Global Review of Accounting and Finance
Vol. 4. No. 2. September 2013. Pp. 142 – 160

Internet Financial Reporting in UAE- Analysis and Implications

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The paper is an empirical study which investigates the extent of Internet Financial Reporting (IFR)among United Arab Emirates (UAE) companies listed on the Abu Dhabi Securities Exchange (ADX). The population of the study consists of all the 65 companies listed on the first market of ADX, divided into ten (10) sectors based on ADX classification. The study also expands its scope to investigate the significant determinants of IFR in the companies studied. The findings show that 89% of the listed companies have websites while 11% do not have web-sites. Also, 60% of the ADX-listed companies having web-sites revealed financial information on-line whereas the remaining 40% did not disclose financial information on their web-sites. Logistic regression has been employed as the method of estimation on the cross-sectional data collected as on 31 December 2010. The researchers examine the effect of eight (8) selected characteristics on companies that report financial information on their web-sites. These characteristics are size, profitability, liquidity, financial leverage, ownership concentration, type of ownership, corporate governance and company age. Results reveal that profitability and corporate governance act as significant determinants of IFR in the sample studied.

Keywords: IFR, determinants, corporate governance.

1. Introduction

Information disclosure is considered to be inevitable and imperative in the modern business scenario as it avoids potential issues related to information asymmetry and agency problems. Firms can disseminate their financial information using different means either through paper-based reports or various electronic devices. Katrina and Danimir (2006) remarked that information technology witnessed significant changes towards the end of the twentieth century. However, the use of internet for financial reporting is considered comparatively new but a rapidly growing phenomenon (Oyelere, Laswad and Fisher, 2003).

The Internet is considered to be a unique information dissemination tool as it encourages flexible forms of presentation and permits communication with existing and potential stakeholders (Kelton and Yang, 2004). However, although innumerable companies around the world publish their financial data on their web-sites, the amount of information disclosed actually varies among firms. Some companies publish comprehensive financial statements while others publish partial or summary financial statements or just financial highlights. Disclosing material information to interested stakeholders is also considered a sign of good corporate governance.

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Although information disclosure and transparency issues are only at an embryonic stage in the GCC compared to European counties, strenuous efforts are being taken to widen the scope and severity of disclosure levels in the MENA region. The National Investor (TNI) in cooperation with Hawakamah, the Institute for Corporate Governance in the MENA region generated an important report related to corporate communication in the course of developing a corporate scoring methodology to analyze the presence of basic structural elements of corporate governance in the companies listed in the GCC towards the end of 2008. The tool is referred to as BASIC which stands for **Behavioral Assessment Score for Investors and Corporations**. This is a comprehensive and systematic measure of corporate and stock market behaviour, based on a company's disclosure habits and market history. The BASIC is a number between zero and ten, the former representing the worst score and the latter the best.

The corporate communication section of BASIC looks into the communication standards met by the GCC companies for disseminating important information to the stakeholders such as the availability of web-site, investor relations details etc. The GCC received a low average score of 3.24 due to a structural lack of corporate communication and the passive nature of these companies in communicating necessary information. However, the Emirate of Abu Dhabi emerges as the country with the highest BASIC score of 5.34 indicating a conscious and dynamic effort from their part in the overall adherence to the communication standards. It is closely followed by Dubai with 4.64 and Qatar with 4.64.

The aim of the study is thus to survey the practice of IFR among United Arab Emirates companies listed on the Abu Dhabi Securities Exchange (ADX) and to identify the major determinants of IFR in these companies. An overall analysis of the findings shows a consistency in the results obtained in prior studies but it is noteworthy to identify the significant impact of corporate governance variables on the IFR in UAE as this concept has not been dealt with in prior studies conducted in the UAE.

The remainder of the paper is structured as follows. Section 2 sheds light on previous studies in the similar field while Section 3 is related to the methodology employed in the paper. Section 4 reports the findings and analysis while Section 5 summarizes the paper. Section 6 concludes the paper with limitations and recommendations for further research.

2. Literature Review

A review of prior research suggests that several strands of studies have evolved focusing on the extent of adoption of IFR, factors determining IFR and the benefits which accrue from it. Davey and Homkajohn (2004) investigated 40 listed companies in Thailand and found that 92.5% have web-sites, 81% of them report comprehensive sets of financial statements on their web-sites while 13.5% present only partial financial statements. Following the same lines Smith and Peppard (2005) found that 95% of the 43 general public Irish corporations have web-sites where 93% of them disclose complete sets of financial statements on their web-sites. Similar opinions are voiced by Momany and Shorman (2006) as they examine the status of financial reporting on the internet for the Jordanian companies listed in the first market of the Amman Stock Exchange (ASE). The findings indicate that about 45% listed in the first market of the ASE have a web-site with

70% of the web-site companies reporting financial information while 30% of them are not reporting any financial information. The companies reporting financial information are classified into three categories and results reveal that about 31.5% report comprehensive sets of financial statements, 15.8% report partial or summary financial statements while 52.7% report only financial highlights. In addition, the authors found that on an average companies that report financial information on their web-sites are larger, more levered, have concentrated ownership, have more international investors and are more recent than non-IFR companies.

Another study by Kelton and Yang (2004) examines whether corporate governance affects a firm's internet disclosure behaviour. The authors examine 305 companies traded in the NASDAQ national market and at the same time having their data available in the 2003 COMPUSTAT data-set. Results indicate that firms with weak shareholder rights are more likely to use the internet to communicate information to existing and potential investors and to provide information related to corporate governance on their web-sites. Moreover, board independence increases internet disclosure and there is a positive association between board independence and corporate governance disclosure.

Building on the same lines, Salawu and Awolowo (2009) examine the status of IFR in a sample of 220 companies listed on the Nigerian Stock Exchange (NSE). The results show that 54.1% have official web-sites with 14.1% publishing their financial information on their web-sites. The results indicate that 5% of these companies having websites publish full financial information, 6.3% publish partial information and 2.7% reveal only summarized information. The authors found that almost all the companies in the banking and insurance sectors have official web-sites and e-mail addresses and they attribute this to the nature of the business and strong competition in both sectors. However, in the banking sector only 40% of those that have web-sites publish their financial statements on-line as compared to 32% of those in the insurance sector. Moreover, the results show that more than half of the companies in other sectors with official web-sites do not publish any financial information and their web-site is employed for circulating other information about the background of the company, available services to customers, latest news and events marketing or launching their products or services.

A more comprehensive study encompassing the firm specific features affecting IFR, the type of information disseminated and the effect of this information on the stakeholders was conducted by Celik, Ecer and Karabacak (2006) in the Turkish market. The authors analyze 253 companies listed on the Istanbul Stock Exchange (ISE) and construct a disclosure index to associate the firm's characteristics with the disclosure behaviour. The results reveal that 87.75% of the 253 ISE firms have web-pages but the level of disseminated information is relatively low. The researchers indicate that the Disclosure index formed by evaluating the websites of the firms quoted on the ISE is examined according to two groups namely the Total Disclosure Index (TDI) and Financial Disclosure Index (FDI).The averages of TDI and FDI which are 0.0912 and 0.0563 respectively, indicate that ISE firms are considerably reluctant in disclosing information on the web. Further, financial information tends to be disclosed relatively less than other types of information (pp.111 -112). The results show that size, industry classification and internalization could explain the level of information disclosed by the firms. Technology,

risk and profitability are also important factors for the Total Disclosure Index but not for the Financial Disclosure Index. Ownership structure, institutional investors and intangibles are the other independent variables which do not show any significant association with the web-based disclosure behaviour.

Another relevant study which emerged from the GCC market was by Oyeler and Mohammed (2007) who examine the extent and nature of IFR practices among listed firms on both the Muscat Securities Market (MSM) in Oman and the Bahrain Stock Exchange (BSE). The results indicate that 59% firms listed on MSM have web-sites and 78% firms listed on BSE have web-sites. While 49% firms in the MSM provide a variety of information on their web-sites including company history, products, financial and other information only 44% firms provide financial information on their web-sites. Of the 44% firms providing financial information, 77%of the firms provide both annual reports and additional financial highlights while 23% firms provide only financial highlights. It is also worth noting that 80% of the Bahraini companies having web-sites provided financial information on their web-sites. The researchers generally conclude for both the MSM and the BSE that the proportion of web-site ownership appears to be low when they are compared with developed western countries like the USA, the UK, Australia and New Zealand. However, it seems to be that IFR is a relatively new phenomenon and not a common practice among Omani firms, while it is reasonably common practice among Bahraini firms with web-sites.

Following the chain of research, Al Shammari (2007) investigates the use of the internet for disseminating financial reporting by companies listed on the Kuwait Stock Exchange in 2005 and to determine the factors influencing companies to use the Internet for this purpose. The factors studied were company size, leverage, liquidity, profitability, company age, ownership structure, industry, auditing firm and internationality. A logit analysis indicates that company size, liquidity, audit type and industry have a significant impact on IFR while the others emerge as insignificant factors. On the contrary, extremely contrary results are obtained from a study by Marston (2003) on the extent on IFR by 99 leading Japanese companies in 1998. She reports that although 79% of the companies disclosed on-line financial information there was no relationship among company size, profitability, industry and overseas listing on IFR practices in the investigated companies. This suggests that there can be an effect of certain country specific and firm specific factors in these variables studied as determinants of IFR.

Another study investigating the key predictors of IFR practices in the UAE was conducted by Al Mansour (2009) on 127 listed companies in the UAE for the year 2007 by applying linear regression but concluded that leverage and profitability have no impact on IFR but size plays a dominant role in acting as a determinant of IFR. Building on the same lines, Oyelere (2010) performed a study on IFR practices in the UAE. 132 companies listed on the Abu Dhabi Securities Exchange (ADX) and the Dubai Financial Market (DFM) were analyzed using both univariate and multivariate analysis in order to isolate the determinants of IFR in the UAE. Finally, the results indicate that 67% of the UAE-listed companies engaged in IFR have firm size and leverage as the key determinants of the voluntary adoption of IFR and the researchers generally concluded that the rate of IFR is similar to the rate in other middle east countries like Oman, Bahrain and Kuwait but it falls

behind the 100% rate in advanced western economies like the USA, the UK, and New Zealand. Furthermore, the differences in results obtained by Al Mansour (2009) and Oyelere (2010) on the same country studied can be attributed to the differences in methodology employed, the number of firms studied or the year of collecting data.

More recently Agyei Mensah (2012) based his research on 35 companies listed in the Ghana Stock exchange for the year 2010 in order to study the major determinants of IFR in these companies. Results reveal that 77.14% of these companies have a web-site while 22.86 are devoid of it. A multiple regression analysis reveals that profitability and leverage are major determinants of IFR but firm's size, audit type and liquidity emerge as insignificant contributors. This shows that developing countries are also taking immense efforts in improving their disclosure levels.

A review of the above literature reveals that countries around the world, specifically the developing countries, are adopting IFR as a means of communicating company-specific details to the interested stakeholders in order to express their transparency in dealings. Also, studies show that companies practising corporate governance principles adopt IFR as a measure to reduce agency issues. Various common determinants of IFR such as firm size, profitability and shareholding structure have also been seen in the studies. However, a gap is noticed in the prior research in relation to factors analyzed as determinants of IFR. While the majority of the studies corner around firm size, profitability, leverage and ownership structure, none of the studies has considered dividends as a determinant of IFR. Also, there are very few studies which incorporate both firm specific and corporate governance variables together to analyze their join impact on IFR. There is also no study, to our best knowledge, that is completely devoted to the Emirate of Abu Dhabi. Identifying the above gaps in literature the study now proceeds to data collection and application of a suitable methodology.

3. Methodology

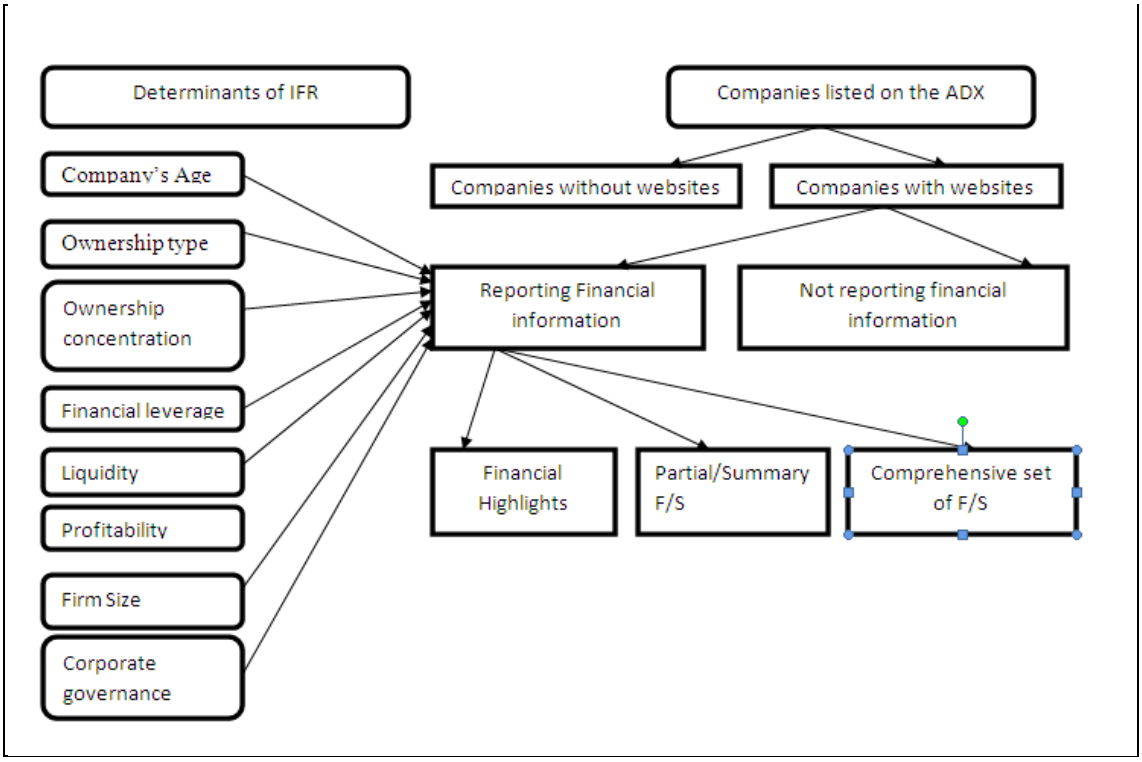
The population and sample of the study consist of all the 65 companies listed on the first market of the ADX, divided into ten (10) sectors based on the ADX classification, 14 companies (22%) in the banking sector, and 2 companies (3%) in the investment and financial service, 3(5%) companies in real estate, 15(23%) companies in the insurance sector, 2 (3%) in the energy sector, 13 (20%) in the industrial sector, 5 (8%) in the consumer and staples sector, 7 (11%) companies in the service sector, one (2%) debt instrument company and 3 (5%) telecommunication companies. Furthermore, UAE electronic search engines like www.gulfbase.com and www.sharewadi.comare used to gather information other than the www.adx.ae, the electronic site of the Abu Dhabi Stock exchange (ADX).

The researchers adopt the methodology used by Momany and Shorman (2006) and Oyler, Laswad and Fisher (2003) in order to decipher the extent of IFR in the sample studied. The researchers of the study searched the above mentioned global and UAE electronic sites as of 31 March 2012 to explore whether each company studied possesses a web-site or not as on that date. Based on the search results companies are classified into three types, 1) companies that possess web-sites and report financial information, 2)

companies that possess web-sites and do not report financial information and 3) companies that do not possess web-sites at all. A pictorial representation of the methodology used in shown in Figure1.

Companies that possess web-sites and report financial information are sub-classified into three categories; 1) companies that disclose comprehensive sets of financial statements, 2) companies that disclose partial statements or summary financial statements, and 3) companies that disclose financial highlights. Over and above analyzing the extent of IFR in the UAE, the researchers examine the effect of eight (8) selected characteristics on companies that report financial information on their web-site. These characteristics are size, profitability, liquidity, financial leverage, ownership concentration, type of ownership, corporate governance and company age. The variables which represent these characteristics will form our general model and the estimation technique adopted will be logistic regression analysis. Cross-sectional data will be used for arriving at the figures for the variables selected as proxies for the eight characteristics mentioned earlier. Cross-sectional data collect information on N units (companies, individuals, countries, etc) during a specific period of time (e.g., a specific year). The present study will analyze annual reports of companies as at 31 December 2010 as all companies disclosing financial information have posted their 2010 results on-line while 2011 results are yet to be released.

Figure 1: Research Methodology



3.1 Hypothesis Development

A review of prior studies and the eight characteristics of firms' to be investigated as determinants of IFR have resulted in several testable hypotheses. This section discusses the development of these hypotheses.

3.1.1 Return on Assets (ROA) and Earnings per Share (EPS)

A reviewer of previous studies can observe different and conflicting results related to the association between profitability and disclosure. In some studies, it is argued that profitable companies increase their disclosure to attract more potential investors, to maintain management continuation and rewards (Oyelre, 2010). However, results of other studies reveal that profitability is not a determinant factor of IFR (Momany and Shorman, 2006) and it can be related to firm performance that might serve as a proxy for information asymmetries between managers and investors (Wallace et. al, 1994).In the present study, profitability is proxied by two variables, namely, ROA and EPS. Based on the above arguments the following two hypotheses are developed to examine the association.

H1: There is a positive relationship between ROA and IFR.
H2: There is a positive relationship between EPS and IFR.

3.1.2 Quick Ratio (QR)

It is assumed that the use of IFR can convey a message about company solvency and prosperity (Oyelre et. al, 2003) which might mean that more liquid corporations have the ability to publish up-dated financial statements on a more developed and secured web-site that might encompass more tools and technologies. This leads to the following hypothesis.

***H3: There is a positive relationship between Quick Ratio (QR) and IFR*.**

3.1.3 Total Liabilities (LOGTL) and Debt to Total Assets(DA)

The current paper also relies on agency theory in explaining and examining the relationship between disclosure and leverage. It is argued that as leverage increases, managers and shareholders are more encouraged to increase disclosure and to provide additional information about firms' accomplishments (Oyelre et. al, 2003). This will help managers in controlling and reducing agency problems. Based on the former theory and prior studies this study also expects a positive relationship between leverage and voluntary disclosure and the hypothesis to be developed are as follows:

H4: There is a positive relationship between Total liabilities and IFR.
H5: There is a positive relationship between Debt to Total Assets and IFR

3.1.4 Age(LOGAGE)

We assume that younger corporations are not encouraged to use IFR as it is more difficult and competitive to hire employees who possess an excellent Know-how in information technology to develop web-sites and, therefore, to provide stockholders with the necessary information. However, senior companies can easily perform such activities and, therefore, let stockholders know that the entity is responsible and accountable towards them (Khan, 2006). Based on the above argument the following hypothesis is developed:

H6: There is a positive relationship between age and IFR.

3.1.5 Firm Size (LOGMCAP)

There is a number of studies that support a strong association between the size of company and IFR as larger companies need more information and data bases for controlling purposes (Oyelre, 2010). IFR provides more economies of scale and cost savings for larger firms (Mohamed and Oylere, 2008). Moreover, larger companies attract more suppliers, customers and analysts and therefore have a higher demand for information related to their activities (Wallace and Naser, 1995). These arguments lead to the development of the following hypothesis:

H7: There is a positive relationship between the size of corporations and IFR.

3.1.6 Government Shareholding (GOVT)

The Regulatory Capture Theory emphasizes the role of managers as a major influence on the regulatory agencies (Khan, 2006) and since regulatory agencies are usually governmental units this might reduce disclosure and negatively affect IFR. Therefore, it is assumed that the higher the percentage of shares owned by government, the lower the need for financial disclosure. Accordingly, we hypothesize the following:

H8: There is a negative relationship between the Government Shareholding (GOVT) and IFR.

3.1.7 Institutional Shareholding (INST)

Institutional shareholdings in a firm are assumed to reduce agency issues as they play a crucial role in monitoring the management from their self-serving attitude. Therefore, firms having institutional shareholdings are forced to be transparent in their dealings in order to attract more investment (Momany and Shorman, 2006). Based on the argument stated above and the results from prior studies the following hypothesis is developed:

H9: There is a positive relationship between the Institutional Shareholding (INST) and IFR.

3.1.8 Concentrated Shareholdings (SH>10%) and (SH>5%)

The upper echelon theory put forth by Hambrick and Mason(1984) suggests that managers perceptions affect the way a firm is managed. Therefore, in the present case, shareholders holding more than 5% and more than 10% of the total shares in an organization have the capacity to influence the decisions in the organizations. They prefer a low disclosure on firm specific details fearing an impending threat in the form of competitors. Concentrated shareholdings are proxied by two variables, namely, shareholders holding more than 5% of the shares and shareholders holding more than 10% of the shares. Based on the above arguments the following hypotheses are developed:

H10: There is a negative relationship between shareholders holding more than 10% of the shares and IFR

H11: There is a negative relationship between shareholders holding more than 5% of the shares and IFR

3.1.9 Audit Type (Big 4)

Agency theory suggests that the employment of qualified auditors will reduce the risk of fraudulent practices in a firm and thus reduce agency cost. Signaling theory, on the other hand, suggests that the employment of a member of the Big 4 auditors signals financial credibility of the firm due to the reliability of the reports generated. Kelton and Yang (2008) and Al-Shammari (2007) reported a positive relationship between audit type and IFR. Based on the above arguments and prior research the present study generates the following hypothesis:

H12: There is a positive relationship between audit type and IFR.

3.1.10 Dividend Payment (DPS)

Signaling theory suggests that a dividend payment signals a positive outlook about the firm to the stakeholders. At the same time echelons theory suggests that it is the management's decision whether to disclose information on certain aspects of the organization. There has been no study evaluating the impact of dividend payments on IFR. Dividend per share is taken as a proxy for dividend payments. Therefore, on the basis of the theories evolved and uncertainty in results the following hypothesis is developed:

H13: There is a positive/negative relationship between dividend payment and IFR

The following table will provide an overview of the variables used, definition of variables employed and the hypothesized sign.

Table 1: Summary of research hypotheses and proxy variables

Variables	Definition	Symbol	Expected sign
Independent variables			
Return on Assets	Net Income/Total Assets	ROA	H1(+)
Earnings per Share	Net Income/ Number of shares outstanding	EPS	H2(+)
Quick Ratio	Cash and cash equivalents/Current liabilities	QR	H3(+)
Total Liabilities	Logarithm of Total Liabilities	LOGTL	H4(+)
Debt to Assets	Total debt/Total Assets	DA	H5(+)
Firm Age	Log of age	LOG AGE	H6(-)
Firm Size	Log of market capitalization	LOG MCAP	H7(+)
Government shareholding	The % of shares held by the government	GOVT	H8(-)
Institutional Shareholding	The % of shares held by institutions	INST	H9(+)
Shareholders holding >10% shares	Number of shareholders holding >10% shares	SH>10%	H10(-)
Shareholders holding >than 5% shares	shareholders holding > 5% shares	SH>5%	H11(-)
Audit type	Dummy variable of 1 for big 4 and 0 otherwise	BIG4	H12(+)
Dividend payment	Dividends/ number of shares outstanding	DPS	H13(+/-)
Dependent variable			
Web Reports*	Dummy variable of 1 if company publishes web reports ,O otherwise	WR	

3.2 Estimation Technique

In Section 3 thirteen testable hypotheses with their expected signs have been formulated and these selected variables will thus constitute our general model to be tested in order to determine the main factors which affect the IFR in Abu Dhabi. Logistic regression analysis will be applied to the data as a method of estimation. Logistic regression is an approach which is suitable for analyzing a dependent variable that is dichotomous.A similar technique has been applied by Ghanem (2011), Almilia (2010) and Al Shammari (2007) in their studies related to IFR. The usage of this technique also differentiates the current paper from prior studies evolved in the UAE. To correct for any possible heteroscedasticity, we run the logistic regressions with robust standard errors. The regression results will be obtained using a statistical package, namely, STATA 12. Several diagnostic tests such as correlation statistics and variance inflation factor techniques will be employed to ascertain the degree of collinearity among the variables. The general model intended to be employed in our study to test the alternate hypothesis can be specified as follows.

$$WR = \gamma_0 + \gamma_1 ROA_i + \gamma_2 EPS_i + \gamma_3 QR_i + \gamma_4 LOGTL_i + \gamma_5 DA_i + \gamma_6 LOGAGE_i + \gamma_7 LOGMCAP_i + \gamma_8 GOVT_i + \gamma_9 INST_i + \gamma_{10} SH - 10\%_i + \gamma_{11} SH - 5\%_i + \gamma_{12} BIG4_i + \gamma_{13} DPS_i + \varepsilon_{it}$$

Where: WR refers to Web Reports which represent the extent of IFR, and is proxied by dummy variables of 1 and 0 according to the un-weighted approach [1 &2], i refers to the firms, $\gamma_0$is the constant, ϵ_{it} is the error term and the variables already explained in Section 3.1.

4. Empirical Results, Analysis and Findings

The present study evaluates 65 companies listed in the ADX during 2012 to analyze the extent of IFR and utilizes annual reports as at 31 December 2010. Data for the same were collected from financial statements taken from the ADX. According to the research design developed the companies studied are first classified as those having a web-site and vice versa. The results for the same are shown in Table 2. The results reveal that all companies in the banking, real estate, energy and telecommunication sectors have their own web-sites. However, fourteen out of the fifteen insurance companies (93%) have web-sites, six out of seven service companies(86%) have web-sites, eleven out of thirteen companies in the industry sector (85%) have their own web-sites, four out of five in the consumer staple (80%) have web-sites, one out of the two companies in the investment and finance sector (50%) have web-sites and there is no web-site for the only company in the debt instruments sector.

Thus, this shows that fifty-eight companies out of the sixty-five listed companies in the ADX (about 89%) have web-sites and seven out of sixty-five(11%) do not have web-sites. The results further justify the reports released by TNI (2008) regarding Abu Dhabi's dominant role in corporate communication in the GCC. This reveals significant improvement in the percentage of ADX listed companies that possess web-sites (89%) when compared with (67%) found in a recent study conducted in (2010) about UAE companies by Oyelere (2010).

Table 2: Industrial classification of companies with/without websites

Industry	Total Number of companies	Companies with Website	% of industries	Companies without website	% of industries
Banking	14	14	100%	0	0
Investment and finance	2	1	50%	1	50%
Real Estate	3	3	100%	0	0
Insurance	15	14	93%	1	7%
Energy	2	2	100%	0	0
Industry	13	11	85%	2	15%
Consumer staple	5	4	80%	1	20%
Services	7	6	86%	1	14%
Debt instruments	1	0	0	1	100%
Telecommunication	3	3	100%	0	0
Total	65	58	89%	7	11%

Table 3 presents the results of the next level of classification as per our research design which classifies the web-site-based companies as those distributing financial information and those who do not do the same. Results reveal that thirty-five companies out of fifty-eight (60%) of the ADX-listed companies have financial information on their web-sites; while 23 out of 58 (40%) do not disclose financial information on their web-sites. Companies in four sectors, investment and finance, real estate, energy and telecommunication, received 100% in presenting financial information on their web-sites. The banking sector got the second highest proportion in presenting financial information on their web-sites with 93%, followed by 50% in both the insurance and service sectors, 25% in the consumer staple and 18% in the industrial sectors. It could be observed that most companies that have web-sites tend to present their financial information on their web-sites. This result is consistent with the findings of Momany and Shorman (2006).

Table 3: Classification of companies with websites disclosing/not disclosing financial information

Industry	Number of website companies	Website and financial information	% of industries	Website and Non-financial information	%of industries
Banking	14	13	93%	1	7%
Investment and finance	1	1	100%	0	0
Real Estate	3	3	100%	0	0
Insurance	14	7	50%	7	50%
Energy	2	2	100%	0	0
Industry	11	2	18%	9	82%
Consumer staple	4	1	25%	3	75%
Services	6	3	50%	3	50%
Debt instruments	0	0	0	0	0
Telecommunication	3	3	100%	0	0
Total	58	35	60%	23	40%

Table 4 presents the final set of information as set out in our research design which centres around the type of financial information provided on the web-sites of the financial-information companies. The majority of those companies 91% (32 out of 35) provide a comprehensive set of financial statements, 9% (3 out of 35) provide partial or summary financial statements, while none of those companies provide financial highlights which represents the minimum level of disclosure. One among the companies that provide partial or summary financial statements is in the banking sector while the remaining two are from the insurance sector. This result shows significant improvement in the type of financial information provided on the web-sites of financial-information companies when compared with (67%) in the 2010 study conducted about the UAE by Oyelere (2010). This might indicate that IFR is becoming relatively common practice among ADX listed companies.

When compared with other regional markets, the types of financial information provided on the web-sites of the financial-information companies in the ADX is better than the Oyeler and Mohammed (2007) findings in Oman and Bahrain in which they have found that 77% of the firms provide both annual reports and additional financial highlights while

23% firms provide only financial highlights. The results are also better than Momany and Shorman's (2006) findings that (31.5%) report comprehensive sets of financial statements, (15.8%) report partial or summary financial statements while (52.7%) report only financial highlights. Although, the majority of the ADX firms provide comprehensive sets of financial statements (91%) on their web-sites, there is still room for improvement to reach the advanced western economies' levels.

Table 4: Classification of financial information on companies with websites

Industry	Number of website co's	Full set of comprehensive data	% of web site co's	Partial/ summary	% of web site co's	Highlights
Banking	13	12	92%	1	8%	0
Investment and finance	1	1	100%	0	0	0
Real Estate	3	3	100%	0	0	0
Insurance	7	5	71%	2	29%	0
Energy	2	2	100%	0	0	0
Industry	2	2	100%	0	0	0
Consumer staple	1	1	100%	0	0	0
Services	3	3	100%	0	0	0
Telecommunication	3	3	100%	0	0	0
Total	35	32	91%	3	9%	0

The analysis now focuses on the main determinants influencing the IFR in the UAE. The summary statistics shown in Table 5 reveal the mean, standard deviation, minimum and maximum values of the dependent and independent variables, respectively. The mean value for web reports (0.58) reveals that more than half of the companies publish their reports on-line. This suggests that strenuous efforts ought to be taken to make the percentage higher and at par with the other neighbouring and western countries. The results also support the extent and rising popularity of IFR in Abu Dhabi companies. The mean values for ROA are 0.034 and this is relatively a low figure to reflect the average return on assets. This can be attributed to the impact of the global financial crisis which hit the world economies by the end of 2007. Another interesting result is related to the EPS which shows a mean value of 0.79 with a minimum of -4.39 and maximum of 19.86. The average is again not a significant figure and the negative values further document the decline in earnings due to the crisis mentioned earlier. The average DA is 0.54 which means that 54% of the company's assets are financed through debt and the remainder from equity. This suggests the extent of reliance on debt to finance assets but it is worth noticing a deviation from the excessive reliance on debt as it was during previous years. Results also show a wide variation in the minimum and maximum values of log of market capitalization and this suggests that there exists a wide gap in the size of firms studied. The mean values for GOVT and INST are 0.10 and 0.24, respectively. This means that the average percentage of shareholdings by governments in invested firms is nearly 10% and the average percentage of shareholdings by institutions in related firms is approximately 29%. As far as major ownership concentration is concerned the average

values for shareholders holding more than 10% shares and more than 5% shares in companies are 1.68 and 3.25, respectively. The mean result for Big 4 is also worth considering as it reveals that nearly 80% of the listed companies in Abu Dhabi have a member of the Big 4 as their external auditors. This suggests that these companies have already taken a step forward in employing reliable and professional people in auditing and scrutinizing the financial statements. It is also noteworthy to study the results for DPS as the mean value is 0.47 with a minimum of 0 and maximum of 9.91. This suggests a wide variation in the dividend distribution adopted by various firms.

Table 5: Summary Statistics

Variable	Obs	Mean	Std. Dev.	Min	Max
WR	65	0.5846	0.4966	0.0000	1.0000
ROA	64	0.0342	0. 0618	-0.2673	0.2522
EPS	62 .	0.7999	2.8939	-4.3900	19.8600
QR	64	0.5713	1.2530	-0.0760	9.4540
LOG TL	64	9.1093	1.0855	7.0000	11.0000
DA	64	0.5473	0.3432	0.0100	2.0400
LOG AGE	65	1.2062	0 .4088	0.1760	1.6280
LOG MCAP	60	7.6831	1.3260	3.1700	9.8940
GOVT	65	0.1021	0.2052	0.0000	0.8720
INST	65	0.2924	0.2491	0.0000	0.9570
SH-10%	64	1.6875	0.9738	0.0000	5.0000
SH-5%	64	3.2500	1.6714	0.0000	7.0000
BIG 4	64	0.7968	0.4055	0.0000	1.0000
DPS	64	0.4722	1.6030	0.0000	9.9100

4.1 Correlation and Multi-collinearity

To detect multi-collinearity, the researchers found that there are low inter-correlations among the explanatory variables used in the regressions which indicate no reason to suspect serious multi-collinearity. Moreover, aVariance Inflation Factor (VIF) test is conducted to check further the extent of multi-collinearity among the independent variables and results reveal a mean VIF of 1.97 which is very small(less than 10, the rule of thumb) thus indicating absence of any multi-collinearity[3&4&5].

4.2 Results of Regression

A logistic regression is applied to the data collected to estimate the results and infer the main determinants affecting IFR in the UAE. It is to be noted that the conventional measure of goodness of fit (R^2) is not particularly meaningful in binary regression models. The pseudo R^2 reported in logistic regression also shares a low level of importance. Gujarati and Sangeeta (2011) document that in binary regression models, the goodness

of fit is of secondary importance but the expected signs of the regression coefficients and their statistical significance should be considered with great priority. However, the p-value of the Wald chi2 test also shows significance at the 1% level and this leads to the rejection of null hypothesis which states that all the coefficients of variables are jointly equal to zero. The results of the regression are shown in Table 6.

Table 6: Results of Logistic Regression

Variable	Coefficient	P-Value
ROA	-54.99	0.000***
LOGTL	-0.954	0.214
LOGAGE	-2.596	0.100*
GOVT	-0.431	0.805
INST	1.565	0.384
SH>10%	-1.150	0.079*
SH>5%	0.022	0.970
BIG4	2.676	0.049*
EPS	2.680	0.007***
DA	4.043	0.100*
LOGMCAP	0.9012	0.074*
DPS	-0.795	0.005***
QR	-0.431	0.079*
Pseudo R^2	0.5313	
P> chi2	0.007	

Notes ***, **, *denotes statistical significance at the 1%, 5% and 10% levels, respectively.

The logistic regression performed on thirteen variables first of all reveals that the regression model is significant at the 5 percent level (p<0.05).The coefficient of variation (β)which explains the direction of variability is positive for INST, Big 4, EPS, DA, SH>5% and LOGMCAP. This means that there is a positive or direct relationship among these variables and IFR. However, of these only EPS shows significance at the 1% level. Audit type proxied by BIG 4 shows significance at the 5% level and debt ratio exhibits a mild significance at the 10% level. Big 4 as the company's auditors and favourable EPS act as fundamental determinants of web reporting. This suggests that firms employing Big 4 auditors have solid business fundamentals and urge the necessity to report on-line. Favourable EPS reveals the profitability of the company and, moreover, EPS is considered by most investors to be the single most important metric to use when evaluating a stock. Therefore, companies with a higher EPS tend to disclose their results on-line in order to attract stakeholders' confidence. Firm size shows a positive but a mild impact on the IFR practices. This suggests that the impact of firm size is very mild on IFR in the current scenario as every company, whether big or small, finds it mandatory to publish their results on-line in order to gain public support and avoid regulatory interventions. The DA shows a positive and mild significance at the 10% level and the positive relationship is consistent with agency theory which argues that firms employing debt tend to disclose results in order to avoid potential agency conflicts.

The coefficient of variation is negative for some variables, namely, ROA, LOG TL, LOG AGE, GOVT, SH-10%, DPS and QR. Of these ROA and DPS show a high degree of significance at the 1% level. LogAGE and QR report a mild significance at the 10% level. It is worth noting that all the variables (GOVT, SH-10%) which represent ownership structure and concentrated shareholdings show an element of insignificance in the p-values. INST, although showing a positive relation as reported earlier, also shows a high degree of insignificance. This suggests that neither shareholding structure nor concentrated shareholdings act as significant determinants for IFR.

As we compare the actual results with our hypothesized signs for these variables in Table 1 we can find that the positive relationship has proved to be consistent with all the variables except ROA and QR. A positive relationship was expected from these two variables. However, this negativity can be explained in the context of management's decision not to reveal the positive returns and favourable liquidity position forecasting a surge in demand of dividends from the stakeholders. Fear of potential entrants into the industry due to high returns can also be a factor dissuading the companies from reporting their financial results. The other side of the coin is that when the liquidity position or ROA is low, this will prompt the companies to disclose their results in order to make the request for additional funds genuine and to avert potential failures which can be detrimental to the stakeholders in future.

As far as DPS is concerned we assumed a positive or negative sign from the beginning and the result emerging from the current study is a highly significant (p<0.01) negative relationship with IFR. This suggests that dividend paying companies prefer to keep a low profile in the industrial arena either to mask their abnormal profits or to avoid competitors in the same field. Therefore, the overall results suggest that a firm's profitability (proxied by ROA and EPS) has significant impact on IFR in Abu Dhabi. Also, firms' leverage positions (proxied by LOG TL and DA) have significant impact on the extent of IFR in Abu Dhabi. Firm age (proxied by LOGAGE) has also emerged as a mild determinant of IFR practices in Abu Dhabi listed companies. These are once again consistent with the results obtained by Momany and Shorman (2006).

Firm's corporate governance mechanisms (proxied by BIG 4 and DPS) also act as constitutional drivers of IFR in the Emirate. The positive and significant presence of Big 4 in affecting the extent of IFR has also been discussed by Al Shammari (2007) Meanwhile, a firm's shareholding structure (proxied by GOVT and INST) and concentrated ownership (proxied by SHARE> $10\%, \mathrm{SHARE} > 5\%$) exhibits no significance as determinants of IFR. These results also prove to be consistent with the findings of Celik et al. (2006). Firm size (proxied by LOGMCAP) has emerged as a mild determinant of IFR in the Abu Dhabi context. These results are consistent with the results obtained by Momany and Shorman (2006) but inconsistent with the findings of Marston (2003) and Agyei Mensah (2012). Finally, the liquidity positions of companies (proxied by QR) have emerged as mild determinants of IFR in the Emirate of Abu Dhabi.

5. Summary and Conclusions

The focal point of this study is to survey the practice of IFR among United Arab Emirates companies listed on the Abu Dhabi Securities Exchange (ADX). The findings show that about 89% of the companies have web-sites and 11% do not have web-sites. This percentage is higher than the percentages found by other researchers in other Middle East markets like Istanbul (87.75% in 2006), Bahrain (80% in 2007), Muscat (59% in 2007) and Jordan (45% in 2006). Companies in four sectors, namely, investment and finance, real estate, energy and telecommunications secured a 100% rate in presenting financial information on their web-sites. The banking sector attained the second highest proportion in presenting financial information on their web-sites, followed by the insurance and service sectors, consumer staple and the industrial sectors. This might indicate that IFR is becoming relatively common practice among ADX listed companies.

The results show that the majority of the financial-information companies (91%) provide a comprehensive set of financial statements while 9% provide partial or summary financial statements.

The findings of the study show direct relationships between IFR and 6 variables which are INST, SH>5%, Big 4, EPS, DA and LOGMCAP. However, of these only EPS shows significance at the 1% level while the Big4 reveals significance at the 5% level.

The findings of the study show negative relationships among 7 variables, namely, ROA, LOG TL, LOG AGE, GOVT, SH>10%, DPS, QR and IFR. Of these, ROA and DPS have emerged as highly significant determinants at the 1% level. Firm age has also emerged as a mild determinant of IFR practices in Abu Dhabi listed companies. A firm's shareholding structure and concentrated ownership exhibit no significance as determinants of IFR.

6. Limitations and Recommendations

The present study encountered certain limitations such as limitation in the size of the sample collected as the companies only included those listed in ADX. The inclusion of dummy variables as proxies for the independent variable Web Reports (WR) can disturb the efficacy of results. Non-inclusion of variables which act as determinants of IFR can also pose errors in results. Considering the above limitations it is recommended to include the companies listed in Dubai Stock Exchange in order to get a comprehensive result regarding determinants of IFR in the whole of UAE. Since logistic regression requires a large sample size, the small sample size can cause variations in results obtained. Disadvantages related to cross-sectional data can also intrude the scene and distort the results obtained. It is also suggested to calculate an index to quantify the existence of IFR. Several other variables of corporate governance such as board size and the existence of corporate social responsibility can also be considered as determinants of IFR.

Endnotes

1.The un weighted approach is a common method of scoring items and assigns "1" if disclosure exists and "0" if not. This approach has also been employed by Wallace (1988) and Cooke (1998) in their studies related to IFR.
2.Dummy variables of 1 and 0 was also employed by Al Shammari (2007) and Agyei Mensah (2012) as a proxy for the independent variable namely web reports.
3. As a rule of thumb, if one of the individual VIFs is greater than 10, there is an indication of a multi-collinearity problem (Gujarati, 1995,pp.339).
4.The VIF can be defined as: $VIF(B\hat{}\ ) 1/(1\ R\ 2\ )\ i = -\ i$, where $R^2 i$is the squared multiple correlation coefficient between *xi* and the other explanatory variables (see Maddala, 2001, p.272). The minimum value of VIF is one, where R^2 is equal to zero.
5. The correlation matrix and VIF tables are available from the authors upon request.

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