Northumbria Research Link

Earnings Management and Internal Governance Mechanisms: The Role of Religiosity

Abstract

Motivated by the managers' social norms and religious orientations, this study offers new avenues for investigating the effect of internal governance in curbing earnings management. We comparatively assess whether internal governance mechanisms (i.e., boards of directors and audit committees) employed by Islamic and conventional banks could differentially mitigate earnings management. We take a step further to assess this association under the extended governance mechanism (i.e. Shari'ah supervisory board) employed by Islamic banks. For a global sample of 14 countries operating on a dual banking system between the years 2007-2015, we find that, on average, having effective boards and audit committees enhance the quality of financial reporting in banking industry. Conditional on bank type, we find that large and independent board of directors (and audit committees) are negatively associated with earnings management for Islamic and conventional banks. There are no structural differences across the two bank types for the effectiveness of these traditional governance mechanisms. We also find that Shari'ah supervisory board (i.e., non-traditional governance) can significantly reduce earnings management. This finding is more evident when this board is large; its members have financial expertise and serve on multiple banks' boards. Our results provide important implications for regulators governing dual banking systems by highlighting the explicit role of religiosity on managerial opportunism and the impact of double governance in promoting high financial reporting quality for global banking.

1. Introduction

The quality of financial reporting has long been discussed as having broader moral and ethical implications on various stakeholders (Du et al. 2015; Kanagaretnam et al. 2015; Lai et al. 2016; Vladu et al. 2017). Corporate scandals (e.g., Enron and WorldCom) have raised serious concerns about the credibility of financial statements over the last decade. Organisations enjoy legitimacy as they show that their activities are congruent with wide societal acceptations. Managers might be motivated in some situations to show that their firms adhere to the prevailing systems of acceptable norms, beliefs and cultural values to confer legitimacy upon their organisations (Wijayana and Gray 2018). A weak system of governance is likely to offer managerial incentives to opportunistically manipulate reported earnings. Earnings management[1] has been documented as one of the most critical questionable practices, which have substantial detrimental societal and economic consequences (Dechow et al. 1996; Klein 2002; Leuz et al. 2003). Earnings management emerge within the presence of several motives (e.g. stock market incentives, compensation contracts incentives, debt contracts incentives, political incentives). Consequently, financial reporting quality is substantially lower as investors receive inaccurate information about the actual financial performance of the entities. This could cause adverse selection problems and moral hazards (Jiraporn et al. 2008; Chen et al. 2010).

Regulators in stock markets emphasise the role of different corporate governance mechanisms. To limit manipulative earnings management practices and protect shareholders' interests, various internal governance mechanisms (e.g., the board of directors and the audit committee) and external governance mechanisms (e.g., auditing and regulation) should be employed by organisations (Fama and Jensen 1983; Demsetz and Lehn 1985). Extant literature (e.g. Xie et al. 2003; Iatridis and Kadorinis 2009; Salem et al. 2021) document that effective governance and high disclosure quality should limit managerial opportunism. For example, an effective board of directors can monitor top management on behalf of shareholders to reduce information asymmetry between managers and shareholders and lessen agency costs. From one perspective, prior empirical evidence on governance and earnings management often excludes financial institutions given their unique institutional and regulatory environments (see Jo and Kim 2007; Zalata et al. 2018). The banking industry forms a necessary pillar for global economic and financial stability given their intermediation and financing roles which constantly remains under heightened regulatory and market scrutiny (Talavera et al. 2018). While banks contribute to their communities' social and developmental activities, some banks have been marked with opacity and ethically questionable financial practices and fraudulent financial reporting (Grougiou et al., 2014)[2]. The complexity and diversity of banking financial instruments and transactions lead to substantial information asymmetries. From another perspective, there is a lack of empirical studies in the literature

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[1]Earnings management can be defined as the deliberate alteration of a firm's reported financial performance by managers to mislead stakeholders or influence contractual outcomes (Healy and Wahlen, 1999).
[2]For example, Lehman Brothers and Bear Stearns cases highlight the severe repercussions of banks' activities on their communities and market participants.

examining the role of bank type (i.e., Islamic versus conventional banks)[3] on corporate governance-earnings management nexus (e.g., Kanagaretnam et al. 2010, 2015, Talavera et al. 2018). Prior literature has also failed to investigate the role of religiosity in mediating the association between effective governance and earnings management. This effect could be pervasive for specific banking systems like Islamic banks, marked by religious business practices and complex internal governance mechanisms, compared to their conventional counterparts. Therefore, research on the governance and earnings management within religious establishments (e.g., Islamic banking) has become prolific. A few studies have found that Judo-Christian religious norms affect earnings quality (Callen et al. 2011; Du et al. 2015; Kanagaretnam et al. 2015); financial reporting irregularities (Dyreng et al. 2012; McGuire et al. 2012); stock returns and volatility (Al-Khazali et al. 2017); corporate decision-making (Hilary and Hui 2009); and corruption (Mensah 2014).

Studying the Islamic banking business model compared to the conventional banking model offers a unique setting for identifying the role of ethical business orientations and the effect of additional monitoring mechanisms on restraining earnings management. This banking sector has been proliferating over the past decade for various reasons associated with the collapse of global banking during the 2008's financial crisis, investors' perceptions of the sector's ethical practices and the stability of the Islamic banking model as compared to conventional banking (see Trinh et al. 2020).

Islamic banks are distinguished from conventional banks by several characteristics in their business models. The operations of the Islamic banking industry are principally driven by a constrained banking practice, which inherits both religious orientations and moral accountability values alongside legal responsibilities (Abdelsalam et al. 2020).

Furthermore, governance in Islamic banking is more complex and extended than that in conventional banking. Besides the traditional governance mechanisms used in conventional banks (i.e., board of directors and audit committees), Islamic banks operate on an additional (i.e., non-traditional) governance structure, with the existence of Shari'ah supervisory board (SSB). This internal (extra) layer of governance represents scholars in Islamic legitimacy who monitor the banks' activities and funding decisions[4].

Moreover, the principal-agent relationships in Islamic banks are complex compared to their conventional counterparts (Elnahass et al. 2020a; Abdelsalam et al. 2021). Depositors in Islamic banks, i.e., Investment account holders (IAHs), have no right to intervene in their funds' financial and operational management. They rely on the bank's board of directors to monitor the management on their behalf. Therefore, Islamic banks' managers have opportunities to pursue

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[3] We refer to Islamic banks as those banks that follow Islamic Shari'ah principles in their business transactions. These banks operate on a banking model which prohibits usury, excessive uncertainty and speculation while encourages risk and profit-sharing between the bank and its depositors. Conventional banks refer to traditional commercial banks which operate on an interest basis (Elnahass et al. 2018).

[4] This board acts as a monitoring mechanism to carry out an independent audit and issue a separate report as part of the bank's financial statements. SSB members may also have to review additional information and reports, such as operating and financial reports and policies (Abdul Rahman and Bukair 2013). This board is appointed during the annual general assembly, and its members are likely to be recommended by the board of directors and approved by the shareholders.

personal benefits at the expense of IAHs and engage in earning management practices (Safieddine 2009).

This study investigates the roles of internal governance mechanisms in mitigating earnings management practices among Islamic and conventional banks. These mechanisms are represented by: (1) the board of directors; (2) the audit committees; and (3) the extra governance mechanism (i.e., SSB) in Islamic banks. Given the constrained business model and the additional governance layer adopted by Islamic banks, our premise is that earnings management is likely lower in Islamic banks than in conventional banks. This prediction is also in line with prior evidence (Elnahass et al. 2014, 2018; Abdelsalam et al. 2016, 2020; Lassoued et al. 2018; Salem et al. 2021), showing that Islamic banks engage in a higher financial reporting quality and lower managerial opportunism as compared to their conventional counterparts. That premise is also consistent with prior literature, which documents that religious orientation and robust institutional environments ultimately shape corporate behaviour and mitigate aggressive earnings management (Dyreng et al. 2012; McGuire et al. 2012; Kanagaretnam et al. 2015; Abdelsalam et al. 2021). Moreover, Islamic banks commonly act under a predominant set of social norms.[5]

Our study employs a global banking sample representing 679 bank-year observations of listed conventional and Islamic banks located in 14 countries that operate on a dual banking system. The empirical setting uses several alternative models to measure earnings management across the two bank types, including (i) loss avoidance, (ii) loan loss provisions and realised security gains and losses, and (iii) discretionary accruals. We examine the size and independence of both the board and audit committees for the traditional governance mechanisms. We extend our analyses to identify the effect of the non-traditional mechanism by examining within the Islamic banking sub-sample SSB size, financial expertise, and multiple directorships.

Our results show strong evidence that internal governance mechanisms play a catalytic role in restricting earnings management for the whole sample of banks. In particular, we find that having both large and independent board of directors and audit committees can significantly reduce earnings management practices within the two bank types. These findings suggest that despite institutional differences across the two bank types, no significant differences exist between conventional and Islamic banks for the effectiveness of traditional governance in limiting earnings management. Such findings remain consistent across several model specifications and sensitivities including market microstructure factors (e.g. volatility and bank size). By examining the incremental impact of the SSB (i.e., jointly with the presence of the board of directors and audit committees in Islamic banks), we show that the SSB significantly mitigates earnings management practices in Islamic banks. This association is observed when SSB is large in size and includes financially qualified Shari'ah scholars. The analyses also report that Shari'ah scholars employed across many Islamic banks. These findings imply that multiple directorships in Islamic banks can reduce managerial opportunism for their banks.

Our findings contribute to the broad strands of literature on earnings management and corporate governance. First, to our knowledge, this is the first empirical study to identify the combined

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[5] Social norms refer to the external rules and values shared by a group of individuals. Individuals are expected to comply with the understandings and reactions of their peer groups to avoid sanctions associated with non-adherence to the shared values and beliefs. Accepted attitudes are likely to be widely supported and socially approved by the community (Akerlof 1980; Kohlberg 1984).

effects of traditional and non-traditional governance mechanisms on limiting earnings management in the banking sector. We provide international evidence while recognising the effect of bank type. Accordingly, our findings extend prior studies in conventional banking (e.g. Kanagaretnam et al. 2010, 2015; Leventis and Dimitropoulos 2012; John et al. 2016). Second, none of the prior literature has investigated the systematic effect(s) of additional monitoring within the context of earnings management. Previous studies have mainly examined the individual effect of SSB on bank risk-taking, performance and social reporting (e.g., Farook et al., 2011; Abdul Rahman and Bukair, 2013; Almutairi and Quttainah, 2017). These studies have not assessed the cumulative effect of traditional governance mechanisms within both Islamic and conventional banks. As such, our research is among early attempts in the comparative literature of Islamic versus conventional banking. By applying Islamic banks' case, this study highlights the impact of religious norms and the influence of religiosity on mediating the predicted relationship between internal governance and earnings management for dual banking systems. Hence, our findings provide strong evidence from the Islamic Code of religion to offer new insights to the established literature identifying the role of religion on corporate choices (Menash, 2014; Chen et al. 2016; Abdelsalam et al. 2021).

This study provides important implications for policymakers and various set of stakeholders engaging with global banking sectors. We highlight the importance of effective monitoring in enhancing financial reporting quality for countries operating on a dual banking system. Banking regulators and auditors should consider the combined effect of different layers of internal governance on mitigating accounting opportunism in both sectors. Although prior studies provide strong evidence that Islamic banks are less likely to engage with earnings management practices when compared to conventional banks. The absence of variations in results for traditional mechanisms among the two bank types implies that these mechanisms tend not to be the sole and ultimate reason for the prior established evidence on higher financial reporting quality in Islamic banking than conventional banking. Our findings suggest that double governance through SSB incrementally and significantly contributes to the enhancement of the financial reporting quality for Islamic banks. Therefore, policymakers and regulators can use the evidence presented in this study to establish double governance mechanisms within dual banking systems to unify/monitor financial operations and promote high earnings quality. The overall results substantiate the influence of social norms on core economic matters with important ramifications for financial reporting framework and effective governance systems.

The remainder of the paper is organised as follows. Section 2 presents the theoretical background and reviews the related literature. Section 3 develops the research hypotheses. Section 4 describes the data selection procedure. Section 5 discusses the study's methodology. Section 6 presents the empirical results and sensitivity analyses. Section 7 concludes.

2. Theory and Literature Review

2.1 Theoretical Framework

According to the agency theory, self-interest and external rewards motivate managers to behave opportunistically. Agency conflicts may arise from the separation of ownership and control (Jensen and Meckling 1976; Fama and Jensen 1983). The problem of "information asymmetry", where the agents have more access to the company's information than the principals (Arnold and Lange 2004), creates more earnings management opportunities. Information asymmetry complicates the agency conflicts, as managers can manipulate the information they disclose, and owners might not monitor and evaluate managers' actions accurately. Earnings management can be viewed as a core agency cost (Jiraporn et al. 2008). In line with the agency theory, managerial self-serving and opportunistic behaviour can be limited by establishing formal corporate governance mechanisms. The agency theory considers corporate governance mechanism(s) as one of the classical cures in controlling conflict of interests between agents and principals (Shleifer and Vishny 1997; Brennan 2006). Effective board and audit committee are indications of a sound internal governance system, which can help to reduce agency costs through greater monitoring activities (Adam and Ferreira 2007; Ronen and Yaari 2008; Kent et al. 2010; Talavera et al. 2018).

Unethical activities such as financial fraud and fraudulent financial reporting confirm ethical failures (Staubus 2005). The attitudes toward the morality or ethics of particular behaviour should affect managers' choices and decisions. It has long been argued that managers are driven merely by self-interest, while owners should rigorously limit opportunistic managerial behaviour either by aligning managers' and shareholders' interests or through implementing additional monitoring mechanisms. Despite the dominance of the agency theory in explaining many aspects of the contracting environment, this theory has been criticised for assuming that self-interest explains managerial behaviour (Ferraro et al. 2005). The agency theory focuses mainly on extrinsic rewards and ignores intrinsic rewards like self-satisfaction and ethical conduct (Cohen et al. 2007). Prior studies have shown that dominant cultural values in a community and social norms such as fairness and reciprocity can shape managerial behaviour and mitigate earnings management (Wijayana and Gray 2018). Cohen et al. (2007) suggest that fairness is an essential motivator for positive organisational behaviour. Also, Bosse and Phillps (2016) argue that self-interested managers will attempt to maximise their own interests only as long as they are not violating their perceived social norms of fairness and reciprocity.

The social norm theory provides detailed grounds for shaping individual economic attitudes (Akerlof 1980; Kohlberg 1984). Social norms represent the prevailing code of conduct and ethics jointly shared by a group of individuals. This code drives forces and mechanisms for individuals. Compliance with norms and group expectations is subject to community support and acceptance, while non-compliance would promote social discrimination. Such social acceptance or discrimination should shape the accepted attitudes and moral liability. Social norms also affect corporate decision making (Hilary and Hui, 2009). Organisational policies and decision-making process represent peer-group expectations and community beliefs. Hence, as driven by the social norms theory, corporate management practices are influenced by their informal beliefs and values, besides the formal organisational governance arrangements (McGuire et al. 2012). Therefore,

codes of ethics can stimulate social norms to help to deter opportunistic behaviour (Davidson and Stevens 2012).

Religiosity, conceptualised as the extent of adhering to prevailing religious codes and promulgations, represents a prime example of the social norm. Religious norms interact with individual attitudes and corporate decision making (Hunt and Vitell 1986). Influential religions such as Judaism, Christianity and Islam have promulgated a joint set of principles and beliefs which serve as the code of actions and virtues for good ethical attitudes (Melé and Fontrodona 2017). Moral and religious groups penalise activities that deviate from the endorsed frame of ethics. Hence, ethics and religions should promote anti-fraudulent and anti-manipulative ethos and facilitate the development of morality and ethical conducts (Callen and Fang, 2015; McGuire et al. 2012; Al-Khazali et al. 2017).

Many theoretical arguments support the expectation that the social norm perspective of religion drives more resistance against aggressive earnings management at the corporate level. First, ethically oriented organisations often adhere to the moral constraints that shape the individual frames of their financial operations[6]. These restraints are also predicted to impact their corporate and business decisions and to encourage faithfulness and trust. According to Abdelsalam et al. (2021), religiously oriented organisations are more inclined to internalise ethical norms associated with conservatism and are, as a result, less likely to embark on earnings management. Second, if the managers of ethically oriented organisations are tempted to embark on earnings management practices for personal gain, they are still less likely to trade off the gain from additional remuneration against the cost of social stigma. Finally, communities in which ethics are predominated hold expectations that shape individuals and organisations' behaviour (Weaver and Agle 2002). Attitudes in these communities are, to a certain degree, shaped by endorsed behaviours. Such influences are predominantly pervasive in organisations where religious adherence is a predominant characteristic of the local population (Hilary and Hui 2009; Callen and Fang 2015). Consequently, banks, either Islamic or conventional, operating in countries where religion is highly important, are expected to display a distinct ethical conduct profile to gain broader public trust. Akin to people, religiously oriented firms are likely to be less manipulative in their business practices (Hilary and Hu, 2009). Against this background, we argue that banks marked, at least in principle, with ethical and religious orientations should prioritise moral choices among different business opportunities that involve excessive manipulations.

2.2 Islamic Banking Business Model

Islamic banks present an example for ethical and religiously orientated organisations assumed to operate in compliance with their set of moral codes and the Shari'ah rulings, which broaden the moral accountability of Islamic banks beyond their legal responsibility (Abdelsalam et al. 2016). An essential foundation of Shari'ah principles is the commitment to ethical behaviour. The Islamic moral code is built on coherent guidelines that control all religious, social, and economic affairs

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[6] According to Ha-Brookshire (2017), in corporations with well-defined moral guidelines or structures that all members can easily follow, individuals' morally responsible behaviour improves.

(Haniffa and Hudaib 2002). Islamic principles of honesty, transparency, integrity and truthfulness constrain managers from engaging in ethically questionable activities, like earnings management. Recent attempts have established that solid ethical commitment can influence financial reporting and act as deterrence for earnings management (Hilary and Hui 2009; Kanagaretnam et al. 2015). Islamic banking is also based on the profit-and-loss sharing principle[7]. The contracts between the banks and their depositors (i.e., IAHs) imply that all transactions are backed by real economic activities that include tangible assets.

In line with the behavioural theory of the firm (Van Ees et al. 2009), a corporate manager's ability to make optimal decisions is limited. Therefore, the decision-making process will be managed by reasonable attempts to arrive at satisfying rather than optimising outcomes. In this context, managerial decision-making will be affected by prior managerial experiences, beliefs and values instead of rational thought only. This is particularly crucial for Islamic banks, whereby the business context is characterised by the commitment to Islamic religious values and beliefs (Abu-Tapanjeh 2009).

Islamic banks are marked with complex agency-principal relationships compared to their conventional counterparts (Elnahass et al. 2020a; Abdelsalam et al. 2021). The distinct nature of the bank-depositor relationship in Islamic banks is likely to promote additional complexities to the agency costs associated with this banking sector[8]. IAHs have no right to intervene in the financial and operating management of their funds. Therefore, Islamic banks' managers have opportunities to pursue their personal benefits at the expense of IAHs, resulting in additional agency costs to be carried by the depositors (Abdelsalam et al. 2016). Also, Islamic banks do not compete on an equal footing with conventional banks (Hasan and Dridi 2010), which might give an incentive for opportunistic earnings management. Telling against that consideration is the ethical commitment of Islamic banks to their stakeholders, which is likely to enhance financial reporting quality. Earnings management practice by Islamic banks is also subject to an additional governance mechanism: the SSB. The principal role of SSB is to guide whether banks' operations and activities comply with Islamic Shari'ah law. Within the context of earnings management, the existence of the SSB may provide an added assertion to shareholders that top managers of Islamic banks are less likely to manage their earnings relative to other institutions without such committee. Therefore, both the religious orientation alongside the existence of SSB as part of the governance structure should, in principle, restrain managerial opportunism in an Islamic banking business model.

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[7] Because of the prohibition of charging interest in Islamic banking, depositors are recognised as investment account holders (IAHs) who enter into equity-based investment contracts. Under these arrangements, banks are allowed to share in profits, while losses are borne by the IAHs (Abdelsalam et al. 2016).

[8] While depositors receive a fixed rate of return (interest) on investments in the conventional banking system, Islamic banks use the profit-sharing contract to invest funds on behalf of investment account holders (IAHs) who earn their returns by sharing in the profits generated from their funds and bear their share in any investment losses incurred (Elnahass et al. 2020a).

2.3 Prior Literature

Prior literature has established that effective governance mechanisms mitigate agency problems (Shleifer and Vishny 1997; La Porta et al. 2000; Filatotchev and Wright 2011). Some studies examine the role of individual traditional governance mechanisms in earnings management, such as board size (Beasley 1996; Gulzar and Wang 2011); board independence (Bédard et al. 2004; Osma 2008; Dimitropoulos and Asteriou 2010); audit committee independence and expertise (Klein 2002; Zhou and Chen 2004). Other previous studies investigate the association between governance index and earnings management (Liu and Lu 2007; Iatridis and Kadorinis 2009; Leventis and Dimitropoulos 2012; Zalata et al. 2018).

The Islamic banking literature provides inconclusive evidence on earnings management. Ismail and Be Lay (2002) find evidence of earnings management through banks' loan loss provisions (LLP) within a sample of Malaysian Islamic banks. Zoubi and Al-Khazali (2007) reach the same conclusion for conventional and Islamic banks in the GCC region. On the other hand, Taktak et al. (2010) find no evidence of income smoothing through LLP for an international sample of Islamic banks. Similarly, Abdelsalam et al. (2016) find that Islamic banks are less likely to engage in earnings management when compared to conventional banks within the Middle East and North Africa region. Elnahass et al. (2018) investigate the use of different loan loss provision models across Islamic banks (i.e. adopting forward-looking loan loss model) and conventional banks (i.e. adopting backward-looking loan loss model) to assess the implications on earnings management within three countries, Bahrain, Jordan and Qatar. This study shows that, unlike conventional banks, Islamic banks tend not to use LLP in earnings management practices. This study suggests that differences in the practices of the two bank types may be attributed to the constrained business model of Islamic banking, strict governance and religious orientations.

Overall, prior studies in the banking sector suggest that even in highly regulated institutions such as banks, corporate governance mechanisms significantly mitigate aggressive earnings management. However, none of these studies examines the effect of bank type while distinguishing between different internal governance systems. Exploring these aspects is essential in identifying possible differential effects of the internal system of governance on mitigating motives/opportunities for earnings management in banking. Moreover, our study offers new insights into the literature of Elnahass et al. (2018) and Abdelsalam et al. (2016) who find that Islamic banks are less likely to manage their earnings relative to their conventional counterparts. IThese studies have not explicitly utilised any measures for internal governance mechanisms. They only narratively attribute their main findings to the possible unobserved effect of double-governance mechanisms (i.e., board of directors and SSB) within Islamic banks relative to their conventional counterparts. These studies also used restricted sample for emerging economies like the Gulf and the Middle East North Africa (MENA) region. Therefore, we extend such earlier theoretical claims by introducing empirical examinations for a dedicated set of internal governance measures, alternative models of earnings management, and a comprehensive sample of international banks. Consequently, this study fills this gap using Islamic banking as a case of

religiosity-oriented organisations whose conservative business model operates on an extended monitoring mechanism layer.

3. Hypotheses Development

3.1 Board of directors and audit committee size

The board of directors is widely recognised as an essential internal governance mechanism (Fama and Jensen 1983). It ensures that top managers act in the best interests of shareholders and approve primary business strategies (Cerbioni and Parbonetti 2007; John et al. 2016). In discharging their responsibility of managing and supervising banks' business affairs, the boards of directors owe fiduciary duties to the banks and their shareholders. The complex nature of banking institutions implies that the duties and obligations of bank directors are more extensive relative to those of other directors. According to Macey and O'Hara (2003), boards of directors must make careful and prudent decisions to ensure the banks' safety and soundness. They are also required to provide careful oversight of banks' operations. Boards will not have an effective control role unless they can curtail discretionary managerial decisions (Elnahass et al. 2018; Trinh et al. 2020). Previous research documents that effective governance through the board of directors will cause better monitoring of management operations and better bank performance (Talavera et al. 2018).

An effective audit committee represents a governance device that assists the board in its monitoring role and therefore promotes financial reporting quality (Pomeroy and Thornton 2008; Beasley et al. 2009). This end is achieved through strengthening governance, promoting conservatism, and reducing opportunistic earnings management (Xie et al. 2003; Bédard et al. 2004; Sharma and Kuang 2014). Audit committees are also associated with oversight of risk management and internal control systems (Chambers and Weight 2008). The effectiveness of both the board of directors and the audit committee in monitoring and controlling opportunistic managerial behaviour depends on their characteristics and attributes. Among these aspects are the sizes of the board and audit committee. The relationship between their sizes and earnings management is not straightforward, and prior literature provides no consensus about the direction of this association (Xie et al. 2003; Ronen and Yaari 2008; Zalata et al. 2018).

On the one hand, according to the resource dependence theory, a larger board is "a provider of resources, such as legitimacy, advice and council links to other organisations, etc." (Hillman and Dalziel 2003, p. 383) and therefore enhances the skills, expertise, and knowledge needed to exert effective monitoring over earnings management practices (Xie et al. 2003; Peasnell et al. 2005; Abed et al. 2012). Similarly, a large audit committee can be seen as an indication of the resources and varied expertise available to the committee to effectively monitor financial reporting practices (Baxter and Cotter 2009). Yang and Krishnan (2005) provide evidence of a significant negative association between audit committee size and discretionary accruals for a sample of 250 U.S. publicly traded firms between 1996 and 2000. Kent et al. (2010) examine a sample of Australian companies and find that higher accruals quality is associated with larger audit committees. García et al. (2012) study a sample of Spanish firms between 2003 and 2006 and conclude that the size of the audit committee has a significant negative association with discretionary accruals.

On the other hand, according to the agency theory, firms with larger boards tend to be less effective in monitoring managerial behaviour due to coordination and communication problems,

hindering the decision-making process (Jensen 1993). Consistent with this view, several studies find a positive association between board size and the degree of earnings management (Hoitash et al. 2009; Gulzar and Wang 2011). Likewise, some studies show that the size of the audit committee is not related to earnings management (Xie et al. 2003; Abbot et al. 2004; Baxter and Cotter 2009; Habbash et al. 2013). In a multi-country analysis of 69 commercial banks, Andres and Vallelado (2008) find that adding new directors to the board improves governance and enhances the advisory function of the board if communication and coordination problems outweigh the benefits.

Given the mixed prior evidence on the association between board (and audit committee) size and earnings management, a directional hypothesis is difficult to state. We provide no prediction for the direction of the association between board size (and audit committee size) with measures of earnings management for both conventional and Islamic banks. However, we conjecture that for Islamic banks operating on a complex and constrained banking model, the role of the board of directors and audit committee in controlling agency problems should be more visible compared with that in conventional banks. With expectations that social norms in these religious organisations dominate, effective scrutiny by the boards of directors and audit committees becomes necessary. In Islamic banks, the board of directors plays an executive role and enforces the SSB's authority to perform either supervisory or advisory functions or both. Hence, the size of the boards of directors and audit committees in Islamic banks can substantially influence their monitoring and control capabilities of managerial opportunism. Thus, our first hypotheses are stated in alternative forms:

H_{1a}: A significant (positive/negative) relationship exists between the board of directors' size and earnings management practices.

H_{1b}: A significant (positive/negative) relationship exists between the audit committee's size and earnings management practices.

We expect that the above relationships should be more significant in Islamic banks relative to conventional banks.

3.2 Board of directors and audit committee independence

Besides board (and audit committee) size, the board's effectiveness in its monitoring function is determined by its independence (John and Senbet 1998). According to the agency theory, independent directors can exercise sovereign judgement to protect shareholders' interests when an agency conflict is present (Jensen and Meckling 1976). Given the need to develop and maintain a reputation in the labour market, and since independent directors bring valuable expertise and potential networks that could benefit the firm (Fama and Jensen 1983; Pathan and Skully 2010), boards dominated by independent directors are better positioned to monitor and control managers' activities (Fama and Jensen, 1983). If independent directors on the board enhance monitoring, they should also be associated with lower use of earnings management (Cornett et al. 2009). Beasley (1996), for example, examines whether including larger proportions of outside members on the board reduces the likelihood of financial statement fraud and finds that non-fraud firms have boards with significantly higher percentages of outside members than those of fraud firms.

Dechow et al. (1996) use a sample of firms subject to Securities and Exchange Commission enforcement actions between 1982 and 1992 to investigate firms alleged to have violated GAAP to overstate their earnings and match businesses that did not. They find that firms manipulating earnings are more likely to have boards with a lower proportion of independent members. Klein (2002) concludes a negative relation between board independence and abnormal accruals.

Much emphasis has also been placed on the audit committee's role in overseeing the financial reporting process and preventing fraudulent accounting statements. The effectiveness of an audit committee in accomplishing these functions depends on the independence of its members (Klein 2002). Abbott et al. (2004) suggest that audit committee directors' independence is associated with effective monitoring for two reasons: (1) the absence of economic or psychological ties to management that might conflict with their job duties; and (2) the reputational capital preservation/development motivates independent directors to serve as active overseers of the financial accounting processes. Klein (2002) finds that large increases in abnormal accruals accompany reductions in audit committee independence. Abbott et al. (2004) find that the independence of the audit committee exhibits a significant and negative association with the occurrence of a financial restatement. Chang and Sun (2009) and Chen and Zhang (2014) provide evidence for a significant negative association between audit committee independence and earnings management.

We conjecture that more independent boards and audit committees are likely to monitor and mitigate managerial opportunism. We maintain similar predictions to that in the first hypothesis; the role of independent boards of directors/ audit committees in controlling managerial behaviour is expected to be more noticeable in Islamic than in conventional banks particularly, under the assumed dominance of religious norms in Islamic banking. This leads to our second set of hypotheses stated in alternative forms:

H_{2a}: A negative relationship exists between the board of directors' independence and earnings management practices.

H_{2b}: A negative relationship exists between the audit committee's independence and earnings management practices.

In line with predictions, we expect these relationships to be more significant in Islamic banks relative to conventional banks.

3.3 Shari'ah supervisory board

Decisions of the board of directors (audit committee) can depend much on the effectiveness of Shari'ah compliance for an Islamic bank. The presence of non-traditional and extra governance – SSB – aims at developing an effective internal mechanism to monitor Islamic banks' prioritisation of religious/ethical business orientations (Elnahass et al. 2020a). The existence of the SSB is likely to provide additional assurance to shareholders that the social norms of the bank are preserved. At least in principle, having SSB should provide a deterrent against earnings management practices in Islamic banks.

To date, several studies investigating the role of the SSB have been carried out; however, most of these studies occurred within the context of corporate social responsibility disclosure, bank risk-taking, and performance. Farook et al. (2011) examine the association between SSB characteristics and corporate social responsibility disclosure for a sample of Islamic banks and conclude that SSB members with cross-memberships and international reputation are associated with higher levels of such disclosures. Abdul Rahman and Bukair (2013) also find similar results for Islamic banks operating in the GCC countries. Mollah and Zaman (2015) and Almutairi and Quttainah (2017) provide evidence that SSBs positively affect Islamic banks' performance. Mollah et al. (2016) investigate whether the differences in governance structures between Islamic banks and conventional banks affects their risk-taking. They find that the unique governance structures in Islamic banks lead to a lower risk-taking profile. Both Elnahass et al. (2020a) and Trinh et al. (2020) examine whether SSB busyness (i.e. multiple directorships across different banks) affects stock market valuations for the former and the bank stability for the latter. Although previous studies have shown the significant role of the SSB in enhancing corporate social responsibility disclosure, promoting bank performance, and mitigating risks, we find that such investigation is incomplete as it fails to explicitly highlight the cumulative effect (i.e., in addition to boards and audit committees) of having an effective SSB to scrutinize the bank activities against impermissible business activities.

In response to the above research gap, we extend our comparative assessments for the effects of the internal system of governance across the two banking sectors to identify the role of the SSB in controlling earnings management in Islamic banks. We consider three key characteristics of SSB: (i) size, (ii) financial qualification, and (iii) multiple memberships. For SSB size, in line with Farook et al. (2011) and Elnahass et al. (2020a), we predict that a larger SSB enables members to share their experience and benefit from diverse knowledge. In line with these findings and supported by the resource dependence theory, we conjecture that a larger SSB should provide more effective monitoring and limit earnings management in Islamic banks.

The effectiveness of the SSB is also likely to be affected by the scholars' financial and accountancy qualifications. Because of the complex nature of Islamic bank activities, SSB members should not only be knowledgeable in Islamic commercial jurisprudence, but they should also be equipped with relevant expertise and education on modern business disciplines, economic developments, and accounting and financial practices. The financial qualification of a Shari'ah scholar is expected to enable him/her to monitor and detect opportunistic managerial acts. Finally, the competence of Shari'ah scholars may also be determined by their multiple memberships. Like board members, multiple memberships held by Shari'ah scholars in many Islamic banks can promote knowledge and expertise within the SSB, as they are exposed to more diverse experiences (Trinh et al. 2020). Multiple memberships could be regarded as a proxy for the scholars' reputation in the external labour market (Brennan et al. 2016). Accordingly, the diverse knowledge and expertise of reputable Shari'ah scholars are predicted to enhance their ability to monitor and control opportunistic managerial behaviour.

We, therefore, conjecture that large SSBs with financially qualified members who hold multiple directorships should promote additional monitoring and temper discretionary acts in Islamic banks. This conjecture leads to the following hypothesis, stated in an alternative form:

H_3: A significant and negative relationship exists between the SSB's size, financially qualified membership, members' multiple directorships and the earnings management practices within Islamic banks.

4. Sample selection and data

Our multi-country sample comprises 679-year observations of 93 listed banks operating between the years 2007 and 2015. We initially had 146 Islamic banks (IBs) and 515 conventional banks (CBs). Following Beck et al. (2013), Mollah et al. (2016) and Elnahass et al. (2020a, b), we applied three sample criteria: (1) countries having both types of banks; (2) the availability of governance data for both types of banks, and (3) the availability of at least three consecutive years of bank data. Moreover, our sample excludes CBs with Islamic windows, which refer to traditional CBs that provide compliant products with Shari'ah (Beck et al. 2013). The supervisory issues and capital adequacy requirements for those windows are different from Islamic banks (IFSB 2005). Therefore, our final sample represents 39 IBs and 54 CBs, across 14 countries operating on a dual banking system[9]. The relevance of the sample period is that the Basel II Capital Adequacy Framework (Basel Committee on Banking Supervision, 2006) became mandatory for IBs in 2007 (see IFSB 2005; Ariss and Sarieddine 2007). This period also allows an examination of whether bank managers opportunistically deviate from accounting standards and regulations during the 2007-2008 financial crisis (see Hoffmann et al. 2013).

Financial data are collected from Bankscope, DataStream, and Bloomberg, while country-specific macroeconomic and governance data are obtained from the World Bank's World Development Indicators. Data on corporate and Shari'ah governance are hand-collected from banks' annual reports. Table 1 presents the final sample distribution across countries and the two bank types.

[Insert Table 1 here]

5. Methodology

5.1 Earnings management models

To examine earnings management practices in banks, we use three different models to measure earnings management in the two banking sectors. The first model is developed initially by Burgstahler and Dichev (1997), who document that U.S. managers use accounting discretion to avoid reporting small losses. Following Burgstahler and Dichev (1997), Leuz et al. (2003) and Barth et al. (2008), we use the frequency of small positive net income as a proxy for earnings management. The notion is that managers avoid reporting losses by reporting small positive net income. Accordingly, we use an indicator variable for loss avoidance (*LOSS_AVOID*) that takes 1 if net income scaled by lagged total assets is between 0 and 0.01 for each given year, and 0 otherwise (Leventis and Dimitropoulos 2012; Abdelsalam et al. 2016). Our first model of earnings management utilises *LOSS_AVOID* as a dependent variable in a logit regression specified as:

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[9]The final sample countries include Bahrain, Bangladesh, Egypt, Indonesia, Jordan, Kuwait, Malaysia, Oman, Pakistan, Palestine, Qatar, Saudi Arabia, Turkey, and United Arab Emirates.

$$LOSS\_AVOID_{it} = a_0 + a_1IG_{it} + a_2IB_i + \gamma\ Control_{it} + \varepsilon_{it} \tag{1}$$

Where, IG_{it} represents vector of internal governance variables, IB_i is an indicator variable taking 1 if the bank is Islamic, and 0 otherwise, $Control_{it}$ is a vector of control variables, and ε_{it} is an error term. A significant and negative coefficient on *IG* indicates that banks with effective internal governance report small positive income to avoid losses less frequently and are less likely to engage in earnings management.

The second model to measure earnings management practices in both bank types is based on the use of loan loss provisions (*LLP*) and realised securities gains and losses (*RSGL*) to manage banks' earnings. Prior studies have found that CBs use *LLP* to significantly manage their earnings (Scheiner 1981). Also, Kanagaretnam et al. (2003) suggest that managers' use of *LLP* to manage reported earnings is motivated by opportunistic reasons (i.e. to reduce job security concerns) as well as efficiency reasons (i.e. to reduce the cost of borrowing). Similar conclusions are drawn from studies using Japanese banks (Shrieves and Dahl 2003), Spanish banks (Anandarajan et al. 2003), and Australian banks (Anandarajan et al. 2007). Moreover, global banking studies have documented the use of *LLP* to manage earnings in several countries (Leventis et al. 2011). Although prior studies provide inconclusive evidence for the use of LLP in earnings management (see Ismail and Be Lay 2002; Zoubi and Al-Khazali 2007; Taktak et al. 2010), LLP remains as the primary tool used by bank managers to manage and smooth earnings (Cornett et al. 2009; Abdelsalam et al. 2016; Elnahass et al. 2018).

In addition to the use of *LLP* to manage earnings, the prior literature shows that banks' earnings can be managed through *RSGL* (Beatty and Harris 1999; Beatty et al. 2002; Cornett et al. 2009; Leventis and Dimitropoulos 2012). This evidence has also been extended to Islamic banks (Abdelsalam et al. 2016), as there are no specific restrictions for securities' gains and losses within Shari'ah law. Both *LLP* and *RSGL* combine a non-discretionary component and a discretionary component (Cornett et al. 2009). Accordingly, we define an additional measure of earnings management based on estimating the discretionary part of *LLP*. The focus on a single accrual is explained by the fact that *LLP* is large and explains much of the variability in total accruals. In addition, a measure of a specific discretionary accrual account results in less subjectivity in measurement issues than an aggregate accrual measure (Beatty and Liao 2014). However, there is a lack of consensus in the literature on how to best model discretionary provisions. Accordingly, we follow (Beatty et al. 2002; Cornett et al. 2009; Abdelsalam et al. 2016) to calculate the discretionary part of *LLP* through the following fixed-effect model:

$$LOSS_{it} = a_t + b_1LnTA_{it} + b_2NPL_{it} + b_3LLR_{it} + b_4LOANR_{it} + b_5LOANC_{it} + b_6LOANI_{it} \\ + \varepsilon_{it} \tag{a}$$

Where, $LOSS_{it}$ is the ratio of loan loss provisions to total loans, $LnTA_{it}$ is the natural logarithm of total assets, NPL_{it} is the ratio of nonperforming loans to total loans, LLR_{it} is the ratio of loan loss reserves to total loans, $LOANR_{it}$ is the ratio of real estate loans to total loans, $LOANC_{it}$ is the

ratio of commercial and industrial loans to total loans, $LOANI_{it}$ is the ratio of consumer and instalment loans to total loans, and ε_{it} is an error term.

The discretionary part of *LLP* (*DLLP*) is the error term from this regression. We standardise the error term by total assets, and define our measure of *DLLP* as:

$$DLLP_{it} = (\varepsilon_{it} \times LOANS_{it})/ ASSETS_{it} \qquad (b)$$

Where, $LOANS_{it}$ is defined as the total loans while $ASSETS_{it}$ is the total assets.

To estimate the discretionary part of *RSGL*, we estimate the following fixed-effect model (Cornett et al. 2009; Leventis and Dimitropoulos 2012):

$$RSGL_{it} = a_t + b_1 LnTA_{it} + b_2 URSGL_{it} + \varepsilon_{it} \qquad (c)$$

Where, $RSGL_{it}$ is the realised security gains and losses as a ratio of total assets, $URSGL_{it}$ is the unrealised security gains and losses as a ratio of total assets, and ε_{it}

The error term from the regression above is the discretionary component of realised security gains and losses (*DRSGL*). The estimated measure of earnings management is defined as the difference between the discretionary component of *RSGL* and the discretionary component of *LLP* which is specified as:

$$EM_{it} = DRSGL_{it} - DLLP_{it} \qquad (d)$$

This leads to our second model for earnings management estimated using random-effect estimation[10], based on the results from the Hausman Test that are reported in Table 4, and specified as follows:

$$EM_{it} = a_0 + a_1 IG_{it} + a_2 IB_i + \gamma\ Control_{it} + \varepsilon_{it} \qquad (2)$$

We predict that higher levels of earnings management correspond to understating *LLP* and overstating *RSGL*. Accordingly, a significant and negative coefficient on *IG* is expected, suggesting that banks with effective internal governance are less likely to manage their earnings through *LLP* and/or *RSGL*.

Our third model for measuring earnings management is based on the magnitude of discretionary accruals[11] (*DACC*). Our measure of *DACC* is estimated from a variation of the Jones (1991) model, developed by Yasuda et al. (2004). This model adjusts for firm-specific factors in banking institutions and has been used in the banking literature (Leventis and Dimitropoulos 2012;

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[10] We use random-effect estimation as corporate governance variables (board of directors and audit committee characteristics) do not vary much over time. Hence, using fixed-effect estimations would result in a massive loss of the degrees of freedom (Baltagi 2005; Mollah and Zaman 2015).

[11] Accruals are widely used as a proxy for earnings management (Becker et al. 1998; Bédard et al. 2004; Lai et al. 2016), as they aggregate the net effect of all accounting choices into a single measure (Watts and Zimmerman 1990).

Abdelsalam et al. 2016). To obtain the discretionary component of total accruals, we follow Yasuda et al. (2004) and estimate the following regression model:

$$ACCR_t / TA_{t-1} = a_1 (1 / TA_{t-1}) + a_2 (\Delta OI_t / TA_{t-1}) + a_3 (PPE_t / TA_{t-1}) + \varepsilon_t \quad (e)$$

Where, $ACCR_t$ is the total accruals calculated as the difference between net income and operating cash flows, TA_{t-1} is lagged value of total assets, ΔOI_t is the change in operating income between t − 1 to t, PPE_t is the bank's property, plant, and equipment and ε_t is the error term.

To reduce heteroscedasticity, we deflate all variables, including the intercept in the above model, by lagged total assets (Jones 1991). We define the residuals from equation (e) as $DACC$, which is introduced as the dependent variable in the following regression model estimated using random-effect:

$$DACC_{it} = a_0 + a_1 IG_{it} + a_2 IB_i + \gamma \, Control_{it} + e_{it} \quad (3)$$

Discretionary accruals are viewed as an inverse measure of earnings quality (i.e. higher discretionary accruals reduce earnings quality). Accordingly, a significant and negative coefficient on IG is predicted, indicating that banks with effective internal governance report lower discretionary accruals and hence have higher financial reporting quality.

5.2 Internal governance measures

We follow prior studies to measure traditional internal governance mechanisms (i.e. the board of directors and audit committee) represented by their size and independence (e.g. Dimitropoulos and Asteriou 2010) within the two banking sectors. We define the board size (*BODSIZE*) as the total absolute number of board members and the board independence (*BODINDEP*) as the ratio of independent members over the total number of board members.

We define the audit committee size (*ACSIZE*) as the total absolute number of audit committee members. We also measure audit committee independence (*ACINDEP*) as the ratio of independent audit committee members over the total number of members in the audit committee (Habbash et al. 2013; He and Yang 2014). In line with our first two hypotheses, we maintain non-directional expectations for the coefficients on both *BODSIZE* and *ACSIZE*. Consistent with hypotheses H_{2a} and H_{2b}, we expect negative coefficients on the *BODINDEP* and *ACINDEP*.

For the influence of an additional governance mechanism (i.e., the SSB) on IBs earnings management practices, we identify three characteristics of the SSB: size, financial qualification, and multiple memberships. First, the SSB size (*SSBSIZE*) is measured as the total absolute number of SSB members (Farook et al. 2011; Mollah and Zaman 2015; Almutairi and Quttainah, 2017). Second, in line with Farook et al. (2011), we also test for the effect of financial qualification of SSB members (*SSBQUAL*). This variable is defined as the ratio of SSB members with financial/accounting qualification (undergraduate or postgraduate degree in finance, accounting, or Islamic finance) over the total number of SSB members. Finally, SSB multiple memberships (*SSBMM*) is defined as the ratio of SSB members with multiple memberships over the total number of SSB members. Following (Elnahass et al. 2020a; Trinh et al. 2020), we define a member with

multiple memberships as a member serving on at least three boards. Consistent with H_3, we predict negative coefficients on all SSB variables.

We additionally control for various bank-specific and country-level factors that may explain variations in the earnings management models. Prior studies have demonstrated that CEO duality impedes effective monitoring and could be linked to higher managerial opportunism (Dechow et al. 1996; Klein 2002). Therefore, we control for the effect of CEO duality by introducing an indicator variable (*CEODUAL*), taking 1 if the CEO is also the chairman of the board and 0 otherwise. We also control for banks' earnings performance through earnings before taxes (*EBT*). If income smoothing is an important determinant (Anandarajan et al. 2007). We further control for the leverage (*LEV*), measured as the ratio of total debt to equity (Chang and Sun 2009).

We also control for the bank age (*AGE*), measured as the natural logarithm of the number of years the bank has operated in the country (Elnahass et al. 2020a). Furthermore, we control for the bank size (*BANK SIZE*) measured as the natural logarithm of the total year-end assets. We also control for financial performance using net cash flows (*CFO*) from operating activities deflated by average total assets (average total assets recorded at the end of the current year and preceding year; Becker et al. 1998). We also control for the banks' investment and growth opportunities which might affect the magnitude of discretionary accruals (Lai 2009). We measure growth opportunities (*GRW*) as the ratio of market-to-book value of equity (Cornett et al. 2009). To control for the external audit quality, we introduce an indicator variable (*BIG4*), which takes a value of 1 if the bank's auditor is a Big Four and 0 otherwise. Earnings management is likely to be tempered in companies audited by a highly reputable audit firm (Kanagaretnam et al. 2010). Furthermore, we address the role of ownership structure in banks earnings management by controlling for government ownership (*GOV_OWN*), measured as the proportion of shares held by the government (Abdelsalam et al. 2016, 2020). Moreover, because our sample period encounters the financial crisis of 2007-2008, we control for the effect of this exogenous shock by including an indicator variable (*CRISIS),* which takes a value of 1 for the years 2007 and 2008, and 0 otherwise (Elnahass et al, 2018; Abdelsalam et al. 2021). Regarding the country-level factors, we control for the *GDP* annual growth rate to adjust for the impact of the macroeconomic cycle (Kanagaretnam et al. 2015; Elnahass et al. 2020b). To capture between-country differences in governance perceptions, we follow Čihák and Hesse (2010) and Tinh et al. (2020) to introduce a country governance index (*COUNTRY_GOV*). This variable is measured as the average of six governance measures – control for corruption, government effectiveness, political stability, regulatory quality, the rule of law, and voice and accountability. Finally, following Elnahass et al. (2018), we use an indicator variable (i.e., *AAOIFI*)[12] to control for financial reporting regulatory differences across IBs we use an indicator variable for the type financial reporting standards applied. This variable takes a value of 1 if an IB is located in Bahrain, Jordan, or Qatar and applies the Accounting and Auditing Organization for Islamic Financial Institutions (AAOIFI), and 0 for an IB located in another countries which adopt IFRS.

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[12]The AAOIFI is a standard-setting body for Islamic financial institutions in accounting, auditing, ethics, and governance. AAOIFI is supported by nearly 200 members from 40 countries, including central banks. AAOIFI has issued a total of 88 standards comprising 26 accountability standards, 5 auditing standards, 7 governance standards, 2 ethics standards and 48 Shariah standards (see Elnahass et al. 2018).

6. Results

6.1 Descriptive statistics

Table 2 reports the descriptive statistics for the full sample (Panel A), the conventional banks' subsample (Panel B), and the Islamic banks' subsample (Panel C). We also present the mean differences *t*-test, comparing means for CB and IB subsamples.

For the dependent variables, we find that for CBs (IBs), the mean LOSS_AVOID is 0.296 (0.288), EM is 0.002 (0.001), and DACC is -0.037 (-0.120), respectively. These results are comparable to those of Abdelsalam et al. (2016), who report similar LOSS_AVOID of 0.356 (0.264), EM of 0.002 (0.001), and DACC of -0.041 (-0.039) for CBs and (IBs), respectively. These results indicate that IBs have lower mean values across the three measures of earnings management relative to CBs. Reported *t*-tests show a significant difference in the third measure (i.e. DACC), implying that IBs are less likely to manage their earnings through discretionary accruals relative to CBs. Regarding the internal governance variables, we find that for CBs (IBs), the mean board of directors' size (BODSIZE) is 9.477 (10.015), board's independence (BODINDEP) is 0.367 (0.371), audit committee size (ACSIZE) is 3.686 (3.550), and audit committee independence (ACINDEP) is 0.538 (0.532), respectively.

According to the mean comparison test, significant differences exist between the two subsamples for BODSIZE only. These results indicate that IBs have a significantly larger board size compared with their conventional counterparts. For bank-specific variables, CBs have a significantly higher average for EBT of 0.020 than IBs (i.e. 0.014). Results also show that, compared with CBs, IBs are less leveraged, younger in age, smaller in size, and hold lower cash flows which might be attributable to the restrictions on their liquidity management. We also find that a Big Four audit firm audits 83.5% of the IBs on average. This high percentage might be explained by the unique structure of the Islamic banking activities and their complex banking model, which may require high-quality risk assessments and auditing by the Big Four.

For the Shari'ah governance indicators within IBs, we find that the mean of SSBSIZE is 4.442. This finding is comparable to that of Mollah and Zaman (2015), who report a similar mean size of 4.171. The mean of SSB financial qualification (SSBQUAL) is 29%, indicating the relatively low percentage of financially qualified Shari'ah scholars dominating our sample. This result is consistent with the findings of Trinh et al. (2020), identifying the scarcity of financially experienced Shari'ah scholars worldwide. Finally, the SSB multiple membership's rate is relatively high (63%), which can be explained by both the popularity and the scarcity of experts in Shari'ah legitimacy on a global basis (Elnahass et al. 2020a).

[Insert Table 2 here]

Table 3 presents the Pearson correlation coefficients for the full sample. The traditional internal governance mechanisms (i.e. BODSIZE, BODINDEP, ACSIZE, and ACINDEP) show significant and negative correlations with the two earnings management models, LOSS_AVOID and EM. The Shari'ah governance indicators (SSBSIZE, SSBQUAL, and SSBMM) report significant and negative correlations with the second earnings management model (EM). These results provide some preliminary insights into the role of effective governance in mitigating opportunistic

managerial behaviour. All other correlations are in line with expectations, and the matrix of the correlation coefficients affirms that multicollinearity does not appear to be a serious statistical problem[13], except for the independence of the board of directors and AC (BODINDEP and ACINDEP), which have a significant positive correlation (73%).

Therefore, in an attempt to mitigate the problem of collinearity between the BODINDEP and ACINDEP, we examine the individual effect of board and audit committee characteristics on earnings management separately (i.e. across separate regression estimations).

[Insert Table 3 here]

6.2 Empirical results

6.2.1 Tests for the traditional governance mechanisms: Full sample

Table 4 reports the results from examining the effect of traditional internal governance mechanisms in mitigating earnings management practices for the full sample, using the three models of earnings management (*LOSS_AVOID, EM*, and *DACC*). These models are estimated separately for the board and audit committee characteristics. Columns 1-3 report the results for board characteristics, while columns 4-6 present the results for the audit committee. Results show that the board of directors' size (*BODSIZE*) coefficient is consistently significant and negative across all three earnings management models (i.e., *LOSS_AVOID, EM*, and *DACC*). These results suggest that banks with larger boards tend to avoid reporting losses less frequently than banks with smaller boards. Moreover, these banks are, on average, less likely to manage their earnings through either *LLP* or *RSGL*. Banks with large boards also appear not to use discretionary accruals (*DACC*) to manage their earnings. These findings suggest that a large board enhances bank's financial reporting quality, which benefits from the members' knowledge and expertise in mitigating accounting opportunism (Xie et al. 2003).

The boards' independence (*BODINDEP*) variable also shows statistically significant and negative associations across the three earnings management models, suggesting lower earnings management practices for banks employing independent boards. These findings support are in line with the agency theory that independent directors enhance monitoring and can restrain opportunistic behaviour (Fama and Jensen 1983; Klein 2002).

We find that the audit committee size (*ACSIZE*) coefficient is significantly and negatively associated under the three earnings management models. These findings suggest that large audit committees are associated with lower levels of earnings management. Large audit committees appear to increase the committee's effectiveness by including members with varied expertise and consequently promote higher financial reporting quality for their banks (Bédard et al. 2004; Zalata et al. 2018). For the audit committee independence (*ACINDEP*), results show that greater audit committee independence is associated with lower levels of earnings management, with significant and negative coefficients across the three measures of earnings management. These results support prior studies suggesting that independent audit committees can effectively lessen earnings

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[13] In addition to the Pearson correlation coefficient analysis, we also calculate variance inflation factors (VIF). Results of VIF tests indicate that no predictor variable produces a VIF greater than 10. These results confirm that multicollinearity is not a problem.

management activities through effective monitoring (Klein 2002; Vafeas 2005; Chang and Sun 2009; Chen and Zhang 2014).

Regarding the control variables, the coefficient on the leverage variable (*LEV*) is positive and significant under both the *LOSS_AVOID* and *EM* models (in columns 1-2 and 4-5). This outcome is consistent with the debt covenant hypothesis, suggesting that managers in highly leveraged firms tend to manage reported earnings to reduce the probability of covenant violation in debt contracts. Results also show that the banks' age (*AGE*) is significantly negative in the third earnings management model (*DACC*), in columns 3 and 6. The bank's size (*BANK SIZE*) has a significant and negative association with *LOSS_AVOID* (in columns 1, 4 and 6), suggesting that larger banks are less likely to manage their earnings relative to smaller banks (Cornett et al. 2009; Leventis and Dimitropoulos 2012). For the macroeconomic effect of *GDP*, we find a positive and significant association under both the *EM* and *DACC* models (in columns 2, 5 and 6). Finally, the coefficient on the Islamic bank dummy variable (*IB*) is negative and significant in the *EM* and *DACC* models (columns 3, 5 and 6), indicating that IBs are less likely to manage their earnings through *LLP* and *RSGL*, and report significantly lower discretionary accruals relative to their conventional counterparts. These results confirm our initial expectation and are consistent with that of Elnahass et al. (2014, 2018).

The overall results confirm our predictions under the main first and second hypotheses indicating that large board and audit committee are negatively associated with earnings management. The large and independent boards of directors (and audit committees) are more likely to include members with diversified experience and extended networks who can challenge managers' opportunistic practices and improve earnings quality for their banks.

[Insert Table 4 here]

6.2.2 Tests for the traditional governance mechanisms: conventional banks

We clustered the full sample into two sub-samples (i.e. Islamic and conventional banks subsamples). Table 5 reports the results for CBs, while Table 6 presents the results for IBs. For both sub-samples, we re-estimate the same baseline models of earnings management (i.e., *LOSS_AVOID*, *EM*, and *DACC*) by employing separate regressions for board characteristics (in columns 1-3) and audit committee characteristics (in columns 4-6). In Table 5, the board of directors' influence shows that CBs with large and independent boards are consistently less likely to manage their earnings. The two variables (*BODSIZE* and *BODINDEP*) show significant and negative coefficients under all earnings management models. For the effect of audit committees on earnings management, we find that both the coefficients on *ACSIZE* and *ACINDEP* are negatively associated with the three models of earnings management. These findings suggest that larger and more independent audit committees can significantly mitigate opportunistic managerial behaviour within CBs. The results highlight the substantial importance of traditional internal governance mechanisms in restraining managerial opportunism for CBs. These findings are consistent with both the agency theory and prior studies (see Hoitash et al. 2009; Chen and Zhang et al. 2014; Zalata et al. 2018).

For control variables, results show (in columns 2 and 5) a significant and positive association between earnings before taxes (*EBT*) and the second measure of earnings management (*EM*). This result indicates that CBs tend to significantly understate discretionary LLP and overstate discretionary *RSGL* for income smoothing purposes (Cornett et al. 2009; Leventis and Dimitropoulos 2012). Additionally, the coefficient for leverage (*LEV*) is positively and significantly associated with two models of earnings management (i.e. *LOSS_AVOID* and *EM*) (in columns 1-2 and 4-5), while the *BANK SIZE* shows a negative association with *LOSS_AVOID* (in columns 1 and 4). We also find a significant and negative association between growth opportunities (*GRW*) and *DACC* (in column 6), in line with Leventis and Dimitropoulos (2012). Finally, the *GDP* coefficient is positive and significant under the DACC model (in columns 3 and 6).

[Insert Table 5 here]

6.2.3 Tests for the traditional and non-traditional governance: Islamic banks

Based on the above analyses, we further extend our analyses to examine the possible differential earnings management behaviours between the two bank types and whether such practices can be determined by distinct governance mechanisms (i.e., traditional and non-traditional governance: SSB). The expected influence for religious orientations dominating the Islamic banking business model is also verified through these comparative assessments. For the IBs sub-sample in Table (6), the joint estimates of the board of directors and SSB characteristics on earnings management are presented in columns (1-3). Columns (4-6) report the joint impacts of the audit committee and SSB characteristics. The findings show that the coefficients on large board size (*BODSIZE*) are significantly and negatively associated with *LOSS_AVOID* and *EM* models, while the coefficients on board independent (*BODINDEP*) is negative and significant under the three earnings management models. These results highlight the important role that a large and independent board of directors plays in lowering managerial opportunism within IBs. These findings align with the resource dependence theory (Pfeffer and Salancik 1978; Hillman and Dalziel 2003). Like CBs, large boards in IBs can promote valuable connections and a broad spectrum of expertise, which tends to help the board detect possible discretionary managerial behaviour in IBs. Moreover, results show that IBs with large audit committees are associated with significantly low earnings management practices under the *LOSS_AVOID* model. For *ACINDEP* variable, we find strong evidence of significant and negative effects of having an independent committee in reducing managerial opportunism, particularly across the *LOSS_AVOID* and *DACC* models. These findings suggest that having a large and independent audit committee improves internal monitoring and promotes the varied expertise of committee members for Islamic banks, leading to higher financial reporting quality.

For control variables, the coefficient on earnings before taxes (*EBT*) is insignificant across the three earnings management measures. These results support our predictions for the absence of income smoothing practices in IBs and imply higher quality of earnings in IBs relative to CBs (Abdelsalam et al. 2016; Elnahass et al. 2018). Results also show that leverage (*LEV*) is positively associated with the EM measure (in columns 2 and 5), confirming that highly leveraged IBs tend to manage their earnings more than lower leveraged IBs. Large IBs (*BANK SIZE*) are more likely

to manage their earnings via *LLP* and *RSGL* (column 2). Results also show that the banks' financial performance, measured as cash flows from operating activities (*CFO*), is significant and positively associated with *EM* (column 5). This finding contradicts our initial prediction for the effect of financial performance on earnings management. A plausible explanation for this outcome might be the existence of restrictions on liquidity management in the IBs. The macroeconomic indicator of *GDP* shows a positive and significant association with EM (in columns 2 and 5). Finally, the coefficient on *AAOIFI* is negative and significant in the EM model (column 5), suggesting that IBs following the accounting standards issued by AAOIFI are less likely to engage in earnings management practices (Elnahass et al., 2018).

Taken together, our findings for the two bank types further support our main first and second hypotheses. However, these results indicate no systematic differences among the traditional governance mechanisms within the two bank types. IBs appear to benefit from the presence of the two (traditional) governance mechanisms (i.e. board, audit committees) in mitigating their extended agency problems under their constrained banking model. These findings are inconsistent with the expectations that IBs have higher financial reporting quality and better mitigation for earnings management due to the effectiveness of board and audit committees. Such internal governance mechanisms appear to be equally important for the two bank types to control earnings management.

For our third hypothesis, in Table 6, when examining the incremental influence of the SSB in lowering earnings management within IBs, we find that the coefficient on the (*SSBSIZE*) is highly significant and negative across all models. These findings indicate that the presence of a large SSB mitigates managerial discretion which supports the argument that large SSB, enables its Shari'ah scholars to share their experience and benefit from the diverse knowledge of other scholars (Farook et al. 2011; Abdul Rahman and Bukair 2013). Hence, this should promote effective monitoring of managers' financial reporting practices. The results also show a significant and negative coefficient on *SSBQUAL* for the three earnings management models (i.e., tested jointly with the board of directors) and under the *LOSS_AVOID* and *DACC* models when controlling for the audit committee characteristics. These findings suggest that a financially qualified SSB plays an essential role in deterring earnings management behaviour within IBs. Moreover, we find that the SSB multiple memberships (*SSBMM*) are negatively and significantly related to all the earnings management models except the *EM* model under the audit committee joint test. This provides strong evidence that Shari'ah scholars holding multiple memberships across several banks can promote extended business networking and knowledge exchange (Elnahass et al. 2020a; Trinh et al. 2020), contributing to significant risk mitigation like discretionary managerial acts.

The overall findings presented for SSB indicate that, even when having effective monitoring via boards of directors and audit committees, strong Shari'ah governance can still promote substantial restrictions on opportunistic behaviour of IBs managers, which support our third hypothesis. A large SSB with financially qualified and highly reputable Shari'ah scholars is likely to promote higher financial reporting quality for this banking sector. The impact of Islamic social norms on lowering managerial opportunism seems to be more visible through effective Shari'ah monitoring than other traditional governance mechanisms (i.e., board and audit committee's members). These results suggest that higher financial reporting in IBs can be explained by such double governance, unlike their conventional counterparts.

[Insert Table 6 here]

6.3 Additional tests and sensitivity checks

We run additional tests to assess the validity of the findings. First, the definitions of several internal governance variables are changed. The size of the board of directors (*BODSIZE*), the size of the audit committee (*ACSIZE*), and the size of the Shari'ah supervisory board (*SSBSIZE*) are all replaced with dummy variables, taking 1 if the board/committee is larger than the sample mean, and 0 otherwise. Instead of defining the Shari'ah supervisory board financial qualification (*SSBQUAL*) as a ratio variable, a dummy variable is introduced that takes 1 if there is at least one Shari'ah scholar with financial qualification and 0 otherwise. In addition, the Shari'ah supervisory board multiple memberships (*SSBMM*) is replaced with a dummy variable that takes 1 if at least 50% of the Shari'ah scholars hold multiple memberships and 0 otherwise. The models are re-estimated using the newly defined variables. The results are reported in Tables 7a for the full sample and in Table 7b for the Islamic banks sub-sample. The reported results show that the change in the definitions of some governance variables does not significantly change the main findings.

[Insert Tables 7a & 7b here]

Second, additional tests examine whether the activity of the board of directors and audit committee influence the extent of earnings management practices. Prior studies suggest that active boards of directors and audit committees are better able to constrain opportunistic earnings management (Xie et al., 2003; Elnahass et al. 2020a). Consequently, the main models are extended to control for the effect of the board of directors (*BODMEET*) and audit committees' activity (*ACMEET*), which is measured by the number of meetings held in a year. The results reported in Table 8 show that the frequency of meetings of the board of directors and audit committees is an insignificant determinant of the three measures of earnings management.

[Insert Table 8 here]

Third, as some market microstructure factors might also affect earnings management practices in banks, additional test examines the effect of market capitalization and stock prices volatility on earnings management in banks. The main models are extended to control for the effect of market capitalization (MCAP) and stock prices volatility (STOCK VOL). Market capitalization is the natural logarithm form of the bank's market capitalisation which is measured by stock price per share multiplied by the number of outstanding shares, deflated by average total assets (Elnahass et al., 2020b) and stock prices volatility is calculated as the standard deviation of annual bank's stock returns (Larrain, 2006). The results reported in Table 9 show that stock prices volatility has insignificant relation to earnings management measures, while results show marginally significant negative association between market capitalization and earnings management for our sampled banks.

[Insert Table 9 here]

Fourth, as the main results presented in Table 6 show a negative association between Shari'ah scholars' multiple memberships to all the earnings management models except the EM model, an additional test investigates whether this relationship is non-linear. This is tested using the squared term of Shari'ah supervisory board multiple memberships variable ($SSBMM^2$). The results reported in Table 10 show a negative coefficient on SSBMM variable (in column 3), while the coefficient on the squared term is positive. Hence, this result suggests that the multiple memberships held by Shari'ah scholars have a non-linear relationship with earnings management in Islamic banks. In other words, as Shari'ah scholars get busier due to extended multiple memberships in several banks, their ability to monitor banks' activities effectively and to mitigate opportunistic earnings management. These findings are in line with Trinh et al. (2020).

Finally, the relationship between internal governance mechanisms and earnings management may be influenced by endogeneity issues possibly emanating from the selection bias. We address this possible endogeneity concern by using the propensity score matching (PSM) estimates for the entire sample, in order to examine whether differences in earnings management practices of the two bank types are driven by differences in sample size. To do so, we follow Elnahass et al. (2020a, 2021) and Trinh et al. (2020) approach for PSM. We identify a control group of banks (conventional banks which exhibit no observable differences in characteristics of board and audit committee relative to Islamic banks) and the treatment group (Islamic banks). Therefore, the main purpose of matching banks from control and treatment groups is to ensure that each pair of matched banks is virtually indistinguishable from one another except for the function of bank type. Accordingly, we utilise our Islamic banks (IB) dummy variable (i.e. takes the value of 1 for Islamic banks and 0 otherwise) in order to match observations of banks based on the probability that they are Islamic. A logit model is estimated to regress the IB dummy on all the control variables used in the main models. Three different matching methods are employed; K-nearest neighbors with n=2 and n=5; Kernel matching; and radius matching. The results in Table 11 indicate that no significant differences exist to the main findings, which confirms that the mitigated earnings management practices in Islamic banks are stemmed from the additional governance mechanisms employed by these banks.

[Insert Tables 10 & 11 here]

7. Conclusion

The dominance of ethical and religious norms in organizations has gained substantial attractions nowadays. Religiosity plays a catalytic role in determining both the judgments and intentions of individuals and shaping choices and corporate decisions. While prior literature has examined the impact of social norms on the quality of financial reporting within contexts where Christian values are influential, we bring to the fore contexts where Islamic values predominate, illuminating the role of religious norms in accountability and transparency. The impact of the banking sector in the economic realm, the ramifications of specific activities and the overarching repercussions may give rise to severe social criticism, especially in highly religious contexts like Islamic banking. A structured investigation of the joint effective governance instruments on mitigating earnings

management still lacks particularly when comparing Islamic and conventional banks. This study seeks to bridge the gap in the existing literature by studying the combined effect of different internal governance mechanisms, both traditional (i.e., board of directors and audit committees) and non-traditional (i.e., Shari'ah supervisory board).

For a global sample of listed banks, our main findings show that effective traditional governance by both large and independent boards of directors and audit committees is associated with reduced levels of earnings management on average and consistently across the two bank types. These results support our study hypothesis but highlight the absence of significant differences between the two bank types for the impact of traditional governance mechanism in banking. Such traditional internal governance mechanisms similarly perform effective roles to mitigate managerial opportunism within Islamic and conventional banks. This finding suggests that unique institutional factors within Islamic banks are not prevailing in the standard banking governance system like board and audit committees. These findings imply that higher financial reporting (i.e., significantly low earnings management practices) in Islamic banking, as compared to conventional banking, cannot be explained solely by the effectiveness of traditional internal governance mechanism. When examining the cumulative effect of having an extended layer of governance within Islamic banks through the Shari'ah supervisory board, we find that having a large SSB, financial-qualified SSB members, and Shari'ah scholars serving on multiple boards can additionally mitigate earnings management in Islamic banks. This finding suggests that an effective Shari'ah supervisory board (SSB) can further promote financial reporting quality within Islamic banking, in addition to their traditional internal governance mechanisms.

The evidence presented is among the first attempts in global banking literature comparing Islamic and conventional banking business models while addressing the effect of different systems of governance. We utilised a unique set of international data for countries operating on dual banking systems to examine theoretical arguments questioning why Islamic banks are associated with significantly lower earning management practices when compared to their conventional counterparts. We present new insights for one of the ultimate reasons that explain high financial reporting in Islamic banks, unlike their conventional counterparts; SSB members who sit on board to scrutinise and monitor the bank's operations regularly.

The findings in this study provide valuable insights for regulators, investors, auditors and other market participants. We provide strong evidence that both traditional and non-traditional internal governance mechanisms are important for our sampled banks. Regulators working to support dual banking systems need to shape and guide the composition of additional boards like SSB in Islamic banks (i.e., their financial expertise and multiple directorships). Such a double governance mechanism could be particularly crucial for investors and regulators calling for broader adoption of ethical finance and policymakers and stakeholders who recognise the influence of ethical conduct on banking stability.

Furthermore, regulators need to continuously reflect on religiosity and ethical finance in shaping financial reporting practices within banking. Investors and other market participants should consider corporate business orientations for their firms (i.e., being ethically or religiously oriented) and nature/structure of the instruments recruited to support these business orientations.

Such issues are likely to encounter investors' sentiments, stock market valuations and investment choices (see, e.g., Al-Khazali et al. 2017; Elnahass et al. 2020a,b). Overall, the evidence presented in this calls for a better understanding of institutional factors encountering different bank types, the relevance of different internal governance systems alongside the nature of the banking business model employed (i.e., whether additional motives like ethics and religiosity drive it). We invite future research to consider extending this study to specifically evaluate other internal governance mechanisms such as the effect of risk committees' effectiveness, blockholding and institutional ownership for both types of banks.

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References

AOIFI. (2015). *Governance standard for IFIs No. 1, Shari'ah supervisory board.*

Abbott, L. J., Parker, S., & Peters, G. F. (2004). Audit committee characteristics and restatements. *Auditing: A Journal of Practice & Theory*, *23*(1), 69-87.

Abdelsalam, O., Dimitropoulos, P., Elnahass, M., & Leventis, S. (2016). Earnings management behaviors under different monitoring mechanisms: The case of Islamic and conventional banks. *Journal of Economic behavior & Organization, 132*, 155-173.

Abdelsalam, O., Elnahass, M., Ahmed, H., and Williams, J. (2020). Asset securitizations and bank stability: evidence from different banking systems. *Global finance journal*. https://doi.org/10.1016/j.gfj.2020.100551

Abdelsalam, O., Elnahass, M., Batten, J. A., & Mollah, S. (2021). New insights into bank asset securitization: The impact of religiosity. Journal of Financial Stability, 54, 100854. DOI: https://doi.org/10.1016/j.jfs.2021.100854

Abdul Rahman, A. and Bukair, A. (2013). The influence of the Shariah supervision board on corporate social responsibility disclosure by Islamic banks of Gulf Co-Operation Council countries. *Asian Journal of Business and Accounting,* 6(2), 65-104.

Abed, S., Al-Attar, A., and Suwaidan, M. (2012). Corporate governance and earnings management: Jordanian evidence. *International Business Research,* 5(1), 216-225.

Abu-Tapanjeh, A. M. (2009). Corporate governance from the Islamic perspective: A comparative analysis with OECD principles. *Critical Perspectives on Accounting, 20*(5), 556-567.

Akerlof, G. A. (1980). A theory of social custom, of which unemployment may be one consequence. *The Quarterly Journal of Economics, 94*(4), 749-775.

Al-Khazali, O., Bouri, E., Roubaud, D., & Zoubi, T. (2017). The impact of religious practice on stock returns and volatility. *International Review of Financial Analysis*, 52, 172-189.

Almutairi, A. R., & Quttainah, M. A. (2017). Corporate governance: evidence from Islamic banks. *Social Responsibility Journal*, *13*(3), 601-624.

Anandarajan, A., Hasan, I., & Lozano-Vivas, A. (2003). The role of loan loss provisions in earnings management, capital management, and signaling: The Spanish experience. *Advances in International Accounting*, *16*, 45-65.

Anandarajan, A., Hasan, I., & McCarthy, C. (2007). Use of loan loss provisions for capital, earnings management and signalling by Australian banks. *Accounting and Finance, 47*(3), 357-379.

Arellano, M. and Bover, O. (1995). Another look at the instrumental variables estimation of error components models. *Journal of Econometrics*, 68(1), 29-51.

Ariss, R. T., & Sarieddine, Y. (2007). Challenges in implementing capital adequacy guidelines to Islamic banks, *Journal of Banking Regulation,* 9 (1), 46-59.

Arnold, B., & De Lange, P. (2004). Enron: an examination of agency problems. *Critical Perspectives on Accounting*, *15*(6), 751-765.

Baltagi, B. (2005). *Econometric analysis of panel data.* John Wiley and Sons, Chichester.

Barth, M. E., Landsman, W. R., & Lang, M. H. (2008). International accounting standards and accounting quality. *Journal of Accounting Research*, *46*(3), 467-498.

Basel Committee on Banking Supervision (BCBS). (2006). *Enhancing corporate governance for banking organisations.* Basel, Switzerland.

Baxter, P., & Cotter, J. (2009). Audit committees and earnings quality. *Accounting & Finance, 49*(2), 267-290.

Beasley, M. S. (1996). An empirical analysis of the relation between the board of director composition and financial statement fraud. *The Accounting Review*, 443-465.

Beasley, M.S., Carcello, J.V., Hermanson, D.R., & Neal, T.L. (2009). The Audit committee oversight process. *Contemporary Accounting Research*, 26(1), 65-122.

Beatty, A., & Harris, D. G. (1999). The effects of taxes, agency costs and information asymmetry on earnings management: A comparison of public and private firms. *Review of Accounting Studies*, *4*(3), 299-326.

Beatty, A. L., Ke, B., & Petroni, K. R. (2002). Earnings management to avoid earnings declines across publicly and privately held banks. *The Accounting Review*, *77*(3), 547-570.

Beatty, A., & Liao, S. (2014). Financial accounting in the banking industry: A review of the empirical literature. *Journal of Accounting and Economics, 58*(2-3), 339-383.

Beck, T., Demirgüç-Kunt, A., & Merrouche, O. (2013). Islamic vs. conventional banking: Business model, efficiency and stability. *Journal of Banking & Finance*, *37*(2), 433-447.

Becker, C., DeFond, M., Jiambalvo, J., & Subramanyam, K. R. (1998). The effects of audit quality on earnings management. *Contemporary Accounting Research, 15*(1), 1-24.

Bédard, J., Chtourou, S. M., & Courteau, L. (2004). The effect of audit committee expertise, independence, and activity on aggressive earnings management. *Auditing: A Journal of Practice & Theory, 23*(2), 13-35.

Belal, A., Abdelsalam, O., and Nizamee, S. (2015). Ethical reporting in Islami Bank Bangladesh Limited (1983-2010). *Journal of Business Ethics,* 129(4), 769-784.

Blundell, R. and Bond, S. (1998). Initial conditions and moment restrictions in dynamic panel data models. *Journal of Econometrics*, 87(1), 115-143.

Bosse, D., & Phillips, R. (2016). Agency theory and bounded self-interest. *Academy of Management Review, 41*, 276-297.

Brennan, N. (2006). Boards of directors and firm performance: is there an expectations gap? *Corporate Governance: An International Review*, *14*(6), 577-593.

Brennan, N. M., Kirwan, C. E., & Redmond, J. (2016). Accountability processes in boardrooms. *Accounting, Auditing & Accountability Journal* 29 (1): 135-164.

Burgstahler, D., & Dichev, I. (1997). Earnings management to avoid earnings decreases and losses. *Journal of Accounting and Economics*, *24*(1), 99-126.

Callen, J. L., Morel, M., & Richardson, G. (2011). Do culture and religion mitigate earnings management? Evidence from a cross-country analysis. *International Journal of Disclosure and Governance, 8*(2), 103-121.

Callen, J. L., & Fang, X. (2015). Religion and stock price crash risk. *Journal of Financial and Quantitative Analysis*, *50*(1-2), 169-195.

Cerbioni, F., & Parbonetti, A. (2007). Exploring the effects of corporate governance on intellectual capital disclosure: an analysis of European biotechnology companies. *European Accounting Review, 16*(4), 791-826.

Chambers, A., & Weight, C. (2008). Corporate governance handbook. West Sussex: Tottel Publishing.

Chang, J. C., & Sun, H. L. (2009). Crossed-listed foreign firms' earnings informativeness, earnings management and disclosures of corporate governance information under SOX. *The International Journal of Accounting*, *44*(1), 1-32.

Chen, H., Chen, J., Lobo, G., and Wang, Y. (2010). Effect of audit quality on earnings management and cost of equity capital: Evidence from China. *Contemporary Accounting Research,* 28(3), 892-925.

Chen, C., Gotti, G., Kang, T., & Wolfe, M. C. (2016). Corporate codes of ethics, national culture, and earnings discretion: International evidence. *Journal of Business Ethics*, 1-23.

Chen, J. J., & Zhang, H. (2014). The impact of the corporate governance code on earnings management – Evidence from Chinese listed companies. *European Financial Management, 20*(3), 596-632.

Čihák, M. and Hesse, H. (2010). Islamic banks and financial stability: An empirical analysis. *Journal of Financial Services Research,* 38(2-3), 95-113.

Cohen, J. R., Holder-Webb, L., Sharp, D. J., & Pant, L. W. (2007). The effects of perceived fairness on opportunistic behavior. *Contemporary Accounting Research, 24*(4), 1119-1138.

Cornett, M. M., McNutt, J. J., & Tehranian, H. (2009). Corporate governance and earnings management at large US bank holding companies. *Journal of Corporate Finance*, *15*(4), 412-430.

Davidson, B. I., & Stevens, D. E. (2012). Can a code of ethics improve manager behavior and investor confidence? An Experimental study. *The Accounting Review, 88*(1), 51-74.

Dechow, P. M., Sloan, R. G., & Sweeney, A. P. (1996). Causes and consequences of earnings manipulation: An analysis of firms subject to enforcement actions by the SEC. *Contemporary Accounting Research, 13*(1), 1-36.

Dimitropoulos, P. E., & Asteriou, D. (2010). The effect of board composition on the informativeness and quality of annual earnings: Empirical evidence from Greece. *Research in International Business and Finance*, *24*(2), 190-205.

Dyreng, S., Mayew, W., & Williams, C. (2012). Religious social norms and corporate financial reporting. *Journal of Business Finance and Accounting, 39*(7), 845-875.

Elnahass, M., Izzeldin, M., & Abdelsalam, O. (2014). Loan loss provisions, bank valuations and discretion: A comparative study between conventional and Islamic banks. *Journal of Economic Behavior & Organization, 103*, S160-S173.

Elnahass, M., Izzeldin, M., & Steele, G. (2018). Capital and earnings management: evidence from alternative banking business models. *The International Journal of Accounting*, 53(1), 20-32.

Elnahass, M., Omoteso, K., Salama, A. & Trinh, V.Q., (2020a). Differential market valuations of board busyness across alternative banking models. *Review of Quantitative Finance and Accounting*, 55, 201–238.

Elnahass, M., Salama, A., & Trinh, V. Q. (2020b). Firm valuations and board compensation: evidence from alternative banking models. Global Finance Journal, 100553.Doi: https://doi.org/10.1016/j.gfj.2020.100553

Elnahass, M., Trinh, V. Q., & Li, T. (2021). Global banking stability in the shadow of Covid-19 outbreak. Journal of International Financial Markets, Institutions and Money, 72, 101322. DOI: https://doi.org/10.1016/j.intfin.2021.101322

Fama, E. F., & Jensen, M. C. (1983). Separation of ownership and control. *Journal of Law and Economics, 26*(2), 301-325.

Farook, S., Kabir Hassan, M., & Lanis, R. (2011). Determinants of corporate social responsibility disclosure: The case of Islamic banks. *Journal of Islamic Accounting and Business Research*, *2*(2), 114-141.

Ferraro, F., Pfeffer, J., & Sutton, R. (2005). Economics language and assumptions: how theories can become self-fulfilling. *Academy of Management Review, 30*(1), 8-24.

Filatotchev, I. and Wright, M. (2011). Agency perspectives on corporate governance of multinational enterprises. *Journal of Management Studies,* 48(2), 471-486.

García, L. S., Barbadillo, E. R., & Pérez, M. O. (2012). Audit committee and internal audit and the quality of earnings: empirical evidence from Spanish companies. *Journal of Management & Governance, 16*(2), 305-331.

Grougiou, V., Leventis, S., Dedoulis, E., & Owusu-Ansah, S. (2014). Corporate social responsibility and earnings management in U.S. banks. *Accounting Forum, 38*(3), 155-169.

Gulzar, M. A., & Wang, Z. (2011). Corporate governance characteristics and earnings management: Empirical evidence from Chinese listed firms. *International Journal of Accounting and Financial Reporting, 1*(1), 133-151.

Habbash, M., Sindezingue, C., & Salama, A. (2013). The effect of audit committee characteristics on earnings management: Evidence from the United Kingdom. *International Journal of Disclosure and Governance*, *10*(1), 13-38.

Ha-Brookshire, J. (2017). Toward moral responsibility theories of corporate sustainability and sustainable supply chain. *Journal of Business Ethics*, *145*(2), 227-237.

Haniffa, R. M., & Hudaib, M. A. (2002). A theoretical framework for the development of the Islamic perspective of accounting. *Accounting, Commerce & Finance: The Islamic Perspectives Journal, 6*(1/2), 1-42.

Hasan, M., & Dridi, J. (2011). The effects of the global crisis on Islamic and conventional banks: A comparative study. *Journal of International Commerce, Economics and Policy, 2*(2), 163-200.

He, L., & Yang, R. (2014). Does industry regulation matter? New evidence on audit committees and earnings management. *Journal of Business Ethics*, *123*(4), 573-589.

Healy, M. P., & Wahlen, M. J. (1999). A review of the earnings management literature and its implications for standard setting. *Accounting Horizons, 13*(4), 365-383.

Hilary, G., & Hui, K. W. (2009). Does religion matter in corporate decision making in America? *Journal of Financial Economics, 93*(3), 455-473.

Hillman, A. J., & Dalziel, T. (2003). Boards of directors and firm performance: Integrating agency and resource dependence perspectives. *Academy of Management Review*, 28(3), 383-396.

Hoffmann, A. O., Post, T., & Pennings, J. M. (2013). Individual investor perceptions and behavior during the financial crisis. *Journal of Banking & Finance*, 37 (1), 60-74.

Hoitash, U., Hoitash, R., & Bedard, J. C. (2009). Corporate governance and internal control over financial reporting: A comparison of regulatory regimes. *The Accounting Review*, *84*(3), 839-867.

Hunt, S. D., & Vitell, S. (1986). A general theory of marketing ethics. *Journal of Macromarketing, 6*(1), 5-16.

Iatridis, G., & Kadorinis, G. (2009). Earnings management and firms financial motives: A financial investigation of UK listed firms. *International Review of Financial Analyses, 18*(4), 164-173.

Islamic Financial Services Board (IFSB). (2005). Capital adequacy standard for institutions offering only Islamic financial services. Available at: http://www.ifsb.org/standard/ifsb2.pdf.

Ismail, A., & Be Lay, A. (2002). Bank loan portfolio composition and the disclosure of loan loss provisions: An empirical evidence from Malaysian banks. *Asian Review of Accounting, 10*(1), 147-162.

Jensen, M. C., & Meckling, W. H. (1976). Theory of the firm: Managerial behavior, agency costs and ownership structure. *Journal of Financial Economics, 3*(4), 305-360.

Jensen, M. C. (1993). The modern industrial revolution, exit, and the failure of internal control systems. *The Journal of Finance*, *48*(3), 831-880.

Jiraporn, P., Miller, G. A., Yoon, S. S., & Kim, Y. S. (2008). Is earnings management opportunistic or beneficial? An agency theory perspective. *International Review of Financial Analysis*, 17(3), 622-634.

Jo, K., & Kim, Y. (2007). Disclosure frequency and earnings management. *Journal of Financial Economics, 84*(2), 561-590.

John, K., De Masi, S., & Paci, A. (2016). Corporate governance in banks. *Corporate Governance: An International Review, 24*(3), 303-321.

John, K. and Senbet, L. (1998). Corporate governance and board effectiveness. *Journal of Banking and Finance,* 22(4), 371-403.

Jones, J. J. (1991). Earnings management during import relief investigations. *Journal of Accounting Research*, 193-228.

Kanagaretnam, K., Lobo, G., & Mathieu, R. (2003). Managerial incentives for income smoothing through bank loan loss provisions. *Review of Quantitative Finance and Accounting, 20*(1), 63-80.

Kanagaretnam, K., Lim, C. Y., & Lobo, G. J. (2010). Auditor reputation and earnings management: International evidence from the banking industry. *Journal of Banking & Finance, 34*(10), 2318-2327.

Kanagaretnam, K., Lobo, G. J., & Wang, C. (2015). Religiosity and earnings management: International evidence from the banking industry. *Journal of Business Ethics, 132*(2), 277-296.

Kent, P., Routledge, J., & Stewart, J. (2010). Innate and discretionary accruals quality and corporate governance. *Accounting & Finance, 50*(1), 171-195.

Klein, A. (2002). Audit committee, board of director characteristics, and earnings management. *Journal of Accounting and Economics, 33*(3), 375-400.

Kohlberg, L. (1984). *Philosophy of moral development*. Harper and Row, New York.

Lai, K. (2009). Does audit quality matter more for firms with high investment opportunities? *Journal of Accounting and Public Policy,* 28(1), 33-50.

Lai, K. M. Y., Sasmita, A., Gul, F. A., Foo, Y. B., & Hutchinson, M. (2016). Busy auditors, ethical behavior, and discretionary accruals quality in Malaysia. *Journal of Business Ethics*, 1-12.

Larrain, B. (2006). Do banks affect the level and composition of industrial volatility?. The Journal of Finance, 61(4), 1897-1925.

Lassoued, N., Attia, M., & Sassi, H. (2018). Earnings management in Islamic and Conventional banks: Does ownership structure matter? Evidence from the MENA region. *Journal of International Accounting, Auditing and Taxation, 30*, 85-105.

Leuz, C., Nanda, D., & Wysocki, P. D. (2003). Earnings management and investor protection: An international comparison. *Journal of Financial Economics, 69*(3), 505-527.

Leventis, S., & Dimitropoulos, P. (2012). The role of corporate governance in earnings management: experience from US banks. *Journal of Applied Accounting Research*, *13*(2), 161-177.

Liu, Q., & Lu, Z. J. (2007). Corporate governance and earnings management in the Chinese listed companies: A tunnelling perspective. *Journal of Corporate Finance*, *13*(5), 881-906.

Macey, J. R., & O'Hara, M. (2003). The corporate governance of banks. *Economic Policy Review, 9*(1), 91-107.

McGuire, S., Omer, T., & Sharp, N. (2012). The impact of religion on financial reporting irregularities. *The Accounting Review, 87*(2), 645-673.

Melé, D., Rosanas, J. M., & Fontrodona, J. (2017). Ethics in finance and accounting: Editorial introduction. *Journal of Business Ethics, 140*(4), 609-613.

Mensah, Y. M. (2014). An analysis of the effect of culture and religion on perceived corruption in a global context. *Journal of Business Ethics, 121*(2), 255-282.

Mollah, S., & Zaman, M. (2015). Shari'ah supervision, corporate governance and performance: Conventional vs. Islamic banks. *Journal of Banking & Finance*, *58*, 418-435.

Mollah, S., Hassan, M. K., Al Farooque, O., & Mobarek, A. (2016). The governance, risk-taking, and performance of Islamic banks. *Journal of Financial Services Research*, *51*(2), 195-219.

Osma, B. G. (2008). Board independence and real earnings management: The case of R&D expenditure. *Corporate Governance: An International Review*, *16*(2), 116-131.

Pathan, S. and Skully, M. (2010). Endogenously structured boards of directors in banks. *Journal of Banking and Finance, 34*(7), 1590-1606.

Peasnell, K. V., Pope, P. F., & Young, S. (2005). Board monitoring and earnings management: Do outside directors influence abnormal accruals? *Journal of Business Finance & Accounting*, *32*(7-8), 1311-1346.

Pfeffer, J. & Salancik, G.R. (1978). *The external control of organizations: A resource dependence approach*. NY: Harper and Row Publishers.

Pi, L. and Timme, S. (1993). Corporate control and bank efficiency. *Journal of Banking and Finance, 17*(2-3), 515-530.

Pomeroy, B., & Thornton, D.B. (2008). Meta-analysis and the accounting literature: the case of audit committee independence and financial reporting quality. *European Accounting Review*, 17(2), 305–330.

Ronen, J., & Yaari, V. (2008). *Earnings management* (Vol. 372). Springer US.

Safieddine, A. (2009). Islamic financial institutions and corporate governance: New insights for agency theory. *Corporate Governance: An International Review, 17*(2), 142-158.

Salem, R., Usman, M., & Ezeani, E. (2021). Loan loss provisions and audit quality: Evidence from MENA Islamic and Conventional Banks. *The Quarterly Review of Economics and Finance, 79*, 345-359.

Scheiner, J. H. (1981). Income smoothing: an analysis in the banking industry. *Journal of Bank Research* (Summer 1981), 119-123.

Sharma, V. and Kuang, C. (2014). Voluntary audit committee characteristics, incentives, and aggressive earnings management: Evidence from New Zealand. *International Journal of Auditing,* 18(1), 76-89.

Shleifer, A., & Vishny, R. W. (1997). A survey of corporate governance. *The Journal of Finance*, *52*(2), 737-783.

Shrieves, R. E., & Dahl, D. (2003). Discretionary accounting and the behavior of Japanese banks under financial duress. *Journal of Banking & Finance*, *27*(7), 1219-1243.

Staubus, G. J. (2005). Ethics failures in corporate financial reporting. *Journal of Business Ethics, 57*(1), 5-15.

Taktak, N., Zouari, S., & Boudriga, A. (2010). Do Islamic banks use loan loss provisions to smooth their results? *Journal of Islamic Accounting and Business Research, 1*(2), 114-127.

Talavera, O., Yin, S., & Zhang, M. (2018). Age diversity, directors' personal values, and bank performance. *International Review of Financial Analysis*, 55, 60-79.

Trinh V.Q., Elnahas M., Salama A., Izzeldin M. (2020). Board busyness, performance and financial stability: Does bank type matter? *The European Journal of Finance* 26(7-8), 774-801.

Vafeas, N. (2005). Audit committees, boards, and the quality of reported earnings. *Contemporary Accounting Research, 22*(4), 1093-1122.

Van Ees, H., Gabrielsson, J., & Huse, M. (2009). Toward a behavioral theory of boards and corporate governance. *Corporate Governance: An International Review*, *17*(3), 307-319.

Vladu, A. B., Amat, O., & Cuzdriorean, D. D. (2017). Truthfulness in accounting: How to discriminate accounting manipulators from non-manipulators. *Journal of Business Ethics, 140*(4), 633-648.

Watts, R. and Zimmerman, J. (1990). Positive accounting theory: A ten year perspective. *The Accounting Review,* 65(1), 131-156.

Weaver, G. R., & Agle, B. R. (2002). Religiosity and ethical behavior in organizations: A symbolic interactionist perspective. *Academy of management review*, *27*(1), 77-97.

Wijayana, S., & Gray, S. J. (2018). Capital market consequences of cultural influences on earnings: The case of cross-listed firms in the US stock market. *International Review of Financial Analysis*, 57, 134-147.

Xie, B., Davidson, W. N., & Dadalt, P. J. (2003). Earnings management and corporate governance: The role of the board and the audit committee. *Journal of Corporate Finance, 9*(3), 295-316.

Yang, J. S., & Krishnan, J. (2005). Audit Committees and Quarterly Earnings Management. *International Journal of Auditing, 9*(3), 201-219.

Yasuda, Y., Okuda, S. Y., & Konishi, M. (2004). The relationship between bank risk and earnings management: evidence from Japan. *Review of Quantitative Finance and Accounting*, *22*(3), 233-248.

Zalata, A. M., Tauringana, V., & Tingbani, I. (2018). Audit committee financial expertise, gender, and earnings management: Does gender of the financial expert matter?. *International review of financial analysis*, 55, 170-183.

Zoubi, T., & Al-Khazali, O. (2007). Empirical testing of the loss provisions of banks in the GCC region. *Managerial Finance, 33*(7), 500-511.

Table 1 - Sample Distribution by Country and Bank Type						
Country	Islamic Banks	Bank-Year Observations	Conventional Banks	Bank - Year Observations	Full Sample	Observations
Bahrain	5	39	2	18	7	57
Bangladesh	6	28	6	34	12	62
Egypt	1	6	1	9	2	15
Indonesia	1	6	8	55	9	61
Jordan	2	14	9	76	11	90
Kuwait	5	35	4	33	9	68
Malaysia	1	9	2	18	3	27
Oman	2	6	3	18	5	24
Pakistan	2	18	2	17	4	35
Palestine	2	14	2	16	4	30
Qatar	3	22	5	42	8	64
Saudi Arabia	4	28	1	9	5	37
Turkey	2	17	7	61	9	78
United Arab Emirates	3	18	2	13	5	31
Banks	39	-	54	-	93	
Observations	-	260	-	419	-	679

Notes: This table shows the number of Islamic banks and conventional banks in our sample countries from 2007 to 2015. The full sample represents 93 banks (39 Islamic and 54 conventional) over 14 countries.

	PANEL A: FULL SAMPLE				PANEL C: CONVENTIONAL BANKS SUBSAMPLE				PANEL B: ISLAMIC BANKS SUBSAMPLE				Two-sample t-test (Two Tailed)
VARIABLES	Obs.	Mean	Std.	Median	Obs.	Mean	Std.	Median	Obs.	Mean	Std.	Median	T-test
LOSS_AVOID	679	0.293	0.456	0	419	0.296	0.457	0	260	0.288	0.454	0	-0.208
EM	538	0.002	0.008	0.003	381	0.002	0.010	0.004	157	0.001	0.005	0.002	-1.300
DACC	678	-0.069	0.139	-0.043	419	-0.037	0.092	-0.026	259	-0.120	0.181	-0.109	-7.896***
BODSIZE	679	9.683	2.826	9	419	9.477	2.692	9	260	10.015	3.004	9	2.421**
BODINDEP	627	0.374	0.238	0.333	387	0.376	0.234	0.357	240	0.371	0.244	0.333	-0.257
ACSIZE	615	3.637	0.975	3	395	3.686	0.994	3	220	3.550	0.937	3	-1.661*
ACINDEP	573	0.536	0.328	0.600	384	0.538	0.326	0.5	189	0.532	0.333	0.667	-0.208
CEODUAL	679	0.072	0.259	0	419	0.079	0.270	0	260	0.062	0.241	0	-0.842
EBT	679	0.018	0.022	0.019	419	0.020	0.015	0.021	260	0.014	0.030	0.015	-3.785***
LEV	679	7.619	3.916	7.558	419	8.167	2.803	7.836	260	6.736	5.117	6.050	-4.700***
AGE	679	3.277	0.808	3.497	419	3.551	0.683	3.689	260	2.835	0.800	2.944	-12.417***
BANK SIZE	679	15.644	1.571	15.689	419	15.933	1.569	15.967	260	15.178	1.461	15.328	-6.255***
CFO	679	0.016	0.075	0.019	419	0.019	0.055	0.020	260	0.010	0.099	0.019	-1.599
GRW	664	1.654	1.649	1.310	411	1.768	1.960	1.350	253	1.467	0.921	1.220	-2.290**
BIG4	679	0.859	0.349	1	419	0.874	0.333	1	260	0.835	0.372	1	-1.414
GOV_OWN	679	0.081	0.135	0.008	419	0.092	0.150	0.009	260	0.063	0.104	0	-2.803**
CRISIS	679	0.133	0.339	0	419	0.148	0.355	0	260	0.108	0.311	0	
GDP	679	4.894	3.964	4.876	419	5.110	3.985	5.030	260	4.547	3.913	4.410	
COUNTRY_GOV	679	-0.029	0.594	0.028	419	-0.031	0.578	-0.005	260	-0.027	0.620	0.049	
AAOIFI									260	0.323	0.469	0	
SSBSIZE									260	4.442	1.753	4	
SSBQUAL									260	0.289	0.253	0.25	
SSBMM									260	0.631	0.315	0.667	

Notes: This table presents the descriptive statistics for the variables used in our models. The sample period is 2007 to 2015. Panel A presents the results for the full sample including CBs and IBs with 679 bank-year observations. Panel B presents the results for CBs sub-sample comprising 419 bank-year observations. Panel C presents the results for IBs sub-sample comprising 260 bank-year observations. We report mean differences and two-sample *t*-test (comparison of means for CBs and IBs sub-samples).

LOSS_AVOID is an indicator variable that takes 1 if the ratio of net income to lagged total assets is between 0 and 0.01, and 0 otherwise. EM is estimated as the difference between discretionary realised security gains and losses and discretionary loan loss provisions. DACC is the discretionary accruals estimated as the residuals from the cross-sectional Jones (1991) model as modified by Yasuda et al. (2004). See the appendix for other variables definitions. *,**,*** denote significance at the 10%,5% and 1% respectively.

Table 3 – Pearson Correlation Matrix for the Years 2007-2015

Variables	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)
1. LOSS_AVOID	1																	
2. EM	**0.24**	1																
3. DACC	**0.10**	**0.12**	1															
4. BODSIZE	**-0.21**	**-0.27**	-0.07	1														
5. BODINDEP	**-0.28**	**-0.12**	-0.09	**-0.26**	1													
6. ACSIZE	**-0.30**	**-0.27**	-0.03	**0.25**	**0.21**	1												
7. ACINDEP	**-0.36**	**-0.16**	**-0.14**	-0.06	**0.73**	**0.20**	1											
8. CEODUAL	**0.13**	0.01	-0.01	-0.02	**-0.10**	-0.03	-0.07	1										
9. EBT	-0.05	**0.11**	0.07	**0.13**	**-0.18**	0.10	**-0.12**	0.05	1									
10. LEV	**0.08**	**0.10**	0.07	**0.14**	**-0.10**	**0.13**	0.07	-0.06	0.05	1								
11. AGE	**-0.10**	-0.02	0.04	**0.12**	**-0.11**	**0.11**	0.04	0.05	**0.14**	**0.21**	1							
12. BANK SIZE	**-0.20**	**0.12**	0.02	0.01	**0.15**	**0.10**	**0.28**	**-0.11**	**0.26**	**0.18**	**0.49**	1						
13. CRISIS	**0.11**	**0.10**	**0.11**	**-0.10**	**-0.10**	**-0.10**	**-0.13**	**0.11**	**0.20**	-0.02	0.00	0.00	1					
14. GDP	-0.04	0.05	0.05	0.04	**-0.08**	0.07	-0.04	0.04	**0.21**	-0.06	**-0.06**	0.01	**0.17**	1				
15. COUNTRY_GOV	**-0.09**	**0.12**	0.04	**-0.18**	**0.18**	**-0.11**	**0.17**	**-0.08**	0.02	**-0.31**	**0.11**	**0.43**	0.08	**0.11**	1			
16. SSBSIZE	**-0.38**	**-0.37**	**-0.10**	**0.61**	-0.02	**0.40**	0.14	**-0.13**	0.06	**0.31**	**0.14**	**0.22**	-0.08	0.05	**-0.22**	1		
17. SSBQUAL	-0.11	**-0.23**	-0.04	**-0.12**	0.10	**0.13**	**0.16**	0.09	-0.03	0.02	-0.06	**-0.18**	-0.03	0.02	0.07	-0.03	1	
18. SSBMM	-0.01	**0.20**	-0.03	**-0.32**	**0.25**	**-0.37**	0.08	**-0.19**	**-0.13**	**-0.19**	0.05	**0.19**	-0.10	**-0.18**	**0.46**	**-0.40**	0.02	1

Notes: This table presents Pearson correlation coefficients for earnings management variables (LOSS_AVOID, EM and DACC), internal governance variables (BODSIZE, BODINDEP, ACSIZE, ACINDEP, SSBSIZE, SSBQUAL and SSBMM), bank-specific variables (CEO, EBT, LEV, AGE, BANK SIZE and CRISIS) and country-specific variables (GDP and COUNTRY_GOV) included in our models. The results are reported for the full sample including CBs and IBs with 720 bank-year observations. Coefficients in bold indicate statistical significance at the 5% significance level or more.

Table 4 - Regression Analysis of Earnings Management: Full Sample						
Variables	Board of Directors			Audit Committee		
	(1) LOSS_AVOID Logistic Reg.	(2) EM Random Eff.	(3) DACC Random Eff.	(4) LOSS_AVOID Logistic Reg.	(5) EM Random Eff.	(6) DACC Random Eff.
Constant	7.5237***	0.0125***	0.0972	8.8293***	0.0062	-0.0424
	(3.71)	(3.27)	(0.96)	(3.61)	(1.41)	(-0.65)
BODSIZE	-0.7205***	-0.0010***	-0.0042*			
	(-5.07)	(-8.36)	(-1.73)			
BODINDEP	-9.4581***	-0.0085***	-0.1019***			
	(-6.52)	(-6.62)	(-3.35)			
ACSIZE				-1.5547***	-0.0014***	-0.0078**
				(-5.30)	(-7.98)	(-2.37)
ACINDEP				-4.7504***	-0.0045***	-0.0932***
				(-6.03)	(-8.04)	(-9.52)
CEODUAL	0.9667	-0.0008	-0.0261			
	(1.45)	(-1.52)	(-1.02)			
EBT	-6.0266	0.0055	0.0214	-5.0730	0.0015	-0.1790
	(-0.45)	(0.47)	(0.04)	(-0.39)	(0.12)	(-0.83)
LEV	0.2196***	0.0002***	0.0017	0.2320***	0.0002***	0.0008
	(2.92)	(3.71)	(0.81)	(3.33)	(3.12)	(0.69)
AGE	-0.5081	-0.0005	-0.0278**	-0.0195	-0.0009	-0.0190**
	(-1.06)	(-1.01)	(-2.13)	(-0.05)	(-1.48)	(-2.24)
BANK SIZE	-0.6299**	0.0002	0.0020	-0.5789**	0.0003	0.0087*
	(-2.00)	(0.58)	(0.26)	(-2.24)	(0.98)	(1.82)
CFO	0.1191	0.0005	-0.0374	1.9362	0.0046	-0.0001
	(0.05)	(0.28)	(-0.46)	(0.82)	(1.16)	(-0.00)
GRW	0.3038	0.0001	-0.0062	-0.0440	0.0001	-0.0036
	(1.49)	(0.80)	(-1.05)	(-0.26)	(0.27)	(-1.31)
BIG4	-0.0592	0.0005	0.0071	-0.7371	0.0003	0.0132
	(-0.08)	(0.80)	(0.29)	(-0.99)	(0.36)	(1.07)
GOV_OWN	-0.3500	-0.0002	-0.0034	-0.4296	0.0007	-0.0375
	(-0.12)	(-0.05)	(-0.05)	(-0.16)	(0.18)	(-0.73)
CRISIS	0.2764	0.0001	0.0258	0.5364	-0.0001	-0.0002
	(0.55)	(0.26)	(1.44)	(1.07)	(-0.36)	(-0.03)
GDP	-0.0193	0.0001**	-0.0004	0.0317	0.0001**	0.0015**
	(-0.43)	(2.20)	(-0.26)	(0.68)	(2.05)	(2.25)
COUNTRY_GOV	0.7377	0.0008	0.0155	1.2165	0.0009	0.0132
	(1.03)	(1.26)	(0.87)	(1.53)	(1.23)	(1.15)
IB	0.3135	-0.0009	-0.0935***	-0.1167	-0.0024**	-0.0835***
	(0.41)	(-1.09)	(-4.89)	(-0.18)	(-2.43)	(-6.22)
Adjusted R^2	0.1753	0.3177	0.1132	0.1572	0.2294	0.2412
Wald Chi2	59.38***	209.66***	46.80***	64.68***	174.13***	175.05***
Hausman Test	15.78	14.68	16.52	13.26	13.34	15.37
Observations	615	498	615	562	462	562

This table presents the regression results from three models (i.e. logistic regression for LOSS_AVOID, and random effect for both EM and DACC) examining the role of traditional internal governance mechanisms in earnings management for the full sample. Columns 1-3 report the results for board characteristics, while columns 4-6 present the results for audit committee. Z-statistics are between parentheses. *,**,*** denote significance at the 10%, 5% and 1% respectively. IB is an indicator variable that takes 1 if the bank is Islamic, and 0 otherwise. All other variables are defined in the appendix.

Variables	Board of Directors			Audit Committee		
	(1) LOSS_AVOID Logistic Reg.	(2) EM Random Eff.	(3) DACC Random Eff.	(4) LOSS_AVOID Logistic Reg.	(5) EM Random Eff.	(6) DACC Random Eff.
Constant	9.9999***	0.0107	0.1483***	8.3400***	0.0055	0.0770
	(2.59)	(0.95)	(2.75)	(2.68)	(0.53)	(1.39)
BODSIZE	-0.6117***	-0.0018***	-0.0086***			
	(-3.99)	(-7.01)	(-6.05)			
BODINDEP	-9.0664***	-0.0104***	-0.0951***			
	(-5.66)	(-4.08)	(-6.23)			
ACSIZE				-1.6046***	-0.0031***	-0.0113***
				(-3.98)	(-5.62)	(-3.25)
ACINDEP				-4.9333***	-0.0034*	-0.0751***
				(-5.21)	(-1.90)	(-7.08)
CEODUAL	0.8561	-0.0001	-0.0301			
	(0.81)	(-0.04)	(-1.29)			
EBT	3.8346	0.0928*	0.2294	-6.9505	0.0988*	-0.0807
	(0.13)	(1.73)	(0.69)	(-0.27)	(1.66)	(-0.24)
LEV	0.5026***	0.0008***	-0.0009	0.5582***	0.0009***	-0.0005
	(4.09)	(3.21)	(-0.65)	(4.86)	(3.66)	(-0.04)
AGE	0.2939	-0.0002	-0.0016	0.5791	-0.0012	-0.0041
	(0.39)	(-0.10)	(-0.19)	(0.92)	(-0.76)	(-0.47)
BANK SIZE	-0.8543**	0.0004	-0.0043	-0.8830**	0.0002	-0.0013
	(-2.00)	(0.00)	(-1.04)	(-2.51)	(0.03)	(-0.32)
CFO	5.4228	-0.0014	-0.0213	5.6148	0.0026	-0.0083
	(1.41)	(-0.19)	(-0.45)	(1.47)	(0.34)	(-0.18)
GRW	0.2166	-0.0001	-0.0032	-0.0297	-0.0004	-0.0048*
	(1.01)	(-0.17)	(-1.24)	(-0.15)	(-0.53)	(-1.81)
BIG4	-0.0472	0.0041	0.0088	-0.1016	0.0050	0.0049
	(-0.04)	(1.55)	(0.61)	(-0.10)	(1.50)	(0.33)
GOV_OWN	-0.4904	0.0026	0.0213	-0.7614	0.0005	0.0154
	(-0.15)	(0.33)	(0.63)	(-0.28)	(0.07)	(0.44)
CRISIS	0.4554	-0.0009	0.0113	0.4055	-0.0013	-0.0001
	(0.72)	(-0.73)	(1.47)	(0.70)	(-1.00)	(-0.01)
GDP	0.0363	0.0001	0.0014*	0.0627	0.0002	0.0017**
	(0.54)	(1.02)	(1.88)	(0.99)	(1.29)	(2.23)
COUNTRY_GOV	1.1151	0.0001	0.0009	1.2471	0.0002	0.0053
	(1.25)	(0.03)	(0.10)	(1.64)	(0.13)	(0.54)
Adjusted R^2	0.1914	0.1574	0.1526	0.1688	0.1955	0.1128
Wald Chi2	46.16***	115.70***	101.81***	50.96***	87.19***	101.71***
Observations	381	350	381	378	349	378

Table 5 - Regression Analysis of Earnings Management for the Conventional Banks Subsample

This table presents the regression results from three models (i.e. logistic regression for LOSS_AVOID, and random effect for both EM and DACC) examining the role of traditional internal governance mechanisms in earnings management for the conventional banks sub-sample. Columns 1-3 report the results for board characteristics, while columns 4-6 present the results for audit committee. Z-statistics are between parentheses. *,**,*** denote significance at the 10%, 5% and 1% respectively.

Variables	Board of Directors and SSB			Audit Committee and SSB		
	(1) LOSS_AVOID Logistic Reg.	(2) EM Random Eff.	(3) DACC Random Eff.	(4) LOSS_AVOID Logistic Reg.	(5) EM Random Eff.	(6) DACC Random Eff.
Constant	8.5160**	-0.0040	-0.0886	6.7813*	-0.0096	-0.1844
	(2.40)	(-0.59)	(-0.69)	(1.86)	(-1.28)	(-1.23)
BODSIZE	-1.2730**	-0.0004**	0.0004			
	(-2.29)	(-2.32)	(0.11)			
BODINDEP	-5.9927**	-0.0059***	-0.0554**			
	(-2.46)	(-4.56)	(-2.12)			
ACSIZE				-3.4059***	-0.0001	0.0102
				(-2.92)	(-0.43)	(1.50)
ACINDEP				-5.2433***	0.0003	-0.0633***
				(-2.75)	(0.28)	(-3.18)
CEODUAL	1.9919	-0.0006	-0.0269			
	(0.64)	(-0.68)	(-1.62)			
EBT	-6.1305	-0.0130	-0.0970	-1.7385	0.0067	0.1045
	(-0.43)	(-0.72)	(-0.34)	(-0.04)	(0.40)	(0.35)
LEV	0.3351	0.0002**	0.0014	0.5083	0.0002*	0.0035
	(1.04)	(2.20)	(0.69)	(1.52)	(1.67)	(1.55)
AGE	-3.7670*	-0.0003	-0.0227	-1.5691	0.0009	-0.0157
	(-1.67)	(-0.45)	(-1.61)	(-0.64)	(1.32)	(-1.01)
BANK SIZE	0.3302	0.0010**	0.0117	0.8291	0.0008	0.0118
	(0.22)	(2.30)	(1.24)	(0.48)	(1.48)	(1.08)
CFO	-1.5601	0.0043	0.0475	-1.5436	0.0088***	-0.0034
	(-0.45)	(1.23)	(1.05)	(-0.21)	(2.62)	(-0.06)
GRW	0.1905	-0.0006	-0.0030	-1.6474	0.0001	-0.0014
	(0.16)	(-1.44)	(-0.40)	(-1.33)	(0.15)	(-0.17)
BIG4	1.9177	0.0009	0.0301	-4.5009	-0.0012	0.0121
	(0.87)	(0.99)	(1.51)	(-1.60)	(-1.33)	(0.57)
GOV_OWN	-2.0266	-0.0042	-0.1307	-3.7948	0.0268*	-0.4284
	(-1.64)	(-0.96)	(-1.14)	(-0.63)	(1.65)	(-1.42)
CRISIS	1.7233	0.0007	-0.0084	0.5780	-0.0001	0.0006
	(0.52)	(0.76)	(-0.52)	(0.14)	(-0.13)	(0.03)
GDP	-0.0358	0.0002***	0.0002	0.2076	0.0002***	0.0017
	(-0.19)	(3.46)	(0.18)	(1.02)	(2.68)	(1.28)
COUNTRY_GOV	-5.1440	0.0016	0.0169	-1.3248	0.0013	0.0351
	(-1.44)	(1.43)	(0.70)	(-0.26)	(1.06)	(1.11)
AAOIFI	-1.1921	-0.0007	0.0094	0.4229	-0.0047**	0.0145
	(-0.25)	(-0.60)	(0.45)	(0.06)	(-2.14)	(0.57)
SSBSIZE	-7.2812***	-0.0008***	-0.0156***	-6.8109***	-0.0010***	-0.0141***
	(-10.15)	(-3.12)	(-2.74)	(-9.05)	(-5.10)	(-2.60)
SSBQUAL	-4.2381***	-0.0059***	-0.0877***	-3.9877*	-0.0022	-0.0599*
	(-2.58)	(-4.19)	(-3.10)	(-1.68)	(-1.28)	(-1.73)
SSBMM	-0.6218	0.0013	-0.0680***	-2.7391	0.0005	-0.0154
	(-0.14)	(1.04)	(-2.79)	(-0.55)	(0.42)	(-0.58)
Adjusted R^2	0.1635	0.3655	0.1249	0.1876	0.3650	0.1437
Wald Chi2	203.17***	175.23***	61.79***	197.25***	101.96***	42.55***
Observations	234	148	234	184	113	184

Table 6 - Regression Analysis of Earnings Management for the Islamic Banks Subsample

This table presents the regression results from three models (i.e. logistic regression for LOSS_AVOID, and random effect for both EM and DACC) examining the role of traditional and additional internal governance mechanisms in earnings management for the Islamic Banks sub-sample. Columns 1-3 report the results for the joint effect of board characteristics and SSB, while columns 4-6 present the results for the joint effect of audit committee and SSB. Z-statistics are between parentheses. *,**,*** denote significance at the 10%, 5% and 1% respectively.

Variables	Board of Directors			Audit Committee		
	(1) LOSS_AVOID Logistic Reg.	(2) EM Random Eff.	(3) DACC Random Eff.	(4) LOSS_AVOID Logistic Reg.	(5) EM Random Eff.	(6) DACC Random Eff.
Constant	6.3743*	-0.0022	0.0654	4.4897	-0.0033	0.0018
	(1.67)	(-0.26)	(0.99)	(1.15)	(-0.39)	(0.03)
Dummy BODSIZE	-1.4645***	-0.0030***	-0.0188***			
	(-3.51)	(-3.52)	(-2.86)			
BODINDEP	-7.1101***	-0.0101***	-0.1096***			
	(-6.10)	(-5.49)	(-7.60)			
CEODUAL	-0.2669	-0.0009	-0.0239*			
	(-0.37)	(-0.52)	(-1.72)			
Dummy ACSIZE				-2.4351***	-0.0014*	-0.0017
				(-5.25)	(-1.77)	(-0.28)
ACINDEP				-4.5026***	-0.0049***	-0.0981***
				(-5.81)	(-3.57)	(-10.26)
EBT	0.9377	0.0407	-0.1979	3.0194	0.0461	-0.1357
	(0.12)	(1.48)	(-1.35)	(0.34)	(1.56)	(-0.94)
LEV	0.2520***	0.0005***	-0.0008	0.3164***	0.0006***	0.0007
	(3.31)	(3.10)	(-0.01)	(3.78)	(2.98)	(0.55)
TIER1	0.0639**	0.0001*	0.0002	0.0670**	0.0001*	0.0002
	(2.09)	(1.89)	(0.40)	(2.07)	(1.93)	(0.33)
AGE	-0.3977	-0.0011	-0.0164**	-0.1917	-0.0016	-0.0132
	(-0.92)	(-1.08)	(-2.04)	(-0.43)	(-1.49)	(-1.59)
BANK SIZE	-0.4415*	0.0002	-0.0007	-0.3564	0.0002	0.0031
	(-1.74)	(0.41)	(-0.02)	(-1.38)	(0.42)	(0.68)
CFO	2.0275	0.0043	0.0292	2.7667	0.0061	0.0031
	(0.89)	(0.74)	(0.82)	(1.02)	(0.96)	(0.08)
GRW	0.1532	0.0003	-0.0035	-0.0697	0.0003	-0.0046*
	(0.96)	(0.79)	(-1.27)	(-0.41)	(0.70)	(-1.66)
BIG4	0.5404	0.0027*	0.0152	-0.0542	0.0027	0.0120
	(0.87)	(1.76)	(1.35)	(-0.08)	(1.62)	(1.03)
GOV_OWN	-1.7832	-0.0005	-0.0270	-2.4542	0.0006	-0.0201
	(-0.75)	(-0.10)	(-0.64)	(-0.92)	(0.11)	(-0.42)
CRISIS	1.1355***	0.0003	0.0047	1.0925**	-0.0003	-0.0047
	(2.58)	(0.31)	(0.63)	(2.25)	(-0.02)	(-0.61)
GDP	-0.0146	0.0008	0.0008	0.0186	0.0001	0.0013**
	(-0.36)	(0.99)	(1.22)	(0.42)	(1.14)	(2.03)
COUNTRY_GOV	0.5863	0.0029*	0.0135	0.8301	0.0024	0.0172
	(0.85)	(1.91)	(1.12)	(1.15)	(1.53)	(1.35)
IB	-0.6656	-0.0012	-0.0837***	-0.7821	-0.0018	-0.0788***
	(-1.07)	(-0.78)	(-7.18)	(-1.16)	(-1.13)	(-6.21)
Adjusted R^2		0.1684	0.2323		0.1404	0.2399
Wald Chi2	65.56***	90.45***	140.76***	67.48***	57.72***	171.61***
Observations	615	498	615	562	462	562

Notes: This table presents the regression results for the full sample from the first sensitivity test for three models (i.e. logistic regression for LOSS_AVOID, and random effect for both EM and DACC). The size of the board of directors (BODSIZE) and the size of the audit committee (ACSIZE) are all replaced with dummy variables. So that, dummy BODSIZE/ACSIZE is an indicator variable that takes 1 if the board/committee is larger than the sample mean, and 0 otherwise.. Columns 1-3 report the results for board characteristics, while columns 4-6 present the results for audit committee. Z-statistics are between parentheses. *,**,*** denote significance at the 10%, 5% and 1% respectively.

Table 7b: First Sensitivity Test: Change the Definitions of Internal Governance Variables (Dummy) – Islamic Banks						
Variables	Board of Directors			Audit Committee		
	(1) LOSS_AVOID Logistic Reg.	(2) EM Random Eff.	(3) DACC Random Eff.	(4) LOSS_AVOID Logistic Reg.	(5) EM Random Eff.	(6) DACC Random Eff.
Constant	8.4928	-0.0081	-0.1214	-0.9636	-0.0241***	-0.1733
	(0.91)	(-1.01)	(-0.80)	(-0.14)	(-3.01)	(-0.97)
Dummy BODSIZE	-2.7103**	-0.0009	0.0148			
	(-2.20)	(-1.30)	(1.13)			
BODINDEP	-6.7441***	-0.0057***	-0.0848***			
	(-2.83)	(-3.99)	(-3.25)			
CEODUAL	0.3781	-0.0001	-0.0015			
	(0.30)	(-0.12)	(-0.08)			
ACSIZE				-2.0187***	-0.0011	0.0170
				(-2.60)	(-1.45)	(1.45)
ACINDEP				-3.8512***	-0.0004	-0.0789***
				(-2.58)	(-0.02)	(-3.95)
EBT	-7.6571	0.0006	0.0184	-6.2750	0.0262	0.0994
	(-0.67)	(0.03)	(0.10)	(-1.16)	(1.08)	(0.51)
LEV	0.2500	0.0003**	-0.0005	0.1536	0.0001	0.0025
	(1.59)	(2.42)	(-0.22)	(1.57)	(1.29)	(0.99)
TIER1	0.0994*	0.0003	0.0009	0.0681*	0.0002	0.0003
	(1.78)	(0.70)	(1.15)	(1.68)	(0.51)	(0.42)
AGE	-0.2499	-0.0012	-0.0184	0.1348	0.0003	-0.0177
	(-0.31)	(-1.62)	(-1.19)	(0.25)	(0.53)	(-1.02)
BANK SIZE	-0.5903	0.0008*	0.0070	-0.0095	0.0012**	0.0084
	(-0.98)	(1.78)	(0.69)	(-0.02)	(2.52)	(0.71)
CFO	-0.4935	0.0117**	0.0556	-1.1921	0.0305***	0.0213
	(-0.13)	(2.35)	(1.09)	(-0.28)	(4.53)	(0.29)
GRW	0.0904	-0.0006	-0.0034	-0.7871*	-0.0004	-0.0008
	(0.17)	(-1.37)	(-0.47)	(-1.65)	(-0.57)	(-0.01)
BIG4	1.7904	0.0035	0.0253	0.5978	0.0025	0.0104
	(1.35)	(0.56)	(1.35)	(0.62)	(1.32)	(0.49)
GOV_OWN	-5.5641	-0.0089*	-0.1315	-4.6126	0.0081	-0.4939
	(-0.89)	(-1.87)	(-1.10)	(-0.56)	(0.51)	(-1.52)
CRISIS	2.8155**	0.0039***	-0.0135	4.5293***	0.0039***	-0.0131
	(1.99)	(3.73)	(-0.80)	(3.58)	(3.24)	(-0.67)
GDP	-0.0635	0.0002	-0.0009	-0.0344	0.0001	0.0004
	(-0.79)	(0.28)	(-0.89)	(-0.45)	(1.36)	(0.31)
COUNTRY_GOV	-0.5702	0.0030**	0.0095	-0.4654	0.0010	0.0222
	(-0.36)	(2.32)	(0.34)	(-0.41)	(0.95)	(0.60)
AAOIFI	1.2165	0.0008	0.0107	-0.0240	-0.0016	0.0564
	(0.73)	(0.05)	(0.33)	(-0.02)	(-0.80)	(1.42)
Dummy SSBSIZE	-1.2209	-0.0017**	-0.0136	0.5040	-0.0015*	-0.0070
	(-0.81)	(-2.22)	(-0.96)	(0.59)	(-1.67)	(-0.41)
Dummy SSBQUAL	-4.5462***	-0.0029***	-0.0264**	-2.0458**	0.0003	-0.0180
	(-2.60)	(-4.17)	(-2.08)	(-2.21)	(0.27)	(-1.14)
Dummy SSBMM	0.6312	0.0019	-0.0117	1.9703	0.0021	0.0120
	(0.64)	(0.38)	(-0.85)	(1.00)	(1.58)	(0.86)
Adjusted R^2		0.6077	0.1508		0.6169	0.1843
Wald Chi2	115.66***	141.73***	32.50**	52.32***	149.74***	31.07**
Observations	234	148	234	184	113	184

Notes: This table presents the regression results within Islamic banks from the first sensitivity test for three models (i.e. logistic regression for LOSS_AVOID, and random effect for both EM and DACC). The size of the board of directors (BODSIZE), the size of the audit committee (ACSIZE), and the size of the Shari'ah supervisory board (SSBSIZE) are all replaced with dummy variables. So that, dummy BODSIZE/ACSIZE/SSBSIZE is an indicator variable that takes 1 if the board/committee is

larger than the sample mean, and 0 otherwise. Dummy SSBQUAL is an indicator variable that takes 1 if there is at least one Shari'ah scholar with financial qualification, and 0 otherwise. Dummy SSBMM is an indicator variable that take 1 if at least 50% of the Shari'ah scholars are holding multiple memberships, and 0 otherwise. Columns 1-3 report the results for the joint effect of board characteristics and Shari'ah supervisory board, while columns 4-6 present the results for the joint effect of audit committee and Shari'ah supervisory board. Z-statistics are between parentheses. *,**,*** denote significance at the 10%, 5% and 1% respectively.

Table 8: Second Sensitivity Test: Activity of the Board of Directors and Audit Committees – Full Sample						
Variables	Board of Directors			Audit Committee		
	(1) LOSS_AVOID Logistic Reg.	(2) EM Random Eff.	(3) DACC Random Eff.	(4) LOSS_AVOID Logistic Reg.	(5) EM Random Eff.	(6) DACC Random Eff.
Constant	11.4882***	0.0049	0.0799	11.6053**	-0.0103	0.0374
	(3.20)	(0.42)	(1.10)	(2.39)	(-0.76)	(0.47)
BODSIZE	-0.6486***	-0.0018***	-0.0061***			
	(-4.26)	(-8.98)	(-4.01)			
BODINDEP	-7.6287***	-0.0079***	-0.1026***			
	(-5.32)	(-4.23)	(-6.49)			
CEODUAL	0.9907	-0.0005	-0.0055			
	(0.84)	(-0.19)	(-0.25)			
BODMEET	-0.0830	0.0001	0.0012			
	(-1.50)	(1.38)	(1.55)			
ACSIZE				-1.3491***	-0.0023***	-0.0070*
				(-4.20)	(-4.94)	(-1.93)
ACINDEP				-3.5966***	-0.0033**	-0.0918***
				(-4.24)	(-2.16)	(-8.06)
ACMEET				-0.0533	0.0007	0.0012
				(-0.99)	(0.69)	(1.58)
EBT	11.6321	0.0464*	-0.2269	6.3192	0.0514	-0.0857
	(1.03)	(1.68)	(-1.41)	(0.64)	(1.56)	(-0.53)
LEV	0.2714***	0.0007***	0.0008	0.3165***	0.0009***	0.0013
	(2.98)	(3.77)	(0.56)	(3.55)	(3.90)	(0.92)
TIER1	0.0354	0.0001*	0.0007	0.0611	0.0003***	0.0007
	(0.97)	(1.67)	(1.11)	(1.52)	(2.59)	(1.10)
AGE	0.0693	-0.0007	-0.0193**	0.0577	-0.0015	-0.0150*
	(0.13)	(-0.47)	(-2.18)	(0.12)	(-0.93)	(-1.65)
BANK SIZE	-0.8992**	0.0004	0.0008	-0.6153**	0.0008	0.0004
	(-2.55)	(0.56)	(0.16)	(-2.00)	(0.84)	(0.08)
CFO	2.6144	-0.0016	0.0471	1.6308	0.0052	0.0383
	(0.98)	(-0.32)	(1.11)	(0.55)	(0.77)	(0.80)
GRW	0.2332	-0.0002	-0.0041	-0.1414	-0.0001	-0.0048
	(1.13)	(-0.45)	(-1.39)	(-0.80)	(-0.26)	(-1.57)
BIG4	1.0343	0.0018	0.0146	-0.2430	0.0014	0.0241
	(1.26)	(1.07)	(1.11)	(-0.27)	(0.63)	(1.64)
GOV_OWN	-1.6585	0.0029	-0.0265	-2.1130	0.0047	-0.0328
	(-0.57)	(0.36)	(-0.60)	(-0.76)	(0.49)	(-0.65)
CRISIS	1.5420***	0.0003	0.0025	1.4036**	-0.0005	-0.0089
	(2.82)	(0.03)	(0.29)	(2.49)	(-0.44)	(-1.03)
GDP	0.0112	0.0006	0.0011	0.0260	0.0001	0.0017**
	(0.21)	(0.82)	(1.42)	(0.48)	(1.19)	(2.22)
COUNTRY_GOV	0.1303	-0.0005	0.0141	1.3156	0.0019	0.0190
	(0.14)	(-0.03)	(1.03)	(1.54)	(0.76)	(1.26)
IB	0.0181	0.0018	-0.0723***	-0.7325	-0.0003	-0.0762***
	(0.02)	(0.73)	(-5.58)	(-1.02)	(-0.10)	(-5.47)
Adjusted R^2		0.1441	0.2358		0.2188	0.2499
Wald Chi2	44.91***	175.31***	121.14***	45.40***	85.37***	125.26***
Observations	615	498	615	562	462	562

Notes: This table presents the regression results from the second sensitivity test for three models (i.e. logistic regression for LOSS_AVOID, and random effect for both EM and DACC) examining whether the activity of the board of directors and audit committee influence the extent of earnings management practices. *BODMEET* is the board of director's activity level, measured as the number of board's meetings held in a year. *ACMEET* is the audit committee's activity level, measured as the number of committee's meetings held in a year. Columns 1-3 report the results for board characteristics, while columns 4-6 present the results for audit committee. Z-statistics are between parentheses. *,**,*** denote significance at the 10%, 5% and 1% respectively.

Table 9 – Third Sensitivity Test: Market Capitalization and Stock Prices Volatility – Full Sample

Variables	Board of Directors and SSB			Audit Committee and SSB		
	(1) LOSS_AVOID Logistic Reg.	(2) EM Random Eff.	(3) DACC Random Eff.	(4) LOSS_AVOID Logistic Reg.	(5) EM Random Eff.	(6) DACC Random Eff.
Constant	6.4513	-0.0029	-0.1187	3.9148	-0.0169**	-0.1992
	(1.47)	(-0.40)	(-0.80)	(1.21)	(-1.99)	(-1.15)
BODSIZE	-1.3161**	-0.0006***	0.0002			
	(-2.16)	(-2.87)	(0.07)			
BODINDEP	-6.4594***	-0.0056***	-0.0515**			
	(-2.78)	(-4.05)	(-2.00)			
ACSIZE				-3.1865***	-0.0003	0.0128
				(-2.61)	(-0.94)	(1.58)
ACINDEP				-5.9869***	0.0002	-0.0663***
				(-2.94)	(0.15)	(-3.36)
CEODUAL	-1.1383	-0.0022	-0.0178			
	(-1.34)	(-1.39)	(-1.02)			
EBT	-6.7900	0.0049	0.0063	6.8922	0.0160	0.1006
	(-0.38)	(0.24)	(0.04)	(0.51)	(0.70)	(0.53)
LEV	0.8179**	0.0004***	0.0016	1.3531***	0.0002**	0.0037
	(2.23)	(3.40)	(0.74)	(3.34)	(2.14)	(1.48)
AGE	-1.9082	-0.0013*	-0.0093	-2.2274	0.0003	-0.0117
	(-1.01)	(-1.84)	(-0.61)	(-1.05)	(0.34)	(-0.67)
BANK SIZE	-0.6374	0.0010**	0.0094	-0.0466	0.0012**	0.0100
	(-0.38)	(2.33)	(0.95)	(-0.03)	(2.17)	(0.86)
CFO	-3.4754	0.0112**	0.0632	-1.7873	0.0300***	-0.0044
	(-0.41)	(2.18)	(1.30)	(-0.22)	(4.68)	(-0.06)
GRW	0.8578	-0.0009**	-0.0047	-0.6378	-0.0002	0.0001
	(0.95)	(-2.10)	(-0.69)	(-0.55)	(-0.28)	(0.00)
BIG4	2.9129	0.0020	0.0311	-4.3239	0.0005	0.0098
	(1.30)	(1.03)	(0.76)	(-1.08)	(0.40)	(0.46)
GOV_OWN	-6.9961	-0.0064	-0.1336	-4.9241	0.0230	-0.5094
	(-1.04)	(-1.48)	(-1.12)	(-0.30)	(1.35)	(-1.58)
CRISIS	2.2042**	0.0026	-0.0194	8.1261	0.0030	-0.0144
	(2.21)	(1.17)	(-1.24)	(1.26)	(1.48)	(-0.77)
GDP	-0.1462	0.0005	-0.0005	-0.0698	0.0001	0.0004
	(-0.91)	(0.86)	(-0.52)	(-0.42)	(1.64)	(0.34)
COUNTRY_GOV	-5.4099	0.0021	0.0037	-3.4985	0.0004	0.0166
	(-1.41)	(1.58)	(0.13)	(-0.63)	(0.26)	(0.45)
MCAP	-0.0904*	-0.0006	-0.0034*	-0.7871*	-0.0004	-0.0008*
	(-1.78)	(-1.37)	(-1.67)	(-1.65)	(-0.57)	(-1.89)
STOCK VOL	1.6488	0.0013	0.0174	1.9320	-0.0018	0.0567
	(0.37)	(0.86)	(0.53)	(0.86)	(-0.76)	(1.43)
IB	-0.0947	0.0005	-0.0768***	-0.7424	-0.0018	-0.0792***
	(-0.12)	(0.01)	(-6.51)	(-1.05)	(-1.14)	(-6.21)
Adjusted R^2		0.1721	0.1864		0.2869	0.1574
Wald Chi2	135.98***	161.56***	56.83***	118.64***	122.61***	39.65***
Observations	575	458	575	522	422	522

This table presents the regression results from the third sensitivity test for three models (i.e. logistic regression for LOSS_AVOID, and random effect for both EM and DACC) examining whether the market capitalization and stock prices volatility affect the extent of earnings management practices. MCAP is the market capitalization measured as a the natural logarithm form of the bank's market capitalisation which is measured by stock price per share multiplied by the number of outstanding shares, deflated by average total assets. STOCK VOL is the stock prices volatility measured as the standard deviation of annual bank stock returns. Columns 1-3 report the results for board characteristics, while columns 4-6 present the results for the audit committee. Z-statistics are between parentheses. *,**,*** denote significance at the 10%, 5% and 1% respectively.

Variables	Board of Directors			Audit Committee		
	(1) LOSS_AVOID Logistic Reg.	(2) EM Random Eff.	(3) DACC Random Eff.	(4) LOSS_AVOID Logistic Reg.	(5) EM Random Eff.	(6) DACC Random Eff.
Constant	9.2891	-0.0016	-0.0620	10.7795	-0.0150	-0.1700
	(1.62)	(-0.21)	(-0.41)	(1.22)	(-1.64)	(-0.95)
BODSIZE	-1.2778**	-0.0006***	-0.0004			
	(-2.08)	(-2.76)	(-0.11)			
BODINDEP	-12.4786***	-0.0057***	-0.0513**			
	(-2.76)	(-4.12)	(-2.00)			
CEODUAL	-3.9190	-0.0023	-0.0214			
	(-1.16)	(-1.52)	(-1.23)			
ACSIZE				-3.2005***	-0.0002	0.0127
				(-2.75)	(-0.42)	(0.83)
ACINDEP				-12.2684***	0.0001	-0.0675***
				(-3.00)	(0.12)	(-3.40)
EBT	-8.7400	0.0036	-0.0193	12.5966	0.0155	0.0916
	(-0.51)	(0.17)	(-0.11)	(0.54)	(0.66)	(0.48)
LEV	0.7554**	0.0004***	0.0021	1.3444***	0.0003**	0.0041
	(2.12)	(3.27)	(0.95)	(3.26)	(2.13)	(1.58)
TIER1	0.2406*	0.0005	0.0012	0.1879	0.0004	0.0007
	(1.93)	(1.27)	(1.60)	(1.25)	(0.89)	(0.86)
AGE	-0.7879	-0.0015**	-0.0114	-2.2689	0.0001	-0.0122
	(-0.36)	(-1.97)	(-0.73)	(-1.06)	(0.15)	(-0.69)
BANK SIZE	-0.6801	0.0010**	0.0070	-0.1343	0.0010*	0.0086
	(-0.48)	(2.17)	(0.70)	(-0.07)	(1.76)	(0.73)
CFO	-2.7914	0.0115**	0.0614	-1.7015	0.0294***	-0.0069
	(-0.33)	(2.24)	(1.27)	(-0.21)	(4.60)	(-0.09)
GRW	0.8739	-0.0010**	-0.0063	-0.6840	-0.0001	-0.0010
	(0.93)	(-2.19)	(-0.92)	(-0.59)	(-0.19)	(-0.13)
BIG4	2.7384	0.0023	0.0320*	-3.8424	0.0003	0.0103
	(1.22)	(1.23)	(1.82)	(-1.00)	(0.28)	(0.48)
GOV_OWN	-9.5356	-0.0065	-0.1177	-6.1196	0.0239	-0.5002
	(-0.64)	(-1.42)	(-0.97)	(-0.13)	(1.23)	(-1.53)
CRISIS	6.1137**	0.0028***	-0.0189	10.9978***	0.0029**	-0.0148
	(2.22)	(2.86)	(-1.21)	(3.82)	(2.31)	(-0.79)
GDP	-0.1377	0.0005	-0.0003	-0.0711	0.0001	0.0005
	(-0.87)	(0.85)	(-0.31)	(-0.43)	(1.38)	(0.44)
COUNTRY_GOV	-4.2925	0.0020	0.0013	-3.2616	0.0006	0.0193
	(-1.15)	(1.48)	(0.04)	(-0.63)	(0.38)	(0.52)
AAOIFI	-0.3647	0.0011	0.0179	4.5892	-0.0019	0.0551
	(-0.06)	(0.70)	(0.53)	(0.76)	(-0.68)	(1.37)
SSBSIZE	-4.9612***	-0.0006*	-0.0144**	-6.1273***	-0.0009***	-0.0141**
	(-7.27)	(-1.94)	(-2.45)	(-9.23)	(-3.68)	(-2.55)
SSBQUAL	-12.1631**	-0.0044***	-0.0761***	-9.9457*	-0.0008	-0.0527
	(-2.53)	(-2.89)	(-2.64)	(-1.78)	(-0.37)	(-1.49)
SSBMM	-1.9635	-0.0034	-0.1794**	2.3941	0.0013	-0.0571
	(-0.18)	(-0.93)	(-2.50)	(0.18)	(0.31)	(-0.69)
SSBMM^2	3.0303	0.0035	0.1093*	-0.9203	-0.0016	0.0486
	(0.33)	(1.05)	(1.78)	(-0.09)	(-0.42)	(0.69)
Adjusted R^2		0.6592	0.1236		0.6309	0.1732
Wald Chi2	113.29***	157.98***	60.97***	142.02***	100.86***	40.12***
Observations	234	148	234	184	113	184

Notes: This table presents the regression results from the third sensitivity test for three models (i.e. logistic regression for LOSS_AVOID, and random effect for both EM and DACC) examining the role of traditional and additional internal governance mechanisms in opportunistic earnings management for the Islamic banks sub-sample and investigating whether the

relationship between Shari'ah scholars multiple memberships and earnings management is non-linear. Columns 1-3 report the results for the joint effect of board characteristics and Shari'ah supervisory board, while columns 4-6 present the results for the joint effect of audit committee and Shari'ah supervisory board. Z-statistics are between parentheses. *,**,*** denote significance at the 10%, 5% and 1% respectively. SSBMM^2 is the squared term of Shari'ah supervisory board multiple memberships.

Table 11 – Propensity Score Matching Technique							
Matching method	Model	LOSS_AVOID		EM		DACC	
		(1)	(2)	(3)	(4)	(5)	(6)
K-Nearest neighbors							
N = 2	Treated	-0.201	-0.201	-0.157	-0.157	-0.173	-0.175
	Controls	0.051	-0.068	0.096	0.085	0.015	-0.015
	Difference	-0.252**	-0.133	-0.253**	-0.242**	-0.188**	-0.16*
	T stat	-2.16	-1.11	-2.46	-2.3	-2.3	-1.93
N = 5	Treated	-0.201	-0.201	-0.157	-0.157	-0.175	-0.175
	Controls	0.035	-0.063	0.091	0.068	-0.019	0.031
	Difference	-0.236**	-0.138	-0.248***	-0.225**	-0.156**	-0.206***
	T stat	-2.27	-1.26	-2.79	-2.3	-2.36	-2.75
Kernel	Treated	-0.196	-0.201	-0.183	-0.157	-0.172	-0.175
	Controls	0.014	-0.036	0.008	0.053	0.022	-0.13
	Difference	-0.21**	-0.165*	-0.191**	-0.21**	-0.194***	-0.045***
	T stat	-2.17	-1.7	-2.47	-2.56	-3.43	-2.77
Radius	Treated	-0.201	-0.201	-0.157	-0.157	-0.175	-0.175
	Controls	0.031	0.032	-0.013	-0.14	-0.005	-0.009
	Difference	-0.232**	-0.233**	-0.144*	-0.017*	-0.17***	-0.166***
	T stat	-2.48	-2.49	-1.84	-1.82	-3.14	-3.08

This table presents the results of the propensity score matching (PSM) technique.

*,**,*** denote significance at the 10%, 5% and 1% respectively.

APPENDIX	
Variable Definitions and Descriptions	
Variables	Definition
LOSS_AVOID	An indicator variable encoded 1 if the ratio of net income to lagged total assets is between 0 and 0.01, and 0 otherwise.
EM	Earnings management measure, estimated as the difference between discretionary realised security gains and losses and discretionary loan loss provisions.
DACC	Discretionary accruals estimated as the residuals from the cross-sectional Jones (1991) model as modified by Yasuda et al. (2004).
BODSIZE	The total absolute number of board members.
BODINDEP	The ratio of independent members over the total number of board members.
ACSIZE	The total absolute number of audit committee members.
ACINDEP	The ratio of independent AC members over the total number of AC members.
CEODUAL	An indicator variable encoded 1 if the CEO is also the chairman of the board, and 0 otherwise.
EBT	Earnings before taxes deflated by lagged total assets.
LEV	Ratio of total debt to equity.
AGE	Bank age measured by natural logarithm of the number of years the bank has operated in the country.
BANK SIZE	Natural logarithm of year-end total assets.
CFO	Cash flow from operating activities deflated by average total assets (average total assets recorded at the end of the current year and preceding year).
GRW	Ratio of market-to-book value of equity.
BIG4	An indicator variable encoded 1 if the bank's auditor is a Big Four, and 0 otherwise.
GOV_OWN	The government ownership, measured by the proportion of shares held by government.
CRISIS	An indicator variable encoded 1 for the financial crisis years 2007 and 2008, and 0 otherwise.
GDP	The country-prevailing GDP growth rate.
COUNTRY_GOV	The country governance index, measured as the average of six governance measures- control for corruption, government effectiveness, political stability, regulatory quality, rule of law, and voice and accountability- for the years 2007-2015 into one single index per country.
IB	An indicator variable encoded 1 if the bank is Islamic, and 0 otherwise.
AAOIFI	An indicator variable encoded 1 if the Islamic bank uses the standards of the Accounting and Auditing Organization for Islamic Financial Institutions, and 0 otherwise.
SSBSIZE	The total absolute number of Shari'ah supervisory board members.
SSBQUAL	The ratio of Shari'ah supervisory board members with financial qualification over the total number of SSB members.
SSBMM	The ratio of Shari'ah supervisory board members with multiple memberships over the total number of SSB members.

BODMEET	The number of board's meetings held in a year.
ACMEET	The number of audit committee's meetings held in a year.
MCAP	Natural logarithm form of the bank's market capitalisation which is measured by stock price per share multiplied by the number of outstanding shares, deflated by average total assets.
STOCK VOL	The standard deviation of annual bank's stock returns.