

# INTERNET FINANCIAL REPORTING AND DISCLOSURE BY LISTED COMPANIES: FURTHER EVIDENCE FROM AN EMERGING COUNTRY

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## Abstract

This paper examines the extent of voluntary financial and non-financial information disclosed on the Internet by an emerging country like Qatar. We tested research hypotheses related to the association between company characteristics and the voluntary dissemination of financial and non-financial information on the Internet based on industry type. A total of 42 companies which are listed on the Qatar Exchange (the only stock Exchange in Qatar) were sampled. An ordinary least regression was undertaken to assess whether voluntary dissemination of information on the Internet was related to firm age, size, profitability, complexity, assets in place, and liquidity. Firm size, assets in-place, and business complexity are variables which are significant in explaining the level of internet financial reporting disclosure, whereas age, profitability, and liquidity are not significant.

**Keywords:** Internet, Financial Reporting, Voluntary Disclosure, Emerging Country, Qatar

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## 1 Introduction

The Internet has become an increasingly important means of communication (Jones and Xiao, 2004), and the rapid and widespread adoption of Web-based financial and business reporting has captured the interest of the accounting profession in several parts of the world (Debreceeny et al., 2001). In accounting, the Internet provides a potentially revolutionary method of financial communication as it is cheap, and increasingly accessible to shareholders and other stockholders (Johnes and Xiao, 2004). Moreover, the growth of the Internet provides companies with the opportunity to "disseminate information to a very wide audience of shareholders, potential investors, and other constituents economically, quickly, and in an undiluted fashion" (Antin and Haas, 2001, p. 21). In addition, a web site may reach a wider audience and present more detailed information than what is possible with traditional printed materials (Kaplan, 1996). Thus, companies are currently moving away from the traditional way of disseminating financial and non-financial information in the hard copy of the annual<sup>10</sup> report to Internet reporting (Xiao et al., 2004).

It is undoubtedly true that companies seem to enjoy primarily a less restrictive space, which allows them to: (1) make available a broad and deep range of information, (2) make information accessible 24 hours a day from any online computer terminal anywhere in the world, and (3) reach an audience of millions within seconds (Xiao, et al., 2005; Jones et al., 1999). Recognising these favourable reporting environments, international organisations such as the American Institute of CPAs

(AICPA), the Canadian Institute of Chartered Accountants (CICA), the Institute of Chartered Accountants in England and Wales (ICAEW), the Accounting Standards Board (ASB) in the UK, and the International Accounting Standard Committee (IASC) are all conducting international research or sponsoring policy initiatives on Web-based reporting (CICA, 1999; IASC, 1999; FASB, 20001).

Several studies on the determinants of Internet Financial Reporting (IFR) have been conducted, mostly in the developed countries including USA, the UK, the European Union countries, Australia, New Zealand, Japan, Canada, and a few studies have been undertaken in Asia as well as in the Middle East region (for examples see, Ashbauph et al., [1999]0 for the USA; Craven, and Marston [1999] for the UK;

<sup>10</sup> For example, in February 1998, the Financial Accounting Standards Board (FASB) undertook a research project to consider the types of information that should be provided to investors. One aspect of the project was to study the

"present systems for delivery of information electronically and considering the implications for business reporting."

Oyelere et al. [2003] for New Zealand; Marston [2003] for Japan; Lodhia et al. [2004] for Australia; Bonson and Escobar [2006] for Eastern Europe; Bonson and Escobar [2002] for the EU; Xiao et al. [2004] for China; Hamid [2005] for Malaysia; Al-Jaber and Mohamed [2003] for Egypt, Saudi Arabia, and Kuwait; Al-Shammari [2007] for Kuwait; Aly [2008] for Egypt; Mohamed et al. [2009] for Oman; and Mohamed [2010] for the GCC countries). To date, no empirical study on IFR has been undertaken in Qatar. Qatar is termed as the fastest growing economy in the Gulf Co-operation Council (GCC)<sup>11</sup> region with the highest GDP in the world ([www.qe.com.qa](http://www.qe.com.qa)). Moreover, The Economist has predicted that economic growth in Qatar will be one of the highest in 2010, ahead of leading emerging economies such as China and India (The Economist, 2009). Qatar is currently the highest rated GCC country (AA), and has an "A" rating from Capital Intelligence, Moody's, and Standard and

Poor's (Qatar Economic Review, 2010). According to Standard & Poor's Ratings Services, the decision by FIFA to award the 2022 World Cup to Qatar (AA/Stable/A-1+) will have a significant impact on the country's economic and financial future (<http://www.ameinfo.com>). We select Qatar based on its rapid economic growth, the magnitude of social changes, and the level of internationalisation of business activities within the GCC. Social transformation in Qatar is driven by the recent expansion of the capital city Doha of Qatar as an international education city, which includes the establishment of many branches of reputable UK, and USA universities. The Qatar Foundation<sup>12</sup> was established in 1995 by His Highness Sheikh Hamad Bin Khalifa Al Thani, Emir of Qatar, and Qatar Foundation's flagship project is the Education City which set out to be an asset not just for Qatar but for the entire Middle East region and beyond. Already it touches communities and individuals well beyond the country's borders ([www.qf.org.qa](http://www.qf.org.qa)). In this paper we specifically focus on this fast developing region because we believe that compared to other countries Gulf regions that are developing rapidly in economic terms are keen to adopt new technologies, and offer incentives to companies to switch to Web-based reporting or IFR rather than remaining with the traditional way of business reporting.

Given the above circumstances, which justify an exploration of IFR and disclosure in Qatari companies, the following objectives are set for the paper:

1. to examine the extent of voluntary IFR practices in Qatar; and
2. to examine the factors affecting the IFR practices.

## 2 The Environment of Corporate Reporting in Qatar

Qatar is an independent and sovereign state situated in the middle of the western coast of the Arabian Gulf, having a land and maritime boundary with Saudi Arabia, and also maritime boundaries with Bahrain, United Arab Emirates (UAE), and Iran. Qatar's nominal GDP growth averaged a stunning 27.2% over the five years from 2005 to 2009 (Qatar Economic Review, 2010). The main drivers for this rapid growth come from the ongoing increase in production and exports of LNG, oil, petrochemicals and related industries, coupled with high product prices. Moreover, economic diversification has become the cornerstone of the Qatari economy with the Non-Oil and Gas sector overtaking the Oil and Gas sector for the first time in 2009, and also with the Gas sector overtaking oil as the single largest contributor to the economy (Qatar Economic Review, 2010). The Non-Oil and Gas sector accounted for 53.8% of overall Gross Domestic Product (GDP) in 2009, with the Gas sector accounting for 24.5%, and the Oil sector accounting for 21.7% of overall GDP (Qatar Statistics Authority, [www.qsa.gov.qa](http://www.qsa.gov.qa)).

While the economy in Qatar has rapidly grown, the accounting system has remained at the infant stage, for example, Qatar has not established its own Accounting Standards (ASs). However, the increasing number of foreign banks that voluntarily use International Accounting Standards (IASs) led the Qatar Central Bank (QCB) to require all banks (foreign and national) to adopt IASs (Qatar Central Bank Annual Report, 2004). In a Central Bank of Qatar circular in 1999 [Circular No. 27 of 1999 issued on 19 February 1999] it states that every bank and investment and finance company must adopt IASs with effect from January 1, 1992.

Qatar has only one stock exchange, the Qatar Exchange and that operates as an independent government entity. The Qatar Exchange (QE) supports the country's economy by protecting accredited and non-accredited investors by providing fair, orderly, efficient and facilitated trading, providing access to information for the public, overseeing key participants in the securities world, ensuring correct disclosure of vital information, and enforcing the securities law.

In Qatar, both company law and securities market law govern corporate financial reporting by listed companies on the QE. Company Law No. 11 of 1981, Doha Securities Market Law No. 14 of 1995, Commercial Companies Law No. (5) of 2002, and Qatar Central Bank Law No. 33 of 2006 are four important statutes in respect of financial reporting.

<sup>11</sup> Other countries are the United Arab Emirates (UAE), Saudi Arabia, Kuwait, and Bahrain.

<sup>12</sup> The Qatar Foundation has created an environment for the Education City by accommodating several universities around the world and allowing them to open their education platform in Qatar.

Article (119) of the Law No (5) of 2002 states that the board of directors will prepare annually, the balance sheet, loss and profit accounts, cash flow statements and explanations in respect of the previous fiscal year, all of them attested by the accounts auditor; a report about the activity of the company, its financial position during the previous fiscal year, and the plan for the coming year. The board will prepare these statements and documents within a maximum of three months after the expiry of the company's fiscal year for submission to the general assembly of the shareholders which must be held within a maximum of four months from the expiry of the company's fiscal year.

On the other hand, Article (77) of Qatar Central Bank Law No (33) of the Year 2006, states that the financial institution shall submit its balance sheet, profit and loss account and profit distribution account to the Bank for approval before submitting it to the general assembly. The submission should be in accordance with the forms specified by the Bank and certified by the auditors. The financial institution shall submit the notes and remarks of the Bank to the general assembly.

Apart from the regulations for financial reporting in Qatar, there are some specific features existing in Qatar which indicate a healthy and growing financial environment. For example, the authorities launched the Qatar Financial Centre (QFC) in 2005 with the main objective of attracting top firms in finance, energy, tourism, transportation, health, and education to increase Qatar's integration into the global economy ([www.qfc.com.qa](http://www.qfc.com.qa)). At year-end 2006, among the 33 firms licensed by the QFC, about ten were foreign banks mainly active in project finance and wealth management ([www.qfcra.com/about/index.php](http://www.qfcra.com/about/index.php)). The banking system in Qatar is the third largest after Bahrain and the UAE, with assets around 94% of GDP at end-2008. The sector is highly concentrated with the three largest local banks (Qatar National Bank, Commercial Bank of Qatar, and Doha Bank) accounting for close to 70% of total assets (Hassan et al., 2010). Moreover, Qatari banks are enjoying stellar financial performance, solid capitalisation, and good asset quality.

### 3 Literature Review

In the previous section (i.e. introduction) we have mentioned that a number of empirical research studies have been conducted to survey corporate financial reporting on the internet in the developed and developing countries, including in the Middle East region. A detailed summary of the literature review in chronological order of the year of study is provided in Appendix 1. However, as a snapshot of the studies in different countries, the author(s), year of study and country involved is mentioned here. These include Craven and Marston (1999) and Gowthroe (2004) –

UK; Deller et al. (1999) - US, UK and Germany; Gowthorpe and Amat (1999) – Spain; Hedlin (1999) – Sweden; Lymer et al. (1999) - International Comparison; Pirchegger and Wagenhofer (1999) - Austria and Germany; Marston and Polei (2004) – Germany; Trites (1999) - US and Canada; Oyelere et al. (2003), Fisher et al. (2004) and Laswad et al. (2005) - New Zealand; Marston (2003) – Japan; Xiao et al. (2004) – China; Smith and Peppard (2005) – Ireland; Khadaroo (2005b) – Malaysia; Chan and Wickramasinghe (2006) – Australia; Ismail (2002) - the GCC countries; Al-Shammari (2007, 2008) - Kuwait; Mohamed et al. (2009) - Oman; and Mohamed (2010) - Oman and Bahrain. We discuss studies about the determinants of IFR within the following two categories: studies in developed and developing countries, and then studies in the GCC countries.

#### 3.1 Studies in the Developed and Developing Countries

A number of empirical research studies have been conducted to survey the corporate financial reporting via the Internet in different developed countries. Amongst these are those undertaken by Lymer (1999); Ashbaugh et al. (1999); Deller et al. (1999); Craven and Marston (1999); Ponte et al. (2000); Brennan and Hourigan (2000); Debreceeny et al. (2001, 2002); Debreceeny and Gray (1999); Ismail (2002); Eteredge et al. (2001, 2002); Marston (2003); Al-Jaber and Mohamed (2003); Fisher et al. (2004); Jones and Xaio (2004); Laswad et al. (2005); Khadaroo (2005a, 2005b); Hodge and Pronk (2006); Chan and Wickramasinghe (2006); Al-Shammari (2007, 2008); Abdelsalam and Street (2007); Pendley and Rai (2008); Mohamed et al. (2009); Aly et al. (2010); Mohamed (2010). Most of these studies are descriptive in nature. They discuss issues such as the number of companies with websites that publish financial information on the Web, the extent of financial reporting on the Internet, the investor relations, and the forms and means of financial information on the Web. In addition, research on financial reporting on the internet has included research efforts aiming at a descriptive account of corporate practices on this issue as well as papers considering the problem from an explanatory perspective, employing well-known analytical tools from the rest of the disclosure literature, and making use of insight provided by studies on the use of the Internet to meet corporate organisational needs (Andrikopoulos and Nikolaos, 2007). Recent studies have also examined the association between corporate governance and IFR practices (Abdelsalam and Street, 2007; Kelton and Yang, 2008).

The first attempts to study accounting disclosure on the Internet were by Petravick and Gillet (1996) and US companies were the first to make their complete financial reports available on the Internet.

Petravick and Gillett (1996) reported that 31% of US listed companies provided their financial report via the Internet in 1995. Another study by Ashbaugh et al. (1999) showed that 87% of the 290 firms they surveyed had established websites. These studies were followed by others considering the situation in other countries. For example, Craven and Marston (1999) studied the UK, finding that 33% of UK companies made their report available on online. In the same year, Deller et al. (1999) reported 46% of German companies placing their reports on the Internet. Many other studies began to explore the nature of the information provided in IFR. For example, Debreceeny and Gray (1999) surveyed 45 large listed companies in the UK, France and Germany. They found that 44 of them had a website; 36 of them published their annual financial statements on their websites; 10 of the 17 corporations reporting information in HTML included the auditors' report on their website; none of these reports linked back to the auditors' own site, and none included a scan of the auditor's "signature"; and four of the HTML-based auditors' reports had hypertext links to other locations within the financial statements. Lymer et al. (1999) showed that the company balance sheet was presented online by 77% of Canadian firms. Deller et al. (1999) also reported that while press releases were provided by 80% of US companies, 65% of UK companies and 61% of German companies, financial calendars were more rarely provided (e.g. 8% for US companies) on online. Barac (2004) reported that 86% of South African companies provided a detailed annual report and 81% had an auditor's report. Marston and Polei (2004) studied 100 companies in Germany, finding that all had websites and that 89% provided their full annual report on those sites. Xiao and Chow (2004) surveyed the use of Internet for disseminating financial information by 300 large, listed Chinese companies. Their study reported that 68% (203) of the companies had websites, and only 71% (144) of those disclosed financial information on their websites. Fisher et al. (2004) surveyed the Internet reporting practices of 210 listed companies in New Zealand with the result that only 188 had websites; 131 companies provided some financial information on those websites; 128 provided audit reports; 101 included the auditors' signatures; 1 had a hyperlink "from" the audit report to other locations within the website (Pike and Lanis, 2003) and 11 had a hyperlink "to" the audit report from other locations within the website (Hodge, 2001).

Another flow of research has concentrated on the association between corporation characteristics and IFR, but the results of the studies undertaken in this area are not conclusive. Xiao and Chow (2004) found company size to be positively associated with IFR, and profitability to be negatively associated with IFR in China. Additionally, the auditor and the industry were also significant. However, Allam and Lymer (2003), in a survey of 250 companies from the USA,

the UK, Canada, Australia and Hong Kong, found no significant relationship between the size and the IFR level in any of the five countries with the exception of Australia. Marston (2003) surveyed the extent of financial disclosure on the Internet by 99 leading Japanese companies in 1998. The study found that 79% (69) of the companies disclosed financial information on their websites but reported no association between IFR and any of the independent variables examined.

### **3.2 Studies in the GCC Countries**

Studies in IFR in the Gulf region countries are limited and descriptive in nature. The research by Mohamed (2010) attempts to add to the literature on IFR by providing evidence of IFR practices in Oman and Bahrain, after investigation the 142 companies listed on the Muscat Securities Market (MSM) and the 51 companies listed on the Bahrain Stock Exchange (BSE) to ascertain whether they maintained websites and/or if these sites were used for communicating financial information. The study reveals that only 124 of the listed companies on both markets were found to operate websites, with even less (only 63) provided IFR, thereby demonstrating that IFR is still at an embryonic stage in Oman and Bahrain, and that there are many opportunities and challenges for all stakeholder parties in corporate reporting. Mohamed et al. (2009) investigate and report on the extent and nature of internet reporting (IR) among companies listed on the MSM in Oman. The findings of that study reveal a seemingly limited use of the internet for financial reporting purposes in Oman, showing that only 84 (59%) companies maintain websites listed on the Omani stock market. It appears that despite the growing use of the internet as a medium for the dissemination of corporate information in other regions and countries of the world, many companies either do not have a corporate website, or are not using their websites to disseminate such information.

In a study conducted by Al-Shammari (2007) the use of the Internet for disseminating financial reporting by companies listed on the Kuwait Stock Exchange in 2005, was investigated. The study examined the determinants of IFR, reporting that 77% (110 of the 143 companies) had websites and 70% (77) disseminated financial reporting information on those sites. Logit analysis indicated that the use of IFR by listed companies in Kuwait could be predicted based on company size, liquidity, auditor, and industry. Larger companies with lower levels of liquidity that were audited by local auditing firms affiliated with the Big Four international audit firms were more likely to engage in IFR. In addition, insurance companies were more likely to engage in IFR than other industries.

Al-Jaber and Mohamed (2003) carried out a comparison study of IFR in three of the region's

countries (Egypt, Saudi Arabia and Kuwait), revealing some variations among the three countries. They reported that Kuwaiti companies were better in utilising the internet for reporting financial information, while Saudi and Egyptian companies came second and third respectively. Their conclusion was that regional companies were still behind in using the Internet to report their financial information, in comparison to western countries.

Ismail (2002) examined the extent of financial information disclosed on the Internet by the Gulf Cooperation Council (GCC) countries, taking a cross-section of all 128 companies listed on the stock exchanges of the selected GCC countries as the sample. Using this data, a method of hierarchical forward stepwise in logistic regression was undertaken to assess whether voluntary dissemination of financial information on the Internet was related to firm size, leverage, and profitability. The findings revealed that the probability of a firm to publish financial information on the Internet does not only depend on individual characteristics, but on a combination of interaction effects among firm characteristics (size, leverage, and profitability), industry type, and country.

#### 4 Theoretical Framework

There are few studies on IFR that use a theoretical framework to explain the motivations for disclosure in this way (Aly, 2008). We employed Diffusion of Innovation theory (DOI) by Rogers (1962) to explain our findings in Qatar. However, we did not test all the variables (such as, contextual variables) that may also influence IFR practices. Rather, we examined organisational variables that determine the extent of IFR in Qatar.

##### 4.1 Diffusion of Innovation Theory (DOI)

Rogers (1962) socio-psychological/sociological theory of Diffusion of Innovation (DOI) is concerned with the manner in which a new technological idea, artifacts, or the new use of an old one, migrates from creation to use. According to DOI theory, technological innovation is communicated through particular channels, over time, among the members of a social system and is adopted and becomes successful (Clarke, 1999). In this case, Internet Reporting is the innovation in question.

Rogers (1995, p. 15-17) identified five critical attributes that greatly influence the rate of adoption (Aly, 2008):

a. Relative advantage: If an innovation has a higher relative advantage, it will be adopted more rapidly.

b. 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.

c. Complexity: New ideas that are simple to understand are adopted more rapidly than those which require the innovator to develop new skills and understandings.

d. Trial-ability: New ideas that can be trialed represent less uncertainty to the individual who is considering their adoption, since the individual can evaluate the ideas before deciding whether to adopt.

e. Observability: This refers to 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.

Therefore according to Rogers' ideas, the rate of adoption of IFR will depend upon how organisations perceive the characteristics summarized above. We assume that if companies in Qatar observe the benefits of publishing financial information via the internet, they will be eager to adopt the innovation, given other factors such as the availability of the required tools. And decisions regarding whether to use PDF, HTML or XBRL in presenting the financial information on the Internet depend on their trial-ability and complexity. However, there are five stages through which a technological innovation passes: knowledge (exposure to its existence, and understanding of its functions); persuasion (the forming of a favourable attitude to it); decision (commitment to its adoption); implementation (putting it to use); and confirmation (reinforcement based on positive outcomes from it) ([www.rogerclarke.com/SOS/InnDiff.html](http://www.rogerclarke.com/SOS/InnDiff.html)).

Academics have used different variables in explaining the adoption and diffusion process. For example, 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. Following Wejnert (2002), we only used characteristics of the adopters - the companies under study - in order to determine the factors currently affecting their IFR practices. We, therefore, developed the following hypotheses based on previous literature and the explanation provided by the Diffusion of Innovation theory.

#### 5 Development of Research Hypotheses

Previous research published in the literature on voluntary disclosure in general and disclosure on the Internet in particular was examined to identify which company characteristics might influence the decision on whether to disseminate financial reports on the Internet. The hypotheses of this study were formulated taking into account this previous research. In considering the results of the listed Qatari companies that were surveyed, there were five-research hypotheses to be tested as follows:

### 5.1 Age

The extent of a company's disclosure may be influenced by its age, with age proxying for the firm's stage of development and growth (Owusu-Ansah, 1998). Owusu-Ansah (1998, p.5) argued three points in this case. Firstly, younger companies may suffer competitive disadvantage if they disclose certain items such as information on research expenditure, capital expenditure, and product development. The second factor is the cost and the ease of gathering, processing, and disseminating the required information. These costs are likely to be more onerous for younger companies than for their older counterparts. The third and final factor is the situation that younger companies may lack a 'track record' to rely on for public disclosure and, therefore, may have less information to disclose or less rich disclosures. Therefore, in principle the age of the firm can be offered as an independent variable in explaining disclosure level. In the Qatari context, it is not possible unambiguously to conclude that a longer-established firm will necessarily disclose more information than a more newly-established firm. However, on the balance of the theory and evidence we present the following hypothesis (with a weak expectation of a positive statistical relation):

H1: Older companies are more likely to adopt IFR than younger companies.

### 5.2 Size

Size is identified as a significant explanatory variable in explaining difference in the level of voluntary disclosure in previous studies. In the literature, a number of theoretical explanations for expecting a positive relationship between company size and level of voluntary disclosure are provided. Agency theory (Jensen and Meckling, 1976) suggested that agency costs are associated with the separation of management from ownership, which is likely to be greater in larger companies. A number of reasons have been advanced in the literature in an attempt to justify this relationship on *a priori* grounds. Ahmed and Nicholls (1994, p.65) argued that it is more likely that large firms will have the resources and expertise necessary for the production and publication of more sophisticated financial statements and, therefore, exhibit more disclosure compliance and greater levels of disclosure. Lang and Lundholm (1993) and McKinnon and Dalimunthe (1993) pointed out that large firms tend to have more analyst followings than small firms and, therefore, may be subjected to greater demand for information. Wallace and Naser (1995, p.317) state that "size is a function of growth and the growth of a firm invariably results in a greater need for external capital and consequently a greater need for more comprehensive information". Cooke (1991, p.176) states that "larger firms are likely to be entities of economic significance so that there may be greater

demands on them to provide information for customers, suppliers and analysts, and governments as well as the general public". These lines of reasoning provide strong grounds for predicting that larger companies are more likely to adopt IFR and voluntary disclosure than smaller companies. Thus, it is hypothesised that:

H2: Larger companies are more likely to adopt IFR than smaller companies.

### 5.3 Profitability

Companies with greater profitability may disclose more information to signal their success and strength to potential foreign investors and market participants, to strengthen their management position and, in turn, to justify management's compensation (Inchausti, 1997, Singhvi and Desai, 1971). Watts and Zimmerman (1986) further argued that companies with larger profits are more vulnerable to regulatory intervention and hence, they could be more interested in disclosing detailed information in their annual reports in order to justify their financial performance and to reduce political costs. So, companies with greater profits are expected to use a voluntary disclosure technique such as IFR to increase the audience for the company's information. However, companies with lower profits are expected to restrict access to information to determined users (Craven and Marston, 1999). As a result, it is hypothesised that:

H3: Companies with greater profitability are more likely to adopt IFR than less profitable companies.

### 5.4 Complexity of Business

The study by Haniffa and Cooke (2002) suggested that structural complexity may be significant in explaining variability in the extent of disclosure. Earlier Cooke (1989a) had argued that structural complexity requires a firm to have an effective management information system for monitoring purposes, and that the availability of such a system helps to reduce the cost of information production per unit, and thus promotes higher disclosure. This variable did not provide significant results in the study by Haniffa and Cooke (2005), although it was expected to give positive sign. Based on the above arguments, we hypothesise:

H4: The level of IFR disclosure is positively associated with the complexity of the firm.

### 5.5 Assets-in-place

As is well known, financial reporting is one means of mitigating agency problems (Healy and Palepu 2001; Jensen and Meckling, 1976). For example, Leftwich et al. (1981) found that the debt ratios of companies which were semi-annual reporters in the US were significantly higher than the corresponding ratios for

the other reporting frequencies; and assets-in-place, used in this context as a proxy for information asymmetry, of semi-annual reporting firms was lower than that for other reporters. Hossain and Mitra (2004) found assets-in-place to systematically influence the level of voluntary disclosure of US multinational companies. Butler et al. (2002) argued that firms with a higher percentage of tangible assets have lower agency costs because it is more difficult for managers to misappropriate well-defined assets-in-place than to extract value from uncertain growth opportunities. Therefore, since those firms with higher than average assets-in-place may tend to have lower levels of agency costs, they can reduce their reliance on disclosures in line with lower levels of agency costs. It may also be argued that firms with relatively high levels of debt financing have higher agency costs, and therefore, exhibit a greater demand for monitoring by creditors and others. These relationships may be mitigated where there are relatively higher levels of (or increases in) a firm's fixed assets, thereby resulting in lower agency costs, and consequently, lower disclosure (Myers, 1977). Myers' (1977) assertion that wealth transfers can be more difficult between shareholders and debt-holders for firms with a larger proportion of assets-in-place is the source of this mitigation. However, some studies which have investigated the influence of variables capturing assets-in-place on voluntary disclosure in annual reports do not report any significant relationship (Hossain et al., 1994, Hossain et al., 1995, Raffournier, 1995). Therefore, there is no unambiguous support for a hypothesis associating financial information on the Internet with assets-in-place. However, keeping this in mind and after considering the foregoing discussions, the following hypothesis is offered:

H5: There is an association between leverage and IFR.

### 5.6 Liquidity

Several studies have examined the relationship between liquidity and the extent of disclosure, but they have produced conflicting findings. For instance, Wallace et al. (1994) found that companies with lower liquidity provide more information in their annual reports and accounts. The main argument is that the 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 similar information being provided in future years. Another study by Oyelere et al. (2003) found that liquidity is considered one of the primary determinants of internet financial reporting among New Zealand companies, and found a positive relationship between company liquidity and voluntary use of internet financial reporting. According to Wallace and Naser (1995), 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. Belkaoui and Kahl (1978) stated that companies that have a high liquidity ratio are more likely to disclose more information than those with a low liquidity ratio. 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 was tested:

H6: There is a positive relationship between the amount of disclosure of corporate information via the internet and the current ratio of Qatari companies.

## 6 Research Methodology

### 6.1 Selection of Sample

The total number of companies listed on the Qatar Exchange (QE)<sup>13</sup>, was 42 as on 31st December 2009. All of these companies were included in this study. To explore whether each of these companies had a website or not, two approaches were used. Firstly, the Qatar Exchange was visited to obtain web addresses for the relevant companies since the Exchange has a link of the companies' websites. Secondly, in the absence of a link/address to a company website, we used search engines such as [www.google.com.qa](http://www.google.com.qa) and [www.yahoo.com](http://www.yahoo.com) (the search was performed during January to August 2009 at various intervals) in an attempt to access as many sites as possible.

Table 1 presents the distribution of Qatari companies by website status (websites and non-website) and industry. It is seen that the service sector is the largest industry (22 companies) on the QE, this being a reflection of the strong representation of non-financial services in Qatar. However, it is noticed from Table 1 that 41 companies (97%) had websites and among them 29 companies (70%) had websites with Internet Reporting (IR), whilst 13 did not engage in Internet Reporting (IR). Moreover, the service sector represents the highest proportion (49%) of websites with IFR, being followed by the banking and financial sector (27%). In terms of companies with no engagement in IR, the banking and financial sector was the lowest represented (8%), followed by insurance (16%) and the industry sector (23%).

<sup>13</sup> It is noted that there is only one security exchange in Qatar and that was previously known as the Doha Securities Market (DSM) until June 2009.

**Table 1.** Distribution of Companies by Website Status and Industry on the Qatar Exchange as on September 30, 2009

| Industry/sector          | Total No of Companies | Companies with a website | Companies without a website | Website with IFR | Website without IFR |
|--------------------------|-----------------------|--------------------------|-----------------------------|------------------|---------------------|
| 1. Banking and Financial | 9                     | 9<br>[100%]              | -                           | 8<br>[27%]       | 1<br>[8%]           |
| 2. Insurance             | 5                     | 5<br>[100%]              | -                           | 3<br>[10%]       | 2<br>[16%]          |
| 3. Industry              | 6                     | 5<br>[83%]               | 1<br>[17%]                  | 4<br>[14%]       | 3<br>[23%]          |
| 4. Service               | 22                    | 22<br>[100%]             | -                           | 14<br>[49%]      | 7<br>[53%]          |
| Total                    | 42                    | 41                       | 41                          | 29               | 13                  |

Note: Figures in the parentheses denote the percentage of the companies

### 6.2 Construction of Disclosure Index

The disclosure index used for this research was chosen after considering the studies conducted by Xiao et al. (2004), Debreceny et al. (2001), Deller et al. (1999), Pirchegger and Wagenhofer (1999), and Marston and Polei (2004). The list consists of 58 items of which 36 items are concerned with voluntary disclosure content and 22 items are concerned with presentation format. The latter is related to how information is presented and how easy it is to access and use. However, it is noted that some of the items found on the websites of the Qatari companies were not applicable to the study of Xiao et al. (2004), as for

example, the Arabic version of the annual report. Among the 36 items of voluntary disclosure, we examined various factors as potential predictors of the degree of IFR as had been done by previous researchers (see for example, Bonson and Escobar, 2006; Spanos and Mylonakis, 2006; Lymer and Debreceny, 2003). Within this framework, we developed a checklist instrument of 58 criteria that expressed a company's voluntary disclosure policy. Table 2 presents the seven categories we chose, and the number included. However, the detailed checklist is given in Appendix 2.

**Table 2.** Total Breakdown of Internet Reporting Checklists

| Groups/categories                  | No. of items |
|------------------------------------|--------------|
| 1. General Corporate Information   | 6            |
| 2. Corporate Strategy              | 2            |
| 3. Corporate Governance            | 9            |
| 4. Financial Performance           | 6            |
| 5. Corporate Social Responsibility | 3            |
| 6. Presentation Format             | 22           |
| 7. Others                          | 10           |
| Total                              | 58           |

An unweighted disclosure index has been used in this study. Researchers such as Cooke (1991 and 1992), Karim (1995), Hossain et al. (1994), and Ahmed and Nicholls (1994), adopted a dichotomous procedure in which an item scores one if disclosed and zero if not disclosed and this approach is

conventionally termed the unweighted approach. Therefore, if a company disclosed an item of information which is included in the index on its internet site, it received a score of one and if the company did not disclose an item, a score of zero was allocated. A similar approach was adopted by Cooke



(1992). Firth (1979) noted that unweighted and weighted scores showed similar results. Thus, we used only an unweighted disclosure index approach in this research.

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 total disclosure index (TDI) for each firm was calculated as follows:

$$TDI = \sum_{j=1}^n \frac{dj}{n}$$

Where  $dj = 1$  if the  $j$ th item is disclosed or 0 if it is not disclosed; and  $n =$  the maximum score each company can obtain. TDI = total disclosure index. In this case, the key fact is whether or not a company discloses an item of information in the annual report. Thus, the unweighted disclosure method measures the total disclosure (TD) score of a company as additive (suggested by Cooke, 1992). It is noted that companies were not penalised for non-disclosure of an item if it was deemed to be irrelevant to their business activities. The unweighted disclosure index was used as the dependent variable and the variables shown in Table 3 were used as the independent ones. Table 3 shows these together with, the proxy and expected signs in the study.

**Table 3.** The Variables and Proxy and Expected Signs

| Variable        | Proxy  | Expected Sign |
|-----------------|--|---------------|
| Age             | Number of years since foundation                         | ±             |
| Size            | Natural log of total assets                              | +             |
| Profitability   | Return on equity = net profit/total shareholders' equity | +             |
| Complexity      | Number of subsidiaries                                   | +             |
| Assets in place | Fixed assets/total assets                                | +             |
| Liquidity       | Current assets - current liabilities                     | +             |

**6.3 General Form of Regression Model**

The following is the general form of the OLS regression model which has been fitted to the data in

$$I_{ij} = \beta_0 + B1 Age_j + B2Size_j + B3 Profitability_j + B4complexity_j + B5 Assetsin place_j + B6liquidity_j + \epsilon_{ij}$$

Where: I = the voluntary disclosure scores for sampled companies; i= number of index according to overall disclosure; j = number of companies (1,...42),  $\beta_0$  = the intercept.

**7 Analysis And Discussion**

**7.1 Descriptive Statistics**

Descriptive statistics for the dependent variables and independent variables are reported in Panel A of Table 4. The table indicates that the level of average voluntary disclosure in the sample companies is 52% with a minimum of 35% and a maximum of 67%. It is consistent with Al-shaminari (2008) in Kuwait (46%).

order to assess the effect of each variable on the disclosure data associated with the versions of the disclosure index and to test the associated hypotheses:

In Panel B, it is also observed that company age ranges from 2 to 45 years with a mean of 16.81 for the whole sample. The size (log of assets) ranged from 6.34 to 28.43, with a mean of 011.89. The size distribution is skewed. However, skewness is mitigated by utilising the natural logarithm of size in the regression analysis, consistent with prior studies (Gluem and Street, 2003). Profitability (ROE) for the full sample ranged from 0.4 to 6 with a mean of 0.21. The variation within minimum and maximum is noticeable because the sample size included the financial institutions. In terms of assets-in-place this ranged from 0.01 to 0.99 with a mean of 0.73, thereby indicating that the sampled companies had higher fixed assets against total assets. The degree of complexity ranged from 0 to 7 with a mean of 1.9.

The figure of zero indicates that some companies effectively had no subsidiary. The liquidity variable ranged from -6.34 to 28.43 with a mean of 11.89, the

minus figure indicating that some companies have more liabilities than assets.

**Table 4.** Descriptive Statistics

| Panel A. Descriptive statistics for the dependent variable |           |                    |           |           |           |            |                |
|--|-----------|--------------------|-----------|-----------|-----------|------------|----------------|
|  | Mean      | Standard deviation | Minimum   | Maximum   |           |            |                |
| Voluntary disclosure                                       | 52.59     | 9.90               | 35        | 67        |           |            |                |
| Panel B. Descriptive statistics for other variables        |           |                    |           |           |           |            |                |
| Descriptive Statistics                                     |           |                    |           |           |           |            |                |
|  | N         | Range              | Minimum   | Maximum   | Mean      |            | Std. Deviation |
|  | Statistic | Statistic          | Statistic | Statistic | Statistic | Std. Error | Statistic      |
| Age  | 42        | 43                 | 2         | 45        | 16.81     | 1.999      | 12.954         |
| Size   | 42        | 34.77              | 6.34      | 28.43     | 11.8924   | 1.19690    | 7.75677        |
| Profit   | 42        | 6.04               | -.04      | 6.00      | .2150     | .14149     | .91699         |
| Assets-in-place  | 42        | .98                | .01       | .99       | .7362     | .03867     | .25063         |
| Complexity   | 42        | 7.00               | .00       | 7.00      | 1.9048    | .27436     | 1.77804        |
| Liquidity  | 42        | 14.81              | .49       | 15.30     | 2.1990    | .36033     | 2.33523        |
| Valid N (list wise)  | 42        |                    |           |           |           |            |                |

### 7.2 Correlation Matrix and Multicollinearity Analysis

Multicollinearity in the explanatory variables has been diagnosed through analyses of correlation factors and Variable Inflation Factors (VIF), consistent with Weisberg (1985). Table 5 presents the correlation matrix of the dependent and continuous variables, from which it has been observed that the highest simple correlation between independent variables was 0.35 and that occurred between Size and Assets-in-place. Judge et al. (1985), and Bryman and Cramer (1997) suggest that simple correlation between independent variables should not be

considered harmful until they exceed 0.8 or 0.9. A VIF in excess of 10 should be considered an indication of harmful multicollinearity (Neter et al., 1989). Alternatively, if the average VIF is substantially greater than 1 then the regression may be biased (Bowerman and O'Connell, 1990). The average VIF5(1.12) is close to 1 and this confirms that collinearity is not a problem for this model. These findings suggest that multicollinearity between the independent variables is unlikely to pose a serious problem in the interpretation of the results of the multivariate analysis.

**Table 5.** Correlation Matrix

| IFR             | Age   | Profit | Complexity | Assets-in-place | Liquidity | Size  |
|-----------------|-------|--------|------------|-----------------|-----------|-------|
| Age             | 1.000 | .181   | -.001      | .315*           | -.163     | .290  |
| Profit          | .181  | 1.000  | -.162      | .101            | -.070     | -.034 |
| Complexity      | -.001 | -.162  | 1.000      | .066            | -.010     | .055  |
| Assets-in-place | .315* | .101   | .066       | 1.000           | -.033     | .356* |
| liquidity       | -.163 | -.070  | -.010      | -.033           | 1.000     | -.017 |
| Size            | .290  | -.034  | .055       | .356*           | -.017     | 1.000 |

\* Significant at .05 (1-tailed)

### 7.3 Multivariate Analysis

We performed an Ordinary Least Square (OLS) regression model for all variables, the results of which are presented in Tables 6 and 7. The multiple regression model is significant ( $P > 0.005$ ). The adjusted coefficient of determination ( $R^2$ )

indicates that 40% of the variation in the dependent variable is explained by variations in the independent variables. The coefficients representing size (log of assets), assets-in-place, and complexity are statically significant between 1% to 5% levels, while the coefficients for age, profitability, and liquidity are not statistically significant.

**Table 6.** Model Summary

| R     | R Square | Adjusted R Square | F    | Sig. | Durbin-Watson |
|-------|----------|-------------------|------|------|---------------|
| 0.698 | 0.488    | 0.40              | 5.53 | 0.00 | 1.008         |

**Table 7.** Regression Results

| Variable        | $\beta$ | T      | Sig.  | VIF  |
|-----------------|---------|--------|-------|------|
| Constant        | 34.962  | 8.428  | 0.000 |      |
| Age             | 0.169   | 1.651  | 0.108 | 1.23 |
| Size            | 0.344   | 2.028  | 0.050 | 1.20 |
| Profit          | 0.025   | 0.002  | 0.985 | 1.08 |
| Complexity      | 1.417   | 2.067  | 0.046 | 103  |
| Assets-in-place | 12.735  | 2.406  | 0.022 | 1.22 |
| Liquidity       | -6.29   | -1.207 | 0.23  | 1.03 |

#### 7.4 Discussion of Regression Result

It is seen from Table 7 that the OLS regression results show that  $F$ -ratio is 5.53 ( $P = 0.00$ ). The result statistically supports the significance of the model. In addition, an  $R$  of 0.4 is modest and thus implies that the independent variables explain 40% of the variance in the disclosure index, and this result compares favourably with similar studies of Marston and Polei (2004) at 31.20%, and Wesley and Theodore (2004) at 33.60%.

The variable of age is positive but not significant at 5% which does not support the argument that an older company will have a greater tendency to engage in IFR, so Hypothesis 1 is not supported. The variable of size by assets is statistically significant at the .05% level and is positive. The positive sign on the coefficient suggests that size has a direct influence on the level of internet financial disclosure in companies in Qatar. This finding is consistent with the outcomes reported by Marston and Leow (1998) in the UK, Ashbaugh et al. (1999) in the US, Pirchegger and Wagenhofer (1999) in Austria, Craven and Marston (1999) in the UK, and Oyelere et al. (2003) in New Zealand. The profitability variable is not significant and therefore, the hypothesis is not supported. This implies that more profitable companies are more likely to engage in IFR. The complexity variable is significant at 5%, providing evidence that if a company has a subsidiary at home and/or abroad, it is likely that it will engage more in IFR than a company without any subsidiaries, or with a smaller number of subsidiaries. This is an interesting result and may be reflective of the stage of development of Qatari companies as they are currently experiencing a period of significant growth. The hypothesis is accepted. The assets-in-place variable is significant at 2% and the sign is positive. Liquidity appeared to be insignificant and had a negative impact on IFR practice, as expected. Companies with a lower level of liquidity were more likely to engage in IFR, a finding which supports that of Shaminari (2008) in the study of Kuwait. However, this result is inconsistent with that of Oyelere et al. (2003) who found liquidity ratios

to be positively associated with IFR practice in New Zealand.

#### 8 Conclusions

It is indeed true that the Internet is widely used by companies as a channel for disseminating information to various stakeholders such as customers, suppliers and investors. This study investigated the use of the Internet for disseminating financial reporting by companies listed on the Qatar Exchange in 2009 and identified company characteristics influencing companies to use the Internet for this purpose. The factors investigated were: company age, size, profitability, complexity, assets-in-place, and liquidity. The finding indicates that IFR of the listed companies in QE depends on some firm characteristics. It is revealed that assets, complexity, and assets in-place, are variables which are significant in explaining the levels of IFR disclosure, whereas age, profitability, and liquidity are not significant. The results at least provide some kind of knowledge and understanding of IFR practices around the GCC region in general, and Qatar in particular. The users of financial reporting, including investors, need confidence in financial markets, and information disclosure is vital in providing such confidence. This study therefore provides a means of communication to the various stakeholders in society. This study provides a number of important contributions. Firstly, it extends Internet Financial Reporting studies by examining a developing and emerging country, Qatar, which has not been the focus of previous research. It does so by developing an index to measure the level of IFR disclosure of voluntary financial and non-financial information on Qatari companies' websites.

Secondly, the study provides a clear snapshot of those factors influencing IFR in GCC countries in general and Qatar in particular. Finally, the study expands the literature about the status of IFR in the Arab region, thus revealing the responses of countries with a strong religious base, to the use of information technology within their businesses and society in general.

## 9 Limitations and Future Research Direction

One limitation of this study is that the findings are based on Qatari companies which may limit the generalisability of the results to other jurisdictions. The findings are also based on observations of a relatively small number of companies, that is, those listed Qatari companies that voluntarily disclosed information in one particular year. This raises further uncertainty about the extent to which the results are generalisable.

In order to overcome this shortcoming, a study can be undertaken in other Arab countries such as the Gulf Co-Operation Council (GCC) member states in order to make comparisons between nations, and between periods of time, since research that extends the data timeframe will help to validate the this study. Moreover, two variables that are well-understood to be influential, i.e. corporate governance and board composition, can be considered in further studies.

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## Appendix

## Internet Financial Reporting and Disclosure Checklist

|   |
|---|
| <b>A General Corporate Information (6):</b>                   |
| 1 Brief narrative history of the Company                      |
| 2 Basic organization structure/chart/description of corporate |
| 3 General description of business activities                  |
| 4 Date of establishment of the company                        |
| 5 Official address/registered address                         |
| 6 Web address of the bank/email address                       |
| <b>B Corporate strategy (2):</b>                              |
| 7 Management's objectives and strategies/corporate vision     |
| 8 Future strategy — information of future expansion           |
| <b>C Corporate governance (9):</b>                            |
| 9 Detail about the chairman                                   |
| 10 Details about directors                                    |
| 11 Number of shares held by directors                         |
| 12 List of senior managers                                    |
| 13 Directors' engagement/directorship of other companies      |
| 14 Picture of all directors/board of directors                |
| 15 Picture of chairperson                                     |
| 16 Composition of Board of Directors                          |
| 17 Number of BOD meetings held and date                       |
| <b>D Financial performance (6):</b>                           |
| 18 Brief discussion and analysis of a financial position      |
| 19 Return on equity   |
| 20 Net interest margin  |
| 21 Earnings per share   |
| 22 liquidity ratio  |
| 23 Dividend per share   |
| <b>G Corporate social disclosure (3):</b>                     |
| 24 Sponsoring public health, sponsoring of recreational pr    |
| 25 Information on donations to charitable organizations       |
| 26 Supporting national pride/government — sponsored           |
| <b>H. Presentation format items (22)</b>                      |
| 27. Annual report in PDF format Arabic                        |
| 28. Annual report in HTML format Arabic                       |
| 29. Hyperlinks inside the annual report                       |
| 30. Click-over menu   |
| 31. Annual report in PDF format English                       |
| 32. Annual report in HTML format English                      |
| 33. Multilingual site   |
| 34. Search engine   |
| 35. Table of content/site map                                 |
| 36. Links to related sites                                    |
| 37. Links to accounting data                                  |
| 38. Quarterly financial statements                            |
| 39. Graphics  |
| 40. Video   |

|  |
|--|
| 41. Notice Book  |
| 42. Last modified                                      |
| 43. Help section                                       |
| 44. Contact to the webmaster                           |
| 45. one click to get to investor relations information |
| 46. one click to get to press releases or news         |
| 47. online investor information order service          |
| 48. next/previous bottoms to navigate sequentially     |
| <b>H Others (10):</b>                                  |
| 49 Age of key employees                                |
| 50 Chairman's/MD's report/directors report             |
| 51 Information on ISO 9001: 2000 certification         |
| 52 Graphical presentation of performance indicators    |
| 53 Performance at a glance — 3 years                   |
| 54 Related party disclosure                            |
| 55 Details of non-compliance, penalties imposed by SE  |
| 56 Year of listing at DSM                              |