter I print the financials of these companies, and do the analysis ... We obtain the information through the websites of the companies, the stock exchange"...***An-1**

*"Yes, we depend on the website of the company, Investor Relations personnel, conference calls, industry reports and third party records"...***An-2**

As for the type of financial information to be included on the companies' website, Investor Relations officers of companies which provided financial information on their websites followed different approaches; one of them reported that his company published audited financial statements accompanied with an audit report, another emphasized that companies should publish all information which affects investors' decision making and share prices; another explained that the company published financial information required by NIRI (National Investor Relations Institute).

*"We publish audited financial information accompanied by the auditor's report"...***IRs1-1**

*"Any information which could have an effect on the share price or on the decision of an average investor in the market should be announced to the stock exchange on which we are registered because this is the rule of disclosure. Information which would have no effect on the share price but which we feel is important and we want people to know it, we inform the stock exchange on which we are registered as well, and this is the complementary information we are talking about"...***IRs1-2**

*"Our goal here is to make sure that all investors, the principal or potential investors, have enough information... Our duty is to make sure that everybody receives information at the same time" ...***IRs1-3**

*"We depend on the national Investor Relations Institute in the US. It gives you updates. Every month they send you a magazine with all the updates. And whenever there's something new, they send you an e-mail. There is no legal obligation. I am not obligated to publish my financials on my*

*websites. It is all about that I want to be perceived well. I want to be in contact with my analysts, with my investors, with regular people in the street. I want to be present. This is the company image” ...IRs1-4*

An Investor Relations officer of a company which did not provide internet financial reporting explained that companies should publish all financial information that could affect shares' prices.

*“Any information which might affect the price of shares up or down, should be on the internet, in a newsletter and should be updated daily or at least weekly or monthly like the newspapers. Financial statements with footnotes to make people understand ... As an Investor Relations manager, when you know the business of your company, you can know the line separating the information which is important to investors, and other competitive information which should not be disclosed. You should understand the type and nature of the industry. You will be the link between the company's management and its financial analysts who do the technical and fundamental analysis”...IRs2-3*

Auditors thought that companies should publish the detailed financial statements not a summarized version of it.

*“Of course it is better for companies to publish the detailed financial statements not the summarized, because it will protect the company, the auditor, investors, and financial analysts”...AP-2*

*“There are no standards, as to what information is to be included. However, generally speaking it is better to include everything and the details because it is better for users. There are no minimum requirements. I think that it would be better to have a standard which determines all the details or the items to be included, to ensure consistency of financial reporting between companies and eliminate the differences”...AP-4*

A financial analyst explained that companies should publish all information not only that required by rules and regulations but also information which helps in analysing the companies. He said he needed information about management future plans of the company. He wanted companies to publish Management Discussion and Analysis. He suggested that a Task Commission should be formed from analysts, auditors and the

Egyptian Stock Exchange to discuss these issues and create a standard form of financial statements for each industrial sector to be published on the internet.

*“Some companies issue the balance sheet, income statement, and cash flow only. So where are the footnotes, press releases, explanations, and Management letter? What is sent on the e-mail is either the financial statements or a press release that includes summarized income statement and balance sheet, not the full details... In America, there are some forms such as 10-K and 10-Q which are important. The companies have to file some forms with the SEC to have good disclosure... In Egypt companies issue the financial statements and footnotes. Why don't the annual reports include Management discussion and analysis ... The footnotes in Egypt are not detailed ... Companies should give indications for analysts so that their forecasting will be in the right direction. The Management know more than the analysts because they are inside the company and they know better, they can give a guide, direction... reporting by segments is very important. ...If the CMA, Stock Exchange Commission, and auditors get together, and form what is called a task committee and create a standard form of financial statements for each sector” ... **An-2***

One of the managers of the Egyptian Stock Exchange explained that there are no rules or regulations for disclosing companies' financial information on their websites. However companies should not publish information which contradicts with what is published on the Egyptian Exchange webpage.

- *There are no rules or laws from the Stock Exchange which force companies to have websites or determine their form, or what information is to be published; there are no laws. The stock exchange has forms to be filled by the companies and the information is available on its website, all its information, capital structure, financials, modifications or changes in the company's structure are also available.*
- *Some companies may wish to hide some information to protect themselves against competitors. In this case, we don't require the company to disclose confidential information.*
- *The company would never publish information which contradicts what is published on the stock exchange website. The company publishes on its website the same information approved by the stock exchange, or even less.*
- *The communication companies ... have good websites and if you are on their mailing list, you can get their conference call and the disclosure department of the Egyptian Stock Exchange can participate in the conference call.*
- *It should publish all details, a summary is not beneficial. The footnotes should be included ... **ESE-1***

The majority of participants thought companies should disclose all financial information which would affect the shares' price and affect investment decisions. Companies should publish the full detailed financial statements and not a summarized version of them. Management discussion and analysis should be included as it helps analysts to know about the management vision and their future plans.

### **8.3.6 How to Improve Internet Financial Reporting and Disclosure**

As for improving internet financial reporting, the Investor Relations officer of companies which provide financial information on the internet suggest that there should be laws, rules and regulations which stipulate that all listed companies should have websites and publish their financial information on these sites. More focus should be given to Investor Relations function. These laws should stipulate the responsibilities of the Investor Relations department. Also training courses should be given not only to Investor Relation officers but to all senior managers of the organisation to understand the concept of Investor Relations. There should be some organisational and cultural change to facilitate to Investor Relations officers to carry on their responsibilities.

*“The Government should take the initiative to make companies have websites and disclose on the internet” ...* **IRs1-1**

*“Companies need to understand the many benefits and the multiple layers of benefits they can get from having a reliable website. I think that the stock exchange can promote this understanding as well as the educational institutes... they should focus on Investor Relations ... surprisingly you will find that most of them[ people working in companies] do not even know what Investor Relations is about.*

*Transparency and data disclosure eventually should become an attitude then it would be rooted in the culture of this institution. I mean with culture the set of norms, values, understandings and assumptions shared by employees of the organisation. A culture should come top down. A change should happen in the culture. To change the culture, you should understand it first. When you try to change; there will be resistance because of the lack of understanding, assessment, uncertainty, self interest. There are tools to avoid resistance, such as bargaining, top management support, education & training, mainly if it needs more skills and involvement...There is an important point, strategy should follow the structure, strategy should reflect the culture and strategy should fit the technology.*



*Strategy should follow the structure: If I have a strategy, then the organisational structure should support this strategy. I cannot have a strategy of superior customer service and be responsive to the market if the organisational chart is tall, centralized and has many hierarchical levels. This will not result in flexibility or fast response or anything. Therefore, the organisational chart in this case should be more flat.*

*Strategy should reflect the culture: I can't have responsive flexible strategy and tell my employees not to disclose anything. Strategy should fit the technology: If I will provide internet reporting, I should have the proper IT, software and skilled personnel" ...IRs1-2*

*"If you make a law then everybody has to do it ...The other thing you can do is to educate companies; the more information that is available to investors, the more investors you actually attract ...The Investor Relations manager has an obligation. It is his job to make sure that information is easily available to everybody. Investor Relations in companies in countries with an emerging market do not have the experience of how their job should be, they do not understand because they do not have a benchmark to follow... So two things can be done; either forcing people or showing them the missed opportunity from not disclosing... Training and education helps. And Egypt in general has a problem with training and education".*  
**IRs1-3**

*"Through the stock exchange and capital market authority, because to change the way management thinks, it would take time, so there should be a mandatory requirement...The stock exchange should impose substantial fines if the company does not disclose" ...IRs2-3*

*"I think to encourage anything in Egypt; the stock exchange should issue new rules and regulations" ...AP-3*

*"It is up to the stock exchange itself or CMA to approve the internet as a means of disclosing the financials. Then the companies would realize that it is a must to disclose their financials on their websites. Therefore the CMA should inform companies to disclose the financial information in a certain format as well, and there should be fines on the companies which do not have websites or do not disclose. It should be a top-down approach. Because it is easier for all stakeholders to obtain the information through the internet, so there should be some regulations which organize the process. Technically speaking, it is not difficult or costly for companies to have a website and disclose the financials" ...An-1*

*"If the CMA, Stock Exchange Commission, and auditors get together and form what is called a task committee and create a standard form of financial statements for each sector" ...An- 2*

*"There are rules and regulations which regulate disclosure in general and they state that any financial statement should be published for 2 days on the website of the Egyptian Stock Exchange" ...ESE-1*

To summarize, the majority of participants emphasized that the Egyptian Stock Exchange should impose rules and regulations to force listed companies to disclose their financial information on their websites. The rules and regulations should stipulate the responsibilities of the Investor Relations officer. Senior management and employees need to understand the concept of Investor Relations, and training should be available to help with this. Disclosure and transparency should be rooted in the culture of organisations. An organisational change is also required to help Investor Relations officers to carry their responsibilities easily.

#### **8.4 The Role of Investor Relations and Auditors and the Impact of Internet Financial Reporting**

In order to achieve the fourth objective of the research, which is to explore the role of Investor Relations officers and auditors regarding internet financial reporting and disclosure and whether their function or procedures are affected. Using Nvivo software, the researcher classified participants' responses into seven main issues:

- 1 Responsibility of Investor Relations officers regarding internet financial reporting
- 2 Responsibility of external auditor regarding internet financial reporting
- 3 Responsibility of internal auditor regarding internet financial reporting
- 4 Modification of engagement letter wording
- 5 Modification of auditor's report wording
- 6 Selective disclosure
- 7 Continuous audit and webtrust

**Table 8.7 Number of Participants from Each Category Discussing Certain Themes Related to the Role of Auditors Regarding Internet Financial Reporting and Disclosure**

Themes \ Work Status	IRs Officers of Companies with internet F. disclosure	IRs Officers of Companies with no internet F. disclosure	Audit partners	Analysts	Managers from Egyptian Stk Exchange
Function of Investor Relations officer	3 (75%)	2 (67%)	0	2 (50%)	0
Responsibility of external auditor regarding IFR	3 (75%)	0	4 (100%)	0	0
Responsibility of Internal auditor regarding IFR	2 (50%)	0	4 (100%)	1 (25%)	0
Modification of Engagement letter wording	0	0	4 (100%)	0	0
Modification of auditor's report wording	0	0	4 (100%)	0	0
Selective disclosure	0	0	2 (50%)	0	0
Continuous audit and Webtrust	0	0	1 (25%)	0	0

Table 8.7 shows the number of participants who talked about each issue. It was found that audit partners were the respondents most inclined to discuss these points, because these matters are related to their work.

#### **8.4.1 Function of Investor Relations Officer**

Some participants thought that the main responsibility of Investor Relations is to supply analysts with needed financial information, and part of this is to publish companies' financial information on companies' websites. Others thought that Investor Relations officers should keep a mailing list of all stakeholders and send them the new financial updates of their companies. However some of the participants explained that Investor Relations is quite a new concept, established by the rules and regulations of the Egyptian Stock Exchange. The law stated that listed companies should have an Investor Relations officer but did not stipulate what are his/her responsibilities. So up to now,

people do not know the role of the Investor Relations department, and whether this job is full time or part time. Therefore, the Egyptian Stock Exchange should determine the responsibilities of Investor Relations officers and provide them with training courses.

*“Analysts are provided with all information required. We have a data base of people interested in our company so we send them e-mails, including the key performance indicators, before publishing the results and we inform them that that annual reports will be available on the website at a certain time” ...***IRs1-1**

*“The concept of Investor Relations in Egypt is considered relatively new or modern... Up till now, many Egyptian companies do not have an Investor Relations officer. Senior management is doing that job. Investor Relations need to be a separate function ... The problem we have in the Egyptian market is the fact that many companies view Investor Relations as something fashionable or trendy... Investor Relations needs to be more developed” ...***IRs1-2**

*“Definitely; the Investor Relations manager has an obligation. It is his job to make sure that information is easily available to everybody. Investor Relations in companies in countries with an emerging market do not have the experience of how their job should be, they do not understand because they do not have a benchmark to follow.” ...***IRs1-3**

*“This is only a part time job. Not all companies will employ a full time Investor Relations officer. This job is active only when the financial statements are issued every three months or when a substantial event happens” ...***IRs2-2**

*“Some people do not know what the role of Investor Relations department is. This job was created by ...the Securities Listing & De-listing Rules of Cairo & Alexandria Stock Exchanges... People inside the companies, from the management, do not know the role of Investor Relations ...As an Investor Relations manager... you can know the line separating the information which is important to investors, and other competitive information which should not be disclosed. You should understand the type and nature of the industry. You will be the link between the company’s management and its financial analysts who do the technical and fundamental analysis”. ...***IRs2-3**

*“One of the functions of the Investor Relations department is to have a mailing list of all interested people which are their target audience. This list should include all the analysts who cover their company. So the company sends e-mails and issues press release to announce the time of issuing financial statements” ...***An-2**

*“The Investor Relation manager should be involved in each and every strategic decision in general because the way of communicating the strategic decision to the market should be studied as part of the decision itself and accordingly the person in charge of communicating it should be a part of the decision. World wide, it is a very high ranking post. In the past, in Egypt, it was a low profile job; it is getting more emphasis recently. Now, Investor Relations officers are invited to conferences world wide to present their companies, someone who understands the business has to be in charge. Having communication with institutional investors, foreigners, cosmopolitan, they all communicate through the Investor Relations officer having conference calls regularly; communicating our information to them, arranging for them to meet top management”... An-3*

The Egyptian Stock Market rules and regulations state that listed companies should have an Investor Relations officer but do not stipulate his/her responsibilities. In addition, there are no rules and regulations which require companies to disclose financial information on their websites. Some companies do not understand the concept of Investor Relations. Investor Relations should be involved in each and every strategic decision in the company and should be informed with all details to be able to answer stakeholders' question and determine which information should be published. Therefore the company's board of directors, management and staff should understand the concept of Investor Relations. The Egyptian Stock Exchange should give training courses to educate companies.

#### **8.4.2 Responsibility of External Auditor Regarding IFR**

The Investor Relations officers of companies with internet financial reporting and disclosure explained that they published the audited financial statements but the auditor has nothing to do with the contents of the website. However one of them stated that they had audit approval on the earning release and audited financial statements before publishing them on the company's website.

*“We publish audited financial information accompanied by the auditor's report”... IRs1-1*

*“The external auditor is not involved with our website”. IRs1-2*

*“The external auditor prefers to review the earning release and the audited financial statements before publishing them on the internet, as they are the two main documents which are posted on the internet. They have already audited them but they approve them. Nevertheless, they do not review the Investor Relations presentation; it is the responsibility of the management. We have to ensure that the Investor Relations presentation has the same figures as the audited financial statements. The reliable source that any analysts or any investors or shareholders get information from is the audited financial statement or earning release” ...IRs1-4*

The audit partners of the big four international companies, which are KPMG, Deloitte Touche, Ernst and Young Coopers and PriceWatersHouse had different opinions regarding their responsibility towards publishing financial information on their clients' websites. Two of them emphasized that their client should obtain their approval before publishing the financial information on the website. One of them explained that they had no responsibility for the clients website, and the fourth explained that their clients need not get their approval if they just publish the financial statements with no modifications. They agreed that the scope of the audit should not be increased to include all information on the client's website.

*“We are not responsible for auditing of websites...The other information in the annual report depends on the audited information so we make sure that it does not contradict with the audited information, but there is no such requirement for the client's website...There is other information which is included on the website such as earning release every quarter and it includes financial information. Our name is not associated with it. We have nothing to do with it” ...AP-1*

*“So before publishing the financials on the companies' website, they should get our approval, we have to review it and give them our consent”... AP-4*

*“The clients should not publish the financial statements or auditors' report on their website except after obtaining the auditors' consent. Once we have finished auditing the annual financial statement and give our report, they can publish it. However, he should give me a draft of what he is going to publish to have a look at. Moreover, if there are mistakes he should correct it... If he publishes something wrong I have to take legal action... As long as the auditor's report is published in any place and there are financial data, whether statements or others, I should ensure that they are according to the documents and with no discrepancies. For example if the revenue included in the press release differs from that included in the*

*audited financial statement, I can take a legal action... No, the scope of the audit shouldn't include all information published on the website of the client. The scope is limited to documents, records, transactions of the company; I audit the truthfulness of whether the financial statement represents the actual financial position of the company. The information on the website is so vast, it can't all be audited"... AP-2*

*"The Company should get the auditor's permission to publish information other than or besides the financial statements and the auditor's report will be attached on its websites. However, if it publishes the financial statements and auditors' report only, no permission is required from the auditor. Once the auditor has audited the financial statement and issued his report, it can be published by any means, it does not differ whether it is published on the website or in a newspaper as long as nothing is changed"... AP-3*

### **8.4.3 Responsibility of Internal Auditor Regarding Internet Financial Reporting**

There was no agreement regarding the role of internal auditor regarding internet financial reporting and disclosure. One Investor Relations officer and an analyst thought that internal auditor has nothing to do with the financial information to be published on the internet while another Investor Relations officer thought that internal auditors should be involved with everything in the company.

*"Internal auditors have no relation with the information to be published"...  
IRs1-1*

*"The internal auditor has nothing to do with that"...An-2*

*"The internal auditors are involved with everything because it is part of their job"... IRs1-2*

As for auditors; they thought that the job description for internal auditors differs from one company to another. The role of the internal auditor may be to report to the external auditor, to ensure that the internal controls of the company are properly designed, implemented and operating efficiently. Now, internal auditors are involved in corporate governance in Egypt. However, internal auditors have very little to do with the disclosure of financial information on the websites of the listed companies.

*“I don’t know, this is related to the client’s policy, not mine. I can talk only about the external auditor’s responsibility” ... AP-1*

*“The concept of internal auditor in Egypt differs from other countries. Outside Egypt, legal action can be taken against him/her. However, in Egypt, the internal auditor reports to the external auditor. However, large companies should present the financial statement to the Internal Audit Commission to be signed before they issue it. This Commission, before signing, asks the internal auditor and make sure that everything is okay. The role of the internal auditor is not as strong as in foreign countries” ... AP-2*

*“The internal auditor’s responsibilities are different; his main task is to ensure that the internal controls of the company are properly designed, implemented, operating and functioning properly. I do not think that internal auditors are relevant to the financial information which is published on the internet, unless if there is an internal control about the posting of information on the internet, to make sure that they are functioning properly” ... AP-3*

*“Job description differs from one company to the other. I think this is related to corporate governance and also the lawyers of the companies should be involved. I think that companies should consult their lawyers before publishing anything on the internet. Legal aspects should be taken into account. Therefore, they should take legal advice” ... AP-4*

#### **8.4.4 Modification of Engagement Letter Wording**

The four large audit firms have different policies regarding the modification of the wording of the engagement letter. The following paragraphs will explain how each auditing firm deals with this matter.

- **Large Accountancy Firm A**

The audit partner of this accountancy firm explained that

*“Whenever we have a company which has a foreign listing and has a website and publishes its annual and quarterly reports on the internet. The engagement letter includes these two paragraphs you read” ... AP-1*

This audit partner provided the researcher with part of their standard engagement letter they used with Egyptian listed companies which have a foreign listing. The audit partner added that



*“This is according to XXX [the name of the accountancy firm] policy, and risk management policy around the world. This part is taken from the risk management manual of XXX [the name of the accountancy firm]” ... AP-1*

The following is part of the engagement letter

**Electronic publication and distribution of financial statement**

*You will not carry out any electronic publication or distribution without first obtaining our consent. We may withhold our consent to the electronic publication or distribution of our report if our report is to be published or distributed in an inappropriate manner. Where we consent, we shall, if appropriate, supply an electronic version of our report suitable for such publication or distribution.*

*It is and shall remain the responsibility of XXXX to ensure that any such electronic publication or distribution properly presents its information and our report. XXX shall ensure that financial information on its website distinguishes clearly between client information that we are associated with and other information and avoids any inappropriate association.*

*Any electronic publication or distribution of our report is to be accompanied by the following statement: “The accompanying report of XXX is for sole and exclusive use of XXX. Any redistribution made by XXX is to be 100 percent full, complete and unaltered in any way. Further, the report of XXX is as of (report date) and has carried out no procedures of any nature subsequent to that date which in any way extends that date.*

- Shall retain responsibility for using a secure method of communication when distributing the information and our report electronically and our work shall not extend to any consideration or examination of such matters, which shall be beyond the scope of our engagement.*
- Shall retain responsibility for the controls over and the security of its Website and our work shall not extend to any consideration or examination of such matters, which shall be beyond the scope of our engagement.*

• **Large Accountancy Firm B**

The audit partner of this firm explained that the wording of their engagement letter has been changed and is standardized to all companies, whether companies have a website or not; he said

*“By the way, our engagement letter is standardized. So this paragraph is included whether the company has a website or not and whether it is registered in foreign stock exchange or not, because this paragraph covers the legal aspects, it reduces our risk”. ... AP-2*

The following is the paragraph which should be included in their engagement letter

***Responsibility relating to electronic distribution of auditor's opinion***

*If the Company intends to publish or reproduce, in printed form or electronically (e.g., on an Internet Website), our report together with the financial statements or otherwise make reference to our Firm in a document that contains other information, management agrees to (a) provide us with a draft of such document to read, and (b) obtain our approval for inclusion of our report, before the document is finalized and distributed.*

*Where our audit report is reproduced in any medium, the complete financial statements, including notes, must also be presented unless we have consented to the reproduction of summarised/condensed financial information.*

*Our responsibility in relation to financial statements published on the internet will be as follows:*

- *Once the website has gone live we will review the financial information to check that it is not inconsistent with the information provided in the financial statements. If there are any changes that we believe are required to be made we will bring these to your attention.*
- *Once satisfied that the financial information contained on the website is consistent with the financial statements we will issue you with a statement to this effect. It should however be noted that our statement will be valid only for the date on which we conducted our review. The responsibility for ensuring that adequate safeguards are in place to prevent unauthorised amendments or alterations of the financial information rests solely with the management of the company. We will not carry out any further checks to review the integrity of the financial and related information on the website.*

*We do not accept any responsibility for the accuracy or authenticity of the financial and related information that is published on the internet. Our responsibility relates only to the signed accounts.*

• **Large Accountancy Firm C**

The audit partner of this audit firm explained that the wording of their engagement letter did not need to be changed as it included implicitly financial information published on the internet or any other media. He clarified that there was a paragraph in the engagement letter which stated that a company should acquire the auditor's consent if it intended to reproduce the financial statement with other information. He read the paragraph from an engagement letter

*“If you intend to publish or otherwise reproduce the financial statements together with our report (or otherwise make reference to XXX [the name of the audit firm]) in a document that contains other information, you agree to provide us with a draft of the document to read and comment on before it is printed and distributed” ... AP-3*

He added that engagement letters were standardized and this paragraph was included in all engagement letters.

*“This paragraph is included in all our engagement letters. Engagement letters should cover the purpose of the auditor and to whom it is directed”*  
... **AP-4**

- **Large Accountancy Firm D**

The audit partner of this company explained that as yet they had not modified the wording of their engagement letter. However he thought that the wording of the engagement letter would be changed in the future. He stated:

*“We are currently in the process of changes and updates of the International Auditing Standards. In Egypt there are only 6 or 7 audit standards, so we are currently in the process of modifying the engagement letter paragraphs. Not only should the client get the auditor’s approval of the information when the auditor’s report is attached, but there are new additional paragraphs related to fraud among the responsibilities of management and auditors for the financial statements. Among the responsibilities is establishing internal control to detect and prevent errors, and especially fraud”*... **AP-4**

#### **8.4.5 Modification of Auditor's Report Wording**

- **Large Accountancy Firm A**

The audit partner of this audit firm explained that if the financial statements were included, the original audit report would be included as well and it included the name of the financial statements that were audited.

*“Only the financial statements are audited and not all information included in the website of the client is audited, so the auditor’s report includes the names of these statements and the date of the audit”* ... **AP-1**

- **Large Accountancy Firm B**

The audit partner of this firm stated that no modification was made to the wording of the audit report to include information published on the internet.

*“It is a standard audit report; nothing is added to it. It is according to international standards and I think it is the same; there is no modification of words”* ... **AP-4**

- **Large Accountancy Firm C**

The audit partner of this audit firm explained that if the financial statements were included, the original audit report would be included and no modification was done to the wording of it.

*“Once the auditor has audited the financial statement and issued his report, it can be published by any means, it does not differ whether it is published on the website or in a newspaper as long as nothing is changed” ...AP-3*

- **Large Accountancy Firm D**

The audit partner of this firm explored the idea that some companies would publish the summarized financial statements on their website and in this case they needed an audit report on the summarized financial statements to be published with these statements.

*“As for the general publishing of financials, some information is summarized while other information is detailed. Sometimes they publish a summary and not all the details, so another audit report should be issued on the summarized financial statements stating that the summarized financial statements agree with the detailed financial statements and the auditor’s report on these detailed statements that are issued on a certain date and we should mention the date as well, and in order to better understand these financial statement you should return to the detailed ones and the accompanying audit report which are issued on that date” ... AP-2*

#### **8.4.6 Selective Disclosure**

As for selective disclosure, where the company selects parts of the financial information and publishes it on its website and adds the auditors’ report, two audit partners discussed this issue and explained that this could not happen.

*“No, it does not work, the client cannot select some items and disclose them and accompany this with the auditor’s report. It is illegal. In order to publish selected items, the client should return to me to issue a report on those selected items and I have to mention in the report that these are selected items from the detailed financial statements which were originally issued on and I mention the date. Some companies have positives and negatives. They can not only publish the positives with my report” ... AP-2*

*“Usually, we write under the financial statements that the notes from number xx to number XY form an integral part of the financial statements so if we have 17 notes if one is deleted then there are only 16, so people will know that something is missing” ... AP-3*

### **8.3.7 Continuous Audit and Webtrust**

Continuous audit and web trust services were not available in Egypt up till now for all audit firms. One of the audit partners (AP-3) said, *“In Egypt we do not have it up till now ...It is not available”*.

To summarize, the audit function and audit scope were not affected by internet financial reporting and disclosure. The wording of the engagement letter of some audit firms had been modified to state that the client should obtain the auditor’s consent before publishing its financial statements and auditor’s report on its website. The audit report wording was not changed, except if the client published summarized financial statements, in which case a summarized audit statement should be issued. The auditor is not responsible for other information of the client’s website. Continuous audit and web trust are not available in Egypt.

## **8.5 Conclusion**

This chapter has presented the results and a framework of the major themes or subjects covered in the interviews. The researcher conducted seventeen interviews with four Investor Relations officers of four companies which provided good internet financial reporting and disclosure, three Investor Relations officers of three companies which provided no internet financial reporting and disclosure, four audit partners, four analysts and two managers from the Egyptian Stock Exchange. Nvivo was used to analyse the interview data. Data were coded using free and tree nodes. The interview results were finally coded into three nodes which are factors affecting internet financial reporting, perceptions of different stakeholders regarding internet financial reporting and the role of Investor Relations and external auditors regarding internet financial reporting which are the second, third and fourth objectives of the research.

# **Chapter Nine**

## **Discussion**

### **9.1 Introduction**

This chapter presents the discussion of disclosure index and interviews. The results of the disclosure index were presented in Chapters Five, Six, and Seven, while the interview results and analysis were presented in the previous chapter (Chapter Eight). The disclosure index and interview results and analysis will be linked with the research objectives and relevant literature and theories. The purpose of this linkage is to enhance our understanding about voluntary internet financial reporting and disclosure in Egypt and to discuss the results of both the quantitative and qualitative data in the light of previous studies. As seen in Chapter Eight, the interview comments were coded and organized according to the objectives of the study. For organisation purposes, this chapter begins by restating the theoretical propositions which were presented in Chapter Two and then the discussion will be developed in the light of these theoretical propositions.

### **9.2 Theoretical Propositions**

The findings of the study regarding determinants of adopting voluntary internet reporting and disclosure are consistent with the suggestions of theories which explain the motivations for disclosure in general. In chapter 2 (literature review), three theories were found to be relevant to internet financial reporting and disclosure; they are Innovation Diffusion theory, Institutional Change theory and Economic Based theory

#### **9.2.1 Innovation Diffusion Theory**

This theory deals with the process of adopting a new innovation which is in this case internet financial reporting. Rogers (1995:15-17) identified five attributes that influence

the rate of adoption which are relative advantage, compatibility, complexity, trialability and observability. The results of the interviews were consistent with this theory as the participants and especially Investor Relations officers of companies which provide internet financial reporting and disclosure emphasized that they adopt it because it is the cheapest, easiest and quickest means of disseminating financial information. They used PDF language as it is relatively easy, not editable and secure. The interviews and disclosure index showed that banks and communications companies adopt internet financial disclosure. This is consistent with innovation diffusion theory as these organisations have websites and have information technology departments so they adopt innovations faster than other organisations with no such facilities. The participants identified that some companies as yet have no websites or if they do, they lack the personnel required to update their websites, and this is the reason for their not having internet financial reporting and disclosure. On the other hand, companies which are technologically developed have websites and provide their financial information on their websites. One of the managers of Egyptian Stock Exchange stated that

*“There is another problem, which is the capability. Not all companies have websites and have the personnel necessary to update the website continuously and publish the financial information” ...ESE-2*

## **9.2.2 Institutional Change Theories**

The results of the interviews provide varying degrees of support for the three theories of institutional change which are coercive, mimetic and normative isomorphism.

### **9.2.2.1 Coercive Isomorphism**

According to this theory, companies adopt a new innovation because they are forced to do so by governmental mandates or statutory requirements (Carpenter and Feroz, 1992:621). Support for this view was found in the interviews. The majority of the participants explained that companies do not disclose their financial information on their websites because there are no rules and regulations which force companies to

disclose their financial information on the internet and that disclosure of financial information on companies' websites is voluntary. One of the Investor Relations officers (IRs1-3) of a company which discloses its financial information on the internet stated that *"There is no requirement to publish on the company's website"* and an auditor (AP-1) emphasized that *"Disclosure on the company's website is not mandatory in Egypt"*. To encourage internet reporting and disclosure in Egypt, some participants proposed that there should be laws, rules and regulations which stipulate that all listed companies should have websites and publish their financial information on these sites. One of the Investor Relations officers (IRs1-3) of a company which discloses its financial information on the internet argued that

*"The Government should take the initiative to make companies have websites and disclose on the internet" ...IRs1-1*

An analyst (AP-3) emphasized that *"the stock exchange should issue new rules and regulations"*. One of the Investor Relations officers (IRs2-3) of a company which does not disclose its financial information on the internet stated that the solution is *"through the stock exchange and capital market authority."*

#### **9.2.2.2 Mimetic Isomorphism**

Carpenter and Feroz (1992:621) explained that companies adopt a new innovation because they model themselves after others. This theory is supported by the results of the disclosure index and interviews. The results of the disclosure index showed that companies within the same sector (the Communications and Banking sectors) follow internet financial reporting and disclosure. One of the Investor Relations officers of companies which provide internet financial disclosure and reporting explained that before developing their website they looked at the websites of different companies as examples to guide them about what information should be included in their website. An analyst was convinced that competitors imitate each other and that companies within the



same sectors imitate each other. Therefore, companies use internet reporting and disclosure to keep pace with other companies in the same industry.

### **9.2.2.3 Normative Isomorphism**

According to Normative Isomorphism, companies adopt a new innovation because they are strongly advised to do so by professionals (Carpenter and Feroz, 1992:621). In Egypt, certified auditors and Investor Relations officers can influence internet financial reporting and disclosure. Auditors cannot force companies to adopt internet financial reporting and disclosure as there are no professional pronouncements in Egypt. In addition to that, the interviews showed that they refuse to be responsible for the financial information on the companies' websites. One of the audit partners who were interviewed explained that they had no responsibility for the clients' website, another two audit partners explained that their client should obtain their approval before publishing financial information on the website, and the fourth explained that their clients need not get their approval if they just publish the financial statements with no modifications. One of the auditor partners (AP-1) explained that they "*are not responsible for auditing of websites*".

Investor Relations officers tend not to influence internet financial reporting as it is a new profession in Egypt; their duties are not yet defined and they have no professional association. The concept of Investor Relations is not yet well understood. Investor relation officer (IRs2-3) noted that even "*People inside the companies, from the management, do not know the role of Investor Relations because they do not understand*". Therefore, it seems that Normative Isomorphism is not an appropriate explanatory theory in Egypt.

### 9.2.3 Economic- Based Theories

One of the objectives of the study was to find out the factors affecting companies to adopt internet financial reporting and disclosure and it was hypothesised that companies' characteristics affect internet financial reporting and disclosure based on the Economic-Based theories (Agency theory, Capital need theory, Signalling theory and Legitimacy theory). Companies disclose more to reduce agency cost, managers increase disclosure to convince shareholders that they are acting optimally on their behalf. Oyeler et al. (2003:36) argued that managers of profitable companies disclose more to signal that their companies are profitable and they are not hiding bad news. Companies within the same industry tend to adopt the same amount of disclosure and the same means. An Investor Relations Officer of a big company which provides internet financial reporting and disclosure in Egypt states there are industry norms and benchmarks that should be followed and that the financial information that is published should be comparable to those of the companies' competitors.

*“These are the benchmarks that you have to add to your website your audited financial statements on a quarterly basis, Investor Relations presentation, annual and quarterly releases. It is something that is governed by industry norms...This is what I have to include to be comparable to my competitors and the industry norms.” ... IRs1-4*

Craven and Marston (1999:323) noted “The very use of the internet might itself be a signal of high quality. It implies that the firm is modern and up to date with the latest technology rather than old and conservative”. The need for capital is another reason why management disclose more and by different means. The legitimacy theory has two different effects on disclosure. Litigation can either decrease managers' incentives to disclose and mainly forward looking information or increase managers' incentives to disclose for fear of legal action against them for inadequate or untimely disclosure. In the next section, factors affecting companies adopting internet financial reporting and disclosure will be discussed in detail, including these companies' characteristics.

## 9.3 Factors Affecting Companies Adoption of Internet Disclosure

### 9.3.1 The characteristics of the Companies

This study used a disclosure index and semi structured interviews to examine the companies' characteristics which affect companies' adoption of internet financial reporting and disclosure depending on *a priori* expectations which are based on Economic-based theories. The 6 firm-specific characteristics examined are size, profitability, leverage, liquidity, industrial sector, size of the audit firm, foreign listing. In the next section, each of these characteristics will be explained.

#### 9.3.1.1 Size of Listed Egyptian Companies

As the semi structured interviews showed, some of the participants agreed that the size of the company affects voluntarily internet financial reporting and disclosure, while others believed that it has no effect. An Investor relation officer (IRs1-3) explained that

*“Bigger companies, which have more shareholders, which have higher technology, which have international shareholders, will have to disclose more”...IRs1-3*

On the contrary, another Investor relation officer (IRs2-1) clarified that

*“it is not [the size of the company], our company is large, and the profitability is great. To tell the truth, it is the difference between the old and new beliefs” ...IRs2-1*

The view that the size of the company affects internet disclosure and reporting is consistent to the results of the disclosure index. The disclosure index of this study showed that the companies' size affects both the amount of internet financial disclosure and reporting and its formatting. The results of this study are consistent with that of Pirchegger and Wagenhofer (1999), Ashbaugh et al. (1999), Hedlin (1999), Craven and Marston (1999), Ettredge et al. (2001a), Ettredge et al. (2002), Debreceeny et al. (2002), Marston (2003), Oyeler et al. (2003), Xiao et al. (2004), Lodhia et al. (2004), Marston and Polei (2004).

In addition, they are consistent with findings that show that there is a positive relationship between size and the adoption of innovation behaviour. Examples include Sharma and Rai (2003) and Dewar and Dutton (1986:1422) who explained that

*“Larger firms are likely to have both more technical specialists and to adopt radical innovations”.*

### **9.3.1.2 Profitability of Listed Egyptian Companies**

As the semi structured interviews showed, the participants agreed that the profitability of the company does not affect voluntary internet financial reporting and disclosure. An analyst (An-3) stated that *“It has nothing to do with being profitable or not”*. However, the disclosure index of this study showed that there is a positive relationship between profitability of companies which have websites and the formats they use to disclose the financial information on their websites. Companies that are more profitable use more formatting techniques to simplify the acquisition of the information from their websites. However, profitability is not a major determinant of whether or not a company adopts internet financial disclosure. It only affects the amount of financial information the company discloses on its website and the formatting techniques.

### **9.3.1.3 Liquidity of Listed Egyptian Companies**

As the semi structured interviews showed, when the researcher asked whether there are other factors which may affect internet financial reporting and disclosure, only one Investor Relations officer of one of the big companies which discloses its financial information on its website stated that liquidity affects voluntary internet financial disclosure and reporting.

*“It depends on so many things such as 1) The size of the companies ...2) liquidity of the company” ... IRs1-2*

This is consistent with the results of the disclosure index where the liquidity has no effect on companies' adoption of internet financial reporting and disclosure.

### **9.3.1.4 Leverage of Listed Egyptian Companies**

In the semi structured interviews; although the researcher asked the participants several times about the company characteristics which might influence companies to adopt internet disclosure, none of the participants mentioned anything about the leverage of the listed Egyptian companies. The disclosure index of this study showed that the leverage of listed Egyptian companies has no effect on companies' adoption of internet financial reporting and disclosure. This is in line with Brennan and Hourigan (1998), Debrecency et al. (2002), Oylere et al. (2003), Xiao et al. (2004), Debrecency and Rahaman (2004). They did not find an association between leverage and internet corporate disclosure. This may be because large creditors can obtain private information.

### **9.3.1.5 Industrial Sector**

The semi structured interviews showed that the industrial sector is a major determinant which affects companies' adoption of internet financial reporting and disclosure. According to participants, there are industry norms and benchmarks that should be followed and the financial information which is published should be comparable to those of the companies' competitors. Companies within the banking and communications sectors disclose financial information on their websites. One of the participants explained that companies within the banking industry do so because they have to follow more disclosure rules and regulations which are imposed by the Central Bank of Egypt.

*“As for the banking sector, they have websites and disclose financial information on their websites, this may be because they are not only required by the rules of disclosure of the Egyptian Stock Market but they are required to meet the disclosure requirement of the Central Bank as they are under the supervision of the Central Bank and this makes Banks are more committed.”... ESE-1*

As for companies which belong to the communications sectors; they are new rich companies, have foreign investors, are aware of the value of disclosure, and are technologically developed. This is consistent with the results of the disclosure index. This result is consistent with some studies such as Lymer (1997), Oyler et al (2003), Debrecency et al (2002), Brennan and Hourigan (1998), and Ismail (2002); they found a significant association between the industry type and extent of financial disclosure on the internet.

#### **9.3.1.6 Size of Audit Firm**

In the semi structured interviews, none of the participants mentioned anything regarding the size of the audit firm. As mentioned before, although, the researcher asked the participants several times about company characteristics which might affect companies to adopt internet disclosure and reporting, the size of the audit firm was not mentioned. The result is consistent with the results of the disclosure index, as no relationship was found between the size of the audit firm and internet financial reporting and disclosure.

#### **9.3.1.7 Foreign Listing of Listed Egyptian Companies**

As the semi structured interviews showed, some of the participants agreed that foreign listing affects voluntary internet financial reporting and disclosure, while others believed that it has no effect and that some companies which are foreign listed do not disclose their financial information on their websites. An audit partner stated,

*“Companies which have good websites and publish their information on the internet are listed in the International Stock Exchange and full disclosure is one of the elements of transparency, they care about their investors and lenders and financial analysts”... AP-1*

The results of the disclosure index showed that listed Egyptian companies which have foreign listing and have websites make more use of formatting techniques which facilitate the acquisition of the financial information from their websites.

Other studies have obtained mixed results; for example Xiao et al. (2004) found a positive association between companies with foreign listing and internet financial reporting on corporate websites, while Oyeler et al. (2003) found no association.

### **9.3.1.8 Capital structure of Listed Egyptian Companies**

This theme emerged during the interview. This factor was partially taken into consideration when the researcher compiled the disclosure index. Shareholders' information was included among the dependent variables of the disclosure index. Analysis of participants' answers shows that there are three issues related to capital structure: foreign investors, Governmental ownership and number of shareholders.

#### **9.3.1.8.1 Foreign Investors**

As shown in the interview results, participants agreed that if a company has foreign investors or is seeking foreign investors, it should disclose its financial information on its website. This is because of the following reasons:

1. Foreign investors can reach the information easily.
2. Foreign investors can obtain the financial information on an ongoing and timely basis.
3. This will encourage foreign investment and good relations with foreign investors.

#### **9.3.1.8.2 Governmental Ownership**

The participants explained that the "Governmental Ownership" is an important determinant of providing internet reporting and disclosure by companies. If the government currently owns some shares of the company or if the company had previously been totally owned by the government and privatized, its managers are used to "government-think". Therefore, it is difficult for them to change and accept a new technological innovation. One of the Investor Relations officers (IR2-3) of a company which does not provide financial information on its website explained what is meant by

“government-think”. He explained that the governmental culture still prevails in some companies which had been owned by the government and subsequently privatized, with the government retaining some shares. These companies are managed according to the governmental way of thinking. From the interviews, the researcher deduced that “government-think” has the following characteristics:

1. It gives too much weight to things which are unimportant.
2. It does not give weight to disclosure. Therefore managers and members of boards of directors are not convinced about the culture of disclosure and transparency. They think that disclosure is not important.
3. It makes people work with the policy called “trembling hands”, which means that people are continually afraid of the government, and their objective is to obey the government.
4. People who are following the government think are not flexible. They are scared and will be reluctant to accept a change.

#### **9.3.1.8.3 Number of Shareholders**

Investor Relations officers of companies with internet financial disclosure believed that the number of shareholders is one of the factors which affect the companies’ willingness to have internet financial reporting and disclosure. One officer (IRs1-2) explained that if the company has only two or three strategic investors, and it does not aim to attract more investors, then there is no need to communicate information to anybody except to the stock exchange. He said

*“It depends on so many things such as ... capital structure of the company, for example, may be just 2 or 3 investors own the company and they are not interested to communicate information to anybody except to the stock exchange... companies would lose interest in building a website as it will not have any benefits and will not attract new investors” ... IRs1-2*



Another officer (IRs1-4) noted that whenever the level of investors who are engaged with the company is higher, then they will require more information and more disclosure. An Investor Relations officer (IRs2-2) of a company which does not provide financial information on its website explained that they need to disclose their financial information on their website because the number of investors has grown and it is inefficient to send them copies of the company's financial statements. Therefore, it can be concluded that there are positive relationships between number of shareholders and internet financial reporting and disclosure.

Archambault and Archambault (2003:180-181) explained that investors who own a large percentage of a company's shares are more able to obtain financial information directly from the company. Therefore, the need for disclosure for these companies with such large block owners may decrease. Marston and Polei (2004:294) clarified that investors who own only a small percentage of shares in a company have limited access to information about the enterprise. Therefore, they can use the internet to gather the financial information because it is difficult to obtain this information from other sources. Consequently, it is likely that firms with a more dispersed ownership of shares will disclose more information on the internet to provide their shareholders with the necessary information. On the contrary, investors with a large percentage of a company's shares can acquire the required information about the company from internal sources. They do not rely on published information. Therefore, more closely held companies will disclose less information on the Web because their large investors can access internal sources of information.

These results are consistent with that of Oyeler et al. (2003) who found that the spread of ownership motivates the provision of internet financial reporting. Bollen et al. (2006)

found that the quality of Investor Relations websites which include the financial information is positively related to the proportion of shares available to individual investors. Also, the results are consistent with those of the FASB study (2001:41) and Healy et al. (1999) which found that increased disclosure is related to growth in institutional ownership.

### **9.3.2 Management Style**

The majority of participants thought that management style and mentality is the most important factor which affects voluntary internet financial reporting and disclosure. This theme emerged during the interview. The adoption of internet financial reporting and disclosure depends upon management discretion and their understanding of the importance of disclosure and transparency. The analysis of the interviews shows that there are several themes within the area of management style which affect internet financial reporting and disclosure; they are Management approach, Culture, Organisational structure, Demographic characteristics, and Technical abilities and presence of the internet.

#### **9.3.2.1 Management Approach [Management Strategy and Mentality]**

Most of the participants agreed that management strategy has an important influence on the adoption of internet financial reporting and disclosure. Provision of financial information on the companies' website depends on managerial beliefs, ideas and understanding of the visibility of disclosure, their relationship with investors and what type of shareholders they are seeking, because there are no laws or regulations which require companies to disclose their financial information on their website. An Investor Relations officer (IRs2-1) of a company which does not provide financial information on its website explained that "*it is the difference between the old and new beliefs, ideas and thoughts*" and an audit partner (AP-3) emphasized that "*it depends on the mentality*

*of the management, because there are no requirements to publish on the internet*". The "Government-think" still prevails in Egyptian companies that were public and privatised and still the government owns a number of shares. As mentioned before, people who rose in this culture are characterized by being inflexible; they are scared and will be reluctant to accept change; they are not convinced about the culture of disclosure and transparency and they think that disclosure is not important.

### **9.3.2.2 Culture and Organisational Structure**

According to participants, the culture of the company affects the adoption of new innovations and hence affects the adoption of internet corporate information. One of the participants (IRs1-2) explained the meaning of culture; he stated that culture means "*the set of norms, values, understandings and assumptions shared by employees of the organisation*". One Investor Relations officer (IRs2-3) of a company which does not provide internet corporate disclosure focused on two cultures; the culture of disclosure and transparency and the "government think" culture. He stated that companies are not convinced about the culture of disclosure and transparency and that they lack the culture and knowledge of disclosure. He added that the governmental culture still prevails in some companies which had been owned by the government and subsequently privatized, with the government retaining some shares. These companies are still managed by "government-think". Hatem (2006:204) emphasized that the government subculture which was dominant during the 1950s and 1960s and which is characterized by being rigid and conservative still prevails in governmental companies that were privatized and where the government still owns a large number of shares. Another predominant cultural characteristic which prevails in Egypt is uncertainty avoidance (Hofstede, 1991:55,123) and this characteristic results in resisting changes and hiding information. One of the Egyptian Stock Exchange managers emphasized that in the past, the prevailing culture among companies was to hide information and some

companies are still affected and tend to hide financial information. This is because of the governmental culture which prevailed in previous years and which is deep-rooted. Companies just publish the minimum amount of information required by the Egyptian Stock Market. He stated

*“In the past, companies which published financial statements faced lots of trouble and taxes. There was a prevailing culture among the companies that it was better to hide information rather than to disclose it. Now this culture is changing mainly in large companies which disclose financial information on their websites”...ESE-2*

Therefore, it can be concluded that the “government think” culture and uncertainty avoidance still prevail in some listed companies. As a result, these companies are accustomed to hiding information, resist change and do not understand the meaning of disclosure and transparency and for that reason they do not adopt internet financial reporting and disclosure.

This finding is consistent with Bonson & Escobar (2002) who examined the level of Internet financial information provided by leading companies in some European Union countries and found that there was a significant relationship between country culture and the level of information provided via the internet.

As for the organisational structure, the participants explained that Investor Relations managers cannot make decisions; all decisions should be made by the Chairman of the Board of Directors, so the organisation structure which prevails in these companies is a mechanistic one and there is a large power distance (Hofstede, 1991).

Hatem (2006:205) contends that Egyptians operate in hierarchical social and organisational structures, supporting centralized power and authority. Unilateral decisions are made by managers and work does not bypass the chain of command.

Therefore, any change in information technology should come from top management; otherwise resistance among employees might occur. This was emphasized by an Investor Relations officer of a company which does not provide financial information on its website, who stated

*“In our company, the chairman does or makes all decisions such as whether to have a website, or whether to disclose financial information”.*

**IRs2-2**

This is an example which shows the mechanistic organisation structure and the large power distance that exist in some Egyptian listed companies.

Hatch and Cunliffe (2006:111) explained that mechanistic organisations are characterized by high levels of hierarchical control, highly specialized and defined roles and tasks, many rules, vertical communication (superior-subordinate) in the form of instructions, and centralized decision making, which impede flexibility and creativity and limit innovation. Hofstede (1991) considered Egypt a high power distance country which is characterized by the acceptance of a superior's opinion simply because it comes from one's superior. Employees are frequently afraid to disagree with their superiors, who are often seen as autocratic or paternalistic (Parnell and Hatem, 1999:404).

An Investor Relations officer of a company with good internet financial reporting and disclosure system explained how culture, organisational structure and organisational strategy are interrelated and could affect internet financial reporting and disclosure and went on to propose a solution. He stated:

*“Strategy should follow the structure, strategy should reflect the culture and strategy should fit the technology.*

- *Strategy should follow the structure: If I have a strategy, then the organisational structure should support this strategy. I cannot have a strategy of superior customer service and be responsive to the market if the organisational chart is tall, centralized and has many hierarchical levels. This will not result in flexibility or fast response or anything. Therefore, the organisational chart in this case should be more flat.*

- *Strategy should reflect the culture: I can't have a responsive flexible strategy and tell my employees not to disclose anything.*
- *Strategy should fit the technology: If I want to provide internet reporting, I should have the proper IT, software and skilled personnel" ...IRs1-2*

Consequently, the diffusion of innovation can be very difficult in Egypt where organisational structures are often tall. To ease the adoption of new innovations, the organisational structure in Egypt may need to move towards a more flat (organic) one to be flexible as this structure should better support the application of strategy.

Therefore, it can be concluded that culture and organisational structure are important factors which affect the adoption of internet financial reporting and disclosure in Egypt.

### **9.3.2.3 Demographic Characteristics**

Demographic characteristics such as education, age and tenure affect the adoption of voluntary internet financial disclosure and reporting. According to participants' responses it can be seen that companies within the banking and communication sectors recruit qualified skilled personnel who have studied English-medium MBA courses and who are aware of the importance of disclosure and this is one reason why companies within these sectors provide their financial information on their website. An Investor Relations manager of a company which provides internet financial disclosure stated

*"It is no surprise that banks and communication companies which are full of MBA graduates understand what corporate disclosure is; understand best practice in the world" ...IRs1-2*

This is consistent with Bantel and Jackson (1989) who found that more innovative banks were managed by more educational teams who are diverse in terms of their functional areas of expertise. Wiersema and Bantel (1992) found that more educated managers are likely to be open to changes in corporate strategy.

Older members of boards of directors and/or staff can find it hard to accept new innovations. Doing a job in a certain way for a long period makes people refuse to

accept change. An Investor Relations manager of a company which does not provide internet financial disclosure illustrated this by noting:

*“All the members of the BOD of my company are over 60 years old. They cannot adapt to the new change” ...IRs2-3*

The participants clarified that older staff with long tenure are accustomed to doing their jobs in a certain way and resist change. This is consistent with Veiga et al. (2001:154) who explained that in case of new information technology, the need for top management support may be problematic because top management tend to be older and previous studies showed that age is negatively related to managerial support for information technology. Sharma and Rai (2003) found that job tenure of Information System department leaders is negatively related to organisational adoption of information system innovation.

Hatem (2006:204) stated that there are some businessmen and other people in Egypt who have been exposed to Western education; they have acquired new characteristics and their root ethics are mixed with a new management style. These businessmen are often the top managers of joint-venture companies and have proven themselves successful in managing their companies in Egypt. Therefore these companies are ready to adopt new innovations quickly as these people understand the meaning of disclosure and transparency and they provide internet financial reporting and disclosure in Egypt.

Therefore, age, tenure and education are among the demographic characteristics which affect internet financial reporting and disclosure in Egypt.

#### **9.3.2.4 Technical Abilities and Presence of the Internet.**

The results of the interviews show that technical abilities and presence of the internet is an important determinant of adoption of internet financial reporting and disclosure. The participants explained that some companies up till now have no websites or if they do,

they lack the personnel required to update their websites, and this is the reason for not having internet financial reporting and disclosure. On the other hand, companies which are technologically developed have websites and provide their financial information on their websites.

*“There is another problem, which is the capability. Not all companies have websites and have the personnel necessary to update the website continuously and publish the financial information. They just fulfil the minimum requirement”...ESE-2*

An Investor Relations manager of a company which discloses its financial information on its website explained that the technology and internet are tied up to the culture of the organisation and management style:

*“Definitely the technology and internet are tied up with the management style that you see in each company, of having a dynamic environment... It has different norms and standards of management ...we can conclude that ...companies ... which have higher technology ... will have to disclose more”...IRs1-4*

Therefore, the technological capabilities of companies and having the required skills are one of the most important determinants which affects internet financial reporting and disclosure.

### **9.3.3 Traditional Disclosure**

Analysis of the interviews showed that there are three interrelated factors which affect companies' adoption of internet disclosure. They are credibility and transparency, amount of paper-based disclosure and the cost, ease and speed of dissemination. If a company wants to create credibility, and provide transparency, it will enhance its disclosure on the papers. Then when the information is available, the cheapest, easiest and quickest way to disseminate its information is to disclose it on its website.



### **9.3.3.1 Credibility and Transparency**

Most of the participants emphasized the fact that companies which disclose their financial information on their websites want to provide transparency. An Investor Relations officer (IRs1-1) of a company which provides internet financial disclosures stated that “*Companies disclose on the internet because they need to be transparent to all stakeholders*”. Another (IRs1-2) explained that complementary information should be disclosed as well on the website, to avoid any kind of surprises to stakeholders to create credibility and build a good relationship between the company and the investor. This is consistent with Chan and Wickramasinghe (2006:123) who clarified that additional disclosure may help companies to increase transparency and thus attract new shareholders more easily. Lymer (1999:291) pointed out that “*The Internet is seen by some as one way to help satisfy these demands for greater transparency of corporate activity*”. Cook (1999:23) stated that one of the advantages of internet technologies is that it is a potential for improved transparency and accountability.

Companies that make voluntary disclosures provide more transparency and understanding about the company to investors and creditors (FASB, 2001:3). Therefore, it can be concluded that to be more transparent and credible, companies should disclose more financial information and disseminate it on their websites.

### **9.3.3.2 Amount of Paper Based Disclosure**

The results of interviews showed that there is a positive relationship between the amount of paper printed disclosure and internet financial reporting and disclosure. An Investor Relations officer (IRs2-3) of a company which does not provide internet financial reporting and disclosure explained that companies which do not provide their financial information on their websites are those whose level of normal (paper-based) disclosure is very low. One of the managers of the Egyptian Stock Exchange (ESE-1)

clarified that banks are required to meet more disclosure requirements, as they are under the supervision of the Egyptian Stock Exchange and Central Bank. Their normal (paper-based) level of disclosure is high and they disclose their financial information on their websites. This is consistent with Al-Htaybat's (2005:256) finding that there is a positive relationship between printed financial disclosure and internet disclosure in Jordan. He (2005:197) explained that increasing companies' printed financial disclosure practice motivates companies' attitude towards disclosing more financial information on the internet and that companies with a low level of financial disclosure are more secretive and reserved to disclose information on the internet.

### **9.3.3.3 Cheapest, Easiest and Quickest Means of Dissemination**

Participants considered the internet to be the cheapest, easiest and quickest means of disseminating financial information. An Investor Relations officer (IRs1-4) of a company which provides financial information on its website explained that disseminating information on the internet is considered

*“the easiest and most convenient way to do it... we cannot send it [financial information] out to each and every individual who is interested in our financials... This reduces the cost ...obligation, administration headache”...*

**IRs1-4**

He clarified that the company publishes on the internet not only to follow the industry norms but because it is the easiest, cheapest and most convenient way to reach people around the whole world. An analyst (An-3) explained that dissemination of companies' financial information on the internet will provide stakeholders with more accessibility and more timely information. Another analyst explained that

*“The cheapest, easiest and quickest is to look at the companies' website on the internet” ...An-1*

Lymer (1999:291) pointed out that the Internet-based model for corporate reporting offers a low-cost provision and access mechanism for corporate data, and it is instant and convenient for users to obtain the data they want. It is also considered a flexible

way of providing data and it is easier to import the data into other computer-based tools for further analysis or examination. Therefore, providing financial information on the internet is considered a motive for companies as it will result in reducing the cost and time incurred in distributing information, increasing the amount and type of data disclosed and improving access to potential investors for small companies (FASB, 2000:1).

#### **9.3.4 Imitation**

This theme reflects both the signalling theory and mimetic isomorphism, where companies adopt internet financial reporting just to signal that the firm is modern and up to date with the latest technology rather than old and conservative and that it is following the same practices as its competitors. One of the Investor Relations officers (IRs1-3) of a company which provides internet financial disclosure and reporting explained that before developing their website they looked at the websites of different companies as an example to guide them about what information to include in their website. Companies need a benchmark to follow when applying internet financial reporting and disclosure. He said that he looked at the websites of listed companies in Egypt which provide very good internet financial reporting and disclosure “*as examples of best practice.*”

An analyst (An-2) was convinced that competitors imitate each other and that companies within the same sector imitate each other. He gave an example of a big monopoly firm in Egypt which does not publish its financial information on its website because it has no competitors. Therefore, companies tend to imitate each other, to be competitive and attract shareholders. This was clear as companies within the same industrial sector tend to imitate each other and provide internet financial disclosure.

### **9.3.5 Rules and Regulations**

The participants discussed the rules and regulations related to the Central Bank of Egypt, the Egyptian Stock Exchange and the rules governing Investors Relations as they affect internet financial reporting and disclosure in Egypt.

#### **9.3.5.1 Central Bank Regulations**

Companies within the banking sector disclose more financial information on their websites because in general they have to follow more disclosure rules and regulations, which are imposed by the Central Bank of Egypt. Therefore, the greater level of disclosure adopted by banks in general makes them disclose information voluntarily on their websites as the information is available already.

One of the managers of the Egyptian Stock Exchange explained that

*“As for the banking sector, they have websites and disclose financial information on their websites, this may be because they are not only required by the rules of disclosure of the Egyptian Stock Market but they are required to meet the disclosure requirement of the Central Bank as they are under the supervision of the Central Bank and this makes banks more committed” ...ESE-1.*

Therefore, it can be concluded that the more disclosure rules and regulations that are imposed on listed companies, the greater the amount of financial information the companies disclose on paper, and this will result in the availability of information for companies to disclose on their websites. Therefore, imposing more rules and regulations of disclosure will increase companies' adoption of internet financial reporting and disclosure. This is considered a reflection of Coercive Isomorphism, where statutory requirements affect companies to adopt a new innovation.

#### **9.3.5.2 The Egyptian Stock Exchange Regulations**

Most of the participants highlighted the fact that there are no issued rules or regulations via the Egyptian Stock Exchange which stipulate that a company should have a website and should disclose its financial information on that site to be accessible to all

stakeholders on a timely basis. Therefore, the coercive isomorphism theory does not apply in this situation. Some of the participants give companies an excuse that they do not publish their financial information on their website because the Egyptian Stock Exchange publishes their financial information on its website. An Investor Relations officer of a company which does not provide financial information on its website commented

*“All information about the company is available in Cairo and Alexandria Stock Exchange (financial statements, Board of Directors meetings, important news, and substantial information) and the stock exchange discloses it on its website on the internet”... IRs2-2*

However, companies could provide a link in their website to the information published by the Egyptian Stock Exchange and the information published via the Egyptian Stock Exchange is the minimum amount of information. An analyst (An-3) complained that the website of the Egyptian Stock Exchange is slow.

*“However the website of the Egyptian Stock Market provides financial information on listed companies. However to tell the truth, the website of the stock exchange is very slow. I think having a website is part of communication strategy of companies. There are no requirements which tell you that you have to have a website”... An-3*

Therefore, some listed companies do not publish their financial information on their websites either because some companies depend on the Egyptian Stock Exchange for disclosing their financial information on its website or there are no obligatory rules or regulations which force companies to disclose the financial information on their websites.

### **9.3.5.3 Rules and Regulations Related to Investor Relations**

Investor Relations is considered a relatively new phenomenon in Egypt. It started in Egypt when Article 15 of the Securities Listing & De-listing Rules of the Egyptian Stock Exchange was issued in 2002. This article states that listed companies should have an Investor Relations Officer who will be in charge of contacting the Stock

Exchange and answering shareholders' and investors' inquiries. The results of the interviews show that the concept and role of Investor Relations are not clear in Egypt, and there is no generally accepted job description. An Investor Relations officer of a company which does not provide internet financial reporting and disclosure explained that the reason for its not disclosing the company's financial information on its website is that the role and responsibilities of Investor Relations officer are not well understood. Although the Egyptian Stock Exchange stipulated that all listed companies should have an Investor Relations officer, it did not specify the roles and responsibilities of such officers and did not mention that among their responsibilities is disclosing the financial information on the companies' websites. He added,

*“People inside the companies, from the management, do not know the role of Investor Relations because they do not understand...Because some events can happen and they (top management, the financial department of the company) do not tell the Investor Relations manager. The law should include the duties and responsibilities of the Investor Relations manager to force the Board of Director to disclose...Some companies do not have even an Investor Relations Officer and they are not convinced that this is a full time job. They consider it a part time job”... IRs2-3*

This is consistent with some studies such as that carried out by Marston (1996:482) who had found that 48% of the top quoted 500 UK companies had no designated Investor Relations officer. 32% had one with Investor Relations as part of the responsibilities and only 20% of the companies had an Investor Relations officer whose main responsibility was Investor Relations. It means that Investor Relations is not often carried out as a separate specialism but usually as part of a wider range of duties. Harbert (2002:58) noted that some companies neglect the Investors relations function and it will remain so until senior management is convinced that good Investors Relations adds value to the firm.

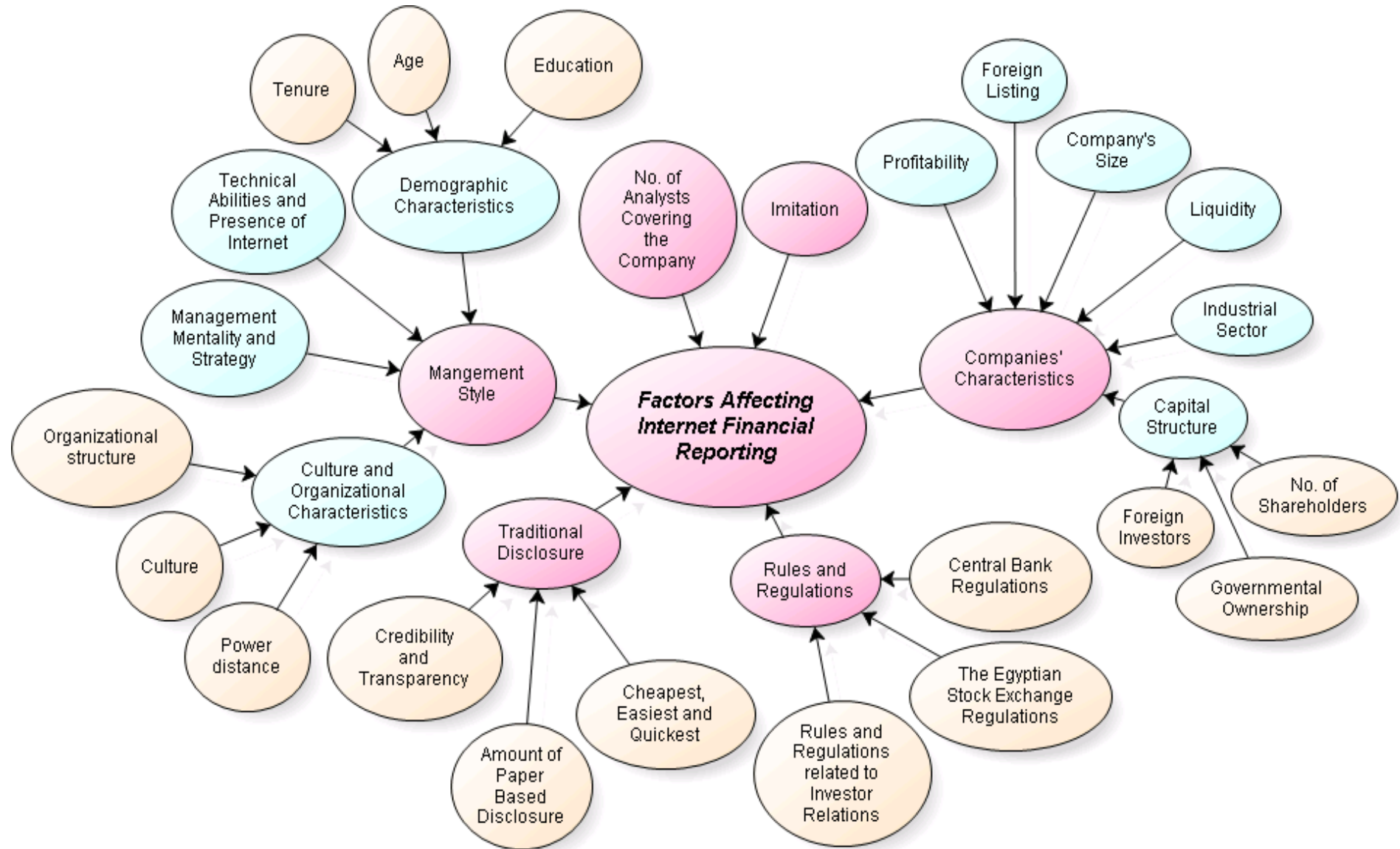
### **9.3.6 Number of Analysts Covering the Company**

The results of the interviews show that there is a positive relationship between the number of analysts following a company and the disclosure of its financial information on its website. Investor Relations officers of companies which provide good internet financial reporting and disclosure explained that having internet financial disclosure may depend on the number and nature (local or international) of analysts covering the company. The more analysts covering a company, the greater the need that the company's disclosure is good and tend not to hide information. Failure of companies to provide sufficient information could be a cause of analysts dropping a company. Therefore, if there are many analysts covering the company, it is better for the company to provide them with the financial information through their website and to mention their names, so that investors can reach them easily. This is consistent with Healy et al. (1999) and Lang and Lundholm (1996) who found that firms with more disclosures are accompanied by a larger analyst following. Ettredge et al.'s (2001b:55) analyses showed that information provided at Web sites varies with companies' levels of analyst following. Higher levels of analyst following are associated with relatively objective, more extensive data.

### **9.3.7 Model of Factors Affecting Companies' Adoption of Internet Financial Reporting and Disclosure**

The following figure, Figure 9.1 shows the conceptual model of the factors affecting companies' adoption of internet financial reporting in Egypt, which was deduced from the interviews and the results of the disclosure index analysis.

**Figure 9:1 Conceptual Model of Factors Affecting the Adoption of Internet Financial Reporting and Disclosure in Egypt**





## 9.4 Stakeholders' Perception on Internet Financial Reporting

In order to achieve the third objective of the research, which was to ascertain the perceptions of different stakeholders regarding internet financial reporting and disclosure, semi structured interviews were conducted. The participants were asked to focus on certain themes such as internet financial reporting responsibility; language of disclosure; links to analysts' webpage; security of information; types of financial information to be included on companies website; and how to improve internet financial reporting.

### 9.4.1 Internet Financial Reporting Responsibility

One of the questions the researcher asked is who should determine the financial information that should be included in the companies' website and who is responsible for it. Is it the Investor Relations officer, or the head of Accounting department, or CFO, or external auditor, or internal auditor? The following Table 9.1 shows the participants' responses

**Table 9.1 Participants' Responses Regarding Internet Financial Reporting Responsibility**

	Interviewee	Investor Relations officer	Chairman of BOD	CFO	CEO	External Auditor	Internal Auditor	Senior Management
Investor Relations officers of companies providing internet financial reporting	IRs1-1	√		√	√			
	IRs1-2							√
	IRs1-3	√	√					
Investor Relations officers of companies which do not provide internet financial reporting	IRs2-3	√						
Audit Partners	AP-3			√	√			
Analysts	An-1	√						
	An-2	√						
	An-3	√						√
Managers in Egyptian Stock Exchange	ESE-1							√

From the above table, it was found that the majority of participants considered that the internet financial reporting and disclosure is the responsibility of Investor Relations officers. Nobody considered it the responsibility of internal or external auditors. One of the audit partners (AP-4) thought that companies should take advice from their lawyers before publishing any financial information on their website to avoid litigation. He said

*“Job description differs from one company to the other. I think this is related to corporate governance and also the lawyers of the companies should be involved. I think that companies should consult their lawyers before publishing anything on the internet. Legal aspects should be taken into account. Therefore, they should take legal advice”...AP-4*

Some participants considered that it should be a combination of Investor Relations officer, CFO, CEO or CFO, and CEO. An Investor Relations officer of a company which provides internet financial reporting and disclosure explained that he and the chairman of the board of directors determine the financial information to be published. A manager of the Egyptian Stock Exchange said that it should be senior management and an Investor Relations officer (IRs1-2) of a company which provides internet financial reporting stated that *“many Egyptian companies do not have an Investor Relations officer. Senior management is doing that job”* The phrase senior manager was used to mean the CEO and CFO. However, the question is whether Investor Relations officer considered a senior management position? It was not specified by law. However, it was stated in the Standards of Practice For Investor Relations that the Investor Relations officers have a “need to know” and must have full access to senior management and have a seat at the table with senior management to be able to speak authoritatively and credibly about the company’s strategic direction and prospects (NIRI, 2004:6). Therefore, it is necessary that Investor Relations officer be in a top management position to enable the incumbent to obtain all information required for the job and to attend the Board of Directors meeting as well. Marston (1996:478) stated that

some researchers consider that the responsibility for financial public relations should be in hands of the chief executive, others think that those should be an investor relation team which should include the finance directors. Therefore, it is recommended that the Investor Relations manager should be at a senior level.

The Investor Relations Society – the UK’s professional body for Investor Relations practitioners issued Website Guidelines, Online Annual Reports Guidelines, and Online Presentation Guidelines which are based on observations of the best practice of listed companies. This indicates that disclosing financial information on the companies’ websites is considered one of the responsibilities of the Investor Relations officer. The Institute of International Finance (IIF) Investor Relations Best Practice explained that a successful Investor Relations programme should incorporate an Investor Relations Website to present financial information on it in a simple, well organized format, user-friendly, and easy to navigate mode (IIF, 2005:265-270). NIRI Standards of Practice for Investor Relations explained that companies can use technology such as websites to disseminate information and it is important to update and correct information on a company’s website, whether orally or in a written statement (NIRI, 2004:30-32). Therefore, it can be concluded that internet financial reporting and disclosure should be the responsibility of Investors relations officers.

### **9.4.3 Language of Disclosure**

Most of the participants did not know XBRL and they preferred PDF as it looks like the real documents and it does not allow user changes as it is not editable, so it is safe. Allam and Lymer (2003:18) stated that PDF has many advantages; when a file is printed, it looks exactly the same as the paper documents ; it is very easy to create from original documents and the documents cannot be altered by users. The results of the disclosure index showed that 57.1% of the Egyptian listed companies which disclose

financial information on their websites use PDF, while 45.7% use HTML, 5.7% use Excel and 5.7% use Microsoft word and 14.2% present their financial information in two formats, for example PDF and HTML. Although 45.7% of the companies use HTML, the majority of participants prefer PDF because of the reasons stated previously. Analyst (An-2) stated that

*“Then we can have PDF not HTML because it is better in printing. The print of HTML is not easy and it is not as easily saved as PDF”... An-2*

Allam and Lymer (2003:18) states that using HTML may result in tables and pages may be split; documents printed will probably not look like original document and the documents cannot be saved properly; the original document requires significant work to be converted into a HTML document in terms of layout and design.

One of the analysts explained that he preferred the financial statements on Excel because it is easier to copy the financial statements in their own format when they are analysed by a company. The participants thought that in the future they would upgrade to a higher tech format and use XBRL. Now, the Egyptian Stock Exchange knows about XBRL and will study the possibility of using it. One of the managers of Egyptian Stock Exchange stated that

*“We received some documents about XBRL a few weeks ago and we will start to do some research about it. Up till now, nobody in Egypt knows it”... ESE-2*

The choice and use of website language, mainly PDF, is a typical application of Innovation diffusion theory, having passed through the five stages that Clarke (1999) identified which are knowledge, persuasion, decision, implementation and confirmation. The PDF, its function, advantages and disadvantages were known, a favourable attitude was formed about it, a decision was made to adopt it, it was

implemented and used, and then its usage was confirmed based on favourable outcomes. XBRL has to go through these stages as well, to be put in use.

#### **9.4.4 Links to Analysts' WebPages**

The results of the interviews show that some companies' websites include the analysts' report of their company or their analysts' name in their website; others have links to analysts' webpages. An Investor Relations officer (IRs1-2) explained that the reports of international rating companies about his company are included on the company's website. He thought that this created more confidence in the financial information included in their websites, as stakeholders could double check the information by looking into the analysts' reports or websites. He added that if the financial information on the website is wrong, these rating agencies can take legal action against the company. He stated that

*“There is a strong supervision on this website... There is authorized information on our website because it comes from big international rating agencies. If this information is wrong we will pay fines to these rating agencies, as they will take legal action. The reports of international rating companies such as Standard & Poors, Fitch, Moody's Investor Services and Capital Intelligence are on the internet and they are an authorized source of information for people seeking the information”...IRs1-2*

However another Investor Relations officer (IRs1-3) preferred to publish the analysts' contact list only so that investors can reach them and not to include the analysts' report or to provide a link to analysts' websites, in order not to be responsible for the information included in these reports or the other links. He said *“We publish the analysts' contact details on our company's website. We do not publish their reports”*. This view is similar to the stance taken by the FASB (2000:72) which states that in order to reduce the legal risks from electronic disclosures, particularly those associated with web sites, companies should consult a legal counsel for the legal implications, use links with caution, and not link to analysts' sites or include analysts' comments on the

company's site. If a list of analysts covering the company is provided, the names of all analysts, should be included, not just those with good comments.

One of the analysts (An-2) explained that if the company is followed by more than one analyst, this means that the company has a good disclosure system and is not hiding information. Therefore most companies which provide financial information on their websites are covered by more than one analyst. He noted,

*“I think that it is more beneficial for listed companies to include the name of the companies which analyse it with the contact persons because it shows the public that their company is not small and it is being covered by many analysis companies. It sends the message, [I have no information to hide. My disclosure and transparency are very good]”... An-2*

IR Best Practice website guidelines (The Investor Relations Society, 2006:8) state that companies should provide in the shareholder information section:

*“A complete list of analysts covering the company's stock including the name of the broker and their employee. This should be regularly updated to ensure that the list is comprehensive and accurate”.*

According to the descriptive analysis of the disclosure index, it was found that 11.1 % of the Egyptian companies which disclose their financial information on the website have links to securities' companies websites, 11.1% have links to the Egyptian Stock Exchange or a foreign stock exchange if they are listed in another stock market, and 11.1 % of the companies publish information about their ratings.

Participants did not agree upon the benefits derived from including the analysts report in their websites or having a link to the analysts' websites. However, most of them agreed that a list of analysts' names and their contacts should be included on the companies' site as it would be beneficial to investors to know the analysts covering the companies, so they can contact them. It gives investors more confidence that the company is disclosing all financial information. On the other hand some Investor

Relations officers did not want to be responsible for the information included in these analysts' reports or websites.

#### **9.4.5 Security of Information**

As for the security of the information, Investor Relations officers of companies which provide internet financial information were sure that their information is reliable and secure. One of them (IRs1-1) stated that all the financial information published on their website was true and fair because the company never published any information before sending it to the Egyptian Stock Exchange and obtaining their approval. Another Investor Relations officer (IRs1-2) explained that their website is extremely secure and access is limited to certain persons. They are authorized, having passwords and having electronic supervision. If any information is published on the website, more than one person reviews it. They keep track of it to make sure that nothing has been changed and nothing is outdated. There is strong supervision on this website. He said

*“Our website is extremely secure and is limited to certain persons. They are authorized, having passwords and having electronic supervision. If any information is published on the website, more than one person reviews it, to make sure that the information is correct. They keep track of it all the time to make sure that everything is ok and nothing has been changed and nothing is outdated. There is a strong supervision on this website”...IRs1-2.*

An analyst (An-3) thought that companies will not include false financial information on their websites. One of the managers of the Egyptian Stock Exchange explained that companies should send the financial information to be published on their websites to the disclosure department of the Egyptian Stock Exchange. The Egyptian Stock Exchange has a monitoring system which monitors all information that is published on the internet, whether on the company's website or on any other website. He then explained the actions that would be taken by the Egyptian Stock Exchange if any company published false information on the internet. First, they print out the news related to the company, send a copy of it with a covering letter to the company and then ask the management of the

company whether the information is true or not. If it is true, the company sends the supporting documents to the Egyptian Stock Exchange, and in this case, there are other procedures (penalties to be paid) the Stock Exchange takes against the company as a consequence of disclosing information before informing the Stock Exchange or disclosing false information even on other websites.

#### **9.4.6 Types of Financial Information to be Included on Companies' Website**

Analysts stated that they depend on the financial information which is published on the companies' websites as a source of information. The following list contains types of financial information which the participants deemed important and thought should be included on companies' websites

- Audited financial statements accompanied with an audit report;
- All information which affects investors' decision making and share prices;
- Financial information required by NIRI (National Investor Relations Institute);
- Newsletter which should be updated daily or at least weekly or monthly;
- The detailed financial statements not the summarized;
- Footnotes, press releases, explanations, and Management letter;
- Some forms such as 10-K and 10-Q;
- Management Discussion and analysis;
- Conference calls;
- Management Vision.

One of the managers of the Egyptian Stock Exchange explained that there are no rules or regulations for disclosing companies' financial information on their websites. However companies should not publish information which contradicts with what is published on the Egyptian Exchange webpage.



An analyst An-2 suggested that the Capital Market authority, Egyptian Stock Exchange and the auditors form a committee and create a standardized form of financial information to be included on companies' websites for each industrial sector. He said

*“If the CMA (Capital Market Authority), Stock Exchange Commission, and auditors get together, and form what is called a task committee and create a standard form of financial statements for each sector, because for example the banking sector differs from communication companies. This will help us in making comparisons with different companies in the same sector” ...An-2*

The National Investor Relations Institute (NIRI) issued Standards of Practice for Investor Relations and it includes some standards and guidance for corporate disclosure and information dissemination (NIRI, 2004:22-29); Appendix A includes sample corporate disclosure policy and Appendix B includes frequently asked questions about conference calls and Webcasts. The Investor Relations Society issued IR Best Practice Guidelines in December 2006 which are based on observations of the best practice of listed companies; it includes Website Guidelines, Online Annual Reports Guidelines, and Online Presentation Guidelines. These guidelines were summarized in Chapter Three (literature review).

#### **9.4.7 How to Improve Internet Financial Reporting**

As for improving internet financial reporting, the following summarizes participants' beliefs about improving internet financial reporting and disclosure. They suggested the following:

- There should be laws, rules and regulations which stipulate that all listed companies should have websites and publish their financial information on these sites. This is a reflection of Coercive Isomorphism; companies adopt a new innovation because they are forced by governmental mandates or statutory requirements.
- More focus should be given to the Investor Relations function. These laws should stipulate the responsibilities of the Investor Relations department. Also training

courses should be given not only to investor relation officers but to all senior managers of the organisation, to enable them to understand the concept of Investor Relations.

- The Investor Relations Association should be reformed and be active. This would be an application of normative isomorphism, where professionals force the application of online reporting (as a new innovation) as one of the responsibilities of Investor Relations.
- There should be some organisational and cultural change to assist Investor Relations officers in carrying out their responsibilities and making decisions about the contents of their websites.
- Disclosure and transparency should be rooted in the culture of organisations.
- Tools to avoid resistance should be used, such as bargaining, top management support, education & training.
- The organisational structure should be flat in order to be flexible and able to respond quickly to a new innovation. If it is tall, centralized and has many hierarchical levels, it will be inflexible and takes time to adopt a new innovation.

Mullins (2005:643-644) explained that organisations have a tendency to be mechanistic or organic, or hybrid which is a mixture of both mechanistic and organic structure because in today's high technology environment, organic organisational culture is more important. He added that there are some functional activities within the organisation which can be performed under mechanistic structure while others under organic structure. He demonstrated that universities are a typical example of hybrid organisation where the non academic staff works within prescribed administrative systems and procedures and the academic staff works under an organic structure as they are engaged with a broad functional activities. Therefore, if the organisation has a mechanistic

structure, has a tall hierarchal level, the investor relation department should operate within an organic structure and have direct contact with Board of Directors.

## **9.5 The Role of Investor Relations and Auditors and Impact of Internet Financial Reporting**

In order to achieve the fourth objective of the research, which was to explore the role of Investor Relations officers and auditors regarding internet financial reporting and disclosure and whether their function or procedures are affected, the following issues were discussed during the interviews

1. The role of Investor Relations officers regarding internet financial reporting
2. Responsibility of external auditor regarding internet financial reporting
3. Responsibility of internal auditor regarding internet financial reporting
4. Modification of Engagement letter wording
5. Modification of auditor's report wording
6. Selective disclosure
7. Continuous audit and webtrust.

### **9.5.1 Function of Investor Relations Officers**

According to participants' responses, the responsibilities of Investor Relations can be summarized as follows:

- 1) Supplying stakeholders with needed financial information and this could be achieved by publishing companies' financial information on companies' websites.
- 2) Keeping a mailing list of all stakeholders to send them the new financial updates of their companies.
- 3) Answering stakeholders' questions and determining which information should be published by being involved in each and every strategic decision in the company.

- 4) Issuing press releases.
- 5) Having conference calls\*.
- 6) Going to conferences worldwide to present his/her company.

However, some of the participants explained that Investor Relations is quite a new concept established by the rules and regulations of the Egyptian Stock Exchange. The law stated that listed companies should have an Investor Relations officer but did not stipulate what are his/her responsibilities and did not mention that among their responsibilities is disclosing the financial information on the companies' websites. In addition, there are no rules and regulations which require companies to disclose financial information on their websites.

Article Fifteen of Securities Listing & De-listing Rules of Cairo & Alexandria Stock Exchanges states that *“The Company shall appoint an Investor Relations Officer (IRO) who will be in charge of contacting the Stock Exchange and answering shareholders’ and investors’ inquiries. The IRO shall also distribute press publications about the company including the information and any requests required by the Stock Exchange (Decree of the Capital Market Authority’s Board of Directors No. 30, 2002:9). Article 4 of the same rules states that among the documents to be attached to the listing application is “a declaration of the company’s auditors, with the names, addresses and contact details of Investor Relations’ Officers”.*

An Investor Relations officer (IRs2-3) explained that these rules and regulations

*“did not state that the person who works as Investor Relations manager must do this job only, and not be occupied in any other job. The financial*

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\* Conference call is an event during which investors can call in to a special phone number and hear company management report its quarterly results as well as forward, or projected earnings. While the average investor can only listen to the call, the reporting company will often field questions from analysts. Also known as "earnings conference call", "analyst call" and "earnings call". (Investopedia) <http://www.answers.com/topic/conference-call>

*director does the job of Investor Relations officer and he does not have time”...IRs2-3*

The majority of respondents thought that people do not know or understand the role of the Investor Relations department, and whether this job is full time or part time. One of the Investor Relations officers (IRs1-2) stated that “*many companies view Investor Relations as something fashionable or trendy*”. Another officer (IRs1-3) stated that “*Investor Relations in companies in countries with an emerging market do not have the experience of how their job should be, they do not understand because they do not have a benchmark to follow*”. Investor Relations officer (IRs2-3) added that “*People inside the companies, from the management, do not know the role of Investor Relations because they do not understand*”. This is consistent with the results of Laskin’s (2006:70) interviews which showed that the greatest problem which Investor Relations face is that they have to struggle for the “support of senior management,” “recognition of Investor Relations as key function of the company” and “showing the value that Investor Relations brings to the table”.

Investor Relations manager (IRs1-2) explained that an Investor Relations association was formed in Egypt but unfortunately it did not materialize into an active organisation. Therefore, the participants explained that the Egyptian Stock Exchange should play an important role and focus on Investor Relations officers and determine their responsibilities and provide them with required training courses.

The company’s board of directors, management and staff should understand the concept of Investor Relations as well. This could be achieved through training courses, seminars, lectures given by the Egyptian Stock Exchange and the educational institutions. In addition to that, an association similar to The National Investor

Relations Institute (NIRI) in USA or The Investor Relations Society (IRS) in UK could be formed. They provide the best practices for Investor Relations, so their standards can be taken as a benchmark for the Egyptian companies to develop and evaluate their Investor Relations.

As Investor Relations is considered a new innovation in Egypt, companies have to adopt the innovation by having an Investor Relations officer. This can be seen as an application of coercive isomorphism where companies adopt a new innovation because they are forced by governmental mandates or statutory requirements. Listed companies in Egypt are forced to have an Investor Relations officer by law.

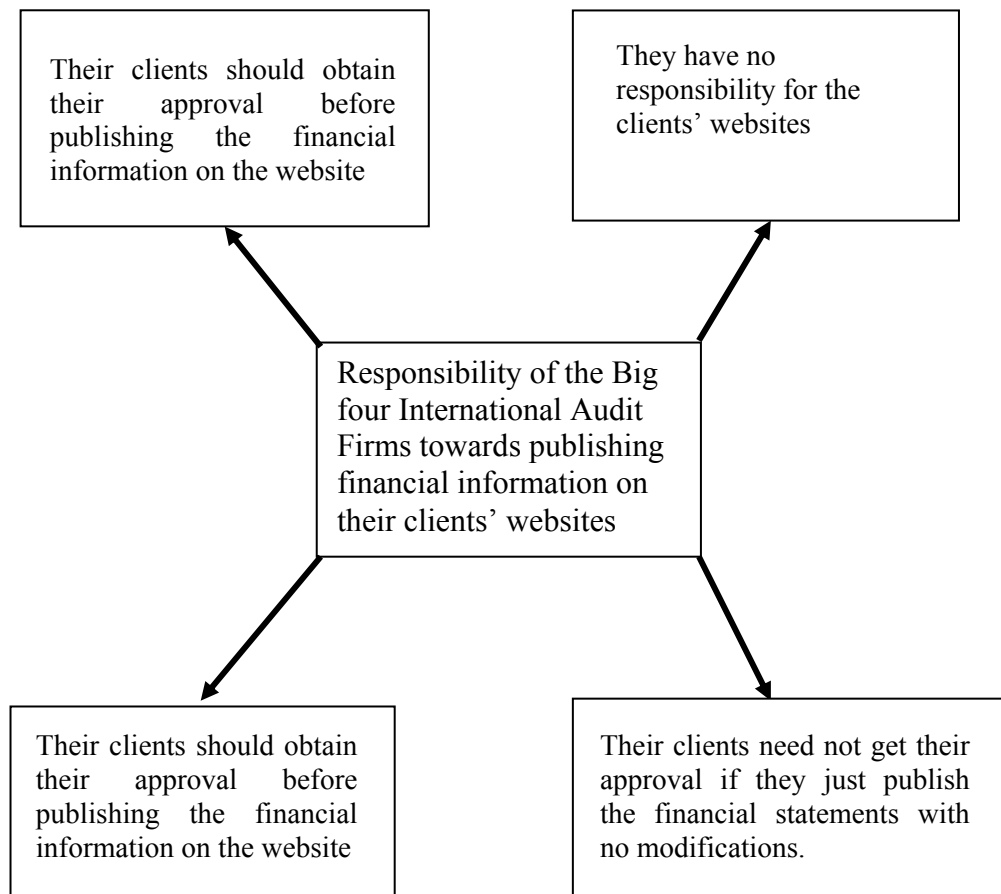
### **9.5.2 Responsibility of External Auditor Regarding Internet Financial Reporting**

The Investor Relations officers of companies with internet financial reporting and disclosure explained that they publish the audited financial statements; the auditor has nothing to do with the contents of the website. However one of them (IRs1-4) stated that they have to have the auditors approval on the earning release and audited financial statements before publishing them on the company's website.

The audit partners of the big four international companies, which are KPMG, Deloitte Touche, Ernst & Young and Price Waterhouse seem to have different opinions regarding their responsibility towards publishing financial information on their clients' websites. As shown in Figure 9.2, two of them emphasized that their client should obtain their approval before publishing the financial information on the website. Audit partner (AP-2) said that *"The clients should not publish the financial statements or auditors' report on their website except after obtaining the auditors' consent"*. One of them explained that they had no responsibility for the clients' website; he (AP-1) said *"We are not responsible for auditing of websites"*. The fourth explained that their

clients need not get their approval if they just publish the financial statements with no modifications. They agreed that the scope of the audit should not be increased to include all information on the client's website.

**Figure 9.2 Summary of the Big four International Audit Firms' Responsibility towards publishing financial information on their clients' websites**



One of the audit partners (AP-2) believed that auditors should ensure that other information included in the client's website does not contradict with the audited financial information as long as the auditor's report is published on this website. This is consistent with Paragraph .36 (AASB, 2002:11) which notes that all the principles and procedures identified in AUS 212 also apply when the audited financial report is included in an electronic format on a website. AUS 212 'Other information in documents containing Audited

Financial Reports' requires the auditor to read other information to ensure that there is no inconsistency with the audited financial report.

Those who consider that the auditor has nothing to do with the contents of the website and that the company's website is a means of disseminating information, have a similar outlook to what was included in Paragraph .04 (AASB, 2002:5) which states that the responsibilities of management and the auditor remain unchanged, whether financial information is presented in hard copy or electronically on a website. Therefore, it is the responsibility of management to ensure that the information on the website is accurate. In USA, the Audit Issues Task Force of the Auditing Standards Board issued an interpretation of SAS No. 8; a website is just a means of distributing information and auditors are not required to read the information on a website or to consider whether it is consistent with information in original documents.

Taking the auditor's consent before publishing on companies' website is similar to Bulletin 2001/1. It specifies that auditors should check that the financial information published via the internet is derived from the signed paper printed annual reports, is identical in content and that the conversion into electronic format has not distorted the overall presentation of the financial information (Para. 13). It is also recommended that auditors should keep a printout or disk of the final electronic version for future reference (Para. 14). They should discuss with the directors and audit committee how the financial statements and auditors' report are presented on the website (Paras 22-24). If auditors are not satisfied with the presentation of audited financial statements and auditors' report and the presentation is not amended, they have the right to withhold the electronic release of their audit opinion (Para. 24).



### **9.5.3 Responsibility of Internal Auditor Regarding Internet Financial Reporting**

The results of the interviews showed that there was no agreement regarding the role of internal auditor regarding internet financial reporting and disclosure. One Investor Relations officer (IRs1-1) and an analyst (An-2) thought that the internal auditor has nothing to do with the financial information to be published on the internet; IRs1-1 said “*Internal auditors have no relation with the information to be published*”. While another Investor Relation officer (IRs1-2) thought that internal auditors should be involved with everything in the company.

As for auditors, they thought that the job description for internal auditors differs from one company to another. The role of the internal auditor may be to report to the external auditor, to ensure that the internal controls of the company are properly designed, implemented and operating efficiently. Now, internal auditors are involved in corporate governance in Egypt. However, internal auditors have very little to do with the disclosure of financial information on the websites of the listed companies.

### **9.5.4 Modification of Engagement Letter Wording**

The results of the interviews show that the four large international audit firms in Egypt have different policies regarding the modification of the wording of the Engagement letter.

- **Large Accountancy Firm A**

The first large audit firm adds two paragraphs to the engagement letter in the case that the company has a foreign listing and has a website and publish its financial information on its website. The engagement letter will include the following:

- 1) The company will not carry out any electronic publication or distribution without first obtaining the auditor consent.

- 2) The auditor may withhold his consent to the electronic publication or distribution of audit report if the audit report is to be published or distributed in an inappropriate manner.
- 3) The audit firm will supply an electronic version of the audit report suitable for such publication or distribution.
- 4) It is the responsibility of the company's management to ensure that any such electronic publication or distribution properly presents its information and the audit report.
- 5) The company management shall ensure that financial information on its web site distinguishes clearly between client information that we are associated with the audit report and other information and avoids any inappropriate association.
- 6) Any electronic publication or distribution of the audit report is to be accompanied by the following statement: "The accompanying audit report is for sole and exclusive use of the company. Any redistribution made by the company is to be 100 percent full, complete and unaltered in any way. Further, the report of XXX is as of (report date) and has carried out no procedures of any nature subsequent to that date which in any way extends that date".
- 7) The company management shall retain responsibility for using a secure method of communication when distributing the information and the audit report electronically and the audit firm work shall not extend to any consideration or examination of such matters, which shall be beyond the scope of the engagement.
- 8) The company management shall retain responsibility for the controls over and the security of its Web site and our work shall not extend to any consideration or examination of such matters, which shall be beyond the scope of our engagement.

- **Large Accountancy Firm B**

The audit partner of this firm explained that the wording of their engagement letter has been changed and is standardized to all companies, whether companies have a website or not. The engagement letter will include the following points

- 1) If the company intends to publish or reproduce, in printed form or electronically (e.g., on an Internet Web Site), the audit report together with the financial statements or otherwise make reference to the audit firm in a document that contains other information. The management of the company should (a) provide the audit firm with a draft of such document to read, and (b) obtain their approval for inclusion of audit report, before the document is finalized and distributed.
- 2) If the audit report is reproduced in any medium, the complete financial statements, including notes, must also be presented unless the audit firm consents to the reproduction of summarised/condensed financial information.
- 3) The audit firm responsibility in relation to financial statements published on the internet will be as follows:
  - Once the website has gone live, the audit firm will review the financial information to check that it is not inconsistent with the information provided in the financial statements. If there are any changes that they believe are required to be made they will bring them to the management's attention.
  - Once the audit firm is satisfied that the financial information contained on the website is consistent with the financial statements, it will issue a statement to this effect.
  - It should, however, be noted that the audit statement will be valid only for the date on which the review was conducted.

- The responsibility for ensuring that adequate safeguards are in place to prevent unauthorised amendments or alterations of the financial information rests solely with the management of the company.
  - The audit firm will not carry out any further checks to review the integrity of the financial and related information on the website.
- 4) They do not accept any responsibility for the accuracy or authenticity of the financial and related information that is published on the internet. Their responsibility relates only to the signed accounts.

- **Large Accountancy Firm C**

The audit partner of this audit firm explained that the wording of their engagement letter did not need to be changed as it includes implicitly financial information published on the internet or any other media. He clarified that there is a paragraph in the engagement letter which states that a company should acquire the auditor's consent if it intends to reproduce the financial statement with other information.

- **Large Accountancy Firm D**

The audit partner of this company explained that up till now they had not modified the wording of their engagement letter. However he thought that the wording of the engagement letter would be changed in the future.

The first two audit firms have added some words to the engagement letter; the only difference is that the first audit firm adds these words if the company has a foreign listing, has a website and publishes its financial information on it, while the second audit firm adds these words to all engagement letters.

This is similar to paragraph .19 (AASB, 2002:17) which clarifies that the following is to be stated in the engagement letter:

- a) the electronic presentation of the audited financial report and audit report is management's responsibility; and*
- b) the examination of the controls over the electronic presentation of audited financial information on the entity's website is beyond the scope of the audit of the financial report.*

Then paragraphs 32-34 of Bulletin 2001/1 "The Electronic Publication of Auditors' Reports" explained that it would be beneficial for auditors to clarify the directors' responsibilities and auditors' role in the engagement letter. Therefore, engagement letters:

- *acknowledge that the auditors recognise that the company may wish to publish its financial statements and the auditors' report on its web site or distribute them by means such as e-mail,*
- *note that it is the responsibility of the directors to ensure that any such publication properly presents the financial information and any auditors' report,*
- *establish that the company should advise the auditors of any intended electronic publication before it occurs,*
- *state that the auditors reserve the right to withhold consent to the electronic publication of their report if the audited financial statements or the auditors' report are to be published in an inappropriate manner,*
- *note that the directors are responsible for the controls over, and the security of, the website,*
- *state that the examination of the controls over the maintenance and integrity of the entity's website is beyond the scope of the audit of the financial statements, and*
- *where applicable, state that the directors are responsible for establishing and controlling the process for electronically distributing Annual Reports and other financial information to shareholders and to the Registrar of Companies.*

### 9.5.5 Modification of Auditor's Report Wording

The results of the interview showed that the big international accountancy firm in Egypt do not modify the wording of the Auditor's report which will be presented on the client's website with audited financial statement. However, one of the audit partners noted that if the client published a summarized version of the audited financial statement, an audit report on the summarized financial statement should be added.

### 9.5.6 Selective (Partial) Disclosure\*

As for partial disclosure, where the company selects parts of the financial information and publish it on their websites and add the auditors' report, two audit partners discussed this issue and explained that this could not happen. AP-2 explained that if a client wants to publish some selected financial information items, he has to ask the auditor to issue a report on those selected items and using this report, companies cannot publish positive items without negatives. He noted

*"No, it does not work, the client cannot select some items and disclose them and accompany this with the auditor's report. It is illegal. In order to publish selected items, the client should return to me to issue a report on those selected items and I have to mention in the report that these are selected items from the detailed financial statements which were originally issued on and I mention the date. Some companies have positives and negatives. They can not only publish the positives with my report"...* **AP-2**

AP-3 explained that stakeholders will know that something is missing, mainly because the footnotes are arranged numerically and the audit report includes the number of the footnotes.

Ettredge et al. (2001a:166) found that some companies' websites did not include essential investor information, such as portions of annual reports. They found some

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\* The researcher used partial disclosure to mean the practice of disclosing positive information on the internet and hiding negative information. The researcher does not mean selective disclosure as defined Regulation fair disclosure as providing material non-public information to selected group of people (such as securities analysts or institutional investors), who may well trade with this information before disclosing the information to the general public.

sites with stale data and the potential for selective disclosure, arising from referring financial press release readers to Websites for additional information.

### **9.5.7 Continuous Audit and Web Trust**

Continuous audit and web trust services are not available in Egypt up to now, for all audit firms. One of the audit partners (AP-3) said, *“In Egypt we do not have it up till now ...It is not available”*.

WebTrust is a seal of assurance service developed jointly by the American Institute of Certified Public Accountants (AICPA) and the Canadian Institute of Chartered Accountants (CICA). It provides “a seal of assurance on the integrity and security of company data on the Web (Cook, 1999:19). Ettredge et al. (2001a:151-152) explained that accounting entities such as the AICPA have focused on providing assurance for Web based transactions (e- commerce), such as Web Trust. However, their primary reaction to internet financial reporting has been to reject responsibility for verifying their clients Web site content. Therefore, web trust is directed to promoting e-commerce and not to internet financial reporting and disclosure (Cook, 1999:19).

Rezaee et al. (2001:151) defined Continuous auditing as “a systematic process of gathering electronic audit evidence as a reasonable basis to render an opinion on fair presentation of financial statements prepared under paperless, real-time accounting system”. Audit firms refuse responsibility for the information on companies’ website so continuous audit of the financial information on the website does not exist in Egypt.

Table 9.2 shows a summary of the view of the big four international companies toward the above six points. Up to now, there is still a gap between technology (internet

financial reporting and disclosure) and professional response. There is only a small response, reflected in the modification of the engagement letter wording.



**Table 9.2 A Summary of the 4 Big International Accountancy Firms Regarding the Role of Auditors and Impact of Internet Financial Reporting**

	<b>AP-1</b>	<b>AP-2</b>	<b>AP-3</b>	<b>AP-4</b>
Responsibility of external auditor regarding Internet Financial Reporting	They are not responsible for any financial information the client discloses on the company's website	Before publishing financial information on company's website, the client has to take the auditor consent	Before publishing financial information on company's website, the client has to obtain the auditor's consent if the audit report is to be attached	Before publishing Financial information on company's website, the client has to take the auditor's consent
Responsibility of Internal auditor regarding Internet Financial Reporting	Does not know	Has nothing to do with internet financial reporting	Has nothing to do with internet financial reporting	It is related to internal auditor job description
Modification of Engagement letter wording	Modify on conditions that the client has a foreign listing, has a website and publishes financial information on this website	The engagement letter was modified and is standardized for all companies	No modification was made in the engagement letter but it was stated implicitly	No modifications were made
Modification of auditor's report wording	No modification of auditor's report wording	No modification of auditor's report wording	No modification of auditor's report wording. However, if a summarized version of financial statement is published, an audit report on summarized statement should be attached	No modifications of auditor's report wording
Selective disclosure		If a client wants to publish some selected financial information items, he has to ask the auditor to issue a report on those selected items and using this report, companies cannot publish positive items without negatives	Stakeholders will know that something is missing, mainly because the footnotes are arranged numerically and the audit report includes the numbers of the footnotes.	
Continuous audit and webtrust	Continuous audit and web trust services are not available in Egypt up till now for all audit firms			

## **9.6 Summary**

The Innovation Diffusion theory, Institutional Change theory and Economic Based theory have provided useful insights which have aided in the interpretation of the research findings. These theories helped in understanding the factors which lead companies to disclose financial information on their website. It was found that companies' characteristics, rules and regulations, imitation, management style, number of analysts covering the company, and amount of paper-based disclosure affect companies voluntary adoption of internet financial reporting and disclosure. The companies' characteristics include size of the company, capital structure, and the industrial sector the company belongs to. Management style includes the management mentality and strategy, technical abilities and presence of internet, culture and organisational structure, and demographic characteristics which include age, education and tenure. Then stakeholders' perceptions of internet financial information and how an innovation should be adopted were analysed. The majority of respondents explained that the Investor Relations officer should be responsible for internet financial reporting, then the function of Investor Relations officers was discussed. However, up to now, the concept of Investor Relations is not clear in Egypt. It was found that PDF is used to disclose the information. Links to analysts' webpages, information to be included and how to improve internet financial reporting were discussed. Regarding the fourth objective of the research which is concerned with the role of the Investor Relations officers and auditors regarding internet financial reporting, it was found that internet financial reporting is still regarded as a new innovation, the Investors Relations function is not clear in Egypt and external auditors do not want to take responsibility for it, although some have modified the wording of the engagement letter.

# **Chapter Ten**

## **Conclusions, Contributions, Limitations and Future Research**

### **10.1 Introduction**

Egypt is a developing country and in order to develop, it has to attract foreign investment into the country. To promote confidence and encourage investors to invest in Egypt, companies should meet stakeholders' demands for greater speed and volume of transparent and timely financial information. The internet can provide better and more effective ways of communicating financial information. Therefore, there is a need to examine the role played by the internet in communicating financial information in Egypt in order to find out how that role may be enhanced.

This research sought to achieve the following four objectives:

1. Identify the extent of internet corporate financial reporting of Egyptian companies.
2. Identify factors which influence Egyptian listed companies voluntarily to adopt internet based corporate financial reporting.
3. Evaluate the effectiveness of voluntary internet financial reporting and disclosure as perceived by selected groups of users.
4. Explore the role of Investor Relations and auditors regarding internet financial reporting and disclosure and whether their function or procedures are affected.

The chapter will provide an overview of current research in Section 10.2, and a summary of the research methodology employed to achieve the research objectives in section 10.3. The findings and conclusions of the study are discussed in section 10.4. Section 10.5 presents the contribution of this research to knowledge. Section 10.6

discusses the limitations of the study. Section 10.7 includes some suggestions for future research.

## **10.2 Overview of the Current Research**

The literature reviewed in Chapters Two and Three showed that internet financial disclosure and reporting has attracted much attention in recent years. However, since most of the previous studies were conducted for developed countries, especially the USA and European countries, their findings may not be generalizable to different countries at different stages of development, or with different business environments and cultures. Very few studies have been conducted in developing countries. In an Arab context, only one study was conducted in Jordan (Al-Htaybat and Napier, 2006), a comparative study was conducted to compare internet reporting in Qatar, Bahrain and Saudi Arabia (Ismail, 2002), and no study has been undertaken in Egypt as far as the researcher knows. This investigation of internet financial reporting and disclosure in the distinctive cultural and regulatory environment of Egypt, therefore, is a new and fruitful area for study.

In early studies, researchers used descriptive analysis only to offer a general overview of the current state of internet financial reporting and disclosure in different countries (Zhang et al., 2007:3). They focused on the existence of Websites for large, stock-exchange listed companies and whether these companies disclosed some type of financial information on their websites (Allam and Lymer, 2003:3). These studies include Louwers et al. (1996); Gowthorpe and Flynn (1997); Lymer (1997); and Gray and Debreceeny (1997).

Following this came a number of explanatory studies which attempt to suggest why some companies adopt internet financial reporting and disclosure while others do not,

and why the amount of internet disclosure differs from one company to another (Zhang et al., 2007:3).

A weakness of this research, however, has been the neglect of factors such as culture as a determinant of internet financial reporting and disclosure. For that reason, Oyeler et al. (2003:58) suggested that future research should consider some explanatory variables which are specific to the internet financial reporting environment, such as age and levels of education of company directors/managers, attitude of management to IT and new ideas and the age and strategic position of each company in its industry, which factors may influence the use of the internet for financial reporting purposes. This study answers this call, providing new insights into the effects of culture, organisational change and demographic characteristics on the adoption of internet financial reporting and disclosure in Egypt.

In doing so, three sets of theories, namely, Innovation Diffusion theory, the Institutional Change theories (Coercive, Mimetic and Normative isomorphisms) and the Economic-Based theories (Agency, Capital need, Signalling and Legitimacy theories) were employed to explain the adoption of internet financial reporting and disclosure in Egypt.

This study is also distinctive in its combination of methods and approaches. Most previous studies employed a disclosure index to describe the extent of internet financial reporting and disclosure. Others used univariate and/multivariate statistics to find out company characteristics which affect internet financial reporting and disclosure. There has been little use of qualitative methods, although Xiao et al. (2002) examined the immediate trends in external financial reporting on the internet and their implications by using an open-ended questionnaire to seventeen experts in accounting and/or the

internet and Gowthorpe (2004) interviewed senior officers in smaller listed companies in UK about their use of internet financial reporting and disclosure and about how they identified stakeholders and their needs. Semi structured and open ended interviews can provide a potentially valuable additional dimension to the data, yet not many studies have taken advantage of this. This study, therefore, breaks new ground in combining quantitative index-based methods with semi structured interviews of investor relations officers, audit partners, analysts and fund managers and key managers from Egyptian Stock Exchange, thereby gaining a rich perspective on the only range of possible factors which affect voluntary internet financial disclosure and reporting.

According to the Normative Isomorphism theory; companies adopt a new innovation because they are strongly advised to do so by professionals (Carpenter and Feroz, 1992:621). Therefore, it was of particular interest in this study to explore the role of Investor Relations officers and auditors regarding internet financial reporting and disclosure and whether their functions or procedures are affected.

### **10.3 Research Methodology**

In order to achieve the research objectives, the researcher adopted method triangulation which incorporated both quantitative and qualitative data collection and analysis. Quantitative data collection and analysis was used to achieve the first two objectives of the study. The quantitative approach entailed the construction of a disclosure index which was based on the framework of Web-based disclosure proposed by Xiao (2004) which is based on Debreceeny et al. (2001), Deller et al. (1999), Pirchegger and Wagenhofer (1999), and Marston and Polei (2002). The index encompassed 59 items of disclosure content, and 31 presentation items. The content items show the information companies disclose on their websites, while the presentation format items deal with how the information is presented.

The items in the index were weighted using a dichotomous approach, in which an item was given 1 if disclosed and 0 if not disclosed. The index was calculated by dividing the actual scores awarded by the maximum possible scores appropriate for the company.

In Chapter 5, comprehensive descriptive statistics were used in order to evaluate internet financial reporting and disclosure. This evaluation was conducted at two levels; the first dealt with the extent of internet disclosure for each company, the second dealt with the extent to which each group of items of information is disclosed and then the extent of disclosure of each individual item within each group.

Furthermore, in Chapters 6 and 7, the relationship between the extent of internet voluntary financial reporting and disclosure (dependent variable) and the company's characteristics (independent variables): firm size, profitability, leverage, liquidity, industry type, type of audit firm, and foreign listing were examined. Both univariate analysis which shows the impact of each variable on the extent of internet disclosure and multivariate analysis (multiple regression) which shows the impact of all variables on internet financial reporting and disclosure were used.

Semi-structured interviews with Investor Relations managers of Egyptian companies, audit partners, analysts and fund managers and key managers from the Egyptian Stock Exchange were used to fulfil the second, third and fourth objectives of this study. Nvivo software was used to code and classify the data. General analytical procedures were used to analyse the resulting data.

## **10.4 Conclusions and Results**

**Objective One: Identify the extent of Internet corporate financial reporting of Egyptian companies.**

This study examined the 100 most actively traded listed companies in the Egyptian Stock Exchange except that two insurance companies which had websites and disclosed their financial information on their websites were excluded from the study, such companies are subject to different regulations, tax and accounting rules. It was found that 27 companies had no websites, the websites of 9 companies were under construction, 62 companies had websites and 35 companies disclosed their financial information on their websites.

Average disclosure rates of financial information were 30% for the 62 Egyptian companies which had websites and 44% for the 35 companies having websites and disclosing financial information. The most frequently disclosed content groups were “About the Business”, “Financial Statements” and “Ratios”. “About the Business” attained the highest ranking because it includes information concerning the background of the organisation and services and/or products provided. Companies provide information about their products and services because they want the general public to know about their activities. This is a kind of advertising or e-commerce of services and products.

“Sales information” was the group least often provided by companies, as they seemed reluctant to present detailed information about their revenue sources. Only one company presented information about monthly/weekly sales or operating data.

In terms of presentation-related items, the “communication” items were the most common as companies seemed to be encouraging e-commerce especially to export their products and services. Therefore, they presented on the internet various means of contacting them. However, more companies disclosed their phone numbers and address



than their e-mail, either because they did not have skilled labour or they did not trust the web as a means of communication. The “links” items were the least frequently used as companies were concerned that users may depend on the information available in these links which they had reduced control over, assuming that it is provided by the company and that the companies will be held accountable for such information. All companies having websites used the English language for their websites. Only 29% of the companies having websites also disclosed the information in Arabic. The use of English can be explained by companies’ wish to be global. They were not addressing the people in Egypt only, but the whole world. They wanted to sell their products abroad or they wanted to increase their capital by selling the companies’ stock to foreigners. Now, the Egyptian Law encourages foreign investment in Egypt as well as the sale of companies to foreigners.

Click over menus are used more than pull-down menus, as the latter cannot be found on the screen at first glance and they do not provide users with a visual clue that suggests the menu exists. Users, especially beginners, often, do not notice pull-down menus. Another problem with pull-down menus is that only the links in one category are displayed at a time and users are not able to view a list of all links. By conducting a usability test, a web designer can find out just how stressful pull-down menus are to users. Click over menus are easier for the users and enable them to see all the items in the menu.

It was found that 100% of communication companies and 67% of financial services companies disclose financial information on their websites. All communication companies had disclosure scores over 50% (Table 6.19 and Table 6.20). An explanation for this might be found in the innovation diffusion theory (as discussed in Chapter

Two). The communication companies had the necessary facilities (information technology departments, skilled labour, and websites) to adopt the innovation faster than organisations within other sectors.

**Objective two: Identify factors which influence Egyptian listed companies voluntarily to adopt internet based corporate (financial) reporting.**

a. Univariate analysis was used to assess the relationship between the extent of voluntary internet financial reporting and disclosure and each independent variable. The results revealed that firm size variables (total assets, total sales); leverage variables (Total Debt /Total Assets and Long term Debt/ Total Assets); foreign listing; industry type; and audit firm size are significantly associated with the extent of internet disclosure at least at the 5% level of significance.

b. In the multivariate analysis, two multiple regression models were run for each dependent variable, one using the rank and the other using normal scores. There were two independent variables: total score, content, and format. There were 3 sample sizes; companies with websites (62) and companies which disclose the financial information on their website (35). Table 7.20 provided a summary of the outcome of Ranked and Normal OLS regression. It was concluded that profitability, foreign listing and industrial sector (communications and financial services) are important factors affecting the amount and presentation formats of Egyptian companies' internet financial reporting and disclosure.

c. The semi structured interviews results indicated that there are six main factors affecting companies' disclosure of financial information on the internet, which include companies' characteristics, management style, amount of paper-based disclosure, imitation, rules and regulations, and number of analysts covering the company.

## **I. Companies' characteristics**

- Size: The adoption and amount of internet financial reporting and disclosure is affected by the size of the reporting company. The larger the size, the greater the disclosure.
- Foreign listing: Some of the participants agreed that foreign listing affects voluntary internet financial reporting and disclosure, while others believed that it has no effect and that some companies which are foreign listed do not disclose financial information on their websites.
- Industrial sector: Companies within the banking and communications sectors disclose financial information on their websites.
- Capital structure
  - Foreign investors: Participants agreed that if a company has foreign investors or is seeking foreign investors, it should disclose its financial information on its website.
  - Governmental ownership: If the government currently owns some shares of the company or if the company has previously been totally owned by the government and privatized, its managers exhibit “government-think” and it is difficult for them to change and accept new technological innovations and to adopt internet financial reporting and disclosure.
  - Number of shareholders: there is a positive relationship between number of shareholders and internet financial reporting and disclosure.

## **II. Management style**

- Management approach: Provision of financial information on the companies' website depends on managerial beliefs, ideas and understanding of the importance of disclosure and transparency, their relationship with investors

and what type of shareholders they are seeking. The “Government-think” still prevails in Egyptian companies and people who rose in this culture are characterized by being inflexible, scared and reluctant to accept change.

- Culture and organisational structure: the “government think” culture and “uncertainty avoidance” still prevails in some listed companies. These companies are reluctant to adopt internet financial reporting and disclosure because they are not accustomed to voluntary information disclosure and resist change, and they do not appreciate the need for disclosure and transparency. In addition, the organisational structures are characterized by being “tall”, “mechanistic” and having “large power distance” and this hinders the adoption of internet disclosure.
- Demographic characteristics: The participants indicated that older staff with long tenure are accustomed to doing their jobs in a certain way and resist change and consequently tend not to adopt internet financial reporting.
- Technical abilities and presence of the internet: Companies which are technologically developed, have websites and the required skills and provide financial information on their website.

### **III. Traditional disclosure**

If a company wants to create credibility, and provide transparency, it will enhance its traditional paper-based disclosure by using internet disclosure as information is made widely available at lowest costs.

#### **IV. Imitation**

Companies tend to imitate each other, to be competitive and attract shareholders.

It was found that companies within the same industrial sector tend to imitate each other and provide internet financial disclosure.

#### **V. Rules and regulations**

The more disclosure rules and regulations that are imposed on listed companies the greater amount of financial information disclosed whether on paper form or on their websites.

#### **VI. Number of analysts covering the company**

Information provided at companies' websites varies with companies' levels of analyst coverage. Higher levels of analyst coverage are associated with relatively objective, more extensive data.

#### **Objective three: Evaluate the effectiveness of voluntary Internet financial reporting and disclosure as perceived by selected groups of users.**

The results of the interviews showed that internet financial reporting and disclosure should be the responsibility of Investor Relations officers. Most of the participants did not know XBRL and preferred PDF as it looks like real documents. Another reason for the preference is that, because it does not allow user changes, as it is not editable, it is considered safe.

Participants did not agree upon the benefits derived from including analysts' reports in their websites or having a link to the analysts' websites. However, most of them agreed that a list of analysts' names and their contacts should be included on the company's site as it would be beneficial to investors to know which analysts cover the companies,

in case they may wish to contact them. It would give investors greater confidence that the company is disclosing adequate levels of financial information. On the other hand, some Investor Relations officers did not perceive themselves as responsible for the information included in these analysts' reports or websites.

As for the security of the financial information on companies' websites, companies should send the financial information to be published on their websites to the disclosure department of the Egyptian Stock Exchange. The Egyptian Stock Exchange has a monitoring system which scrutinizes all information that is published on the internet, whether on the company's website or on any other website. The Egyptian Stock Exchange keeps track of the changes of financial companies of the top 100 companies on the internet.

The participants regarded the following information as essential to be included on companies' websites: audited financial statements accompanied with an audit report; all information which affects investors' decision making and share prices; financial information required by NIRI (National Investor Relations Institute); a newsletter which should be updated daily or at least weekly or monthly; the detailed financial statements, not the summarized; footnotes; press releases; some forms such as 10-K and 10-Q; management discussion and analysis; conference calls; management vision.

As for improving internet financial reporting, participants suggested the following:

- There should be laws, rules and regulations which stipulate that all listed companies should have websites and publish their financial information on these sites.
- More focus should be given to the Investor Relations function. These laws should stipulate the responsibilities of the Investor Relations department. Also, training

courses should be given, not only to investor relation officers but to all senior managers of the organisation, to enable them to understand the concept of Investor Relations.

- An Investor Relations Association should be formed and be active so that professionals encourage the application of online reporting as one of responsibilities of Investor Relations
- There is a need for organisational and cultural change to assist Investor Relations officers in carrying out their responsibilities and making decisions about the contents of their websites.
- Disclosure and transparency should be rooted in the culture of organisations.
- Tools to avoid resistance should be used, such as bargaining, top management support, education & training.
- The Investor Relations department should operate within an organic organisational structure and have direct contact with board of directors to be flexible and able to respond quickly to a new innovation.

**4. Explore the role of Investor Relations and auditors regarding Internet financial reporting and disclosure and whether the audit function or procedures are affected (objective four).**

Investor Relations is relatively a new concept, established by the rules and regulations of the Egyptian Stock Exchange. The law stated that listed companies should have an Investor Relations officer but did not specify his/her responsibilities, and did not mention that among their responsibilities is disclosing financial information on the companies' websites. In addition, in Egypt there are no rules and regulations which require companies to disclose financial information on their websites. It was found that most Egyptian companies do not know or understand the role of and importance the Investor Relations department.

As for the responsibility of the audit firms towards financial information on their clients' website, some participants considered that auditors have no responsibility; others were of the view that clients should obtain auditors' consent before publishing financial information on the websites. Auditors' consent was required to modify any audited financial information. Internal auditors were seen as having very little to do with internet reporting and disclosures, as their job was seen as to ensure that the internal controls are properly designed, and implemented, and operate efficiently.

The views of the four largest auditing firms in Egypt, regarding publication of financial information online were mixed. One audit firm in Egypt adds two paragraphs to the engagement letter in the case that the company has a foreign listing and has a website and publishes its financial information on its website. A second audit firm modifies the wording of the engagement letter for all companies, whether they publish financial information on their websites or not. A third audit firm has a paragraph in the engagement letter which states that a company should obtain the auditor's consent if it intends to reproduce the financial statement with other information. The fourth audit firm does not modify the wording of the engagement letter.

The results of the interviews showed that the big international accountancy firms in Egypt do not modify the wording of the Auditor's report, which will be presented on the client's website with the audited financial statements.

If a company selects parts of the financial information to be published on its websites and wants to add the auditors' report, the auditor should be asked to issue a report on those selected items before publishing them on the website.



Continuous audit and web trust services are not available in Egypt up to now, for all audit firms.

## **10.5 Contribution to Knowledge**

- 1) This study is the first which undertakes an empirical investigation regarding internet financial reporting and disclosure of Egyptian listed companies. This study therefore makes a significant contribution to our understanding.
- 2) This is the first study to examine the effects of culture, organisational structure and demographic characteristics on the adoption of voluntary internet reporting and disclosure.
- 3) One of the significant features in this study is that it employed quantitative and qualitative methods to identify the factors which affect companies' adoption of voluntary internet financial reporting and disclosure in Egypt. This is the first time such a triangulation has been used in internet financial reporting and disclosure studies. Using both quantitative and qualitative methods provides a fuller and more comprehensive picture concerning internet reporting and disclosure. Using a triangulation design clarifies many issues which could not easily be understood using one approach.
- 4) This study will contribute to the understanding of the concept, functions and activities of Investor Relations within companies and this might draw the attention to the importance of Investor Relations and help in the development of Investor Relations in Egypt. This is the first time that the role of Investor Relations has been investigated in Egypt, or indeed any Arab country.

- 5) The disclosure index used was modified to be suitable for companies working in the Egyptian environment context. This index could be used by other researchers to investigate internet financial reporting and disclosure for companies working in other Arab countries that are experiencing similar economic changes.

## **10.6 Limitations of the Study**

1. This study presents a snap shot of online financial reporting and disclosure of Egyptian companies. It investigated the level of internet financial reporting in Egyptian companies during a certain period of time. Data was collected from companies' websites from October 2005 to January 2006. As internet financial reporting is a new phenomenon in Egypt and the information has not been available over a long period of time, this study could not examine the longitudinal data of internet financial reporting, and so is limited to a cross-sectional study. However this study provides a base for future longitudinal studies of internet financial reporting in Egypt.
2. The number of companies involved in the disclosure index in this study was relatively small. However, a small sample size is a characteristic of many disclosure studies (Cooke, 1998:213). For example Wallace et al. (1994) sampled 50 non-financial Spanish firms, Leventis and Weetman (2000) tested 87 companies listed on the Athens Stock Exchange (ASE), and Owusu-Ansah (1998) used 49 listed companies in Zimbabwe. The sample size reflects the limited adoption of internet financial reporting in Egypt. Therefore, it is difficult to generalise the results of the disclosure index because the sample sizes used are relatively small.

3. All items included in the disclosure index are equally weighted, which means that all information items are assumed to be of the same degree of importance for investors. However, assigning different weights for different items in the list may be misleading because the relative importance of each item varies from company to company, industry to industry and time to time (Abd El Salam, 1999:152).
4. The  $R^2$  (explanatory power) in multiple regression analysis ranged between 50% and 76% which means that the multiple regression model, which contained seven variables, explains about 50% - 76% of the variation in the internet financial reporting and disclosure. Although this percentage is considerable, it means that other variables that were not included could affect the level of disclosure. To overcome this limitation, interviews were conducted to uncover other factors which could affect internet financial reporting and disclosure. However, future studies might include corporate governance variables such as non-executive directors, existence of audit committee, and ownership structures.
5. Participants emphasized that capital structure is one of the most important determinants of voluntary internet financial disclosure and reporting. This factor was partially taken into consideration when the researcher compiled the disclosure index. Shareholders' information was included among the dependent variables of the disclosure index. If the company disclosed any information about its shareholders, it was given the value of one; if it did not disclose, it was given the value of zero. However, type of capital structure such as governmental, institutional or individual shareholders could be included as independent variable which might affect internet financial reporting and disclosure.

6. There is a limitation regarding the translation of the Arabic interviews into English. Sometimes exact meanings are difficult to reproduce in a second language which has evolved in a different cultural context. To address such issues, the researcher recontacted the participants to clarify matters which were unclear. Also the researcher asked one of her Egyptian colleagues to review the translation of a sample of the transcripts to ensure the validity of the translation.
7. Finally, this study was not designed to explore the economic consequences of voluntary internet financial reporting, e.g., the extent to which internet financial reporting provides value-relevant information for investors. Future research might explore how internet financial reporting and disclosure affect stock prices and trading volumes of the shares.

## **10.7 Future Research**

1. Future research might test empirically how internet disclosure impacts upon companies' stock prices or dividends, to examine how this reporting provides value-relevant information for investors. Firms tend to disclose more information in order to reduce information asymmetry between themselves and investors. By attracting more investors to the firm, the cost of capital is expected to be reduced for the company. Therefore, the relationship between the level of internet financial reporting and disclosure and cost of capital could be examined in future research.
2. Recently, corporate governance has become an important issue in both developed and developing countries. Corporate governance is concerned with the relationship between management, board of directors and other shareholders. Corporate governance should be considered in disclosure studies in general and in internet disclosures in particularly

as it is the board of directors that manage the disclosure of information. Corporate governance factors that could be examined in Egyptian companies are non-executive directors' ownership, role duality, proportion of family members on the board, and the existence of an audit committee. Study of corporate governance is needed in Egypt, as no studies have tested the relationship between the level of internet financial reporting and disclosure.

3. This is the first empirically based study undertaken on internet financial disclosure in Egypt. In the future, the internet is expected to become the standard means of company communication, and thus it is expected that more Egyptian companies will be involved in internet financial disclosure. Therefore, in a few years' time, further examination of Egyptian companies' websites and their online financial reporting is suggested as a worthwhile topic for research.

4. This study can act as a benchmark in the area of internet financial reporting for developing countries in the region (i.e. Middle Eastern countries). A comparison between internet financial reporting in Egyptian and other Arab countries could be conducted. Collecting data for more companies in different countries, especially those with different disclosure regulations, would enhance the validation of the results in this study and would assist in identifying the differences and similarities in policy makers' decisions.

5. Since this study employed an unweighted disclosure index, the findings might be different if a weighted disclosure index were employed. The weighted index assesses the importance of each item in accordance with specific users' perspective (e.g. investors, financial analysts). A questionnaire could be used in determining the

importance of items. The results of using a weighted disclosure index could be compared with the results of this study.

6. Studies related to how the characteristics of “government-think” organisations affect the adoption of new innovations in accountancy would be worthwhile. The sample can be split into companies whose shares are owned by government and companies whose shares are owned by individuals and non-government institutional, in order to investigate and determine how “government-think” affects the adoption of Investor Relations and internet financial reporting.

7. This study used OLS multiple regression to find out companies’ characteristics which were related to the amount of internet financial reporting and disclosure for a sample of 62 companies which had websites and 35 companies which disclosed financial information on their websites. OLS multiple regression was not run for the 98 total number of companies, because the dependent variable would include 36 zeros for companies which had no websites\* and this would bias the results of multivariate analysis as the technique is designed to measure the extent rather than the presence of financial disclosure. A future study could employ logistic regression for all listed companies to find out companies’ characteristics which are related to their adoption of internet financial reporting and disclosure. Logistic regression is a form of regression where the dependent variable is dichotomous (with the values of zero and one) and the independents can take on any measurement type. It is useful for situations in which the presence or absence of a characteristic or outcome (presence of internet financial disclosure) needs to be predicted based on values of a set of predictor variables (company’s characteristics) (Tabachnick and Fidell: 2001).

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\* For companies which had websites, there were no zeros, because these companies had some information about their companies, their activities and performance which could assist in making some investment decisions.

8. Voluntary internet financial reporting and disclosure in this study encompass both mandatory and voluntary financial information which may be disclosed in the traditional paper-based annual and interim financial reports and some incremental financial information. Internet financial reporting allows companies to disclose additional information, so increasing the availability of information for users. If this information is relevant, according to the efficient market theory, it might lead to share price reactions. A future study could examine the relationship of incremental information on companies' websites with companies' characteristics, and the influence of this incremental information on stakeholders.

9. This study emphasized the role played by Investor Relations departments and the responsibility of Investor Relations officers for the disclosure of financial information on companies' websites. Future research could be conducted to study how investor relations officers ensure the security of financial information on companies' websites and in particular whether they have a monitoring system to prevent unauthorized changes to this information. In addition, the role of auditors regarding internet financial reporting may develop through time and they may work alongside Investors Relations officers. This area requires further investigations as internet financial disclosure develops.

10. As explained in section 3.3, continuous audit is used to continuously monitor transaction processing and is considered a very efficient method of auditing advanced computer based system. Shields (1998:40) explained that in a continuous audit, auditor's reports are issued at short intervals (daily or weekly) or made available immediately whenever a user access companies' websites. Future research is required to investigate how continuous auditing could be used to enhance the credibility of internet

financial reporting and disclosure. The possibility of using Web Trust to provide a rating for the quality of the company's website needs to be investigated. Future research could also address the relationship between web services, XBRL, and continuous auditing.

11. This study investigated the extent of internet financial reporting and characteristics of companies adopting internet financial reporting and as such it focused on the supply rather than the demand side. Therefore, a better understanding of the different needs of users and the potential for effective reporting activity could be achieved by measuring demand side factors such as the frequency of visits to corporate websites to download or view financial information.

12. Research is required to explore how differences in presentation format of information affect user decisions. This could be done by studying the effect of hypertext links on users' decisions and predictions, the amount of information accessed, and the time taken to make decisions. Companies could compare different interfaces to choose the one best suited to providing quality financial reporting to the users.





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### Appendix 1 Summary of Internet Financial Reporting Studies

No.	Author	Data collection Date	Country	Sample	Results
1	(Louwers et al., 1996)	March 1996	US	Top 150 Fortune 500 companies	Of the top 150 corporations in the Fortune 500, approximately 23% included virtually all the information typically shown in an annual report hard copy and about 13% included summarized portions of the hard copy annual report.
2	(Gray and Debreceny, 1997)	Late 1996	US	50 largest US industrial corporations	49 companies had websites. Of these, 34 companies (69%) posted annual reports on the Web. Of these, 18 companies (50%) included the auditor's report in their corporate report. The annual reports were typically not merely electronic versions of the printed report, but complete web documents. Eleven of the eighteen auditors' reports included the audit firm's signature. No auditors' report included a link to the audit firm's own website.
3	(Booker and Galbreath, 1997)		US	65 companies	82% of the companies had websites and 87% of them presented financial information on their websites. There was little consistency as to the amount, format, or content of the financial information across companies.
4	(Gowthorpe and Flynn, 1997)	December 1996	US	Top 100 fortune 500 companies	89% had a website and 71% presented their annual financial information on the company website.
5	(Lymer,	1997	UK	Top 50 UK	In June 1997, 92% had a website, 60% had accounts or reports on the Web, but



No.	Author	Data collection Date	Country	Sample	Results
	(1997)			companies	only 32 % had full accounts. Comparisons with other surveys undertaken at the same time in USA and Finland showed that Finnish companies supplied little or no financial information on their websites so they were behind companies in US and UK.
6	(Lymer and Tallberg, 1997)	January and February 1997	UK and Finland	50 Top UK companies and 72 Finnish listed companies	90% of Finnish companies and 92% of UK companies had corporate Websites. 8 Finnish companies and 7 UK companies had full financial statements on their websites. A significant number of companies supplied summary accounts of various forms. There was an increase in the use of Adobe Acrobat (PDF) formats to present annual reports on the Web.
7	(Debreceeny and Gray, 1999)	Late 1998	UK, Germany and France.	15 largest companies in each country	36 companies (80%) posted annual reports on the Web in HTML or Adobe Acrobat. Ten of the seventeen corporations reporting in HTML included the auditors' report on their website. None of these reports linked back to the auditors' own site.
8	(Marston and Leow, 1998)	November 1996	UK	100 companies	63% of the companies had websites and a further 34% disclosed detailed annual reports. Internet reporting was positively correlated to firm size. Correlation to industry classification was mixed.
9	(Deller et al., 1999)	January 1998	USA,UK and	Each country's	More US corporations (91%) used the internet for investor relations activities than UK (72%) and German (71%) corporations. US corporations used the

No.	Author	Data collection Date	Country	Sample	Results
			Germany	relevant stock market 100 index	internet more for corporate reporting as it was considered a standard feature of investor relations strategies. In contrast, in Germany only about two-thirds of the corporations used the internet as an alternative way to distribute accounting information. The UK results lay in between the other two countries.
10	(Pirchegger and Wagenhofer, 1999)	December 1997 and December 1998	Austria and German	32 Austrian companies & 30 German corporations	The quality of Austrian websites had significantly improved from 1997 to 1998. Australian larger firms disclosed more information than German firms. The quality of Austrian websites rose with size and percentage of free float. These results did not hold for German companies' websites.
11	(Ashbaugh et al., 1999)	Between November 1997 and January 1998	US	290 nonfinancial firms	87% of the firms had websites, with various contents depending on the reason for establishing the website. Only 70% of the firms engaged in internet financial reporting. Firms with websites were larger and more profitable than firms with no websites. Internet financial reporting decreased firms' cost of disseminating information and expanded the audience for firms' financial information.
12	(Hussey and Sowinska, 1999)	August 1997, March 1998	UK	FTSE 100 companies	In August 1997, 25 of the companies did not have their own website and 54 disclosed financial information on their website. In March 1998 only nine of the 100 companies did not have a website and 63 companies were using their website for financial disclosures, which indicates a rapid growth in the use of the internet for financial disclosures over a very short period of time.

<b>No.</b>	<b>Author</b>	<b>Data collection Date</b>	<b>Country</b>	<b>Sample</b>	<b>Results</b>
13	(Gowthorpe and Amat, 1999)	July 1998	Spain	379 listed companies	70 (18.5%) of the companies had a Web presence. Larger companies and certain sectors were more likely to have websites for communication. Only 34 companies reported accounting information on their websites and 11 of those companies had annual reports in PDF format.
14	(Hedlin, 1999)	September 1998	Sweden	All 60 companies listed on the Stockholm Stock Exchange	Only one company did not have a website. Larger corporations were more advanced in their use of the internet as a tool to communicate investor information. The listed companies were in the stage of using the internet to communicate investor information, with a few companies taking advantage of the unique features and possibilities of the internet.
15	(Craven and Marston, 1999)	End of July 1998	UK	Largest 206 companies listed on the London stock Exchange	Larger companies (by various measurements) were more likely to disclose their financial information on the internet. There was no significant relationship between the extent of internet financial disclosure and industry type.
16	(Debreceeny and Gray, 1999)	1999	UK, French and German	forty-five major European	Thirty-six companies offered electronic annual reports on the web in HTML or Adobe Acrobat. Ten of the seventeen corporations reporting in HTML included the auditors' report on their website. None of these reports linked back to the

No.	Author	Data collection Date	Country	Sample	Results
				corporations	auditors' own site.
17	(FASB, 2000)	January 1999	US	Top 100 fortune 500 companies	99% of these companies had websites. 61% of the companies had annual reports exclusively in PDF format and 59% presented annual reports in HTML format. 12% provided financial reports in word processor formats. The remaining 16% provided downloadable spreadsheet files.
18	(Asthana and Balsam, 2001)	2001	US		There was a price and volume reaction to the 10-K filed on EDGAR (Making accounting information available on the internet). For faster growing firms, EDGAR's effect was smaller where there were other sources of information. 10-K filed on EDGAR were filed earlier than 10-Ks filed under traditional methods
19	(Ettredge et al., 2001)	May 1998	US	490 companies	82% of the companies had websites. The most commonly disclosed accounting and financial data items were quarterly reports (54%) and news releases (80% of all sites). The comparison of disclosure levels in different industries revealed that larger, more established firms tended to provide more information than smaller, emerging technology firms.
20	(Ettredge et al., 2002)	in late 1997 and early 1998	US	220 firms	Disclosure mandated by SEC and voluntary disclosures not mandated by regulations were associated with company size and information asymmetry, measured by the correlation between annual stock returns and annual earnings. Voluntary disclosure was associated with demand for external capital, measured

No.	Author	Data collection Date	Country	Sample	Results
					by equity. Level of technology was associated with presentation format, but not with content.
21	(Debreceeny et al., 2002)	Between November 1998 and February 1999.	22 countries*	660 companies (30 company from each country)	Firm size, listing on US securities markets and the level of technology of the firm were positively related to internet Financial Reporting. The overarching disclosure environment of a country was found to be an important environmental driver for internet Financial Reporting presentation formats.
22	(Bonson and Escobar, 2002)	July and August 2001.	European Union countries	biggest 20 companies in each European Union country	A statistically significant relationship was found between industry type, the country of origin, and size and the extent of voluntary disclosure (transparency) on the internet.
23	(Ismail, 2002)	between Oct. 2001 and	Qatar, Bahrain, and Saudi	128 companies	The Bahraini companies made most use of the internet in disclosing financial information (47.22%) compared to their Qatari counterparts (20.83%) and those in Saudi Arabia (41.18%). The Banking and Investment sector was using internet

\* (Malaysia, Mexico, Brazil, Chile, Italy, Spain, France, Germany, Japan, Netherlands, South Korea, Hong Kong, Singapore, South Africa, Sweden, Denmark, Norway, Australia, Canada, New Zealand, USA, UK).

No.	Author	Data collection Date	Country	Sample	Results
		Feb. 2002	Arabia		financial reporting more than other sectors.
24	(Larran and Giner, 2002)	October and November 2000	Spain	144 listed companies	Although the level of disclosure of financial information through the internet by Spanish companies was low, size was the main factor that explains not only the quantity but also the quality of financial information.
25	(Xiao et al., 2002)	From Jan. 1999 to May 1999	UK	17 experts drawn from academics, auditors, regulators, and users	The analysis of open ended questionnaire showed that all experts agreed that the internet will have a significant impact on financial reporting. This impact will result in a significant growth in non-financial information and non-audited information, widening of the types of information provided on the internet, increased auditing problems, increasing provision of information by third parties, and benefits both to preparers and users.
26	(Marston, 2003)	1998 and 2001	Japan	Top listed 99 Japanese companies identified from The Times 1000	In 1998, 78 companies had websites in English, 68 companies reported some financial disclosure and 57 provided detailed accounting information. There was no significant association between size, profitability, industry grouping and overseas listing status and extent of financial disclosure. In 2001, the majority of companies with no websites in 1998 and companies with Japanese only websites had English websites with their full annual reports available.
27	(Allam and Lymer,	At the end of 2001 and in early	5 countries (USA, UK,	250 companies	1. There were no significant differences among internet financial levels across US, UK and Canadian companies. US companies had higher levels of internet

No.	Author	Data collection Date	Country	Sample	Results
	2003)	2002	Canada, Australia, Hong Kong)		financial reporting in terms of how information was delivered and what information was delivered. UK and Canadian companies were close to US companies. Australian companies ranked fourth, whereas Hong Kong companies lagged behind the other countries.  2. There was no significant relationship between size and internet Financial reporting level of companies in any of the five countries, with the exception of Australia.
28	(Oyeler et al., 2003)	at the end of 1998	New Zealand	229 listed companies	Firm size, liquidity, industrial sector and spread of shareholding were determinants of adopting internet financial reporting
29	(Geerings et al., 2003)	From Nov. 15 <sup>th</sup> to Dec. 15 <sup>th</sup> 2001	Belgium, France and Netherlands	Fifty largest listed companies	Many companies in the Euronext Zone were situated at the end of the second stage of Investor relations activities on the internet, which was concerned with the disclosure of other information such as press releases, financial news, and share prices. This represents an advance on the first stage which is concerned with the disclosure of annual and Interim reports. Companies were ready to move on to the third stage, where websites include all kind of multimedia features such as sound, video and possibilities for online participation in meeting .
30	(Xiao et al., 2004)	between August 2	China	Largest 300 listed Chinese	Of the 203 companies with an accessible Web site, 144, or 71%, disclosed financial information on the site. There was a significant and a positive relation

No.	Author	Data collection Date	Country	Sample	Results
		and August 19, 2002		Companies	between mandated and voluntary disclosure. The presentation format of ICD was associated with the employment of a Big-5 auditor and whether the firm was in the information technology industry, while a negative association was found between profitability and voluntary disclosures. Voluntary ICD was positively and significantly associated with the proportion of legal person ownership, but not with ownership by domestic private investors, foreign investors and the state. In addition, the proportion of independent directors had a positive relation with presentation format, voluntary disclosures, and the availability of English Web pages.
31	(Lodhia et al., 2004)	2004	Australia	Top 50 companies	Large Australian companies were using the internet as an additional dissemination channel for their mandatory reporting requirements. The presentation of financial information was primarily the same as would appear in hard-copy form.
32	(Davey and Homkajohn, 2004)		Thailand	Top 40 Thai listed companies	It was found that Thai companies provided financial information on the internet as a complement to their traditional paper based annual reports. The extent and quality of internet financial position varied widely among the firms.
33	(Marston and Polei,	From the 21st of July	German	50 corporations	Significant improvements in the amount and the presentation of information at corporate Web sites had occurred since the initial survey in 2000. Firm size was



No.	Author	Data collection Date	Country	Sample	Results
	2004)	to the 26 <sup>th</sup> of July 2000 then from the 25 <sup>th</sup> of May to 3 <sup>rd</sup> of June 2003			the only significant explanatory variable for the amount of information disclosed at corporate Web sites which was stable over time. Foreign listing status was only significant for the 2003 sample and free float only significant for the 2000 sample. Profitability and systematic risk appeared to be insignificant predictors for the Internet financial reporting practices of the sample companies.
34	(Trabelsi et al., 2004)	February 2002	Canada	35 Canadian firms	There were significant differences between Traditional and internet financial reporting, a wide variability among the sample firms in their use of internet financial reporting content, format and technology and these differences were not related to the firm's ritualistic or opportunistic behaviours.
35	(Fisher et al., 2004)	2001	New Zealand	210 companies listed on New Zealand Stock Exchange	Some companies did not publish the audit report with the audited financial statement. No audit firm made use of digital signature or located the audit report of their clients on their websites. Companies' websites blended audited and unaudited information. Only two audit firms modified the content of their hard copy report and highlighted responsibilities of management and auditors regarding the websites.
36	(Gowthorpe,	Several	UK	Senior	The results of interviews showed that the internet as a means of communication

No.	Author	Data collection Date	Country	Sample	Results
	2004)	months between 2000 & 2001		officers in smaller listed companies	of corporate financial information had not fundamentally changed the nature of dialogue between companies and stakeholders which stays asymmetrical.
37	(Smith and Pierce, 2005)	2001	European countries	100 large European companies quoted on the London Stock Exchange*	The questionnaire survey to Senior officers with financial reporting and/or information risk responsibilities showed that the use of IFR was standard practice for large companies. The nature, format and content of disclosure did not differ noticeably from paper-based disclosures. The slow development of IFR was compounded by limited engagement with IFR by senior management of large organisations. Corporate governance procedures and framework surrounding IFR had received insufficient managerial attention.
38	(Hamid, 2005)		Malaysia	100 stock market index-linked firms listed on	74 companies had websites and 70 companies provided investor-related materials on their websites. The top five items that were disclosed were company background (93%), historical press releases (50%), current annual reports (47%), current press releases (45%) and Earning per share (31%).

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\* 62 UK companies, ten Dutch, eight German, seven French, four Irish, three Spanish, three Swedish, and one company from each of Luxembourg, Denmark and Belgium

No.	Author	Data collection Date	Country	Sample	Results
				kualalumpur stock exchange	
39	(Khadaroo, 2005a)	in 2003 and 2004	Malaysia	100 Kuala Lumpur Stock Exchange Indexed companies	Although there had been an increase in both the number of companies and the types of information provided on the internet, the quality of internet reporting information to users had improved a little. This problem existed because auditors had little control over Web contents and the changes that could be made to audited information.
40	(Khadaroo, 2005b)	February 2003	Malaysia and Singapore	100 Malaysian and 45 Singaporean companies	Singaporean companies made more use of the internet as a financial reporting tool than their Malaysian counterparts.
41	(Al-Htaybat and Napier, 2006)	September 2004	Jordan	190 Jordanian companies listed on the Amman Stock	55 companies had accessible and active home pages on the internet. Only a minority of companies with active websites were disclosing significant amounts of accounting information on their websites, those doing so usually providing either the entire annual report document or selected parts of their audited financial statements. There were considerable variations in the level of internet

No.	Author	Data collection Date	Country	Sample	Results
					voluntary disclosure across industry sectors. The banking sector achieved an average of 80%, while at the other extreme the insurance sector scored on average only 37%.
42	(Chan and Wickramasinghe, 2006)	August and September 2000.	Australia	69 Australian companies	Internet financial disclosure was related to company size measured by market capitalization. Profitability, leverage, liquidity, systematic risk, industry group and quality of audit firm played no significant role in the adoption and quality of internet financial disclosure.
43	(Bollen et al., 2006)	Between Dec. 2001 and Oct. 2002	Australia, Belgium, France, UK, Netherlands, and South Africa	270 listed companies	Company size measured by market capitalization, level of international activities (Foreign listing and foreign revenue), and proportion of shares available to individual investors; disclosure environments that had a higher level of traditional forms of financial disclosures were significantly related to the quality of Investor relations websites.
44	(Bonson and Escobar, 2006)	From mid February to mid March 2005	Eastern Europe countries*	630 companies	There were statistically significant relationships between the extent of information disclosure on the internet and a) company size, b) the company's activity being in the financial sector, and c) the fact of employing one of the world's Big Four accountancy firms for auditing the company's books.

\* Bulgaria, Cyprus, Czech Republic, Estonia, Hungary, Latvia, Lithuania, Malta, Poland, Romania, Slovakia, Slovenia and Turkey.

No.	Author	Data collection Date	Country	Sample	Results
45	(Zhang et al., 2007)	End of 2004	China	770 companies	Firm size, managerial ownership and industry sector (i.e., whether a firm was in the IT sector) were associated with the level of internet Financial Reporting in China. However, no evidence was found to support links between internet Financial Reporting and shareowner structure, types of auditors, audit reports, profitability and proportion of independent directors.
46	(Trabelsi, 2007)	from Sept. 2000 to Dec. 2000	Canada	118 firm	57% of the companies provided incremental disclosure on their website. Pressure from investors, the complexity of TFR, the search for visibility, competition level, and the threat of litigation all influenced the incremental voluntary financial disclosure on companies' websites.

## **Appendix 2**

### **Free Nodes**

1. Age
2. Amount of Paper Based Disclosure
3. Analysts Dependence on Companies' Website
4. Central Bank Regulations
5. Cheapest, Easiest And Quickest
6. Continuous Audit
7. Disclosure Via the Egyptian Stock Exchange
8. Education
9. Foreign Investors
10. Foreign Listing
11. Function of Investor Relations Officer
12. Governmental Ownership
13. How to Improve Internet Financial Reporting
14. Internet Financial Reporting Responsibility
15. Imitation
16. Industrial Sector
17. Function of Investor Relations Officer
18. Investor Relations' Rules and Regulation
19. Language of Disclosure
20. Links to Analysts Webpage
21. Liquidity
22. Management Mentality And Strategy
23. Modification of Auditor's Report Wording
24. Modification of Engagement Letter Wording
25. Number of Analysts Covering the Company
26. Number of Shareholders
27. Organizational Structure
28. Power Distance
29. Profitability
30. Responsibility of External Auditor Regarding Internet Financial Reporting
31. Responsibility of Internal Auditor Regarding Internet Financial Reporting
32. Security of Information
33. Selective Disclosure
34. Size of Company
35. Technical Abilities and Presence of Internet
36. Tenure
37. Credibility and Transparency
38. Types of Financial Information to be Included on Companies Website
39. Webtrust

**Appendix 3**  
**Free and Tree Nodes**

Tree Nodes	Tree Nodes	Tree Nodes	Free Nodes	
1. Factors Affecting Internet Financial Reporting	1. Companies' Characteristics	1. Capital Structure	1. Foreign Investors 2. Governmental Ownership 3. No. of Shareholders	
		2. Company's Size	4. Company's Size	
		3. Foreign Listing	5. Foreign Listing	
		4. Industrial Sector	6. Industrial Sector	
		5. Liquidity	7. Liquidity	
		6. Profitability	8. Profitability	
	2. Imitation	7. Imitation	9. Imitation	
	3. Management Style	8. Culture and Organizational characteristics	10. Culture	10. Culture 11. Organizational structure 12. Power distance
			9. Demographic Characteristics	13. Age 14. Education 15. Tenure
		10. Management Mentality and Strategy	16. Management Mentality and Strategy	
		11. Technical Abilities and Presence of Internet	17. Technical Abilities and Presence of Internet	
	4. No. of Analysts Covering the Company	12. No. of Analysts Covering the Company	18. No. of Analysts Covering the Company	
	5. Rules and Regulations	13. The Egyptian Stock Exchange Regulations	19. The Egyptian Stock Exchange Regulations	
		14. Rules and Regulations related to Investor Relations	20. Rules and Regulations related to Investor Relations	
		15. Central Bank Regulations	21. Central Bank Regulations	

Tree Nodes	Tree Nodes	Tree Nodes	Free Nodes
	6. Traditional Disclosure	16. Amount of Paper Based Disclosure	22. Amount of Paper Based Disclosure
		17. Cheapest, Easiest and Quickest	23. Cheapest, Easiest and Quickest
		18. Credibility and Transparency	24. Credibility and Transparency
2. External Auditors and Investor Relations	7. Modification of Auditor's Report Wording	19. Modification of Auditor's Report Wording	25. Modification of Auditor's Report Wording
	8. Responsibility of External Auditor Regarding IFR	20. Responsibility of External Auditor Regarding IFR	26. Responsibility of External Auditor Regarding IFR
	9. Modification of Engagement Letter Wording	21. Modification of Engagement Letter Wording	27. Modification of Engagement Letter Wording
	10. Responsibility of Internal Auditor Regarding IFR	22. Responsibility of Internal Auditor Regarding IFR	28. Responsibility of Internal Auditor Regarding IFR
	11. Selective Disclosure	23. Selective Disclosure	29. Selective Disclosure
	12. Continuous Audit and Webtrust	24. Continuous Audit	30. Continuous Audit
		25. Webtrust	31. Webtrust
	13. Function of Investor Relations Officer	26. Function of Investor Relations Officer	32. Function of Investor Relations Officer
3. Perceptions of different Stakeholders Regarding IFR	14. IFR Responsibility	27. IFR Responsibility	33. IFR Responsibility
	15. Links to Analysts Webpages	28. Links to Analysts Webpages	34. Links to Analysts Webpages
	16. Types of Financial Information to be Included on Companies' website	29. Types of Financial Information to be Included on Companies' website	35. Types of Financial Information to be Included on Companies' website
			36. Analysts Dependence on



Tree Nodes	Tree Nodes	Tree Nodes	Free Nodes
			Companies' Website
	17. How to Improve IFR	30. How to Improve IFR	37. How to Improve IFR
	18. Language of Disclosure	31. Language of Disclosure	38. Language of Disclosure
	19. Security of Information	32. Security of Information	39. Security of Information