

DETERMINANTS OF CORPORATE RISK DISCLOSURE PRACTICES: THE CASE OF ISLAMIC BANKS IN GULF COOPERATION COUNCIL REGION

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ABSTRACT

The paper develops a framework to explore the risk disclosure practices of 29 Islamic banks operating in the Gulf Cooperation Council countries over the period of 2013-2016 and examines the potential factors which might be affecting risk disclosure. To analyze the level of risk disclosure, the paper develops a composite index by using the content analysis technique. We also employ OLS technique to examine factors affecting Islamic banks' risk disclosure. The results indicate a very high difference in risk disclosure between countries. Only two countries, the United Arab Emirates and Bahrain, have a higher level of risk disclosure. The findings also suggest that reporting on some risk disclosure types especially displaced commercial risk and rate of return risk is very low. The regression results show that Islamic banks with a stronger set of corporate governance mechanisms and an active Shariah board appear to disclose more risk information. Other factors that influence risk disclosure practices of Islamic banks are bank size, leverage, cross-border listings and the level of political and civil regression. The study recommends that Islamic banks have to revise their communication strategies and provide more risk information related to rate of return risk and display commercial risk. In addition, GCC regulators should establish risk disclosure regulations which have to become mandatory for all Islamic banks. To the best of our knowledge, the paper provides the first analysis related to the determinants of corporate risk disclosures of Islamic banks in the Arab Gulf region.

Keywords: Corporate risk disclosure, corporate governance, Shariah board, Islamic banks, GCC countries.

INTRODUCTION

In recent years, the concept of corporate risk disclosure (CRD) has received great interest in the literature, especially after the recent financial crisis. Providing more risk information in annual reports and improving disclosure quality are considered an important part of corporate governance principles (Hassan, 2014). To respond to the stakeholder's pressure and to help them take more effective decisions, firms have to provide a higher level of disclosure on corporate risk. Adequate disclosure about the risks helps companies to develop their risk management process. Risk disclosure can play a vital role in generating trust and increasing company

legitimacy, resources and survival capabilities (Carpenter & Feroz, 2001; Madrigal et al., 2015). In addition, adequate risk disclosure, according to signal theory, reduces information asymmetries and increases firm value. Disclosure is always associated with transparency. Therefore, the increase in the transparency of banks leads to efficient allocation of resources by improving market discipline (Wan Ibrahim et al., 2011). However, based on proprietary cost theory, risk information presents potential disadvantages and additional costs for companies. First, this information could be used by competitors, pressure groups and political groups (Abid & Shaiq, 2015). Second, according to Rodríguez Domínguez & Noguera Gámez (2014), the communication of information by companies could lead to threats of mergers or takeovers, and the intervention of government agencies and tax authorities. Third, in the banking sector, disclosure “may lead to interpretation of specific information about banks’ financial conditions unjustifiably as indicator of wide spread problem in banking system, thereby leading to bank runs or stock market collapse” (Wan Ibrahim et al., 2011).

In the case of Islamic banks, the quality of corporate risk disclosure is extremely important to increase stakeholders’ confidence in the Islamic financial system. Transparency in risk management disclosure gives depositors reassurance that investments in Islamic banks are well managed and comply with Shariah law. Failure to maintain this confidence can lead to stakeholders reacting negatively (Wan Abdullah et al., 2015). In addition, according to Abu-Tapanjeh (2009) accountability is entitled to produce a true and fair disclosure and transparency. A lack of transparency in corporate risk could lead to information asymmetry between the Islamic bank and its stakeholders and expose banks to reputational risk. Therefore, to address the additional risks in Islamic bank as compared to conventional bank, Islamic financial institutions are deemed to have a reliable governance model with an extremely high level of accountability in order to protect and safeguard the rights and interest of their stakeholders (Srairi, 2015). In Islamic banks, Shariah board as an internal control mechanism is expected to exert some influence on the risk disclosure aspects and should encourage management to be transparent in order to make Islamic bank operations credible in the eyes of stakeholders.

Given the importance and benefits of corporate risk disclosure, several studies on this concept have been conducted in recent years. Most of these studies deal with non-financial companies in developed countries. There has been little research in emerging markets on financial companies and especially on Islamic banks. To fill this gap in the disclosure literature, this paper explores the risk disclosure practices in the annual reports of a sample of 29 Islamic banks operating in GCC countries (Bahrain, Kuwait, Qatar, Saudi Arabia and the United Arab Emirates) during the period of 2013-2016. In addition, the paper examines the determining factors that may influence the risk reporting practices of GCC Islamic banks. For this purpose, an index of CRD was constructed based on previous studies and

regulatory documents (AAOIFI, 2014, IFSB, 2007). The CRD index, which consists of 45 items, incorporates seven types of risk disclosure, namely general disclosure risk management, credit risk, liquidity risk, market risk, operational risk, rate of return risk and other risks. Furthermore, to quantify disclosure risk, a content analysis of annual reports was performed to obtain both mandatory and voluntary risk information. Finally, a regression model was constructed to investigate the association between the level of risk disclosure and the internal components of corporate governance in Islamic banks as well as other variables related to bank-specific and country characteristics.

This study seeks to contribute to the existing corporate risk disclosure and Islamic banking literatures in several ways. To our best knowledge, this is the first research on GCC countries that explores the determinants of corporate risk disclosure in Islamic banks by using a multiple theoretical framework. Second, previous studies on risk disclosure focused exclusively on samples from a single country, whereas the present study attempts to examine this issue in several countries which contain a large number of Islamic banks. Third, the paper develops a comprehensive risk disclosure index which comprises a large set of risk disclosure dimensions. This index, specific to Islamic banks, can be applied on other countries or other regions such as the Middle East and North Africa (MENA) and South East Asia (SEA). Finally, prior studies in the literature have explored almost one set of variables such as bank specific or corporate governance characteristics. This research differs from these studies and investigates a variety of factors (SSB attributes, corporate governance characteristics, bank specific, country characteristics) that may be important in explaining the risk disclosure practices in Islamic banks.

LITERATURE REVIEW

In the last few years, there has been a growing interest by companies and financial institutions in reporting information about their risk management activities. The global financial crisis in 2008 has significantly raised research interest on corporate risk and risk disclosure practices around the world (Dobler et al., 2011). In the risk disclosure literature, empirical studies focus on different aspects such as the advantages and benefits of risk disclosure (e.g., Hodder et al., 2001; Linsley & Shrides, 2000; Rajgopal, 1999), the characteristics of risk disclosure (Linsley & Shrides, 2006; Beretta & Bozzolan, 2004) and the determinants of corporate risk disclosure (e.g., Madrigal et al., 2015; Abraham & Shrides, 2014; Oliveira et al., 2011b; Abraham & Cox, 2007). In terms of methodology, these studies can be divided into three types of research approaches. The first type of researches uses sentences count to quantify risk disclosure (e.g., Linsley & Shrides, 2006; Oliveira et al., 2011a; Dobler et al., 2011). The second group uses content analysis based on counting words (e.g., Abraham & Cox, 2007). The final group uses disclosure indexes to measure risk disclosure (e.g., Abdullah et al., 2015; Madrigal et al., 2015).

The majority of the studies on risk disclosure have mostly analysed the drivers of corporate risk disclosure. The results of these studies provide evidence that several characteristics of firms and corporate governance mechanisms determine provision of risk disclosure in annual reports.

Beretta & Bozzolan (2004) analysed risk disclosure in reports of 85 Italian stock exchange companies. They suggested that risk disclosure quality should be analysed along various risk information. They also examined the effect of firm size and industry type on risk disclosure but failed to find any association between these variables and risk disclosure. Linsley & Shrivs (2006) investigated the relationship between firm characteristics and risk disclosure in annual reports of UK companies. Using content analysis, they found a positive relationship between size and risk disclosure but no association between leverage and risk disclosure. Ntim et al. (2013) examined factors influencing the level of risk disclosure using a sample of firms in South Africa. They found that leverage, firm size, profitability and level of risk are significantly associated with risk disclosure. They also reported that the quality of risk disclosure is influenced by corporate governance characteristics such as board size, board diversity, presence of independent and non-executive directors on the board and government ownership. Abdul Rahman et al. (2013) analysed the risk management disclosure practices of Islamic banks in the MENA region. This study finds that there is slightly above average compliance with the IFSB disclosure checklist of risk related information by Islamic banks. It also reported that bank size and foreign subsidiaries have an impact on risk disclosure. Abdallah et al. (2015) evaluated the determinants of corporate risk disclosure in a sample of 424 publicly traded firms in the GCC countries. They found that Islamic banks disclose less risk than conventional banks. They also suggested that firms which operate in the context of better quality corporate governance disclose more risk than do their counterparts.

These referenced studies provided evidence that multiple factors affect risk disclosure. In addition, few studies explored corporate risk disclosure in Islamic banks. This study extends this large literature in that it evaluates the impact of a set of variables on risk disclosure in the context of Islamic banks in emerging markets, the GCC countries.

Hypothesis development

To explain the motivations of managers to disclose risk information, it is necessary to use multiple theories especially in the emerging capital market context (e.g., Lundholm & Winkle, 2006; Lopes & Rodrigues, 2007; Beattie & Smith, 2010). The paper proposes a theoretical framework and develops a set of hypothesis based on agency theory, signal theory, stakeholder theory and legitimacy theory. It is suggested in this study that risk disclosure practices in GCC Islamic banks are strongly influenced by four factors: corporate governance characteristics, SSB features, bank specific characteristics and country characteristics.

Corporate governance characteristics

Based on agency theory, the firm can reduce the conflicts between shareholders and managers through the monitoring of managerial decisions by implementing an effective corporate governance mechanism. The quality of governance mechanisms reduce information asymmetry and influence the level of risk disclosure (Abdallah et al., 2015). Following several studies (Wan Abdullah et al., 2015; Brown & Caylor, 2006; Gompers et al., 2003), the paper uses a combination of four factors to examine the role of corporate governance mechanisms on the risk disclosure aspects in Islamic banks. The study focuses on board size, board independence, audit size and audit committee independence.

According to agency theory, large boards are conducive to better monitoring. Large boards incorporate generally different stakeholder groups and are more likely to disclose more risk information voluntarily (Klein, 2002; Williams et al., 2005). Several recent studies find a positive association between the number of directors on a bank's board and the level of risk disclosure information (Allegrini & Greco, 2013; Elshandidy & Neri, 2015). However, it is interesting to note that a number of researchers (e.g., Cheng & Courtenay, 2006; Beasley, 1996) support Jensen's (1993) idea of that large boards are less efficient and have a tendency to be controlled by CEOs. In the context of Islamic banks, as suggested by Wan Abdullah et al. (2015), boards have to represent many stakeholder groups in accordance with the Islamic corporate governance model proposed by Bhatti & Bhatti (2009) and Hassan (2009) and in consequence enhance the monitoring quality and the level of disclosure in Islamic banks. Agency theory reveals how board characteristics in terms of composition, diversity and expertise can affect its ability to carry out its duties (Allini et al., 2016). The presence of independent directors on the board might also be an interesting variable to consider because it may help to reduce agency costs and information asymmetry and improve the quality and the disclosure of information. In theory, independent directors are not influenced by corporate insiders. To satisfy their stakeholders' information requests, independent members have more incentives to disclosure risk information. Several studies (e.g., Abraham & Cox, 2007; Oliveira et al., 2011a; Elshandidy et al., 2013) confirmed the positive association between the number of independent directors and risk disclosure. Therefore, the study suggests that the presence of independent directors in the board of Islamic banks leads to higher level of risk disclosure. Since the importance of responsibilities of bank audit committees, their size and type could affect the control and the majority of operations. Anderson et al. (2004) claimed that large audit committees could provide strong monitoring and lead to a higher level of transparency. In addition, to reduce information asymmetry, banks with a large committee will be prone to disclose more information. Larger audit companies are identified as being one of the big four international auditing companies. Accordingly, a positive association is expected between the size of the audit committee and risk disclosure. To be effective in assuming all responsibilities, the audit committee should be

independent and should contain a large number of non-executive managers (Turley & Zaman, 2004). Several studies (e.g., Taylor, 2011; Oliveira et al., 2011b) find a positive relationship between audit committee independence and risk disclosure. Therefore, as argued by Taylor (2011), the more independent the audit committee, the more it acts for the benefits of the bank's stakeholders in terms of reducing agency costs and decreasing information asymmetry. Following the similar methodology used by several studies (Wan Abdullah et al., 2015; Brown & Caylor (2006); Gompers et al., (2003)), these four factors are combined and a score which represents the main characteristics of good corporate governance is calculated. According to Arcay & Vasquez (2005), the analysis of individual corporate governance mechanisms does not explain the role of corporate governance in increasing transparency and in disclosing more risk information. Based on this discussion, the first hypothesis of this research is formulated as follows:

H₁: *There is a positive association between the characteristics of corporate governance and the level of corporate risk disclosure.*

Supervisory Shariah Board (SSB) features

The governance of Islamic banks is different from the governance of conventional banks since its main objective is to ensure the compliance of bank operations and products with Shariah rules (Srairi, 2016). In Islamic banks, SSBs act as an internal and independent governance structure. It encourages the management to be transparent and its characteristics influence the level of disclosure in Islamic banks. The present study adopts the methodology of Farook et al. (2011) and calculates a specific score using the main characteristics of SSBs. Based on prior studies (Srairi, 2016; Wan Abdullah, 2015), four SSB features that may influence risk disclosure in Islamic banks are estimated, namely SSB size, cross-membership, SSB meetings and the presence of accounting/finance knowledge. Similar to the arguments relating to the board of directors, SSB size is expected to influence the attitude of Islamic banks to disclose risk information. A SSB with many members is better able to respond to its diverse stakeholders (Wan Abdullah, 2015). In consequence, a larger SSB provides strong monitoring, implying a higher level of transparency and disclosing risk information. The paper also suggests that a SSB with shared members could enhance corporate risk disclosure in Islamic banks. As mentioned by Srairi (2016), shared scholars with their large knowledge in Islamic laws are exposed to more discussions about the level of Shariah compliance and in consequence encourage Islamic banks to respond to the needs of stakeholders, especially investment account holders, by disclosing more risk information. The third variable examined in this paper is SSB meetings. In Islamic banks, a SSB acts as an internal control mechanism and its duties are similar to those of the audit committee. In the literature, several studies (e.g., Allegrini & Greco, 2013; Barako et al., 2006) reported a positive association disclosure and the regularity of audit committee meetings. According to Allini et al. (2016), active boards

meeting regularly are more likely to lead to compliance with responsibilities and the monitoring of financial reporting. Based on these arguments, regular SSB meetings lead to greater disclosure. Finally, SSB expertise can also influence the level of risk disclosure in Islamic banks. Previous studies (Farook et al., 2011; Abdul Rahman & Bukair, 2013) find that financial and accounting expertise of the SSB members increases the level of corporate social responsibility disclosure by Islamic banks. Members with knowledge, especially in Islamic law, economics and financial and accounting practices are more likely to better monitor and supervise the bank, which leads to higher levels of risk disclosure. By combining all these factors in one indicator related to SSB characteristics, the second hypothesis will be:

H₂: SSB features are positively associated with the level of corporate risk disclosure.

Bank-specific

Prior studies about risk disclosure have highlighted the possible association between the disclosure of corporate risk information and company characteristics. Five variables are included in this study, namely: size, profitability, leverage, cross-border listings and adoption of norms (IFRS).

* **Size**: Several studies have often found a positive association between company size and corporate risk disclosure. Based on signaling theory, larger companies have incentives to disclose more risk information to signal to the market their ability to manage risk (e.g., Abraham & Cox, 2007; Hassan, 2009; Mohobbot, 2005). Further, because larger firms attract more attention of many different classes of stakeholders, it may make them susceptible to higher political focus by the authorities supervising them (price controls, social responsibility) compared to the smaller firms (Oorschot, 2009, p52, 2). According to stakeholder theory and political cost theory, to face social and political pressures, larger firms are more likely to disclose more risk information than smaller ones. Rodríguez Domínguez & Naguera Gámez (2014) argue that larger firms have to provide risk information to lenders to reduce the cost of capital. In addition, legitimacy theory argues that larger companies will consider risk disclosure as a way to enhance corporate reputation because greater levels of public visibility imply a closer scrutiny from stakeholders (Oliveira et al., 2011a). Accordingly, the following hypothesis is tested:

H₃: There is a positive association between bank size and the level of corporate risk disclosure.

* **Profitability**: Profitability can be seen as a sign of good management. Signaling theory (e.g., Haniffa & Cooke, 2002; Strong & Walker, 2008) states that companies with “good news” due to better performance are more likely to disclose more detailed information than by “bad news” in order to avoid undervaluation of their shares (Halbouni & Yasin, 2016). According to Linsley & Shrivs (2006), to show their management competence and their good financial results to stakeholders,

firms are likely to disclose more risk information. In addition, Neri (2010) argued that profitable companies have sufficient resources to invest in the system to manage risks, which supports its attitudes towards risk disclosure. However, empirical research on this issue is mixed. Some authors believe that lower profitability firms are also forced to disclose risk information to justify their lower performance. In the case of Islamic banks, a positive relationship is expected between profitability and the level of risk disclosure.

H₄: *There is a positive association between bank profitability and the level of corporate risk disclosure.*

* **Leverage**: The firm leverage refers to the degree of financial risk that are faced by the business. Therefore, firms perceived by the market as having high levels of leverage are exposed to costs of control (Hassan, 2014). According to agency theory, companies with higher leverage disclose more risk information to reduce control costs that may be incurred by the shareholders, to satisfy the need of creditors and lenders and to explain the reasons of higher risk (Jensen & Meckling, 1976; Linsley & Shrivs, 2006; Deumes & Knechel, 2008). In addition, managers are inclined to disclose greater amounts of risk related information to provide a signal to the stakeholders about the ability of companies to manage risks effectively and efficiently (Abraham & Cox, 2007; Hassan, 2009). Based on these theories, the following hypothesis is tested:

H₅: *There is a positive association between bank leverage and the level of corporate risk disclosure.*

* **Cross-border listings**: Gul & Leuny (2004) argued that companies listed on a foreign stock market are subject to more extensive risk-related disclosure than those operating only within a local context. These companies face additional capital market pressure and greater levels of stakeholder monitoring for the provision of information (Branco & Rodriguez, 2006; Meek et al., 1995). According to legitimacy theory, greater levels of legitimacy and corporate reputation will be required to manage stakeholders who provide resources to firms listed in foreign market. In the case of European and Asian-Pacific companies, Khanna et al. (2004) found a positive relationship between disclosure and US listing companies. The same results are indicated by Marshall & Weetman (2002) and Abraham & Cox (2007) concerning UK firms with US dual listings. Therefore, higher levels of risk-related disclosure are expected for companies which have multiple listings on stock exchanges.

H₆: *There is a positive association between a bank listed on a foreign stock market and the level of corporate risk disclosure*

* **Adoption of IFRS**: Prior studies (e.g., Abraham & Cox, 2007; Dobler et al., 2011) suggest that risk disclosure practices are influenced by the existence of reporting guidelines. Indeed, several researches (Bischof, 2009; Oliveira et al., 2011a)

reported that the adoption of norms (IFRS, IAS) lead to greater amount of risk-related disclosure. The adoption of international norms is likely to send signals to the market that firms are following state of art disclosure practices and obtain social legitimacy. Generally, companies that follow a standard framework in the field of internal control and risk management disclose more risk information than those which do not. In the context of GCC countries, Abdallah et al. (2015) found that firms that were early adopters of IFRS reported more corporate risk disclosure than their peers. Therefore, hypothesis seven is stated as follows:

H₇: *There is a positive association between the adoption of norms (IFRS) and the level of corporate risk disclosure.*

Country characteristics

Stakeholder theory and legitimacy theory are adopted to explain the impact of country characteristics on risk disclosure. Stakeholders incorporate all groups (shareholders, employee, customers, suppliers, financial partners, government, local authorities and public administration, communities, competitors), that have interest in corporate information and can exercise influence on the activities of a firm (Donaldson & Preston, 1995). For this reason, in order to meet the interests of stakeholders and to respond to their requests, the company has to identify the most influential stakeholder groups. In addition, according to this theory, managers are accountable to all stakeholders (Chen & Roberts, 2010) and firms require their support for their operations and to guarantee the continuity of their functionality (Gray et al., 1997). The legitimacy theory is based on the notion that firms have a social contract. According to several studies (e.g., Bebbington et al., 2008; Toms, 2002; Oliver, 1991, Suchman, 1995), legitimacy is a process that leads to economic gains, reduces information asymmetries, attracts resources and strengthens the trust of appropriate stakeholders through the practice of disclosure. Based on this theory, managers are inclined to disclose more risk related information in order to legitimate their actions and build good corporation reputation in society and with all stakeholders (Tilt, 1994; Patten, 1992; O'Sullivan & O'Dwyer, 2009).

Based on these theories and following the study of Wan Abdullah et al. (2015), we choose two indicators related to country characteristics:

* Level of political and civil repression: Iqbal (2002) argues that accounting is influenced by multiple environmental factors such as the economic system, the political system and the education system. Therefore, the political system could influence disclosure practices in a country. Several studies support the existence of a relationship between the level of disclosure made by a firm and the political system adopted by a country. Wan Abdullah et al. (2015), in their Southeast Asian and GCC regions study, find that the level of political and civil repression is negatively associated with voluntary corporate governance disclosure. Similar results are reported by Farook et al. (2011) and Williams (1999) in their study

related to the determinants of corporate responsibility disclosures. Based on these studies, this research hypothesizes that:

H₈: There is a negative association between the level of political and civil repression and the level of corporate risk disclosure.

* **Nature of the legal system:** The legal systems of different countries have been broadly classified into civil (or code) and common law systems (La Porta et al, 1997). Most empirical studies report that the legal system influences directly or indirectly disclosure practices in a firm. For example, Jaggi & Low (2000) indicate that firms from law countries are associated with higher financial disclosures compared to firms from code law countries. Recently Wan Abdullah et al. (2015) find a positive association between Islamic banks located in code law countries and the extent of voluntary corporate governance disclosure of Islamic banks. According to Ball et al. (2000), firms in code law countries adopt the stakeholder governance model whereas in common law countries, companies apply the shareholder governance model. Since Islamic banks have a multi-layer governance structure (Mollah & Zaman, 2015) which comprises many actors, we expect that Islamic banks operating in code law countries will disclose more risk information than those which exist in common law countries. The related hypothesis is stated as follows:

H₉: There is a negative association between Islamic banks operating in common law countries and the level of corporate risk disclosure.

METHODOLOGY

Sample and data sources

Since Islamic banks operate under vastly different regulatory regimes and political and economic conditions across the globe, the sample banks was selected from countries, which share common geo-political, socio-economic objectives and have adopted approximately the same model of Shariah governance. The paper draws on a sample of 29 commercial Islamic banks operating in five GCC countries, namely Bahrain (8), Kuwait (8), Qatar (3), Saudi Arabia (3) and the United Arab Emirates (7). The sample (not include investment banks) comprises more than 90 per cent of GCC commercial banks which makes it the most comprehensive database on commercial banks in the Arab Gulf region. The sample was selected with a minimum of three consecutive annual reports of Islamic banks which are available on their website. In order to have a homogenous sample and examine the situation of Islamic banks especially in the post-2007/2008 global financial crisis periods, the paper uses only a sample of full-fledged Islamic banks between the years of 2013 to 2016. The data for the risk disclosure, SSB and corporate governance was hand-collected mostly from the annual reports and corporate governance reports of individual banks and completed by the Zawa database.

Financial and accounting data were extracted from the Bankscope database of Van Dijk's Bureau. The scores related to political rights and civil liberties were collected from the scoring system of Freedom House.

MEASUREMENT OF VARIABLES

Construction of corporate risk disclosure index

To construct the corporate risk disclosure index (CRDI), an extensive review of financial and accounting literature was undertaken (e.g., Linsley et al., 2006; Lipunga, 2014; Abdullah et al., 2015). In addition, the investigation was based on regulatory documents published by the Accounting and Auditing Organization for Islamic Financial Institutions (AAOIFI, 2010) and the Islamic Financial Service Boards (IFSB, 2007). Based on these studies and international benchmarks, CRD index which contains 45 items and incorporates seven types of risk disclosure that were regrouped into the following dimensions: general disclosure risk management (14 items), credit risk (11 items), liquidity risk (5 items), market risk (4 items), operational risk (5 items), rate of return risk (4 items) and other risks (2 items).

To quantify the level of risk disclosure in Islamic banks and to compare the content of their annual reports, this paper employed a content analysis which is the most common and widely used method in the recent risk disclosure literature. This technique involves different procedures to measure the extent of risk disclosure. According to Beattie et al. (2004), three procedures can be used, such as subjective analyst ratings, semi-objective textual analysis and semi-objective disclosure indices. The latter is the method of choice for our research. In the literature, both un-weighted and weighted indexes can be used to construct the disclosure index. The second method is often criticized for its subjectivity (Chow & Wong-Boren, 1987). For this reason, the study chooses to construct an unweighted index. Sarkar et al. 2012 suggest that this approach has an advantage of treating every attribute under a sub-index symmetrically without having to make any subjective judgments on the relative importance of each attribute. In addition, since the study addresses all users of annual reports, there is no need to confer different importance levels to the disclosed risk items (Oliveira et al., 2006). Concerning the coding method, an ordinal coding scheme was used with three levels. The item is scored 0 if not disclosed, 1 for a basic disclosure and 2 if it is disclosed extensively. The final score for each bank and for each dimension of CRD index is calculated as follows:

$$CRDI_j = \frac{\sum_{i=1}^{n_j} X_{ij} \times 100}{2n_j}$$

Where CRDI_j represents the corporate risk disclosure index for the bank *j* and ranges from 0 to 100%, *X_{ij}* varies between 0 and 2 and *n_j* is the number of total items. The higher the index, the more transparent the bank is disseminating risk information.

Determinants of corporate risk disclosure

Table 1:

Variables' description

Variables	Definition and measure
Dependent variables	
Corporate risk disclosure index	CRDI: This index is calculated through a content analysis based on seven components (45 items) extracted from the annual reports of the bank.
Independent variables: SSB attributes	
SSB size	Number of scholars sitting on the Shariah board. 1 if the number of members is \geq to 4, 0 otherwise
Cross members	Number of scholars who serve on 2 or more other Shariah board of other Islamic financial institutions. 1 if the number of members is \geq to 3, 0 otherwise
SSB meetings	Number of meetings held during the fiscal year. 1 if the number of meetings is \geq to 4, 0 otherwise
Presence of accounting/finance knowledge	Number of members formally trained in accounting, banking and finance. 1 if the number of members is \geq to 2, 0 otherwise
Independent variables: Corporate governance characteristics	
Board size	Number of members in the board of directors. 1 if the number of members is \geq to 9, 0 otherwise
Board independence	Percentage of outside directors to the total number of directors on the board. 1 if the percentage is $>$ to 0, 0 otherwise
Audit size	1 if the company employs one of the big 4 auditors and 0 otherwise.

Audit committee independence	Percentage of independent non-executive directors on the audit committee. 1 if the percentage is > to 0, 0 otherwise
Independent variables: Bank-specific variables	
Size	Logarithm of total bank assets.
Leverage	Investment account holders divided by total assets.
Profitability	ROA: Net income divided by average total assets.
Cross-border listings	1 if the bank is listed on international stock market, 0 otherwise
Adoption of norms (IFRS)	Number of years since a bank first implemented IFRS.
Independent variables: Country characteristics	
Level of political and civil repression	Score ranges between 1 and 14
Nature of legal system	1 if the country adopts the common law, 0 otherwise.

The factors with an influence on CRD and used in this paper are described in **Table 1**. Four indicators represent the characteristics of corporate governance, namely board size, board independence, audit size and audit committee independence. Board size is proxied by the number of members in the board of directors and board independence is measured by the ratio of outside directors to the total number of directors on the board (Srairi, 2016). Audit size is measured as being one of the big 4 audit firms (Hassan, 2014). These companies are considered to provide higher audit quality and, in consequence a higher level of voluntary risk disclosure as compared to other companies. Audit committee independence is proxied by the proportion of non-executive members of the board (Oliveira et al., 2011b, Neri, 2010). All these variables are given equal weighting and combined into a single index (the average of score of each indicator). Regarding the SSB characteristics which incorporate four variables namely, SSB size, cross-membership, SSB meetings and the presence of accounting/finance knowledge, the same methodology is adopted as used for corporate governance characteristics and the paper calculates another index related to SSB. The size of SSB is defined as the number of scholars sitting on the Shariah board. Cross membership is measured by the percentage of scholars who serve on two or more Shariah boards of different Islamic financial institutions (Srairi, 2016).

SSB meetings are proxied by the number of meeting in one year. Knowledge in business, accounting of finance of the SSB is computed as the percentage of scholars sitting on the Shariah board with this knowledge. Concerning bank-specific characteristics which may have an impact on corporate risk disclosure, the paper has selected five variables measured as follows: bank size is proxied by the logarithm of total bank assets, bank profitability is measured by ROA, leverage is measured by the deposits of the Islamic bank (investment account-holder) to total asset, cross-border listings is defined as a dummy variable equal to 1 if the bank is listed on international stock markets and 0 to the contrary and the last variable is the adoption of norms which is measured by the number of years since a bank first implemented IFRS. Finally, for country characteristics, two indicators are considered. Similarly to prior studies, the level of political and civil repression is proxied by the scoring system developed by Freedom House which ranges between 1 (freedom) and 14 (repression). The nature of the legal system is defined as a dummy variable equal to 1 if the country adopts common law and 0 if civil law is adopted.

Econometric model

In order to test our hypotheses and to identify the factors that influence the level of corporate risk disclosure in the annual reports of Islamic banks, a multivariate analysis was carried out through the following regression equation:

$$CRDI_{ijt} = \alpha + \beta_1 (CG)_{it} + \beta_2(SSB \text{ attributes})_{it} + \beta_3(X)_{it} + \beta_4(Y)_{jt} + \beta_5Country_j + \epsilon_{it} \quad (1)$$

Where i subscripts the bank, t denotes the time dimension, CRDI, as an dependent variable, represents the corporate risk disclosure index for each bank, CG represents the corporate governance index for each bank i at time t , SSB is also a score that indicates the attributes of bank i at time t , X is a vector representing bank size, leverage, bank profitability, cross-border listings and adoption of norms (IFRS), Y is a matrix of country characteristics, Country is a dummy variable to control for cross country and ϵ is the random error term.

In estimating the above equation, the present study used the OLS technique. In the presence of panel data, fixed effect or random effect models are applied, but neither of those was appropriate with the data for several reasons. First, the main variable, CRDI, used in this equation does not vary much over time for each time. Second, the model contains variables like country characteristics which are the same for all banks in a country for a specific year. Then, according to Baltagi (2005), applying fixed-effect estimation would lead to massive loss of the degrees of freedom.

RESULTS

The analysis of risk disclosure of Islamic banks in GCC countries will be organized in two main parts. First, using the content analysis, the corporate risk disclosure index is calculated. Then, its evolution by dimension of risk and by country was evaluated. In the second part, the analysis was extended by examining factors that may influence risk disclosure practices of Islamic banks.

Descriptive statistics of corporate risk disclosure index

Table 2 reports the summary statistics of total corporate risk disclosures index and its 7 types of risk disclosure. Based on content analysis, these scores represent the averages of four years, namely 2013, 2014, 2015, and 2016. As shown in **Table 2**, the mean of corporate risk disclosure for Islamic banks is 60.5 per cent and it ranges from 32.3 per cent to 82.7 per cent. It means that on average Islamic banks in GCC countries comply with 61 per cent of the risk disclosure studied in this paper. It is also observed that all dimensions of the index, except the rate of return risk (46.3 per cent) and other risks index (19.8 per cent), have contributed to the improvement of the CRDI.

Table 2:

Summary statistics of Corporate Risk Disclosure Index (CRDI)

Dimension of risk disclosure	Mean (%)	Median (%)	Minimum (%)	Maximum (%)	Standard deviation (%)
General disclosure risk management	53.0	59.7	10.4	72.2	16.4
Credit risk	67.2	66.4	6.7	78.8	21.6
Liquidity risk	76.4	78.7	9.3	90.5	19.7
Market risk	82.6	79.8	11.2	92.6	22.3
Operational risk	78.1	77.3	8.4	89.2	25.5
Rate of return risk	46.3	48.9	4.2	61.9	28.3
Other risks	19.8	17.6	2.4	37.2	14.1
Overall CRDI	60.5	58.9	32.3	82.7	26.5

On average, the highest CRDI exists in the area of the disclosure of market risk (82.6 per cent), followed by operational risk (78.1 per cent), liquidity risk (76.4 per cent) and credit risk (67.2 per cent), respectively. Other risks, especially display commercial risk, are the lowest type of risk where most Islamic banks scored below the 20 per cent.

Table 3 presents the descriptive statistics for the level of corporate risk disclosure by each dimension of risk and by country. It shows that Bahrain has the highest mean of CRDI (65.1 per cent), followed by the UAE (64.5 per cent), Qatar (60.3 per cent), Saudi Arabia (56.4 per cent), and Kuwait (55.9%), respectively. Given the average overall CRDI of 60.5 per cent, it can be observed that there are only two countries, Bahrain and the UAE, which have above average CRDI. However, all 5 GCC countries have an average CRDI superior to 50 per cent. Concerning the type of risk, Bahrain is ranked first in terms of credit risk, market risk and rate of return risk, while the UAE is first in terms of general risk disclosure, liquidity risk, operational risk and other risks. Qatar is ranked second in terms of credit risk and operational risk. Rankings for Kuwait range between third and fourth in most types of risk, whereas Saudi Arabia is in the lowest rank for four categories of risk disclosure. It is interesting to note that all countries have a lower score in terms of rate of return risk and other risks. As suggested by Abdallah et al. (2015), the results of analysis also conclude that although most GCC Islamic banks follow IFRS, Bale and AAOIFI norms, differences across countries are due to differences in their regulatory environments.

Table 3:

Statistics of corporate risk disclosure index by type of risk and country

Dimension of risk disclosure	UAE (%)	Kuwait (%)	Qatar (%)	Saudi Arabia (%)	Bahrain (%)
General disclosure risk management	58	53	51	48	55
Credit risk	60	57	74	68	77
Liquidity risk	83	74	76	69	80
Market risk	86	81	79	78	89
Operational risk	85	72	82	75	76
Rate of return risk	52	39	42	45	54
Other risks	29	15	18	12	25
Overall index	64.7	55.9	60.3	51.8	65.1
Overall rank	2	5	3	4	1

Multiple regression results: Determinants of risk disclosure

To answer the research question about factors affecting Islamic banks' risk disclosure, a regression model was applied using four categories of independent variables namely, corporate governance characteristics, SSB attributes, bank specific and country characteristics. **Table 4** provides panel estimation results using the OLS technique. Model 1 has an adjusted R^2 equal to 0.428, which implies that independent variables explain almost 43 per cent of the variation of the CRDI. The table also indicates that the F ratio is equal to 6.472 at 1 per cent significance level.

Table 4:

Determinants of corporate of risk disclosure: OLS regressions

Explanatory variables	Model 1		Model2	
	Coefficient	t-statistics	Coefficient	t-statistics
Intercept	0.732	2.13**	0.468	0.17
Corporate Governance index	0.051	2.41**		
Board size			0.014	2.88**
Board independence			0.006	1.74***
Audit size			0.026	1.06
Audit committee Independence			0.001	0.38
Shariah supervisory board index	0.113	3.05**		
SSB size			0.003	2.56**
Cross members			0.054	0.81
SSB meetings			0.128	1.16
Presence of accounting/finance knowledge			0.026	1.98***
Bank characteristics				
Bank size	0.009	2.69**	0.153	2.39**
Leverage	0.062	1.92***	0.045	1.56
Profitability	0.186	0.723	0.092	0.06
Cross-border listings	0.035	2.19**	0.007	1.78***
Adoption of norms (IFRS)	0.159	0.482	0.031	0.08
Country characteristics				
Level of political and civil repression	-0.042	-2.32**	-0.076	-1.81***
Nature of legal system	-0.076	-0.35	-0.206	-0.092
Adjusted R^2	0.428		0.364	
F-statistic	6.472*		2.856*	
Observations	106		106	

Consistent with our first hypothesis, the result indicates that corporate governance index is significant at 5 per cent level and positively correlated to the risk disclosure index. It means that corporate governance mechanisms have an influence on the level of risk disclosure. This evidence suggests that well-governed Islamic banks disclose more risk information than poorly governed Islamic banks. The result of this paper is consistent with what has been suggested by many studies (e.g., Abdullah et al., 2015; Elshandidy et al., 2013; Taylor, 2011; Anderson et al., 2004). In model 2, four variables of corporate governance (board size, board independence, audit size, audit committee) are used instead of corporate governance index. From **Table 4**, the result shows that board size and board independence have a significant and positive effect on risk disclosure. This result is consistent with the agency theory. It suggests that, Islamic banks with larger boards and higher number of independent directors provide and disclose more risk information.

The results also show that SSB attributes have a positive significant impact on risk disclosure. This finding is consistent with the research of Farook et al. (2011) who find a positive association between SSB corporate social responsibility disclosures. In conclusion, as argued by several studies, a strong and active SSB with a large size, shared members and higher expertise in financial and accounting practices, encourages Islamic banks to be more transparent and influences them to follow the Islamic standards (AAOIF, IFSB) on risk disclosure. In the second model without using SSB index, the results indicate that only two variables have a significant impact on the level of risk disclosure. A positive and significant association was found between SSB size and CRDI. The same finding is obtained for the presence of finance and accounting knowledge. Then, it is suggested that larger SSBs with skilled members in banking are more able to advice and to supervise Islamic banks and in consequence to encourage them to disclose more risk information. This result is supported by the arguments of stakeholder theory. This theory focuses its attention on an organization's most influential stakeholders, namely those who can, directly or indirectly, influence it.

Regarding bank-specific, **Table 4** indicates that only three variables have an impact on risk disclosure. The results suggest a positive association between bank size and risk disclosure. It means that larger banks have a greater propensity to disclose risk information than smaller ones (Abdul Rahman et al., 2012). This finding can be explained first by the fact that since larger banks have better resources (economies of scale) and information systems they have the ability to disclose more information at a lower cost (Watts & Zimmerman, 1978; Ben Amar & Boujenoui, 2007). Second, according to several studies (e.g., Wan Ibrahim et al., 2011; Abraham & Cox, 2007), larger banks are under greater pressure from stakeholders and markets for increasing risk disclosure. Third, as suggested by Cooke (1989), to reduce regulatory control and to manage political costs, larger banks are likely to disclose more risk information. This result is consistent with

political cost theory that argues that the expansion of disclosure is a means of reducing political focus. With reference to the impact of leverage on risk disclosure, **Table 4** reports that leverage has significant impacts on GCC Islamic banks' risk disclosure. This finding indicates that leverage is a driving factor for Islamic banks to increase the extent of corporate risk disclosure. Consistent with several studies (e.g., Wan Ibrahim et al., 2011; Abraham & Cox, 2007), this result corroborates the arguments of agency theory. The higher the bank leverage the more risk-related information is disclosed in the annual reports (Hassan, 2009). Further, to reduce control costs and to decrease depositors' suspicion about the ability of the bank to meet its obligations, Islamic banks with a higher level of investment account-holders are obliged to disclose more risk information. Results of regression also indicate a significant positive association between cross-border listings and risk disclosure. This is consistent with legitimacy theory arguments and with earlier studies (e.g., Meek et al., 1995; Khanna et al., 2004). As argued by Gul & Leung (2004), companies operating in a global context disclose more risk information to face the competition for obtaining capital in international markets and the increasing pressure from stakeholders. In addition, these banks which are listed both domestically and on foreign stock exchanges have also to comply with the additional listing requirements of a particular foreign stock exchange (Abdul Rahman et al., 2013). Finally, **Table 4** indicates that there is no statistically significant relationship between profitability, adoption of IFRS and CRDI.

Concerning indicators related to country characteristics, the result in **Table 4** shows that only the coefficient of the level of political and civil repression is significantly negative with risk disclosure index. This finding is supported by legitimacy theory and is consistent with the view that Islamic banks operating in countries with less repression voluntarily disclose more information. It is also in line with the studies of Wan Abdullah et al. (2015), Farook et al. (2011) and Williams (1999). The coefficient of the nature of legal system (dummy variable) is negative but there is no significant association with CRDI. This result can be explained by the fact that all GCC countries in our sample follow the common law system. It is interesting to note that in their Southeast Asian and GCC regions study, Wan Abdullah et al. (2015) found that banks in code law countries provide more corporate governance information compared to banks in common law countries.

CONCLUSION

The aim of this study is to investigate risk disclosure by GCC Islamic banks through an index which contains seven categories of risk disclosure. In addition, based on several theories, the paper examines a set of factors that may have an impact on the risk disclosure practices of Islamic banks. The main determinants concerned corporate governance characteristics, SSB attributes, bank-specific and country characteristics. The study employs content analysis to compute risk disclosure for each type of risk, each bank and the overall risk disclosure in the country.

The results reveal, on average, that risk disclosure among Islamic banks in the GCC countries is equal to 61 per cent indicating that the majority of Islamic banks in this region have to improve the level of risk disclosure. The finding also suggested that there is very low reporting on some risk disclosure types, especially other risks (displaced commercial risk) and rate of return risk. More information of the compliance of banks' product has to be provided to the customers and depositors of Islamic banks. A very high gap in risk disclosure exists between countries. Only two countries, the UAE and Bahrain possess a higher level of CRDI. In contrast, Kuwait and Saudi Arabia recorded a low mean score of CRDI. This finding can be explained by the differences in the time at which GCC countries adopted international and Islamic standards (IFRS, Bale 2, AAOIFI).

Regarding factors that may have an influence on risk disclosure, several important findings emerge from this research. First, a positive and significant correlation was found between risk disclosure index and corporate governance characteristics. The results show that better quality corporate governance influences directly the level of risk disclosure. It means that Islamic banks with a stronger set of corporate governance mechanisms appear to disclose more risk information. This finding is consistent with agency theory arguments that assert that adequate disclosure about risks is a vehicle which reduces interest conflict and helps shareholders to exercise effectively their monitoring role towards managers (Uddin & Hassan, 2011; Dobler, 2008). This in return reduces the agency problem, leads to shareholders confidence and decreases information asymmetry. Second, a positive link between several aspects of SSB and risk disclosure is found. Shariah boards in Islamic banks as suggested by stakeholder theory and several studies can potentially play an important role in encouraging banks to disclose more risk information and to be transparent in general. Third, with reference to the bank-specific, the results of regression show that bank size, leverage and cross-border listings have a positive and significant impact on Islamic banks' risk disclosure, while the results do not show any significant effect of profitability and adoption of norms on CRDI. Finally, the results of this paper support the postulates of legitimacy theory and the hypothesis that a negative association exists between the level of political and civil regression and the level of risk disclosure.

A number of limitations should be pointed out in interpreting the results and conclusions of this study. With regard to the construction of risk disclosure index and the use of content analysis, there is a degree of subjectivity to evaluate the practices of Islamic banks. Moreover, the quality of risk information and their level of importance are not taken into account in the analysis. The evaluation adopted in this paper is based on the existence or non-existence of items in the annual reports.

Despite these limitations, the findings of the paper offer important implications for banks, regulatory and policy-makers. Since the average overall CRDI of the GCC Islamic banks is relatively low, there is a need for improvement in corporate

risk disclosure by Islamic banks. These banks should revise their communication strategies and provide more risk information related to rate of return risk and display commercial risk. Second, GCC regulators should establish risk disclosure regulations which have to become mandatory for all Islamic banks. Before that and as a first step, regulators in this region have to encourage Islamic banks to adopt standards issued by the AAOIF and The IFSB. Finally, there is a need to elaborate guidance on best practices in risk disclosure to help managers in Islamic banks to prepare coherent annual reports.

Additional research could be undertaken to extend this study in several ways. First, it might be of interest to compare the present paper with future studies which examine risk disclosure in other regions such as Southeast Asia. This region contains an important number of Islamic banks and adopts another model of Islamic governance. Second, it would be interesting to introduce other independent variables such as ownership structure, characteristics of management and external auditors, as they may have an impact on the behavior of Islamic banks. Lastly, to explore the quality of risk information and to enhance the understanding of the needs of such information by different stakeholders, alternative research methods could be applied, such as surveys and interviews with different users of this information.

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Appendix 1: Dimensions and items for corporate risk disclosure index

** General disclosure risk management*

- A description of the bank's risk management objectives, strategies, policies and procedures by risk category or in aggregate.
- Risk management framework is disclosed.
- The bank's risk terminology is provided.
- Information on risk management structure.
- Full board is accountable and responsible for overall risk.
- Information on risk management committee.
- Scope and nature of the risk measurement and reporting system.
- The top emerging risks that arise from the bank's business models and activities are discussed.
- Disclosure of the range and measure of risks facing each restricted IAH fund based on its specific investment policies.
- Disclosure of the treatment of assets financed by restricted IAH in the calculation of RWA for capital adequacy purposes.
- Disclosure of the treatment of assets financed by unrestricted IAH in the calculation of RWA for capital adequacy purposes.
- Composition of financing by type of contract as a percentage of total financing.
- Disclosure of the carrying amount of any assets pledged as collateral (excluding amounts pledged to the central bank or monetary authority) and the terms and conditions relating to each pledge.
- The amount of any guarantees or pledges given by the IIFS and the conditions attaching to those guarantees or pledges.

** Credit risk*

- A description of the bank's credit risk management policies and objectives.
- Information on credit risk management structure.
- A qualitative and quantitative analysis of the bank's counterparty risks that arises from its derivatives transactions is provided.
- Qualitative information on credit risk mitigation is provided.
- A description of the main types of collateral and other credit risk mitigates taken by the bank.
- Where a third party guarantee is taken as risk mitigation, the risk weight applicable to the guarantor shall be disclosed.
- Total gross credit exposure and average gross credit exposure over the period by rating categories, where applicable.
- Total gross exposure and average gross exposure to equity-based financing structures by type of financing contract.
- Disclosure of the amount and changes in loss provisions during the financial year.

- Disclosure of any penalty imposed on customers for default, and the disposition of any monies received as penalties.
- Disclosure of the total carrying amount by type of collateral of any assets held as collateral by the Bank and the terms and conditions relating to the pledges.

* *Liquidity risk*

- Information about the bank's available liquid assets as well as sources and uses of funds.
- Maturity information about deposits and other liabilities.
- A summary of the liquidity risk management framework in addressing risk exposure for each category of funding as well as on an aggregate basis: current accounts; unrestricted investment accounts and restricted investment accounts.
- General information on policies to address liquidity risk, taking into account the ease of access to *Shari'ah*-compliant funds and diversity of funding sources.
- Indicators of exposure to liquidity risk such as short-term assets to short-term liabilities, liquid asset ratios or funding volatility.

* *Market risk*

- General descriptions and disclosure of appropriate framework for market risk management.
- Qualitative and quantitative breakdowns of significant trading and non-trading market risk factors that may be relevant to the bank's portfolio are provided.
- Qualitative and quantitative disclosures that described significant market risk are provided (such as measurement, model limitations, assumptions, validation procedures, use of proxies, changes in risk measures and models through time).
- Disclosures on value-at-risk or other sensitivity approaches for different types of market risk (foreign exchange risk, commodity price risk,...).

* *Operational risk*

- Policies to incorporate operational risk measures into the management framework (budgeting, target setting, performance review compliance).
- Policies on processes are described.
- Policies on the loss mitigation process via contingency planning, business continuity planning, staff training and enhancement of internal controls, as well as business processes and infrastructure.
- Disclosure of the RWA equivalent for operational risk.
- Indicators of operational risk exposures, such as: Gross income; and Amount of *Shari'ah* non-compliant income.

* *Rate of return risk*

- Disclosures on factors affecting rates of return and benchmark rates.
- Processes and systems to monitor and measure the factors that give rise to rate of return risk.
- Indicators of exposure to rate of return risk (data on expected payments/receipts on financing and funding and the cost of funding at different maturity buckets according to time of maturity or time of reprising for floating rate assets or funding).
- Sensitivity analysis of bank's profitability and the rate of returns to price or profitability rate movements in the market.

* *Other risks*

- Other risks types (example displaced commercial risk) identified by the management are described.
- Disclosure of the bank's policy on these risks (measures and indicators, management,...).

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