Islamic Governance, National Governance, and Bank Risk Management and Disclosure in MENA Countries

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Abstract

We examine the relationships among religious governance, especially Islamic governance quality (IGQ), national governance quality (NGQ), and risk management and disclosure practices (RDPs), and consequently ascertain whether NGQ has a moderating influence on the IGQ-RDPs nexus. Using one of the largest datasets relating to Islamic banks from 10 Middle East and North Africa (MENA) countries from 2006 to 2013, our findings are three-fold. First, we find that RDPs are higher in banks with higher IGQ. Second, we find that RDPs are higher in banks from countries with higher NGQ. Finally, we find that NGQ has a moderating effect on the IGQ-RDPs nexus. Our findings are robust to alternative RDPs measures and estimation techniques. These results imply that the quality of disclosure depends on the nature of the macro-social level factors, such as religion that have remained largely unexplored in business and society research, and therefore have important implications for policy-makers.

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Introduction

In this article, we seek to make a number of new contributions to the extant literature by: (i) examining the extent to which national and religious governance, especially Islamic governance quality influences the level of risk disclosure in Islamic banks; and (ii) consequently, ascertain whether the link between Islamic governance quality (IGQ) and bank risk management and disclosure practices (RDPs) is moderated by national governance quality (NGQ)[1].

Meanwhile RDPs are a significant part of a bank's long-term financial sustainability and annual reporting. They often include managerial clarifications and commentaries about a bank's up-to-date state regarding uncertainty and future predictions (Ntim *et al*., 2013). In fact, regulators and stakeholders have been concerned with RDPs in recent years, especially following the 2007/2008 global banking crisis (Abedifar *et al*., 2013; Barakat & Hussainey, 2013; BCBS, 2015). This notwithstanding, the role of macro-social level factors, such as religion and national governance in driving business decisions and outcomes, such as RDPs in distinct religious, cultural and business contexts remains largely unexplored (Du *et al*., 2014; Ullah *et al*., 2014). Specifically, prior studies investigating the relationships among IGQ, NGQ and RDPs are rare (Barakat & Hussainey, 2013; Ntim *et al*., 2013). Similarly, and to the best of our knowledge, there is no extant study examining how NGQ might probably affect the IGQ-RDPs nexus. A number of reasons have often been cited for the lack of empirical research exploring the effect of religion in particular in corporate decision-making and outcomes, including religion being inherently divisive, sensitive and inconsistent with the principles underlying business (Tracey, 2012). Nevertheless, another strand of research suggests that religion can be influential in business decisions and operations (Chan-Serafin *et al*., 2013). In this case, previous research has, for example, linked religiosity-based management to the extent of social and environmental disclosures (e.g., Al-Bassam & Ntim, 2017; Farook et al., 2011; Haniffa & Hudaib, 2007; Losoncz, 2011; Rahman & Bukair, 2013), risk-taking (Chircop *et al*., 2017), earnings management (Elghuweel *et al*., 2017) and financial reporting irregularities (McGuire *et al.,* 2012). The current study, therefore, seeks to address this lacuna within the extant literature by examining the links

among IGQ, NGQ, and RDPs. In addition, we explore why and how NGQ may have a moderating influence on the IGQ-RDPs nexus within Middle East and North Africa (MENA) Islamic banks.

RDPs have witnessed substantial developments and interests in recent years (Abdallah *et al*., 2015). In this case, the prior literature suggests that Islamic banks may commit to increased RDPs for two main theoretical reasons: (i) efficiency/instrumental; and (ii) legitimation/moral ones. First and from efficiency perspective of neo-institutional theory, institutional pressures often originating from coercive, mimetic and normative forces can compel corporations to commit to standards and regulations that can enhance internal processes, improve efficiency and thereby gain competitive advantages. In this case, engaging in transparent RDPs may improve economic performance by reducing information asymmetry between management and shareholders (Jensen & Meckling, 1976; Ntim *et al*., 2013; Safieddine, 2009). Similarly, committing to increased RDPs may send positive signals to prospective investors about management's willingness to engage in prudent risk management practices, and thereby offer access to cheaper capital (Connelly *et al*., 2011; Ntim *et al*., 2013). Further, improved RDPs can enhance financial performance and improve economic efficiency by offering Islamic banks' access to critical resources, such as Islamic bonds ('*Sukuk'*) and contracts (Al-Bassam *et al*., 2017; Pfeffer & Salancik, 2003).

Second, the legitimation/moral view of neo-institutional theory predicts that coercive, mimetic, and/or normative institutional forces can compel Islamic banks to conform to expected social behaviour. This is because conforming to such expected social behaviour can be a strategic approach towards enhancing Islamic banks' legitimacy and justifying their right to exist (Al-Bassam *et al*., 2017; Ntim *et al*., 2013). Thus, compliance with good RDPs in the form of increased risk disclosures can facilitate congruence of the goals and norms of Islamic banks with those of the broader society, and thereby improve organisational legitimacy. Similarly, the need to maintain good relationships with various bank stakeholders (Aguilera *et al*., 2007), and hence improving organisational legitimacy, can serve as a motivation for Islamic banks to engage in or mimic accepted social behaviour (Al-Bassam *et al*., 2017). Hence, engagement in RDPs by Islamic banks can strategically enhance their legitimacy by helping to gain the support of powerful stakeholders, such as governments, employees, shareholders, depositors and investors (Freeman, 1984;

Freeman & Reed, 1983). Consequently and in consideration of the apparent complex nature of the relationship among RDPs, Islamic governance and national governance in specific settings, such as MENA (Al-Bassam & Ntim, 2017; Elghuweel *et al*., 2017), there have been increasing calls for research that can explore the determinants of RDPs from theoretical perspectives that have the capacity to capture both efficiency and legitimation motives underlying corporate engagement in RDPs (Judge et al., 2008, 2010; Ntim et al., 2013).

Noticeably, the extant research has examined a wide range of motivations and antecedents of RDPs (e.g., Abdallah *et al*., 2015; Barakat & Hussainey, 2013; Dobler *et al*., 2011; Ntim *et al*., 2013). However, existing research seems to suffer from a number of weaknesses. Despite the significance of increased RDPs and the associated substantial accounting standards (e.g., International Financial Reporting Standards 7 and 9, International Accounting Standards 32 and 39), and corporate governance reforms worldwide (Abdulrahman *et al*., 2017; Al-Bassam *et al*., 2017; Elmagrhi *et al*., 2016), existing RDPs research is largely focused on examining the influence of either firm-level characteristics (e.g., Dobler *et al*., 2011; Linsley & Shrives, 2006) or internal corporate governance mechanisms (Abraham & Cox, 2007; Ntim *et al*., 2013) on RDPs in non-financial firms in developed countries. By contrast, studies investigating why and how religion and other macro-social level factors may influence the level of RDPs in Islamic banks are rare (Barakat & Hussainey, 2013; Ullah *et al*., 2014), especially in developing countries (Abdallah *et al*., 2015). Meanwhile a number of studies indicate that macro-social level institutional factors, such as national governance and religion can influence corporate decisions and outcomes (Alon & Dwyer, 2014; Ernstberger & Grüning, 2013). In the case of IGQ and NGQ, for example, it has been argued from a neo-institutional theoretical perspective that they can help in determining how bank executives treat their shareholders, as well as make decisions, including those relating to voluntary disclosures (Essen *et al*., 2013), and thus, can arguably ultimately affect RDPs directly. Also and despite the growing suggestions that NGQ may be an important driver of bank strategies, behaviour, and valuation (Alon & Dwyer, 2014; Ernstberger & Grüning, 2013; Essen *et al*., 2013; Tunyi & Ntim, 2016), the extant research relating to the impact of NGQ on disclosure

quality (e.g., RDPs) has received little attention (Alon & Dwyer, 2014; Cahan *et al.*, 2015; Schiehll *et al.*, 2014).

Further and notwithstanding the lack of evidence relating to the IGQ-RDPs nexus (Aguilera *et al.*, 2008; Barakat & Hussainey, 2013; Essen *et al.*, 2013; Ntim *et al.*, 2013), to the best of our knowledge, there is no extant research that has examined whether NGQ can moderate the IGQ-RDPs relationship. Meanwhile Islamic banks in the MENA region provide a unique context for exploring RDPs. Islamic banks operate on the basis of Islamic religious business principles, values, and laws that are drawn from *Shariah* (Islamic law), and thus arguably offer an interesting context to assess the extent to which religion (IGQ) and other macro-social level factors, such as NGQ may drive RDPs. In particular, the distinctiveness of Islamic banking/finance forms can create unique challenges regarding disclosure and society. For example, it has been suggested that some specific Islamic banking/finance forms, such as "*mudarabah*" (profit-sharing), "*murabaha*" (cost plus), "*musharakah*" (joint-venture), "*bai-muajjal*" (deferred payment sale), "*ijarah*" (leasing), and "*istisna*" (processing and manufacturing contracts) may not only be more prune to conventional agency conflicts, such as adverse selection and moral hazard problems, but also can exacerbate non-traditional agency problems by increasing opportunities for managerial expropriation of bank assets (Al-Bassam & Ntim, 2017; Elghuweel *et al.*, 2017; Safieddine, 2009). Further, MENA countries have observably pursued economic, corporate governance, accounting standards and regulatory reforms (Amico, 2014). These reforms have in the main created an enabling economic and corporate environment within which Islamic banks can maintain successful operations. However and arguably, the relatively poor NGQ in a majority of MENA countries may affect the trustworthiness of Islamic banks.

Hence, this study seeks to make a number of new contributions to the extant literature by examining the relationship among IGQ, NGQ and RDPs within such a distinct environment. First and drawing insights from a neo-institutional perspective, we offer first time evidence on the impact of IGQ on Islamic banks' RDPs. Recent studies suggest that *Shariah* boards play an important role in monitoring Islamic bank's financial reporting quality (AI-Bassam & Ntim, 2017; Farook et al., 2011; Safieddine, 2009). We extend this nascent research by providing evidence that Islamic governance can serve as an additional governance

layer with capacity to closely monitor and scrutinise managerial decisions, including those relating to disclosures. We argue that by highlighting the monitoring, performance and value maximising roles of Islamic governance within Islamic banks, our finding may help inform the decisions of the various stakeholders of Islamic banks, such as employees, depositors, investors, government and regulators. Second, and to the best of our knowledge, our study offers first time evidence on the effect of NGQ on RDPs. This result may potentially help investors and regulators to better understand and/or evaluate the channels (e.g., the institutional and regulatory setting) through which macro-social level factors, such as religion and national governance affect disclosure quality, transparency, and accountability within Islamic banks. Finally, previous research indicates that the relation between governance quality and disclosure varies according to the type of business, disclosure and contexts (Abedifar et al., 2013; Barakat & Hussainey, 2013; Essen et al., 2013; Ntim et al., 2013). We extend this literature by providing first time evidence that shows that NGQ has a moderating effect on the relationship between IGQ and RDPs.

The rest of this study is organised as follows. The next section outlines the theoretical framework. The folllowing sections review the extant empirical literature and develops research hypotheses, outline the research design, and discuss the empirical results, whilst the final section presents concluding remarks, discusses implications and recommendations for future research.

Theoretical Framework

The variations in RDPs could be explained through a generalised neo-institutional lense because a generally accepted theory that links RDPs and governance is still elusive (Christopher, 2010; Ntim et al., 2013; Zattoni & Van Ees, 2012). Thus, we employ a generalised neo-institutional perspective as a direct response to the latest calls for innovative alternative theoretical approaches to the ubiquitous agency theory for studying the link between IGQ and RDPs (Abraham & Shrives, 2014; Christopher, 2010; Dobler et al., 2011). One reason is that no single theoretical frameowrk may be able to offer a complete understanding of how Islamic and national governance mechanisms may affect RDPs on their own. By contrast, insights from a generalised neo-institutional perspective may offer unique insights towards interpreting and

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explaining RDPs within distinctive regulatory and institutional contexts, such as MENA. Also, a neo-institutional perspective may facilitate the examination of the potential interactions among IGQ, NGQ and RDPs (Ntim et al., 2013; Zattoni & Van Ees, 2012; Zona et al., 2015).

Briefly, a generalised neo-institutional theory incorporates both efficiency/instrumental perspective and legitimation/moral view of Islamic banks operating in an institutional environment rather than examining the incidence of particular institutional isomorphisms directly (e.g., coercive, mimetic, and/or normative institutional pressures). In this case and on the one hand, efficiency/instrumental perspective of the generalised neo-institutional theory suggests that effective mechanisms relating to bank- and national-level governance quality may lead to more transparent risk disclosures. Consequently, increased risk disclosure can mitigate agency conflicts and reduce the information asymmetry between management and shareholders (Abraham & Cox, 2007; Jensen & Meckling, 1976; Safieddine, 2009). Efficiency/instrumental motive further suggests that economic actors principally tend to maximise their self-interests by competing for critical resources.

On the other hand, sociology theorists consider institutions to be beyond just delivering economic efficiency, but also as social institutions with some symbolic value (Meyer & Rowan, 1977). Hence, the sociological neo-institutionalism theorists suggest that individuals and firms not only compete for critical resources, but also endeavour to gain social acceptance ("organisational legitimacy") (Zattoni & Cuomo, 2008). In this respect, legitimation is driven by the different values and ethics of economic actors, which may direct an Islamic bank, for example, to adopt some practices with no instant or clear economic benefits (e.g., interest-free loans or "Qard Hassan").

Specifically, Scott (2001) theorised that neo-institutional framework contains three levels of analysis: social (country) institutions; governance arrangements; and firms as economic actors. Social (country) level institutions provide a formal and informal platforms that provide legitimate models and standards of acceptable social behaviour (Judge et al., 2008, 2010). In this case, social (country) level institutions may interact to shape, facilitate, and/or limit the diffusion and/or imposition of structures and actions at lower levels. Thus, it suggests that Islamic banks are more likely to seek to conform to societal norms and

expectations, and as such may engage in increased risk disclosures, as a way of conforming to such expectations (Ntim et al., 2013; Ntim & Soobaroyen, 2013). These pressures tend to arise from Islamic banks' external and internal forces, and may lead to institutionalisation and organisations' isomorphic behaviour (DiMaggio & Powell, 1983; Ntim et al., 2013). Hence, a key principal assumption within a generalised neo-institutional theory's perspective is that the firms are not only seeking "legitimacy" and social acceptance, but they are also competing for critical resources ("efficiency").

A generalised neo-institutional theory has rarely been employed at the organisational level of analysis relating to Islamic governance–RDPs nexus, and this is principally relevant with respect to the rapid global growth of Islamic banking over the past decades. Debatably, there is opportunity to extend our understanding of the institutional antecedents and justifications of RDPs beyond Islamic banks. Hence, complying with Basel Accords and IFRS through increased RDPs can enhance the legitimacy of bank generally. Similarly, voluntarily engaging in RDPs can help Islamic banks to gain organisational legitimacy by fairly balancing the diverse and often conflicting demands of their different influential stakeholders, such as investors, shareholders, governments and depositors (Freeman, 1984; Freeman & Reed, 1983). Further, increased commitment to RDPs can send a credible signal to current and prospective investors of the quality of a bank's governance structures, and by extension its positive current and future prospects (Connelly et al., 2011; Ntim et al., 2013). This can enhance economic efficiency by granting access to critical resources, such as cheaper capital.

This study, therefore, seeks to enhance these neo-institutional motives by drawing insights from all of them together (i.e., efficiency and legitimacy perspectives) in examining and understanding the associations among Islamic governance, national governance, and bank risk disclosures. To add further theoretical nuance to our neo-institutional lense, we cogitate how NGQ and further effects, such as ethical and religious values of the MENA region (i.e., IGQ) may influence RDPs, as presented in Figure 1.

Related Literature and Research Hypotheses Development

Most prior literature on RDPs focuses on firm-specific factors (e.g., Dobler *et al*., 2011; Helbok & Wagner, 2006). However, the focus has recently shifted from firm-specific factors to firm's internal corporate governance mechanisms following unprecedented malfeasance and bank failures (Ntim *et al*., 2013). Conversely, there is no consistent evidence on the relationsship between corporate governance mechanisms and disclosure quality in banks (Abraham & Cox, 2007; Ntim *et al*., 2013). Moreover, the role of religion and other macro-social level factors in influencing RDPs has not been explored. Specifically, most prior RDPs studies rely on single governance level analytical approach, while often being inattentive to the potential influence of religion and national governance level factors (Barakat & Hussainey, 2013). Consequently, this study seeks to examine the impact of IGQ on the level of RDPs. Additionally, this study investigates the effect of NGQ on the level of RDPs. Finally, it explores why and how NGQ may have a moderating influence on the IGQ-RDPs nexus in MENA Islamic banks.

INSERT FIGURE 1 ABOUT HERE

Islamic Governance Quality and Risk Management and Disclosure Practices

It can be argued that Islamic banks' activities are likely to be consistent with the shareholders, stakeholders and society' expectations because of their explicit incorporation of Islamic values and laws (*Shariah*) into their operations (Abu-Tapanjeh, 2009; Elghuweel *et al*., 2017). These include the prohibition of interest charges ("*riba*" *or* "*usury*") and *Shariah* supervisory boards in Islamic banks that are responsible for assessing whether Islamic banks' transactions meet the requirements of Islamic law and values[2]. Thus, it can be conjectured that Islamic governance may play an important role in Islamic banks' decision-making, including those relating to RDPs. For example, prudential supervision and principles regarding Islamic governance may place a better emphasis on committing to more transparent disclosure practices for a number of theoretical considerations (Al-Bassam & Ntim, 2017; Farook *et al*., 2011). From an efficiency/instrumental perspective (Aguilera et al., 2007; Chen & Roberts, 2010), neo-institutional theory suggests that Islamic governance is likely to convey additional monitoring requirements to Islamic banks due to further rules, experience, and knowledge needed to be *Shariah*-compliant (AI-Bassam & Ntim, 2017;

Elghuweel *et al*., 2017). In particular, Islamic governance rooted in Islamic religious values and principles may offer opportunities to engage in greater RDPs through certifying whether Islamic banks have complied with *Shariah* and related risks, and thus, mitigating the level of information asymmetry beween managers and Isamic banks' stakeholders (AI-Bassam & Ntim, 2017; Farook *et al*., 2011; Jensen & Meckling, 1976; Safieddine, 2009). From legitimation/moral view of neo-institutional theory predicts that Islamic governance may offer incentives to engage in greater RDPs in order to enhance their legitimacy within the broader society (Al-Bassam *et al*., 2017; Haniffa & Hudaib, 2007; Ntim *et al*., 2013; Pittroff, 2014). Further, Islamic governance may offer incentives to engage in greater RDPs, especially practices linked to complying with *Shariah* and related risks due to coercive and societal pressures, arising from MENA Islamic banks' external settings, as well as institutional pressures within the banks (Chandler & Hwang, 2015; DiMaggio & Powell, 1983; Ntim & Soobaroyen, 2013).

A number of current qualitative studies have explored the nature of Islamic governance and ethics in Islamic banks (Ullah *et al*., 2014). For example, Haniffa and Hudaib (2007) examined the ethical identity of Islamic banks using annual reports data from 7 Islamic banks in four Gulf countries from 2002 to 2004. They found that Islamic banks disclose further information relating to *Shariah* supervisory boards as a way of creating ethically and socially responsible identity for Islamic banks. Ullah et al. (2014) have also reported similar findings for *Shariah* departments relating to socially responsible investments. Further, Safieddine (2009) explores corporate governance practices using a survey of 43 questions from 40 Islamic banks in 5 Gulf countries. The results of Safieddine indicate that Islamic banks have well-established *Shariah* supervisory boards, which operate as good proxies for Islamic governance based on an evaluation of their independence, structure, education, and power.

Prior quantitative studies have also found a strong evidence supporting the view that the quality of Islamic governance has a positive impact on social responsibility disclosures within Islamic banks (Farook *et al*., 2011; Haniffa & Hudaib, 2007; Rahman & Bukair, 2013). For instance, using data from 47 Islamic banks in 14 countries, Farook *et al*. (2011) found that Islamic governance quality, including the presence of a *Shariah* supervisory board has a positive impact on the level of social responsibility disclosures.

Similarly, prior literature has examined the relationship between Islamic governance quality and disclosure quality. For instance, using data from 75 firms listed on the Saudi market from 2004 to 2010, AI-Bassam and Ntim (2017) find that *Shari'ah* supervisory board characteristics have a positive effect on the level of voluntary corporate governance disclosure. Similarly and using a sample of 116 Omani firms from 2001 to 2011, Elghuweel *et al*. (2017) report that IGQ has a negative effect on earnings management. Notably, to the best of our knowledge, no prior study has examined the impact of IGQ on RDPs to date, and thus genuine opportunity to make a new contribution to the literature by examining this association. Accordingly, we hypothesise that:

H_1: The level of IGQ is positively related to the level of RDPs.

National Governance Quality and RDPs

Effective national governance may place further emphasis on RDPs (Barakat & Hussainey, 2013; Essen *et al*., 2013; Kaufmann *et al*., 2011). Efficiency/instrumental perspective of neo-institutional theory suggests that banks in countries with improved national governance quality may provide additional monitoring level that can mitigate information asymmetries, and hence, serve as a motivation to engage in greater RDPs (Aguilera *et al*., 2008; Barakat & Hussainey, 2013; Beltratti & Stulz, 2012). Similarly, the legitimation/moral view of neo-institutional theory suggests that NGQ may offer Islamic banks incentives to engage in greater RDPs in order to gain the legitimacy to exist and carry out their operations from the broader society (Barakat & Hussainey, 2013; Haniffa & Hudaib, 2007; Ntim *et al*., 2013; Pittroff, 2014). Also, NGQ may offer incentives to engage in greater RDPs due to coercive and societal pressures arising from banks' external settings, such as government, professional, and regulatory bodies (Aguilera *et al*., 2008; Barakat & Hussainey, 2013; Chandler & Hwang, 2015; DiMaggio & Powell, 1983; Ntim & Soobaroyen, 2013). Finally, effective national governance may offer motivations and pressures to engage in greater RDPs in order to offer Islamic banks access to required resources, such as *Sukuk* (Alon & Dwyer, 2014; Barakat & Hussainey, 2013; Ntim *et al*., 2013; Pfeffer & Salancik, 2003).

National governance structures are designed and employed to address agency problems (Aguilera, 2005; La Porta et al., 2000). They consist of formal constraints (e.g., regulations and laws, economic and political regulations and procedures, and other clear restrictions on bank behaviour), and informal rules containing unwritten, but relatively important, social norms, conventions, codes of ethics and values (Kaufmann et al., 2011; Schiehll et al., 2014; Yoshikawa et al., 2014). Thus, national governance structures can serve as motivation for economic actors to comply with laws and regulations. Prior research suggests that national governance structures can protect stockholders from being expropriated by the company's managers, and safeguards minority shareholder rights (Aslan & Kumar, 2014; La Porta et al., 2000; Schiehll et al., 2014; Yoshikawa et al., 2014). Hence, rigorous national governance structures tend to demand mandatory information disclosure and regulate market intermediaries, and thereby alleviating information asymmetries. Also, it places the board of directors and managers under larger pressure to implement its regulatory responsibility (Yoshikawa et al., 2014). Collectively, rigorous national governance structures can serve as a valuable external governance instrument to protect shareholder and influence accountability and disclosure quality. Thus, banks' incentive to offer higher RDPs tend to be higher in countries with strong national governance structures.

The findings of previous empirical studies largely suggest that NGQ may be an important driver of bank strategies, behaviour, and valuation (Alon & Dwyer, 2014; Ernstberger & Grüning, 2013; Essen *et al*., 2013; Tunyi & Ntim, 2016). However, empirical evidence regarding the impact of NGQ on disclosure quality, including RDPs is almost non-existent. For instance, using 85 banks from 20 European countries, Barakat and Hussainey (2013) found that countries with stronger NGQ (i.e., the rule of law) are associated with an increase in the level of operational risk disclosures. On the other hand, using data from 71 nations, Alon and Dwyer (2014) found that countries with poor NGQ are more likely to adopt IFRS early in comparison with their counterparts with strong NGQ, with the aim of allowing them to gain access to critical resources, such as foreign direct investments. To the best of our knowledge, no prior study has examined the impact of NGQ on RDPs to-date, and therefore offers genuine opportunities to contribute to the extant literature by examining the effect of NGQ on RDPs. Accordingly, we hypothesise that:

H₂: *NGQ is positively related to the level of RDPs.*

IGQ and RDPs: The Moderating Effect of NGQ

Inconsistent results about the sign and significance of the governance quality-RDPs nexus has triggered a number of studies to explore them further (Abraham & Shrives, 2014; Aguilera *et al*., 2008; Barakat & Hussainey, 2013; Essen *et al*., 2013; Ntim *et al*., 2013; Zattoni & Van Ees, 2012). On the one hand, a number of studies indicate that different methodological approaches can lead to inconsistent results (e.g., Al-Bassam *et al*., 2015; Barakat & Hussainey, 2013; Ntim *et al*., 2013). For instance, endogeneity problems (e.g., Barakat & Hussainey, 2013; Ntim *et al*., 2013), time frame differences (e.g., Abraham & Cox, 2007; Ntim *et al*., 2013) and different risk disclosure measures (e.g., Ntim *et al*., 2013) can affect the research findings. On the other hand, others suggest that the mixed results relating to the governance-RDPs nexus can be addressed by concentrating on how probable theory-driven variables moderate such a relationship (Aguilera, 2005; Aguilera *et al*., 2008; Alon & Dwyer, 2014; Cahan *et al*., 2015; Ernstberger & Grüning, 2013; Essen *et al*., 2013).

La Porta et al. (1997 and 2000) suggest that NGQ (e.g., legal rules and enforcement quality) might enhance investor protection, as well as the efficiency of governance structures (e.g., corporate governance mechanisms, external finance type, and more importantly disclosure quality). Hence, La Porta et al. (1997 and 2000) suggest that NGQ may have a moderating role on the existing agency problems. Thus, Islamic banks might be motivated by coercive, mimetic and normative national pressures, particularly for those operating in strongly-governed countries to engage in increased RDPs with the purpose of signalling their good performance and bright future prospects to their current and future stakeholders, such as employees, investors and depositors.

Empirically, Ernstberger and Grüning (2013) report that NGQ has a complementary or substitutive influence on the governance-disclosure nexus using a sample of 1,044 European companies. Specifically, Ernstberger and Grüning (2013) results suggest that NGQ can serve as an alternative to firm-level governance quality in terms of its impact on corporate disclosure quality. Hence, we assume that the IGQ-

RDPs relationship may be highly sensitive to the institutional environment, as characterised by the extent of NGQ. Accordingly, we hypothesise that:

   H₃: NGQ moderates the relationship between IGQ and RDPs.

All the earlier hypothesised relations are shown in Figure 1.

Research Design

Sample Selection and Data Sources

   Our sample is based on all listed Islamic and dual banks (ISBs) located in 10 countries in the Arab MENA region, namely, Bahrain, Egypt, Jordan, Kuwait, Lebanon, Oman, Qatar, Saudi Arabia, Syria, and UAE. We generate our sample based on the *Bankscope* database as shown in Table 1, from 2006 to 2013, covering pre-, during-, and post-2007/2008 banking crisis period. In addition, the sample begins in 2006 since Basel II came into effect from mid-2005, as well as the fact that data before 2006 relating to the vast majority of our sample being unavailable. This results in a final sample of 64 banks over 8 years from 2006 to 2013. This generated a total of 425 bank-year observations for our empirical analyses.

INSERT TABLE 1 ABOUT HERE

   We collected the data from three different sources. Firstly, we collected *RDPs* and governance variables from annual reports, which we obtained mainly from the *Perfect Information* database and the sampled Islamic banks' websites, where avaialable. Secondly, financial data was obtained from the *Bankscope* database and the Islmaic banks' annual reports. Finally, national macro-economic statistics and national governance quality (*NGQ*) data were obtained from the *World Bank's* databases.

Definition of Variables

   The study's variables are categorised into four main types and Table 2 presents the full definitions of all the variables used in this study.

First and to test H_1 to H_3, we employ *RDPs* scores, as the dependent variable, which seek to measure the level of *RDPs*.

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We measured *RDPs* variable using risk management and disclosure practices index (*RDPI*) based on 6 broad subsections and total of 96 individual items drawn from several sources. Particularly, the individual items were drawn from the: (i) Basel accords (I, II and III); (ii) international accounting standards (IAS 32 and 39; IFRS 7 and 9); and (iii) other risk disclosure items that have been employed previously in closely related studies (Barakat & Hussainey, 2013; Helbok & Wagner, 2006; Ntim *et al.*, 2013). Hence, the *RDPI* contains 96 items classified as follows: (a) bank financial RDPs, consisting of: (i) credit; (ii) liquidity; (iii) market; and (iv) capital RDPs; and (b) bank non-financial RDPs, consisting of: (i) operational; and (ii) strategic RDPs. The Appendix displays the definitions and scoring procedure of all 96 items included in the *RDPI*.

We use *RDPI* measurement approach instead of other quantitative measures (e.g., word, sentence, paragraph, and page counts) because indices measurement approach employed has the ability to measure *RDPs* more precisely (Barakat & Hussainey, 2013; Ntim, 2016). More specifically, *RDPI* measurement approach has the capacity to capture the comparative weights of different risk categories. In addition, alternative quantitative measures, such as word, sentence, paragraph and page counts, have been repeatedly criticised for the increased probability of capturing non-RDPs (Beattie et al., 2004; Ntim, 2016); and there is no broad agreement with respect to a set of predefined words or sentences that can fully reflect *RDPs* in annual reports. As a result of these limitations, we employ the index approach in coding our *RDPs*. However, the index measurement approach is also often criticised for being inherently subjective (Marston & Shrives, 1991). Therefore, to reduce subjectivity, we followed the following steps.

First, two independent coders coded a sample of 10 annual reports independently and their results were compared. Evidently, no main variances occurred, with high agreement coefficient (0.83), which is higher than the acceptable level in the social science (reliability threshold ranges from 0.70 to 0.80) (Beattie

et al., 2004; Krippendorff, 2004; Marston & Shrives, 1991). Second and subsequently, a single coder (the main coder) completed the coding of the rest of the *RDPI*. Third, the main coder re-coded a sample of five annual reports randomly, and the results were compared with his previous original coding results. Apparently, no significant variances occurred, with high agreement coefficient (0.95). Finally, we use Cronbach's alpha to assess the internal consistency of the *RDPI*. The Cronbach's alpha was sufficiently high at 83.50%; noting that the cut-off level for Cronbach's alpha is 70% (Elghuweel *et al*., 2017).

Second, and to test the first hypothesis, our independent variable is the Islamic governance quality index (*IGQ*). It covers seven *IGQ* best practices, including broad areas of Islamic governance and business principles. The detailed items are contained in Table 2. The *IGQ* seeks to measure the extent to which Islamic banks voluntarily and clearly incorporate Islamic governance and business principles into their operations, and subsequently disclosed in their annual reports. We selected these provisions based on three creteria. First, we conducted extensive exploration of the previous research that explores governance from an Islamic viewpoint and sourced Islamic governance quality variables used in those studies (Abu-Tapanjeh, 2009; AI-Bassam & Ntim., 2017; Elghuweel *et al*., 2017; Farook et al., 2011; Rahman & Bukair., 2013; Safieddine, 2009). Second, we sourced relevant Islamic governance provisions contained in the Accounting and Auditing Organization for Islamic Financial Institutions (AAOIFI) standard on independence of *Shariah* supervisory board. Finally, we supplemented these with Islamic governance variables that were identified in a preliminary exploration of a sample of the sampled banks' annual reports.

Third, because several studies suggest that *NGQ* can affect the quality of disclosure (Barakat & Hussainey, 2013; Essen *et al*., 2013; Kaufmann *et al*., 2011; Zattoni & Van Ees, 2012), we collected data on NGQ. This study employed the "Worldwide Governance Indicators" developed by the World Bank to measure national governance quality (*NGQ*). Kaufmann *et al*. (2011) identified six dimensions of *NGQ*: (i) voice and accountability (*VAQ*); (ii) political stability (*PSQ*); (iii) government effectiveness (*GEQ*); (iv) regulatory quality (*RQ*); (v) the rule of law (*ROL*); and (vi) control of corruption (*COC*). Correlation matrix in Table 3 shows that there are high inter-correlations among the six *NGQ* dimensions, which are consistent with the findings of prior studies (Alon & Dwyer, 2014). Therefore, and following prior research (Dikova

& Van Witteloostuijn, 2007; Tunyi & Ntim, 2016), we conducted a principal component analysis (*PCA*) to create a composite measure for the overall *NGQ* dimensions. Table 4 shows the *PCA* (eigenvectors) and diagnostics of *NGQ* dimensions. The overall *KMO* (Kaiser-Meyer-Olkin), which we use as a measure of sampling adequacy is 0.7029, which is higher than the recommended minimum *PCA* value of 0.50 (Tunyi & Ntim, 2016).

INSERT TABLE 3 ABOUT HERE

INSERT TABLE 4 ABOUT HERE

Finally, we included a wide range of bank-level governance mechanisms, bank-level characteristics and country-level factors, as control variables. These include: (i) bank-level governance mechanisms, such as board size (*BDSZ*), board gender diversity (*GNDI*), and non-executive directors (*NEDs*); (ii) bank-level characteristics, such as bank size (*LTAS*), performance (*ROA*), liquidity (*LIQR*), operations efficiency (*CSTR*), and capital adequacy ratio (*CAPR*); and (iii) country-level variables, such as annual inflation (*INFR*), and annual GDP per capita (*GDPC*). We do not develop direct theoretical links between these variables and *RDPI* for brevity, but the findings of a number of prior studies suggest that they can influence the level of the *RDPI* (e.g., Abdallah *et al*., 2015; Barakat & Hussainey, 2013; Farook *et al*., 2011; Helbok & Wagner, 2006; Ntim *et al*., 2013).

Model Specification

We use fixed-effects regression analysis (Ntim *et al*., 2013) to investigate the moderating effect of *NGQ* on the relationship between *IGQ* and *RDPs* in MENA Islamic banks. Therefore, our main regression model to be considered is identified as follows:

$$RDPI_{it} = \alpha_0 + \beta_i IGQ_{it} + \beta_i NGQ_{it} + \sum_{i=1}^{13} \beta_i CONTROLS_{it} + \delta_{it} + \varepsilon_{it} \quad (1)$$

where,

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RDPI is a proxy of risk management and disclosure practices level for bank *i* during year *t*. *IGQ* refers to Islamic governance quality (*IGQ*). *NGQ* refers to national governance quality. *CONTROLS* refers to: (i) bank-level governance mechanism, including board size (*BDSZ*), gender diversity (*GNDI*), and non-executive directors (*NEDs*); (ii) bank-level characteristics, namely bank size (*LTAS*), performance (*ROA*), liquidity (*LIQR*), operations efficiency (*CSTR*), and capital adequacy (*CAPR*); and (iii) country-level control variables including, annual inflation (*INFR*), and annual GDP per capita (*GDPC*). δ is the bank-year specific fixed-effects, and ε is the white noise error term.

We present the empirical analyses, including the descriptive statistics, bivariate correlations, and multivariate regression analyses in the following sections.

Empirical Results and Discussion

Descriptive Statistics and Bivariate Analyses

Table 5 presents descriptive statistics for the main indices (i.e., the un-weighted risk management and disclosure practices index - *RDPI*), the weighted risk management and disclosure practices index (*W-RDPI*), and national governance quality (*NGQ*) for the full dataset, as well as for each of the 8 bank-years examined, respectively. On average, the distribution of the *RDPI* differs considerably, ranging from 1.04 per cent (1 out of 96 items disclosed) to 87.50 per cent (84 out of 96) with a mean of 60.49 per cent. Also, Table 5 reports that the *RDPI* improved over-time. For instance, the mean of the *RDPI* improved steadily from 37.36 per cent in 2006 to 67.85 per cent in 2013. The steady improvement in the *RDPI* suggests that the implementation of the Basel Accords (Basel I, II and III), international accounting standards (IAS, 32, 9, IFRS 7 and 9) and national CG codes (e.g., Egypt, Oman and Saudi CG codes) appear to have helped in improving the level of RDPs among MENA banks. This seems to reflect the importance that has been attached to RDPs and good national governance, particularly during, and after, the 2007/08 credit crunch (Barakat & Hussainey, 2013; Essen *et al*., 2013; Ntim *et al*., 2013). Similarly, the distribution of the *W-RDPI* depicts a similar pattern to the distributio of the *RDPI*. By contrast, the distribution of the *NGQ* fluctuates substantially, ranging from -8.19 to 3.22 with the mean of 0.48. Also, Table 5 reports that *NGQ*

has been fluctuating over time. Continuous fluctuations in *NGQ* reflect the nature of MENA context. In particular, MENA countries have experienced considerable political instability, especially in the form of the 'Arab Spring', as well as the impact of the 2007/08 credit crunch in the MENA region (Beltratti & Stulz, 2012; Hasan & Dridi, 2010).

INSERT TABLE 5 ABOUT HERE

INSERT TABLE 6 ABOUT HERE

Table 6 shows summary statistics for all variables. Similar to the *RDPI*, all the independent and control variables distributions generally show widespread variations. For instance, Islamic governance (*ISQ*) ranges from 0.00% to 100.00% with a mean of 35.43%. Also, board size (*BDSZ*) ranges from 3.00 to 15.00 with a mean of 10 board members. These results are in line with previous related studies in the banking sector (e.g., Hasan & Dridi, 2010; Rosman *et al*., 2014). Finally, the values of other variables reported in Table 6 suggest widespread variations in our sample, and hence decreasing the possibilities of any sample selection bias.

INSERT TABLE 7 ABOUT HERE

Table 7 reports the correlation matrix of Pearson's parametric coefficients for all variables to test for multicollinearities relating to the regression analysis. Evidently, low correlation coefficients among the variables presented in Table 7 indicate absence of any serious multicollinearity problems. In addition, Table 7 shows statistically significant correlation between the *RDPI* and the other variables. For instance, *BDSZ*, *NEDs*, *IGQ*, *NGQ*, *LTAS,* and *LIQR* are positively related to the *RDPI*, whilst *CAPR* and *INFR* are negatively associated with the *RDPI*.

Regression Analyses and Discussion

Table 8 reports the fixed-effects regression results of the relationship among national governance quality (*NGQ*), Islamic governance quality (*IGQ*) and risk disclosures (*RDP*s). The findings of Models 1, 2, and 3 indicate that *IGQ* and *NGQ* are important in explaining observable differences in *RDP*s as follows.

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First, we examine whether *IGQ* affect the level of *RDPI*. The coefficients of the *IGQ* in Models 2 and 3 of Table 8 are positive ($t = 8.35$, $p < 0.001$ and $t = 8.79$, $p < 0.001$, respectively), and thus providing empirical support for H_1. Specifically, this offers a new evidence which suggests that better-governed Islamic banks are more transparent about their risk management and disclosure practices than their poorly-governed counterparts. To the best of our knowledge, this is the first study to examine the impact of IGQ on the level of *RDPs*. This evidence is largely in line with previous studies that suggest that Islamic governance can improve general voluntary disclosure quality (e.g., Al-Bassam & Ntim, 2017; Farook *et al*., 2011; Haniffa & Hudaib, 2007). This evidence is also consistent with the expectations of our neo-institutional framework presented in Figure 1, which suggests that effective Islamic governance conveys additional monitoring and accountability requirements on Islamic banks, and thereby encouraging them to engage in greater *RDPs* (AI-Bassam & Ntim, 2017; Elghuweel *et al*., 2017; Jensen & Meckling, 1976). Similarly, enhanced *RDPs*, due to coercive, normative, and mimetic pressures can lead to higher levels of risk disclosures in order to gain legitimacy from the broader society, which can facilitate access to critical resources, such as finance (Chandler & Hwang, 2015; Connelly *et al*., 2011; Haniffa & Hudaib, 2007; Pittroff, 2014). All together, the result reveals that religiosity (i.e., Islamic governance) can serve as a motivating force for managers to commit to greater levels of accountability and transparency through increased RDPs, and thereby improve both the efficiency and legitimacy of Islamic banks' operations (e.g., Al-Bassam & Ntim, 2017; Farook *et al*., 2011; Haniffa & Hudaib, 2007).

INSERT TABLE 8 ABOUT HERE

Second, our results show that cross-sectional differences in the *RDPI* level can largely be explained by *NGQ*. Specifically, the coefficient of the *NGQ* in Models 2 and 3 of Table 8 is positive ($t = 2.84$, $p < 0.005$ and $t = 6.46$, $p < 0.000$, respectively), and thus providing empirical support for H_2. In particular, this offers a new evidence to suggest that banks in better-governed countries engage in greater RDPs compared with their poorly-governed counterparts. To the best of our knowledge, this is the first empirical evidence to examine the impact of *NGQ* on RDPs, although this finding offers further empirical support for the

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findings of prior studies that suggest that *NGQ* has a positive effect on general voluntary disclosures (Barakat & Hussainey, 2013; Cahan *et al*., 2015). This evidence is also consistent with the expectations of our neo-institutional theoretical perspective, which suggests that improved *NGQ* can provide additional layer of monitoring that can help mitigate the level of information asymmetry, and hence, offering bank executives greater motivation to commit to increased risk disclosures. Collectively, the *NGQ* results in Tables 8 and 9 are consistent with the notion that *NGQ* has a positive effect on bank executives' commitment to accountability and transparency in the form of increased *RDPs*.

Finally, to ascertain whether the *IGQ-RDPI* relationship can be moderated by *NGQ* (to test *H3*), we create interaction variables between the *IGQ* and *NGQ* variables (i.e., *NGQ*IGQ*) in Model 3 of Table 8[3]. Our estimation is based on the emerging theoretical and empirical evidence (Aguilera, 2005; Aguilera *et al*., 2008; Alon & Dwyer, 2014; Cahan *et al*., 2015; Ernstberger & Grüning, 2013; Essen *et al*., 2013), which suggests that the impact of the *IGQ* on RDPs can be enhanced in countries with higher *NGQ*. Observably, the respective coefficient of *NGQ*IGQ* on the *RDPI* in Model 3 of Table 8 ($t = 1.80, p < 0.072$) is positive, and thus providing original evidence, which supports *H₃*. That is, this contributes to the literature by offering a new evidence which suggests that the *IGQ-RDPI* relationship is significantly and positively improved by *NGQ*. Thus, this result offers further evidence of the influence that *NGQ* has on the *IGQ-RDPI* relationship. Specifically, our evidence indicates that Islamic bank managers operating in better-governed countries are more likely to coercive, mimetic and normative pressures from national institutions, such as accounting regulators, business and treasury ministries and stock exchanges. This appears to compel Islamic bank executives to commit to increased risk disclosures as a way of gaining legitimacy from the broader society, and thereby securing access to critical resources, such as finance.

Additional Analyses

We perform a number of further analyses to determine the robustness of our results. First, as a robustness check, we reproduce our analysis in Model 3 of Table 8 by replacing our unweighted *RDPI* with the weighted *RDPI* (*W-RDPI*), and the results are presented in Model 6 of Table 8. These results are similar to those reported in Model 3 of Table 8, implying that our results seem to be robust to the use of a weighted

or an un-weighted disclosure index. Secondly, following extant research (e.g., Ntim *et al.*, 2013), we address potential endogeneities that may be affected by omitted variable bias by estimating two-stage least squares using generalised panel-data estimators (*G2SLS*). First, we predict instruments by estimating a model for *IGQ*. Second, we check correlations with error terms and then we use the predicted values as instruments. Thus, in the second stage, we use the instrumented variables of the IGQ and re-run equation (1) as follows:

$$RDPI_{it} = \alpha_0 + \hat{\beta}_i IGQ_{it} + \beta_i NGQ_{it} + \sum_{i=1}^{13} \beta_i CONTROLS_{it} + \delta_{it} + \varepsilon_{it} \qquad (2)$$

where,

Everything else remains unaffected as stated in equation (1) except that we use the instrumented part of the *IGQ*, and other bank-level governance variabels. The results are presented in Model 4 of Table 8. These results are also similar to those reported in Model 3 of Table 8, implying that our results appear to be robust to potential endogeneities that may be caused by omitted variables bias.

INSERT TABLE 9 ABOUT HERE

INSERT TABLE 10 ABOUT HERE

Third, to ascertain the assumption underlying our fixed-panel regression model that all the unobserved heterogeneities may affect the correlation between the Islamic governance variables and the error term is invariable over time, we calculate a dynamic panel GMM estimator as proposed by Wintoki et al. (2012). Dynamic GMM estimators have the unique ability to control for a number of endogeneity problems, including reverse causality, unobservable firm-specific factors, dynamic endogenous regressors, possible omitted variables bias, heteroscedasticity, and simultaneity by allowing all the explanatory variables (e.g., the Islamic governance and all control variables) to be considered as endogenous (Ammann et al., 2011; Arellano & Bond, 1991; Arellano & Bover, 1995; Wintoki et al., 2012). Consequently, in the dynamic GMM Model, we employ equation (3) as follows:

$$RDPI_{it} = \alpha_1 + k_1 RDPI_{it-1} + \beta X_{it} + \gamma Z_{it} + \delta_{it} + \varepsilon_{it} \qquad (3)$$

where,

RDPI is a proxy of risk management and disclosure practices level for bank *i* during year *t*. X_{it} denotes all explanatory variables that include Islamic governance (*IGQ)*, board size (*BDSZ*), gender diversity (*GNDI*), non-executive directors (*NEDs*), and national governance quality (*NGQ)*. Z_{it} includes bank size (*LTAS*), performance (*ROA*), liquidity (*LIQR*), operations efficiency (*CSTR*), capital adequacy (*CAPR*), annual inflation (*INFR*), and annual GDP per capita (*GDPC*). δ_{it} is the unobserved bank-year specific fixed-effects, and ε_{it} is the white noise error term. The results are presented in Model 5 of Table 8. Again, we find the GMM results indicate a positive and statistically significant relation among the IGQ, NGQ and RDPs indices. These results are also largely similar to those reported in Model 3 of Table 8, and thereby implying that our results appear to be robust to potential endogeneity problems that may be caused by reverse causality, unobservable firm-specific factors, dynamic endogenous regressors, possible omitted variables bias, heteroscedasticity, and simultaneity.

Fourth, we consider the robustness of our results to sub-samples: Islamic banks and dual banks by re-running equations (1), (2), and (3) and the results are reported in Table 9. Apart from a few sensitivities (such as *GNDI* being now statistically significant), the results in Table 9 are similar to those reported in Table 8, and thereby implying that our results seem to be fairly robust to the use of sub-samples. Finally, Table 10 reports the results of the variables that influence banks to commit to greater risk disclosures, and how those variables work among banks operating in strongly-governed and poorly-governed environments. Table 10 reveals that *IGQ* and *NGQ* have a significant impact on RDPs in banks that operate in strongly-governed environments compared with their counterparts that operate in countries with poorly-governed national environments. Similarly, we found that gender diversity has a positive effect on RDPs in banks that operate in strongly-governed environments compared to their counterparts operating in poorly-governed countries, although this relationship is not statistically significant. Overall, the results support our hypothesis that *NGQ* has a moderating effect on the relationship between *IGQ* and bank risk disclosures.

Conclusion and Areas for Future Research

Whilst the effects of business level factors on the level of corproate risk management and disclosure practices (RDPs) have been fairly documented, the role of religion and macro-social level factors, such as Islamic and national governance quality on RDPs are rare. Therefore, this article has sought to make a number of new contributions to the extant literature by examining: (i) the associations among religious governance, especially Islamic governance quality (IGQ), national governance quality (NGQ), and RDPs; and (ii) consequently, ascertaining whether the link between IGQ and RDPs can be moderated by NGQ.

Using one of the largest datasets to-date from MENA Islamic banks over the 2006-2013 period, our study reveals several interesting findings. Our results suggest that Islamic and national governance quality has a significant effect on the level of bank risk disclosures. Specifically, our results indicate that risk disclosures are high in banks with high IGQ and NGQ. In addition, our results indicate that NGQ moderates the association between IGQ and RDPs. This implies that banks that depict greater commitment towards incorporating Islamic governance into their operations through high Islamic governance index score and located in better-governed countries engage in higher risk disclosures than those that are not. These results are consistent with the predictions of our neo-institutional framework that incorporates both efficiency/instrumental and legitimation/moral views of neo-institutional theory.

This study makes a number of new contributions to the extant literature. First, and to the best of our knowledge, our study offers a first-time evidence on the effect of national governance quality on bank risk management and disclosure practices using a neo-institutional framework. Second, we offer evidence on the impact of Islamic governance quality on bank risk management and disclosure practices. Finally, we provide evidence relating to the moderating effect of national governance quality on the relationship between Islamic governance quality and bank risk management and disclosure practices for the first time. The success of our generalised neo-institutional framework in explaining the variations and drivers of bank risk disclosures reflects in part its ability to integrate complexity. The diverse variations of institutionalism within our research context make it doable to cogitate the contextual embeddedness of the intersections

between religion and country governance, as macro-social level forces operating within the context of Islamic banks.

Consequently, our results have a number of implications for regulators, banks, and investors, especially in emerging markets. Our results suggest that better-governed banks at bank- or national-level have higher tendency to commit to increased level of risk disclosures. These results offer regulators extra incentive to pursue internal CG reforms jointly with national-level governance reforms. Regarding banks, our results suggest that better Islamic governance is expected to be associated with better risk disclosures. These results offer shareholders of banks additional incentive to enhance their banks' board structure (e.g., board size and board independence) and pay attention to Islamic governance arrangements in particular. These results also bring to bear the importance of Islamic governance in mitigating traditional agency problems, such as information asymmetry, and thereby enhancing bank efficiency and legitimacy within the broader society. Thus, our study also has practical implications. Specifically, banks that voluntarily incorporate prudential Islamic governance into their operations are more likely to be more transparent about their RDPs and, hence, offers new crucial insights on Islamic governance and their impact on disclosure quality. Overall, our results highlight the role that religion and national governance, as major macro-social forces, can play in traditional rational business decision-making, such as disclosure and transparency.

Finally, although our evidence is significant and robust, there are a number of limitations that need to be explicitly acknowledged. Like all archival and quantitative studies of this nature, our governance and disclosure proxies may or may not reflect actual managerial practice. In this case, additional insights may be offered by future studies that may employ qualitative approaches using, for example, interviews, case studies and observations that may offer a more nuanced and indepth insights regarding these relationships. Further researchers might investigate the impact of further governance mechanisms (e.g., risk committee and remuneration committee) on risk disclosures; and might also be extended to the use of non-parametric statistical techniques, such as neural networks to test the robustness of their findings.

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Declaration of Conflicting Interests

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Notes

1. To facilitate early reader understanding, we clarify the three main concepts (variables) that we employ in this study as follows: Islamic governance quality (IGQ) refers to the extent to which bank executives are willing to voluntarily incorporate Islamic values and practices into the running of their banks. We measure this by IGQ disclosure quality index that contains items relating to the presence of Islamic governance structures, such as the presence of a *Shariah* supervisory board for a bank. Bank risk management and disclosure practices (RDPs) is a disclosure quality index that measures the extent and quality of voluntary bank risk disclosures, consisting of financial, operational and strategic risks with the individual risk items drawn from the Basel accords (I, II and III), international financial reporting standards (IAS 32 and 39; IFRS 7 and 9) and prior studies. Finally, national governance quality (NGQ) refers to the World Bank's world governance indicators developed by Kaufmann et al. (2011) and consist of six measures: (i) voice and accountability quality; (ii) political stability quality; (iii) government quality; (iv) regulatory quality; (v) rule of law quality; and (vi) control of corruption quality.
2. Islamic values consist of positive values, such as accountability, equality, ethics, fairness, honesty, integrity, philanthropy, responsibility and transparency that are encouraged in sharp contrast to negative values, such as gambling, profiteering and exploitation that are strictly prohibited (Al-Bassam & Ntim, 2017; Sarker, 2012; Syed & Van Buren, 2014).
3. As a robustness check, we also employ Hierarchical regression procedure that examines whether *IGQ-RDPI* relationship can be moderated by *NGQ*. The (untabulated) results indicate that *NGQ* are both relevant and significantly moderate *IGQ-RDPI* relationship. This offers further empirical support to our main conclusions drawn from Tables 8, 9 and 10. We would like to thank an anonymous reviewer for this suggestion.

Appendix

Risk type	Risk management and disclosure practice index (RDPI)
	Financial risk management and disclosure practices
(i) Credit	1- Exposure to credit risk and how they arise. 2- Objectives, policies and processes for managing credit risk. 3- Method of measuring credit risk exposure. 4- Adequately description of how credit risk management occurs, including providing a clear linkage between quantitative data and qualitative description. 5- Changes in exposure to credit risk, measurement of risk, and objectives, policies and processes to manage credit risk from the previous period. 6- Amount of regulatory capital for credit risk. 7- Information about credit quality of financial assets that are not past due or impaired. 8- Renegotiated financial assets. 9- Aging schedule for past due amounts. 10- Impairment methods and inputs disclosed. 11- Summary quantitative data about exposure to credit risk at the reporting date. 12- Maximum credit exposure by currency. 13- Maximum credit exposure by geography. 14- Maximum credit exposure by economic activity. 15- Disaggregated maximum credit risk exposure, including derivatives and off-balance sheet items. 16- Renegotiated loans for troubled borrowers. 17- Risk of counterparty. 18- Credit risk concentrations. 19- Derivatives. 20- Off-balance sheet and joint venture structures. 21- Credit risk transfer/mitigation/hedging techniques. 22- Collateral. 23- Disclosures to help users understand credit risk.
(ii) Liquidity	24- Exposure to liquidity risk and how they arise. 25- Objectives, policies and processes for managing liquidity risk. 26- Methods used to measure liquidity risk. 27- Changes in exposure to liquidity risk, measurement of risk, and objectives, policies and processes to manage liquidity risk from the previous period. 28- Contractual undiscounted cash flows. 29- Maturity analysis of non-derivative liabilities. 30- Maturity analysis of derivative liabilities. 31- Maturity analysis of off-balance sheet commitments and other financial instruments without contractually stipulated maturity. 32- Maturity analysis of financial assets. 33- Expected maturity analysis. 34- Derivative and trading liabilities treatment. 35- Liquidity risk transfer/mitigation/hedging techniques. 36- Liquidity buffers sources and volume. 37- Sensitivity analysis. 38- Financing facilities. 39- Counterparty concentration profile. 40- Disclosures to help users understand liquidity risk.
(iii) Market	41- Objectives, policies, processes, and Strategies of market risk management. 42- Structure and organization of market risk management function. 43- Instruments traded types. 44- Interest rate risk. 45- Equity risk. 46- Currency risk. 47- Commodities risk 48- Market risk transfer/mitigation/hedging techniques. 49- Linkage with credit risk. 50- Amount of regulatory capital for market risk. 51- VAR (value-at-risk). 52- VAR limitations. 53- Stress testing.

Risk type	Risk management and disclosure practice index (RDPI)
	54- Stress VAR. 55- Back-testing. 56- Disclosures to help users understand market risk.
(iv) capital	57- Capital management. 58- Capital measurement. 59- Risk weighted assets. 60- Tier 1. 61- Tier 2.
	Non-financial risk management and disclosures practices
(v) Operational	62- Amount of regulatory capital for operational risk. 63- Regulatory capital for operational risk measurement approach. 64- Operational risk management strategies and processes. 65- The operational risk management function structure and organisation. 66- Scope and nature of the operational risk reporting system 67- Operational risk transfer/mitigation/hedging techniques. 68- Operational value-at-risk. 69- Internal audit function/internal control system. 70- Key risk indicators/early warning systems. 71- Self-assessment techniques. 72- Stress tests/scorecard models/scenario analyses. 73- Operational risk event databases. 74- Legal risks. 75- Additional information on risk exposure and management. 76- Technology/information technology. 77- Compliance. 78- Marketing/customer satisfaction/boycott. 79- Competition/proprietary/copyright. 80- Personnel. 81- Integrity/management and employee fraud. 82- Business ethics/corruption. 83- Disclosures to help users understand operational risk.
(vi) Strategic	84- Sovereign/politics. 85- Performance measurement. 86- Regulation. 87- Taxation. 88- Macroeconomic trends. 89- Natural disasters/terrorism. 90- GDP growth/market demand/aggregate demand. 91- Intellectual property rights. 92- New alliances, joint ventures and acquisitions. 93- Management of growth. 94- Reputation/goodwill/image/brand name. 95- Strategy. 96- Disclosures to help users understand strategic risk.
Total	**96 Risk management and disclosure practices items**
Procedure of scoring for un-weighted index	
0: Risk item not disclosed by bank.	
1: Risk item disclosed by bank.	
Procedure of scoring for weighted index	
0: Risk item not disclosed by bank.	
1: Risk item disclosed by bank contains past, future, good, bad and/or qualitative information.	
2: Risk item disclosed by bank contains past, future, good, bad, qualitative and/or quantitative information.	

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Figures

Figure 1: Proposed empirical model
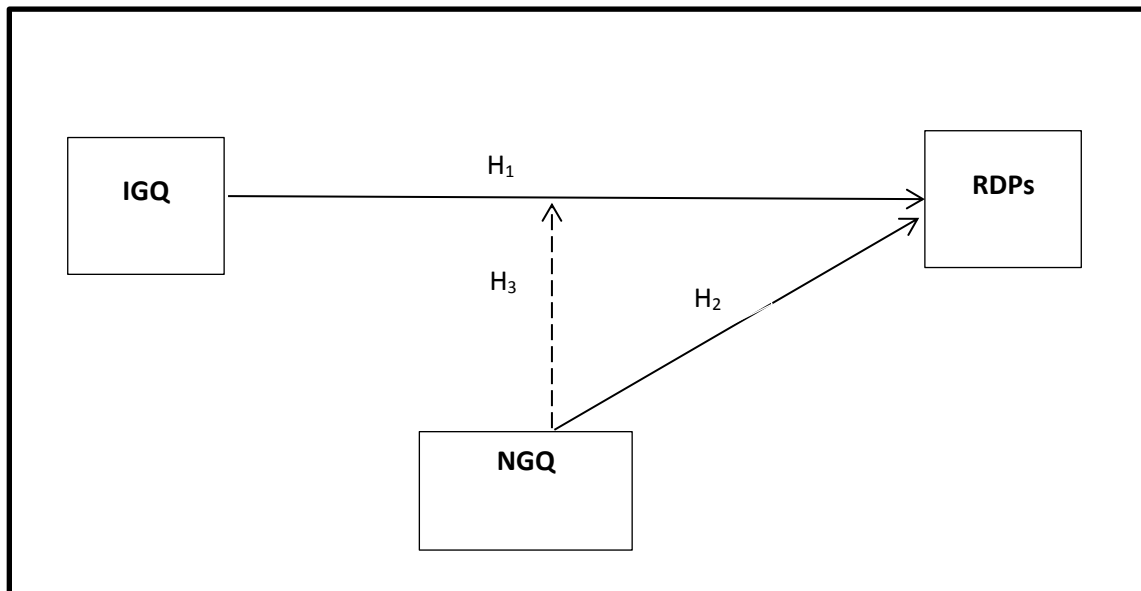
Notes: The graph describes the structural relations between Islamic governance (IGQ), national governance quality (NGQ), and risk management and disclosure practices (RDPs), either directly (solid lines) or via moderating effect of national governance quality (NGQ) (dotted lines).

Tables

Table 1: Sample selection procedure

Country	Banks	Number of bank-year observations			Percentage
		Islamic	Dual	Overall	
Bahrain	9	44	24	68	14.56%
Egypt	6	13	20	33	8.01%
Jordan	3	3	13	16	3.88%
Kuwait	6	36	5	41	9.95%
Lebanon	2	0	16	16	3.88%
Oman	4	0	5	5	1.21%
Qatar	8	24	28	52	12.62%
Saudi Arabia	11	21	63	84	20.39%
Syria	1	6	0	6	0.24%
UAE	14	32	72	104	25.24%
Sum	64	179	246	425	100.00%

Table 2: Summary of definitions of variables

Variables	Definitions and coding.
Panel A: Dependent variable (risk management and disclosure practices index).	
RDPI	The total risk management and disclosure practices score (*RDPI*) is calculated based on the un-weighted (weighted) risk management and disclosure practices index and full scoring criteria are clarified in the Appendix. Un-weighted *RDPI* consisting of 96 items drawn from three major sources: (i) the Basel accords (I, II and III), international accounting standards (IAS 32 and 39; IFRS 7 and 9); and (iii) past risk disclosure studies, covering three main types of risk: (i) financial risk disclosures; (ii) operational risk disclosures (non-financial risk) and strategic risk disclosures (non-financial risk). It takes a value of 1 if each of the 96 *RDPI* items is disclosed, 0 otherwise; scaled to a value between 0% and 100%. For the weighted *RDPI*, each of the 96 items has a score ranging from 0 to 2 (i.e., 0 if risk item is not disclosed; 1 if a risk item focuses on past, future, good, bad and/or qualitative information; and 2 if a risk item focuses on past, future, good, bad, qualitative and/or quantitative information). This weighted scoring procedure can result in a total potential score of 192; scaled to a value between 0% and 100%.
Panel B: Islamic governance quality index	
IGQ	The Islamic governance quality (IGQ) index consists of 7 items with each taking a value of 1 if disclosed, otherwise 0 as follows; (i) 1 if a Shariah supervisory board (SSB) exists, 0 otherwise; (ii) 1 if SSB report is disclosed, 0 otherwise; (iii) 1 if the SSB's members are disclosed, 0 otherwise; (iv) 1 if SSB's number of annual meetings are disclosed, 0 otherwise; (v) 1 if a statement that the SSB's members are independent from management is disclosed, 0 otherwise; (vi) 1 if the experience of the a bank's SSB's members is disclosed, 0 otherwise; and (vii) 1 if the total fees or remuneration paid to the members of a bank's SSB is disclosed, 0 otherwise. This un-weighted scoring procedure can result in a total potential score of 7; scaled to a value between 0% and 100%.
Panel C: National governance quality (*NGQ*)	
NGQ	National governance quality (NGQ) for each bank year is calculated as a composite measure for the overall NGQ 6 dimensions, which: (i) are voice and accountability quality (*VAQ*); (ii) political stability quality (*PSQ*); (iii) government quality (*GEQ*); (iv) regulatory quality (*RQ*); (v) rule of law quality (*ROL*); and (vi) control of corruption quality (*COC*).
Panel D: Control variables	
BDSZ	Board size for each bank year is calculated based on number of board of directors.
GNDI	Board gender diversity for each bank year is calculated based on number of female directors divided by the total number of board of directors.
NEDs	Board independence for each bank year is calculated based on the non-executive directors divided by the total number of board of directors.
LTAS	Bank size for each bank year is calculated based on natural log of the book value of total assets.
ROA	Performance for each bank year is calculated based on return on assets (ROA), which is net income divided by total assets.
LIQR	Liquidity for each bank year is calculated based on net loans divided by total assets.
CSTR	Operations efficiency for each bank year is calculated based on cost divided by income.
CAPR	Bank's capital adequacy for each bank year is calculated based on capital divided by risk-weighted assets.
INFR	Annual inflation for each bank year is consumer price change (annual %).
GDP	GDP per capita for each bank year is average income per individual (current US$).

Table 3: Correlation matrix of the national governance quality's six dimensions

Variable	VAQ	PSQ	GEQ	RQ	ROL	COC
VAQ						
PSQ	0.3005					
GEQ	0.2839	0.7928				
RQ	0.2423	0.6025	0.862			
ROL	0.2161	0.8197	0.7615	0.7902		
COC	0.2899	0.8731	0.9379	0.7849	0.8349	1.00

Notes: National governance quality (NGQ) variables are as follows: Voice and accountability quality (*VAQ*), political stability quality (*PSQ*), government quality (*GEQ*), regulatory quality (*RQ*), rule of law quality (*ROL*), and control of corruption quality (*COC*). See Table 2 for the definitions of each variable.

Table 4: PCA (eigenvectors) and diagnostics of the national governance quality's six dimensions

Variables	Comp$_1$	Comp$_2$	Comp$_3$	Comp$_4$	Comp$_5$	Comp$_6$	Unexplained	KMO
VAQ	0.176	0.979	0.060	0.075	-0.035	-0.019	0	0.8226
PSQ	0.428	-0.008	-0.659	-0.054	0.599	0.148	0	0.7523
GEQ	0.455	-0.067	0.203	-0.530	0.018	-0.683	0	0.6687
RQ	0.419	-0.111	0.699	0.178	0.393	0.369	0	0.6309
ROL	0.435	-0.145	-0.130	0.755	-0.307	-0.329	0	0.6658
COC	0.463	-0.063	-0.125	-0.329	-0.626	0.517	0	0.7950
Eigenvalue	4.336	0.900	0.416	0.250	0.070	0.028	-	-
Proportion	0.723	0.150	0.069	0.042	0.012	0.005	-	-
KMO	-	-	-	-	-	-	-	0.7029

Notes: This table reports the six dimensions of national governance quality indicators (*NGQ*) PCA (eigenvectors). Comp refers to component. The six dimensions of national governance quality indicators (*NGQ*) are defined as follows: Voice and accountability quality (*VAQ*), political stability quality (*PSQ*), government quality (*GEQ*), regulatory quality (*RQ*), rule of law quality (*ROL*), control of corruption quality (*COC*). Also Kaiser-Meyer-Olkin measure (*KMO*) is a measure of sampling adequacy. See Table 2 for the definitions of each variable.

Table 5: Summary statistics for *RDPI, W-RDPI,* and *NGQ*

	All	2006	2007	2008	2009	2010	2011	2012	2013
Panel A: Dependent variable: Un-weighted risk management and disclosure practices index (RDPI) (%)									
Mean	60.49	37.36	51.84	58.20	61.97	64.85	64.74	66.35	67.85
Min	1.04	6.25	7.29	1.04	7.29	34.38	30.21	36.46	37.50
Max	87.50	80.21	76.04	80.21	80.21	80.21	80.21	80.21	87.50
Panel B: Dependent variable: Weighted risk management and disclosure practices index (W-RDPI) (%)									
Mean	43.27	23.42	36.45	41.89	44.38	46.85	47.03	48.12	49.13
Min	1.04	3.65	3.65	1.04	3.65	23.44	23.44	26.04	31.77
Max	70.31	55.21	55.21	56.77	60.42	60.42	60.42	60.42	70.31
Panel C: Independent variable: National governance quality (NGQ)									
Mean	0.48	-0.13	0.09	0.20	0.25	0.09	-0.27	-0.14	-0.05
Min	-8.19	-3.71	-4.00	-4.80	-4.55	-4.66	-5.44	-7.59	-8.19
Max	3.22	1.69	1.82	2.16	3.22	2.83	2.14	2.99	3.05

Notes: The sample consists of all listed Islamic and Dual banks covering 10 countries in the Arab MENA region namely, Bahrain, Egypt, Jordan, Kuwait, Lebanon, Oman, Qatar, Saudi Arabia, Syria, and UAE. The data are extracted from Perfect information Database, Banks' Websites, Banscope Database and the World Bank Database for 8 years from 2006 to 2013 inclusive. The final number of bank-year observations are 179 bank-year observations for Islamic banks and 246 bank-year observations for Dual banks. This table present summary of descriptive statistics of compliance levels with un-weighted risk management and disclosure practices index (*RDPI*) and weighted risk management and disclosure practices index (*W-RDPI*), in addition to national governance quality (*NGQ*) in the full sample and each year separately from 2006 to 2013. See Table 2 for the definitions of each variable.

Table 6: Summary statistics of all variables for all 425 observations

Variables	N	Mean	Std. Dev.	Minimum	Maximum
Dependent variables					
RDPI (%)	425.00	60.49	15.43	1.04	87.50
W-RDPI (%)	425.00	43.27	11.92	1.04	70.31
Independent variables					
IGQ (%)	425.00	35.43	26.71	0.00	100.00
NGQ	425.00	0.48	2.08	-8.19	3.22
Bank-level control variables					
BDSZ	425.00	10.17	2.01	3.00	15.00
GNDI (%)	425.00	0.02	0.05	0.00	0.23
NEDs (%)	425.00	0.88	0.19	0.00	1.00
LTAS	425.00	16.03	1.58	3.73	21.09
ROA (%)	425.00	0.01	0.05	-0.52	0.24
LIQR (%)	425.00	53.42	15.74	0.00	79.93
CSTR (%)	425.00	41.04	38.29	11.91	284.00
CAPR (%)	425.00	21.18	16.83	9.26	204.41
Country-level control variables					
INFR	425.00	4.70	4.12	-5.00	15.00
GDPC	425.00	28068.99	24723.56	1472.60	93714.10

Notes: The sample consists of all listed Islamic and Dual banks covering 10 countries in the Arab MENA region namely, Bahrain, Egypt, Jordan, Kuwait, Lebanon, Oman, Qatar, Saudi Arabia, Syria, and UAE. The data are extracted from Perfect information Database, Banks' Websites, Banscope Database and the World Bank Database for 8 years from 2006 to 2013 inclusive. The final number of bank-year observations are 179 bank-year observations for Islamic banks and 246 bank-year observations for Dual banks. This table reports the mean, standard deviation, and values of the minimum and the maximum range for all variables. See Table 2 for the definitions of each variable.

Table 7: Correlation matrix for variables used for all 425 observations

Variable	RDPI	BDSZ	GNDI	NEDs	IGQ	NGQ	LTAS	ROA	LIQR	CSTR	CAPR	INFR	GDPC
RDPI													
BDSZ	0.475**												
GNDI	-0.025	0.117*											
NEDs	0.251**	0.036	0.007										
IGQ	0.332**	0.127**	0.161**	0.214**									
NGQ	0.282**	-0.093	0.003	0.205**	-0.065								
LTAS	0.564**	0.323**	-0.195**	0.061	0.100*	0.091							
ROA	-0.053	-0.054	-0.139**	0.024	-0.168**	0.159**	0.124*						
LIQR	0.292**	0.022	-0.160**	0.328**	-0.073	0.372**	0.280**	0.278**					
CSTR	-0.069	-0.009	0.330**	-0.008	0.181**	-0.222**	-0.286**	-0.541**	-0.293**				
CAPR	-0.116*	-0.197**	-0.162**	0.092	-0.009	0.051	-0.074	0.148**	0.020	-0.027			
INFR	-0.316**	-0.043	0.010	-0.269**	-0.168**	-0.434**	-0.174**	-0.011	-0.173**	0.038	-0.303**		
GDPC	0.053	-0.121*	-0.099*	0.105*	0.073	0.244**	0.126**	0.274**	0.301**	-0.222**	-0.043	0.085	

Notes: The sample consists of all listed Islamic and Dual banks covering 10 countries in the Arab MENA region namely, Bahrain, Egypt, Jordan, Kuwait, Lebanon, Oman, Qatar, Saudi Arabia, Syria, and UAE. The data are extracted from Perfect information Database, Banks' Websites, Banscope Database and the World Bank Database for 8 years from 2006 to 2013 inclusive. The final number of bank-year observations are 179 bank-year observations for Islamic banks and 246 bank-year observations for Dual banks. This table reports the Pearson correlation coefficients. See Table 2 for the definitions of each variable.

∗∗ Significant at the 1% level.

∗ Significant at the 5% level.

Table 8: National governance quality, Islamic governance quality, and risk management and disclosures practices

Variables	Dependent variable: Bank's risk management and disclosure practices index (RDPI)							
	(1) RDPI	(2) RDPI	(3) RDPI	(4) G2SLS	(5) GMM	(6)W-RDPI	(7)W-G2SLS	(8) W-GMM
Panel A: Independent variables								
Lagged RDPI					17.49***			
Lagged W-RDPI								23.01***
IGQ		8.35***	8.79***	10.08***	10.07***	7.09***	8.70***	3.17***
NGQ		2.84***	6.46***	5.73***	2.84***	4.95***	4.28***	1.09***
NGQ* IGQ			1.80*	1.71*	4.08***	0.62	0.70	1.73***
Panel B: Control variables								
BDSZ		12.09***	14.06***	13.47***	3.21***	13.13***	11.88***	3.03***
GNDI		-1.60	-0.86	-1.37	-3.69***	-0.96	-1.55	-4.00***
NEDs		5.30***	4.78***	4.23***	4.83***	4.39***	3.47***	3.80***
NGQ* BDSZ			8.63***	7.80***	5.56***	8.10***	6.93***	2.47***
NGQ*GNDI			3.55***	3.21***	4.24***	3.41***	2.98***	1.96***
NGQ* NEDs			0.080	0.15	0.94	1.37	1.10	1.53***
LTAS	6.07***	3.93***	3.86***	5.48***	3.02***	4.33***	5.65***	0.30***
ROA	-1.52	-0.44	-0.23	-0.75	0.46	-0.58	-1.14	-0.44***
LIQR	4.99***	4.26***	4.95***	5.08***	4.31***	5.01***	4.83***	1.33***
CSTR	1.20	0.85	0.64	0.86	-1.35	0.79	1.05	-2.27***
CAPR	-2.07**	0.73	0.84	0.62	2.25**	1.03	0.91	1.89***
INFR	-3.51***	-2.08**	-1.77*	-2.57**	-0.78	-0.60	-1.88	-1.43***
GDPC	-2.13**	-0.57	-0.96	-0.54	-1.29	-1.81*	-0.87	2.67***
Constant	-0.65	-6.14***	-6.58***	-6.20***	-0.95	-7.71***	-6.68***	2.70***
Fixed effect	Year	Year	Year	Year	Year	Year	Year	Year
Clustering	Bank	Bank	Bank	Bank	Bank	Bank	Bank	Bank
F- value (χ^2)	23.02***	59.74***	60.02***	903.61***	2074.33***	50.06***	712.86***	508.36***
Overall R^2	0.3284	0.5395	0.5628	0.5941		0.4903	0.5329	
No of obs	425	425	425	425	361	425	425	361

Notes: The sample consists of all listed Islamic and Dual banks covering 10 countries in the Arab MENA region namely, Bahrain, Egypt, Jordan, Kuwait, Lebanon, Oman, Qatar, Saudi Arabia, Syria, and UAE. The data are extracted from Perfect information Database, Banks' Websites, Banscope Database and the World Bank Database for 8 years from 2006 to 2013 inclusive. The final number of bank-year observations are 179 bank-year observations for Islamic banks and 246 bank-year observations for Dual banks. This table reports the following variables: un-weighted risk management and disclosure practices (*RDPI*), weighted risk management and disclosure practices (*W-RDPI*), board size (*BDSZ*), gender diversity (*GNDI*), non-executive directors (*NEDs*), Islamic governance (*IGQ*), national governance quality (*NGQ*), bank size (*LTAS*), performance (*ROA*), liquidity (*LIQR*), operations efficiency (*CSTR*), capital adequacy (*CAPR*), annual inflation (*INFR*), and annual GDP per capita (*GDPC*). See Table 3 for the definitions of each variable.
*** Significant at the 1% level.
** Significant at the 5% level.
* Significant at the 10% level.

Table 9: National governance quality, Islamic governance quality, and risk management and disclosures practices: Islamic vs. dual banks

Variables	Dependent variable: Bank's risk management and disclosure practices index (*RDPI*)							
	Islamic banks				Dual banks			
	(1) RDPI	(2) W-RDPI	(3) G2SLS	(4) GMM	(5) RDPI	(6) W-RDPI	(7) G2SLS	(8) GMM
Panel A: Independent variables								
Lagged RDPI				3.46***				4.31***
IGQ	7.35***	5.73***	8.40***	2.74**	6.33***	5.79***	5.23***	1.84*
NGQ	2.91***	1.21	3.83***	4.39***	3.23***	2.95***	2.79***	3.58***
NGQ* IGQ	2.04**	3.20***	0.94	1.09	2.19**	1.15	0.41	0.91***
Panel B: Control variables.								
BDSZ	9.20***	8.97***	7.46***	1.31	10.30***	9.75***	10.26***	1.07***
GNDI	2.92***	3.48***	0.72	-1.55	-4.33***	-4.76***	-3.36***	-2.35**
NEDs	4.25***	3.96***	3.31***	0.20	3.73***	3.53***	2.65***	0.01
NGQ* BDSZ	3.10***	2.33**	3.60***	2.35**	5.25***	4.98***	6.45***	2.19**
NGQ*GNDI	2.09**	1.92*	2.45**	0.07	1.95*	1.67*	3.10***	1.93*
NGQ* NEDs	2.47**	1.07	2.73***	0.72	0.41	0.39	1.63	2.86***
LTAS	-0.57	-0.41	1.26	2.20**	8.01***	8.34***	7.87***	1.27
ROA	0.58	0.33	-0.89	-1.23	5.55***	5.65***	4.67***	1.44
LIQR	4.06***	4.27***	3.60***	-1.13	4.21***	4.19***	3.18***	2.93***
CSTR	0.68	0.89	0.38	-0.79	2.14**	2.31**	2.08**	-1.45
CAPR	1.26	1.10	1.30	0.97	-0.10	0.62	0.98	-0.06
INFR	-0.12	0.34	-1.26	0.82	-1.43	-0.29	-0.89	-1.36
GDPC	-3.32***	-3.56***	-1.89*	-0.92	0.46	-0.05	0.56	-1.71*
Constant	-1.66	-2.12**	-2.37**	-2.11**	-9.91***	-11.21***	-8.29***	0.37
Fixed effect	Year	Year	Year	Year	Year	Year	Year	Year
Clustering	Bank	Bank	Bank	Bank	Bank	Bank	Bank	Bank
F- value (χ^2)	42.45***	35.04***	542.71***	142.84***	38.90***	35.87***	712.86***	121.73***
Overall R^2	0.4207	0.3118	0.5734		0.6112	0.5708	0.5329	
No of obs	189	189	189	162	236	236	236	199

Notes: The sample consists of all listed Islamic and Dual banks covering 10 countries in the Arab MENA region namely, Bahrain, Egypt, Jordan, Kuwait, Lebanon, Oman, Qatar, Saudi Arabia, Syria, and UAE. The data are extracted from Perfect information Database, Banks' Websites, Banscope Database and the World Bank Database for 8 years from 2006 to 2013 inclusive. The final number of bank-year observations are 179 bank-year observations for Islamic banks and 246 bank-year observations for Dual banks. This table reports the following variables: un-weighted risk management and disclosure practices (*RDPI*), weighted risk management and disclosure practices (*W-RDPI*), board size (*BDSZ*), gender diversity (*GNDI*), non-executive directors (*NEDs*), Islamic governance (*IGQ*), national governance quality (*NGQ*), bank size (*LTAS*), performance (*ROA*), liquidity (*LIQR*), operations efficiency (*CSTR*), capital adequacy (*CAPR*), annual inflation (*INFR*), and annual GDP per capita (*GDPC*). See Table 3 for the definitions of each variable.
*** Significant at the 1% level.
** Significant at the 5% level.
* Significant at the 10% level.

Table 10: National governance quality, Islamic governance quality, and risk management and disclosures practices: Strongly- vs. poorly-governed environments

Variables	Dependent variable: Bank's risk management and disclosure practices index (*RDPI*)							
	Strongly governed environment				Poorly governed environment			
	(1) RDPI	(2) W-RDPI	(3) G2SLS	(4) GMM	(5) RDPI	(6) W-RDPI	(7) G2SLS	(8) GMM
Panel A: Independent variables								
Lagged RDPI				4.50***				8.05***
IGQ	2.74***	2.15**	3.97***	2.78***	7.64***	5.58***	8.66***	1.98*
NGQ	7.16***	5.10***	8.47***	3.69***	1.50	1.27	0.34	0.70
NGQ* IGQ	1.12	0.22	1.52	0.83	-2.50**	-2.48**	-2.24**	-0.10
Panel B: Control variables								
BDSZ	11.04***	9.37***	11.85***	1.92*	7.15***	6.78***	6.70***	0.35
GNDI	0.42	0.23	0.32	1.28	-0.71	-0.40	-1.43	-3.22***
NEDs	5.82***	4.87***	5.70***	0.19	-0.39	-0.66	0.64	0.11
NGQ* BDSZ	6.67***	5.56***	7.37***	1.93*	0.80	0.84	0.02	1.40
NGQ*GNDI	-0.78	-1.01	0.42	0.92	0.25	0.93	0.32	0.13
NGQ* NEDs	-1.19	0.21	-2.01**	0.87	-2.66***	-2.22**	-1.84*	0.13
LTAS	3.17***	3.22***	3.23***	-1.08	0.91	1.71*	2.69***	2.51**
ROA	1.32	1.02	0.96	-1.29	-0.55	-1.16	-1.35	0.85
LIQR	3.05***	3.24***	3.15***	-0.30	2.49**	2.14**	2.07**	-0.24
CSTR	2.09**	1.90*	1.68*	0.08	-0.21	-0.10	0.37	-1.15
CAPR	0.62	1.30	0.74	-3.15***	1.10	0.65	0.53	-0.37
INFR	-1.82*	-0.42	-1.83*	-1.72*	0.72	0.68	-1.07	0.78
GDPC	-0.53	-1.50	-1.33	-1.71*	0.57	1.03	2.49**	1.55
Constant	-5.77***	-5.91***	-5.16***	2.00*	-1.68*	-2.96***	-2.78***	0.24
Fixed effect	Year	Year	Year	Year	Year	Year	Year	Year
Clustering	Bank	Bank	Bank	Bank	Bank	Bank	Bank	Bank
F- value (χ^2)	47.36***	37.69***	829.46***	164.11***	34.91***	27.88***	542.27***	12591.40***
Overall R2	0.6900	0.5952	0.7732		0.5858	0.5351	0.6767	
No of obs	199	199	199	161	226	226	226	176

Notes: The sample consists of all listed Islamic and Dual banks covering 10 countries in the Arab MENA region namely, Bahrain, Egypt, Jordan, Kuwait, Lebanon, Oman, Qatar, Saudi Arabia, Syria, and UAE. The data are extracted from Perfect information Database, Banks' Websites, Banscope Database and the World Bank Database for 8 years from 2006 to 2013 inclusive. The final number of bank-year observations are 179 bank-year observations for Islamic banks and 246 bank-year observations for Dual banks. This table reports the following variables: un-weighted risk management and disclosure practices (*RDPI*), weighted risk management and disclosure practices (*W-RDPI*), board size (*BDSZ*), gender diversity (*GNDI*), non-executive directors (*NEDs*), Islamic governance (*IGQ*), national governance quality (*NGQ*), bank size (*LTAS*), performance (*ROA*), liquidity (*LIQR*), operations efficiency (*CSTR*), capital adequacy (*CAPR*), annual inflation (*INFR*), and annual GDP per capita (*GDPC*). See Table 3 for the definitions of each variable.

***   Significant at the 1% level.
**   Significant at the 5% level.
*   Significant at the 10% level.