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Effects of Board Busyness on Financial Stability, Market Valuations and Dividend Payouts: Evidence from Alternative Banking Models

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ABSTRACT

This thesis investigates the impact of board busyness (i.e. multiple directorships held by outside board members) on the financial stability, stock market valuations and dividend payout policy of banks in a dual banking system (i.e. Conventional and Islamic). The results provide strong evidence for opposing effects of board busyness in terms of the two banking models. Specifically, conventional banks with busy boards of directors exhibit high financial stability (i.e. high profitability; low cost-to-income ratio; low insolvency risk and low credit risk). Board busyness in conventional banks is significantly and positively valued by the stock market. Furthermore, there is significant evidence that busy boards have a positive influence on conventional banks' dividend payout levels. In contrast to these findings, the financial stability of Islamic banks is adversely affected by the presence of busy board members. There is no supporting evidence concerning the market valuations of board busyness in the case of this bank type. Furthermore, Islamic banks that employ a busy board report a lower dividend payout ratio. Extended analyses indicate that busy Shari'ah advisory boards, which act as an additional layer of governance in Islamic banks, are negatively associated with the banks' financial stability. Likewise, investors provide significantly low market valuations for such an attribute of board busyness. The overall findings in the thesis are explained in terms of the extended agency conflicts, complex governance structure and the unique business model of Islamic banks, which require effective monitoring from two different boards (i.e. board of directors and the Shari'ah board). Conventional banks operate on a relatively less complex business model. Therefore, the various reputational benefits associated with board busyness (e.g. better decision-making, efficient utilisation of resources and effective monitoring) are more likely to be available and prevalent for these banks to enhance financial stability, equity value as well as payout strategies. The three empirical studies in the thesis offer important policy implications for international banking studies and for regulations governing countries with dual banking systems.

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The first two empirical chapters (Chapter 3 and 4) of my PhD thesis has been accepted to publish in the European Journal of Finance and Review of Quantitative Finance and Accounting, respectively.

My sincerely,

Trinh Quang Vu

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

LIST OF ABBREVIATIONS

Abbreviation	Meaning
2SLS	Two-Stage Least Square
3SLS	Three-Stage Least-Square
AAOIFI	Accounting and Auditing Organizations for Islamic Financial Institutions
AGM	Annual General Meeting
BHC	Bank Holding Company
BoD	Board of directors
CBs	Conventional Banks
CEO	Chief Executive Officer
CG	Corporate Governance
CII	Council of Institutional Investors
CSR	Corporate Social Responsibility
GCC	Gulf Cooperation Countries
GMM	Two-step system Generalized Method of Moments
IAHs	Investment Account Holders
IB	Islamic Banks
IFRS	International Financial Reporting Standard
IFSB	Islamic Financial Service Board
IVs	Instrumental Variables
LLP	Loan Loss Provision
MENA	Middle Eastern and African countries
NACD	National Association of Corporate Directors
OLS	Ordinary Least Square
PER	Profit Equalization Reserve
PLS	Profit-Loss Sharing
PSIA	Profit and Loss Saving and Investment Accounts
RDT	Resource Dependence Theory
SSB	Shari'ah Supervisory Board
SUR	Seemingly Unrelated Regressions
USD	US Dollars
VIF	Variance Inflation Factor

CHAPTER 1. INTRODUCTION

The global financial crisis of 2007–2009 marked a more controlled operational environment, increased complexity in governance and additional calls for effective monitoring by boards of directors (BoD) in the banking system (*see* Erkens et al., 2012; Körner, 2017; Anginer et al., 2018). This was followed by public calls and support from policymakers in designing effective board governance in banks so as to align the interests of managers with those of shareholders and other stakeholders (Shibani and Fuentes, 2017). While items of post-crisis financial regulatory reform (e.g. heightened capital and liquidity regulation, tools to solve regulatory migration, resolution authority, stress testing and capital planning) have significantly improved the performance and stability of financial institutions, other areas of reform (e.g. supplementary leverage ratio, compensation regulation) have caused greater instability. New stringent regulations have been proposed since 2010 to increase bank capital and liquidity requirements and to develop new tools to manage institutional failure. The primary objective of these attempts was to mitigate the probabilities of failed performance and promote long-term stability for financial institutions.

The complexity of banking transactions and financial instruments leads to substantial information asymmetries. At the same time, research related to the structure of effective governance and the financial stability, market valuations and dividend policy of banks is still developing. These financial indicators form essential pillars for a country's economic growth and stability as well as for banks' rigorous and prudent risk management (Kanas, 2013), and they have recently moved into the regulatory spotlight (Lepetit et al., 2018). For a broader set of stakeholders such as shareholders, managers, regulators and investors, internal governance mechanisms in banks (e.g. BoD and audit committees) are unique and more complex than in non-financial institutions (Elyasiani and Zhang, 2015). Intense regulation and greater asymmetry in banks lead to the special relevance and role of the BoD, which is responsible for approving a bank's policies, procedures and business strategies as well as has an ultimate oversight for corporate decisions. The duties and obligations of the bank directors (i.e. inside and outside directors) serving on the board may arise in two main contexts: a discrete decision brought to the board for approval, which increases the

directors' legal responsibility in terms of the bank's safety and soundness, and their obligation to provide oversight for the boards they serve (Macey and O'Hara, 2003; Adams and Mehran, 2003).

The uniqueness of governance mechanisms in banks implies the dominant role of the BoD in performance and risk-taking behaviour, market valuation and dividend payouts (e.g. Elyasiani and Zhang, 2015; Onali et al., 2016; Faleye and Krishnan, 2017). To inhibit misconduct and excessive risk-taking, both shareholders and regulators expect these boards to be active in establishing effective risk monitoring systems (Kress, 2018). Resource dependence theorists argue that monitoring by the BoD is vital for efficient resource allocation and risk mitigation (Johnson et al., 1996; Hillman and Dalziel, 2003). This board has the final say on a bank's strategic policies and decisions and can hence effectively mitigate possible agency issues that may arise. Consequently, the quality of board monitoring and their engagements in managerial decision-making can have direct implications for banks' financial stability, market value and dividend strategies (Yermack, 1996; Lin and Liu, 2009; Liu, 2015; Onali et al., 2016; Meng et al., 2018). Accordingly, undertaking too many directorships (i.e. board busyness) is likely to influence directors' performance in terms of bank stability and decision-making. It can also affect investors' perceptions of their bank's value and dividend policies, and it tends to be related to the extent of agency conflicts and/or the complication of a bank business model.

Research related to board busyness in the banking sector is indispensable due to the central role of the BoD in governing the business. Board busyness is a prevalent notion in both academia and the real world. A busy board refers to a board which includes a large proportion of "busy" outside members, who hold two or more outside directorships. In most cases, directors are "over-boarded", which means that they hold an excessive number of seats across different boards (Cashman et al., 2012). In principle, the busyness of an individual is gauged to infer their monitoring and advising ability through their involvement, attention, knowledge, skills, experience and networking, and hence, their behaviour in financial and business contexts. However, a precise assessment of board busyness and its influences on banks' outcomes and decision-making is challenging and inconclusive in relation to the two opposing arguments surrounding this attribute of the board. On one hand, it has long been argued that busy boards can offer

reputational benefits to their firms, such as extended business networking/connections and quick access to market resources (Jiraporn et al., 2009; Brennan et al., 2016). Holding multiple board seats can also promote effective monitoring due to a director's rich experience and valuable skills, which accrue from serving many firms (Jiraporn et al., 2008). This might enhance the quality of long-term decision-making and hence, such reputational benefits might lead to favourable implications for a firm's financial stability and value (Field et al., 2013; Muravyev et al., 2016). In addition, banks employing busy outside directors can positively influence their dividends policy through flexible access to capital markets to raise funds at lower costs. As such, the resource-rich outside directors can contribute to the higher demand of the banks regarding external resources or environmental interdependency (Kutubi et al., 2018). On the other hand, a criticism levelled is that directors are unable to monitor their firms effectively when they are "over-boarded", as they will have limited time to scrutinise the bank's operations and strategic decisions. This can adversely affect a bank's performance, increase risk-taking behaviour (Ferris et al., 2003; Fich and Shivdasani, 2006) and give rise to agency problems (Core et al., 1999). The disadvantages of board members' multiple affiliations are particularly severe for large and complex financial firms (Kress, 2018). The accumulation of multiple directorships by outside directors can further entail negative implications for bank governance and dividend strategy. Board busyness can lead to higher agency costs related to free cash flow and can promote adverse impacts on a bank's dividend policy (Chou and Feng, 2018).

A study to investigate the issue of multiple directorships related to performance in industrial institutions was first conducted by Ferris et al. (2003), which was followed by substantial contrasting evidence exploring multiple perspectives on the issue of director busyness in the non-financial sector (e.g. Harris and Shimizu, 2004; Fich and Shivdasani, 2006; Cashman et al., 2012; Field et al., 2013; Falato et al., 2014; Sharma, 2011; Chou and Feng, 2018). In relation to banking, a few prior studies have examined the various factors underlying cross-variation in banks' financial stability (performance and risk) and other financial outcomes. Some studies (see, among others, Mollah and Zaman, 2015; Elyasiani and Zhang, 2015; Mollah et al., 2017) have specifically investigated the important role played by corporate governance (CG), such as BoD characteristics/structure, the BoD's

and managers' compensation packages and ownership structure. However, research related to BoD busyness (except for Elyasiani and Zhang, 2015, Kutubi et al., 2018) often excluded banks from their samples. This is because the complexity and opaqueness[1] of banks have an influential role in their governance mechanism (i.e. in both the interaction between managers and the boards and between the regulators and the bank), exacerbate the information asymmetry (agency) issue and require more difficult scrutiny from the BoD over bank decisions than in the case of any other non-financial firms (Macey and O'Hara, 2003; Onali et al., 2016).

No empirical work to date has investigated the effect of board busyness on financial stability, market valuations and payout decisions across different bank types. In conventional banking literature, Elyasiani and Zhang (2015) demonstrate that busyness has a significant impact on the performance and risks in US bank holding companies. Kutubi et al. (2018) present similar evidence on board busyness for South East Asian banks, which are characterised by weak governance and high concentrated ownership. In addition, within the banking setting, examining stock market valuations (e.g. Caprio et al., 2007; Belkhir, 2009; Zulkafli et al., 2010) and dividend policy (e.g. Onali et al., 2016) is restricted to focusing only on other CG mechanisms and characteristics (e.g. ownership structure, board size and CEO duality).

To the best of my knowledge, empirical evidence on board busyness within the Islamic banking context is scarce. Therefore, this thesis aims at filling this important gap in the current banking literature through conducting a comparative and empirical assessment between Islamic banks (IBs hereafter) and conventional banks (CBs hereafter). CBs are a part of the traditional banking model, which provides services on a regular interest basis (Hoepner et al., 2011; Alnasser and Muhammed, 2012). Meanwhile, the operations of IBs are principally driven by a constrained banking model, which inherits both moral accountability values and legal responsibilities (Abdelsalam et al., 2016). Investigating board busyness in a comparative manner across IBs and CBs is indispensable to the ongoing debate

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[1] Banking firms are able to change the risk composition of their book value of total assets more quickly than other industrial firms. They are also able to readily hide problems by many ways such as extending loans to customers which cannot service previous debt obligations (Levine, 2004). Furthermore, "the business of securitization has in essence (1) speeded up the process of lending at the origination stage and in interbank markets (for example, repo) and (2) increased opacity by merging large amounts of information and relying on credit ratings" (Mehran et al., 2011, p.4-5).

related to factors contributing to the resilience and stability of the two banking sectors (see Čihák and Hesse, 2010; Abedifar et al., 2013; Beck et al., 2013). The rapid growth of IBs in the past four decades implies that the impact of this bank type on the global economy might be substantial. The financial crisis in 2007–2009 has further amplified the attraction of exploring the stability, market value and policy efficiency of the IB model on the part of practitioners and monetary authorities, with the aim to explore a viable and resilient alternative financial system to the CB system (Ibrahim, 2015). Accordingly, gaining an in-depth knowledge about issues surrounding the IB system would assist bank regulators in producing reflective guidelines in order to improve the managerial quality of such banks as well as to enhance the sustainable stability of the international banking sector.

The theoretical motivation for the research questions of the thesis is identified by the systematic differences in governance structures adopted by IBs and CBs (Mollah and Zaman, 2015). For IBs, under the constrained banking model and the nature of the products/services offered, the BoD has additional responsibilities related to the establishment of the appropriate Shari'ah governance framework besides the development of relevant policies to ensure that all activities are conducted in compliance with the Shari'ah law. Moreover, unlike the single-governance layer in CBs (i.e. BoD), IBs are subject to a double-governance mechanism with a Shari'ah Supervisory Board (SSB hereafter) in addition to their regular BoD. The decisions of the BoD depend significantly on the supervisory effectiveness of the SSB for Shari'ah compliance (Mollah and Zaman, 2015). In contrast, the single-tier (unitary) boards in CBs are more likely to make decisions faster, as the frequency of board meetings is greater than in the dual-board structure (Jungmann, 2006). All directors in this unitary board structure are involved in the board's decision-making process and have the same access to information, which can improve the information flow. However, the main drawback of the unitary board in CBs is the non-separation between managerial and supervisory roles, which is reflected as the main advantage of the dual-board structure in IBs. Consequently, it is essential to understand how IBs are typically governed by a unique dual-board governance in contrast to the single-tier boards in CBs (Farag et al., 2018).

As such, three empirical studies will be carried out, with the first investigation

focusing on both listed and non-listed banks' financial stability in a comparison between IBs and CBs employing busy boards. The other two empirical studies will focus on the examination of listed banks that are being traded on stock markets. These studies include an exploration of the way in which board busyness relates to the market valuations and dividend payout decisions of the two bank types. The reasons to choose these three financial indicators as the outcomes of board busyness are threefold. *First*, findings related to such indices could draw important continuing stories about the banking health and performance because they are mostly concerned by regulators, investors and other stakeholders. Practitioners and scholars have both highlighted the importance and influence of these variables on the health of the whole economy. *Second*, research questions about stability, market value, and dividend policy effectiveness emerge under the increasing financial instability of global banking system due to the complexity of the market and market volatility. *Last but not least*, they also emerge under the revolution of financial institutions after a recent turmoil caused by several reasons including corporate governance issues. Taken together, this thesis has laid an emphasis on the importance of empirical studies related to these financial indicators of banks, which are of great interests of numerous prior research particularly in corporate governance area.

Therefore, the specific research objectives are the following:

(i) To investigate the effects of busy boards of directors on the financial stability of conventional banks in comparison to their Islamic counterparts. To additionally examine the effects of busy Shari'ah supervisory boards on financial stability within Islamic banks.

(ii) To comparatively assess the influences of busy boards of directors on the market valuations of listed conventional banks and their Islamic counterparts. To additionally investigate the effects of busy Shari'ah supervisory boards on the market valuations of listed Islamic banks.

(iii) To examine the effects of busy boards of directors on dividend payout policies of listed conventional banks compared to their Islamic counterparts.

Following above research objectives, the three empirical chapters of the thesis are organised as below:

Study 1- Board Busyness and Financial Stability: Evidence from Alternative Banking Models (Chapter 3). This chapter extends the busyness-financial stability topic in terms of the non-financial sector by undertaking comparative analyses for IBs and CBs. The study employs a multi-country sample for fourteen countries for the period of 2010–2015. The results indicate that board busyness exhibits a differential impact on bank financial stability. In comparison to CBs, IBs with busy boards show low performance and high risk-taking. These findings are intensified as the degree of board busyness increases. Moreover, IBs with less busy SSBs are relatively more financially stable and have better financial performance when compared to those with busy SSBs. Only SSBs with lower degrees of busyness can improve the financial stability of their banks. The overall findings suggest that the preferential impacts of board busyness on CBs' stability are more dominant when compared to IBs.

Study 2- Market Valuations of Busy Boards: Evidence from Alternative Banking Models (Chapter 4). This chapter further extends the empirical examination of the stock market pricing of board busyness across two bank types. The aim is to explore whether and how investors valued board busyness for these banks. The analyses are based on a multi-country sample for listed IBs and CBs operating in eleven countries over the period of 2010–2015. The study finds substantial evidence of the differential market valuations of busy boards across IBs and CBs. For CBs, investors tend to perceive board busyness as significantly increasing the bank's value. In contrast, investors in IBs seem not to perceive any value for their banks when appointing a busy BoD, showing insignificant market valuations. However, IBs with busy SSBs exhibit significantly low firm value, suggesting that investors tend to be more sensitive to SSB busyness than to the busyness associated with the BoDs.

Study 3- Empirical Study 3: Board Busyness and Dividend Payouts: Evidence from Alternative Banking Models (Chapter 5). The purpose of this chapter is to test for the effects of board busyness on the dividend payouts policy in the two banking models. The study uses a multi-country sample for listed IBs and CBs operating in eleven countries between the years 2010–2015. The findings

show that a CB with a busy board offers significantly high dividend payout ratios. In contrast, having busy boards in IBs leads to a detrimental effect on the banks' dividend level. These results suggest that the dividend strategies of IBs are likely to be more sensitive to board busyness level than those of their conventional counterparts, which can be attributable to the constrained dividend model of the former.

Notably, busy SSBs are examined in the first two studies because the impressive growth rate of IB industry has been accompanied by growing pains in the ear of human capital management. This is particularly true of the training and preparation of SSB scholars, who are often criticised due to the lack of uniformity in their decision rulings. In addition, Shari'ah requirements can lead to unique agency relations of IBs resulting in Shari'ah non-compliance risk and in turn, financial turmoil. Therefore, we can expect that in theory, SSBs should play an important role in matters related to Shari'ah law and their existence may have significant effects on financial stability of IBs. We can also predict that this religious board might be still valued by market participants because of its possible impacts on risks and profitability. However, busy SSBs will not be tested in the third empirical chapter due to the lack of theoretical background and empirical evidence which can support for the substantial relevance of this board in dividend payout decision-making of IBs.

The thesis contributes to the growing stream of IB–CB literature (see, among others, Beck et al., 2013; Abedifar et al., 2013; Mollah and Zaman, 2015; Mollah et al., 2017; Safiullah and Shamsuddin, 2018a). It extends previous work on the implications of overcommitted boards in corporate governance studies (e.g. Field et al., 2013; Elyasiani and Zhang, 2015; Chakravarty and Rutherford, 2017). The findings in this study are also timely to the paucity of works on governance in the two bank types (Mollah and Zaman, 2015). The thesis further adds new insights to the ongoing debate about the effect of institutional characteristics and system of governance on various corporate outcomes such as firm performance, risk-taking, capital structure, cost of debt and cash holdings (*see* Gompers et al., 2003; Brown and Caylor, 2006; Harford et al., 2008; Fahlenbrach, 2008; Chung et al., 2010; Meng et al., 2018). More specifically, the thesis offers the first comparative assessments between IBs' and CBs' financial stability (Study 1), market valuation (Study 2) and dividend policy (Study 3) by utilising the important board attribute

of busyness. It provides international evidence for the differential effects of board busyness across the two bank types.

CHAPTER 2. RESEARCH BACKGROUND

2.1 Introduction

This chapter first provides key ideas on CG and BoD attributes, as have been reported in the most significant studies in the current banking literature (Section 2.2). The chapter shall also critically elaborate on four theories (i.e. agency and resource dependence, and stakeholders and legitimacy theories, and dividend hypotheses) which are employed to formulate hypotheses about the influences of board busyness on financial stability, market valuations and dividend payouts of banks (Section 2.3). This is followed by the two competing hypotheses of board busyness, including the reputation and busyness hypotheses (Section 2.4), prior studies on board busyness in non-financial and financial firms (Section 2.5) and a background on Islamic banking (Section 2.6). Furthermore, dealing with research questions in this thesis requires a profound understanding of IBs in comparison with CBs. Section 2.7 hence distinguishes between the two bank types in relation to their business models, agency conflicts and governance regime. Finally, Section 2.8 summarises the chapter.

2.2 Corporate Governance in Banking

The concept of CG has been widely used and studied in numerous disciplines such as finance, management and accounting. In general terms, CG can resolve certain challenges faced by BoDs, especially the interaction between and the relationships of the BoD with managers, shareholders and other stakeholders (e.g. creditors, debt financiers, regulators) who are interested in the organisation's affairs (Tricker, 1994). Therefore, the term "CG" is often narrowly applied to research questions related to the structure, characteristics and functions of BoDs (Blair, 1995). Following this, this thesis considers CG as "the structure whereby managers at the organizational apex are controlled through the BoD, its associated structures, executive incentive, and other schemes of monitoring and bonding" (Donaldson, 1990, p. 376).

Previous literature beginning from Macey and O'Hara (2003) has underlined the dissimilarities between the CG of industrial (non-financial) institutions and their financial counterparts such as banks. The former is governed according to the Anglo-American model, in which the exclusive focus of CG is to maximise

10

shareholder (owner) wealth, while the CG of the latter (i.e. banks) fits into a variant of the Franco-German paradigm where the fiduciary duties of the BoD go beyond those towards the shareholders to include other stakeholders such as bondholders, depositors, regulators, buyers of bank guarantee services (e.g. loan commitments, standby letters of credit) and so on. This unique feature of CG challenges banks, as these banks, being value-maximising businesses, must balance the shareholders' demands and the public's interests; this can potentially promote a greater level of agency conflicts among stakeholders and bank managers (Mehran et al., 2011; Mehran and Mollineaux, 2012).

For example, if a bank is publicly traded on stock markets, it has to satisfy investors and follow strict banking regulations due to its economic importance (i.e. potential for contagion within banks and from banks to the real economy). While investors tend to demand a bank's profitability, regulators are more likely to demand a bank's soundness and financial stability. Thereby, the management of a bank must satisfy the demands of both parties, which in most cases are in conflict with each other. Profitable projects may not necessarily increase the quality of financial intermediations, because profitability is directly associated with risky investments. As such, a bank's BoD should be responsible for controlling optimal levels of risk to accomplish target profits, which requires bank-specific and macroeconomic inside information and expertise. Therefore, the board has an essential duty to balance the objective of bank profitability and financial stability via optimal risk-taking (Kutubi et al., 2018), leading to a greater degree of pressure from the BoD in advising and monitoring managers (Klein, 1998). The complexity of bank governance implies dissimilar effects of the BoD's effectiveness on financial indicators compared to industrial entities (see Macey and O'Hara, 2003; Adams and Mehran, 2003; Elyasiani and Zhang, 2015).

BoDs in banks accommodate inside and affiliated members, including senior managers, as well as outside directors. Insiders have unique business knowledge which outsiders do not possess (i.e. information asymmetry – Brennan et al., 2016). They provide valuable information about the institution's activities (Byrd and Hickman, 1992; Chapra and Ahmed, 2002) but are influenced by the CEO's power (Mollah and Zaman, 2015). Meanwhile, the role of the outside directors entails two BoD governance functions in serving the owners: (1) initiating, approving and implementing management/corporate decisions and (2) ratifying

and scrutinising the implementation of those decisions (Fama and Jensen, 1983a; Shaukat and Trojanowski, 2018). Prior research has shown a link between effective monitoring and the presence of outsiders on the board for firms experiencing gross failures of strategy and performance (Klein, 1998; Sierra et al., 2006). Pathan (2009) also reports that outside directors in bank holding companies are associated with less risk-taking, suggesting that they "may view their role as balancing between the interests of shareholders and the other relevant bank stakeholders including depositors and regulators" (p. 1348). The thesis therefore focuses on the effectiveness of outside directors but also extends the scope to more severe agency conflicts within banks. The issue reflects the higher demand for monitoring and consulting by outside directors in banks than in the case of non-financial firms.

2.3 Theoretical Framework

2.3.1 *Agency Theory*

From a simple financial perspective, the vital matter in CG is to envision rules (e.g. guidelines, directions) and incentives (e.g. implicit or explicit "contracts") to effectively align the behaviours of management/executives (agents) with the wishes of owners (principals) (Hawley and Williams, 1996). Problems related to agents can occur when they act opportunistically and make decisions based on their self-interest rather than the interests of the principals. This thesis, following Jensen and Meckling (1976), identifies this problem as being that of an agency conflict, and this includes the sum of the agency costs of monitoring management (the agent), bonding the agent to the principals and residual losses (see Figure 2.1). Among these three main agency costs, the last one is key, as the other two expenditures (i.e. monitoring and bonding) are incurred only in the degree to which they produce cost-effective decreases in the residual loss (Williamson, 1988). Residual loss refers to a fall in the firm value obtained when entrepreneurs dilute their ownerships, leading to the shift out of income and into managerial cost, and in turn, to loss. Monitoring and bonding costs can be helpful in restoring the firm's performance towards pre-dilution stages. The minimum of the sum of these three factors, therefore, will be the irreducible agency costs. Equity purchasers only pay for the projected performance of a firm after considering agency costs of these three kinds. As such, "the entrepreneur will bear the entire wealth effects of these expected costs as long as the equity market anticipates

these effects" (Jensen and Meckling, 1976, p. 314).
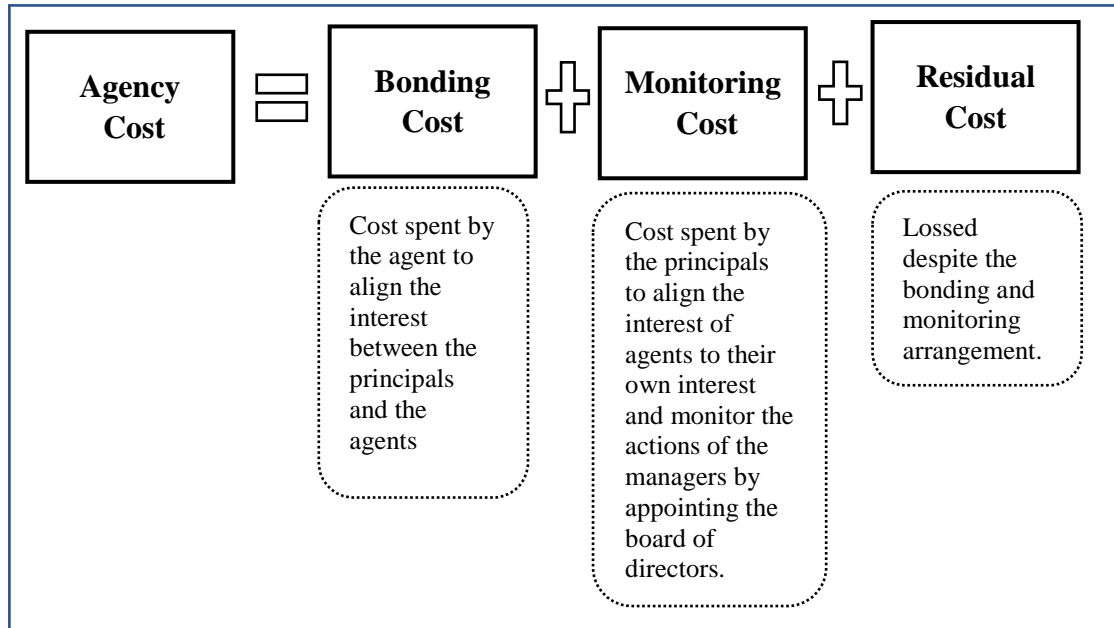
Figure 2.1: Agency Cost

Source: Jensen and Meckling (1976)

More specifically, agency theorists (e.g. Coase, 1937; Jensen and Meckling, 1976) argue that corporate managers can raise funds for their firms from capital providers (i.e. investors) either to put them to effective use or to cash out his/her holdings in the company. The capital providers need to take advantage of the managers' ability to generate returns on their money while the managers, in contrast, need to utilise the capital from these providers to invest in projects or cash out his/her holdings. However, it is probable that funds of the providers become a worthless piece of paper back from the manager. As such, in this context, the difficulties of capital providers have in assuring that their capital will not be expropriated or wasted on negative net present value investments refer to the agency problem. Consequently, it can be held that the fundamental inference of agency theory is that firm's value may not be maximised as desired by the principals, since the management possesses discretion which can allow them to appropriate the value towards themselves before the firm owners.

In an ideal world, the owners of the firm would require managers to sign a complete and legal contract that specifies exactly and thoroughly what and how these managers would do under all states of the world and most importantly, how profits will be distributed to the owners and to the other stockholders via the payout policy. In practice, it is too difficult to describe and foresee future

contingencies, technically leading to an incomplete contract (Shleifer and Vishny, 1997). Thereby, managers can obtain the rights to make individual decisions, which cannot be clarified or anticipated in the legal contract under which debt or equity is constituted (Grossman and Hart, 1986). This results in the principals' problem (Ross, 1973) and the agency problem (Fama and Jensen, 1983a, b). In addition, in the cases a firm funding is collected from many investors, these investors themselves are often hold a very small portion of the whole fund and hence, they are very poorly informed to work-out even the control rights they should have. The free rider problem discourages those individual investors to learn about the firms they owned, or even to take part in the governance (Downs, 1957), "just as it may not pay citizens to get informed about political candidates and vote" (Shleifer and Vishny, 1997, p.741). Consequently, if courts or capital providers actively get involved in detailed contract enforcement, the managers' effective control rights and thus, the boardroom they have for discretionary distribution of capital, would end up being much more extensive than they should have been.

Against the above background, this thesis discusses the agency conflicts or agency costs in cases that complete and contingent contracts between managers and investors are infeasible. The study claims that the agency theory formula for principal-agent conflict looks to BoDs to supervise the verification process on behalf of the principals (Brennan et al., 2016) (Figure 2.2). The board is viewed as a "professional referee" (Fama, 1980, p. 293), which serves as one of the monitoring agents that has a legal and moral obligation in aligning manager and shareholder interests to ensure that the business is run in the best interests of shareholders (Fama and Jensen, 1983a; Monks and Minow, 2011). In other words, it has fiduciary responsibility of monitoring the actions of executives (agents) to protect shareholders' interests (principals) (Eisenhardt, 1989; Jensen and Meckling, 1976; Mizruchi, 1983), supported by legal and finance scholars (Bainbridge, 1993; Berle and Means, 1932). Therefore, monitoring by boards is essential since potential agency costs could be incurred when executives pursue their self-interest at the expense of shareholders' and other stakeholders' interests. In that way, one can anticipate the fact that board-related characteristics/attributes are associated with the levels of agency costs (Renders et al., 2010; Adams et al.,

2010; Shaukat and Trojanowski, 2018), and hence, performance, value and other financial indicators.

Remarkably, the studies on the issue of agency conflicts have recently extended beyond conventional contractual structures between key executives and shareholders. For example, Kapopoulos and Lazaretou (2007) emphasise that such agency problem could be arisen between strong blockholders and weak minority shareholders in the context of family-controlled companies. They explore a positive relation between the degree of ownership concentration and effectiveness of control mechanisms. Dharwadkar et al. (2000) also apply the agency theory in the case of unique CG of privatised companies operating in emerging countries. They find the exacerbation of the conventional agency problems and the creation of issues associated with the expropriation of minorities' rights. Bebchuk et al. (2008), furthermore, contend that the size of agency conflicts increases when the size of cash flow rights reduces. They also find that agency costs in an order of magnitude larger than those related to controlling shareholders, could be created due to the separation of cash flow and control rights. Relating this finding to the case of IBs model, where cash flow and control rights are separated (see more details in Section 2.7.2), agency problems of these banks are expected to be unique and more severe. More importantly, Safieddine (2009) find that agency structure of IBs increases the trade-offs between the compliance of Islamic rulings and mechanisms protecting the rights of investors. Accordingly, the uniqueness of the agency relationships at institutions offering financial services, whether Islamic or conventional, stems from the agents' duty to protect and promote the interests of all capital providers, including depositors, investors and shareholders (Byrd and Hickman, 1992; Safieddine, 2009). The unique agency relationships in IBs compared to CBs is thoroughly discussed in Section 2.7.2.
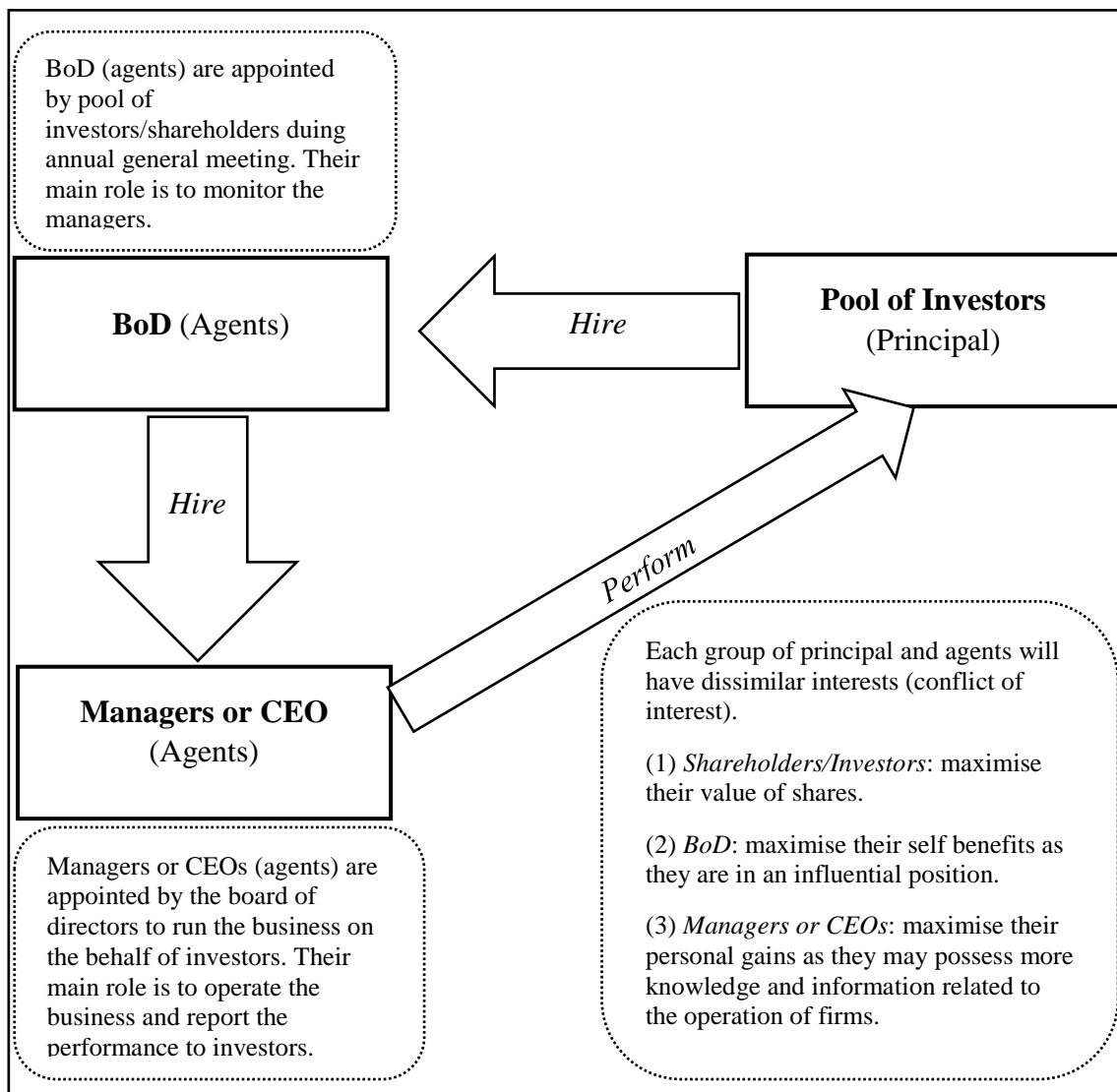
Figure 2.2: Conceptual Framework of Agency Theory

Source: Jensen and Meckling (1976)

2.3.2 *Resource Dependence Theory*

Resource dependence theory (RDT) was introduced for the first time by a seminal work written by Pfeffer and Salancik (1978). Over time, RDT has been applied broadly across various research areas to explain how a firm reduces environmental interdependence and uncertainty (Hillman et al., 2009); and till date, it is still one of the most influential theories in organisational theory and strategic management. The initial premise of this theory is that an organisation behaves as an open system (Hatch, 1997), dependent on contingencies and external resources in their environment (i.e. all structures, actors and events that affect the dependence of an organisation on outside resources) to operate and survive (Pfeffer and Salancik, 1978; Biermann and Harsch, 2017). As stated by

Hillman et al. (2000), RDT focuses on the role of directors in providing access to corporate resources and securing these resources to a firm through their linkages to the markets and external environment. Johnson et al. (1996) argue that RDT concentrates on the appointment of representatives of independent institutions as an effective means to increase access to essential resources, which are critical to a firm's success. For instance, an outside director who are also working in a law company, can provide his/her legal advice in the periodic board meetings or even private communication with management or executive boards that should otherwise be more expensive for an organisation to secure. Accordingly, board directors can bring useful resources (e.g. information, skills, legitimacy and networking) to their "home" firm. Indeed, strong support has accrued four main benefits of those directors which include essential information by providing some advice and counsel, accessing to information channels between the organisations and environmental contingencies, providing preferential access to corporate resources, and legitimacy (Pfeffer and Salancik, 1978). The dynamic nature of the boards, e.g. altering board composition when environmental needs change, is likely to be a nearly normative convention. Provan (1980) states that firms can attract and recruit powerful community influential onto their boards. Goodstein (1999) claim that high-regulated firms tend to need more outsiders with relevant industry knowledge and experience. Those outsiders can enhance corporate social performance (Johnson and Greening, 1999).

Existing literature (e.g. Hillman et al., 2000) proposes three main types of directors corresponding to the different types of resources that directors can bring to a board: business experts, support specialists and community-influential directors. Business experts (i.e. current and former senior executives and directors of other for-profit companies) can provide their expertise and experience in terms of business strategy, decision-making and problem-solving. They can contribute good resources for successful firm operations because of their professions and connections, and they can therefore enhance the legitimacy of the firm in society and accomplish goals of efficiency and better performance (Pfeffer, 1972; Farag et al., 2018). Support specialists (e.g. lawyers, bankers, representatives for insurance companies, public relations experts) can support the firm in their specialised field. Lastly, community-influential directors are those serving as political leaders, university faculty members, members of clergy and

leaders of social and community institutions (Hillman et al., 2000).

Despite the predominant theory in the studies on the boards is agency theory (e.g. Johnson et al., 1996; Zahra and Pearce, 1989; Dalton et al., 2007), the greatest research influence in this area might be still RDT (Hillman et al., 2009). Corporate boards allow companies to minimise dependence or increase resources (Pfeffer, 1972). Previous literature on the boards (e.g. Johnson et al., 1996; Zahra and Pearce, 1989) highlight that RDT provides a more successful lens for understanding boards than any other board perspectives including agency and stakeholders theories. RDT scholars stress two board attributes (composition and characteristics) as antecedents of three board roles (service, strategy and control). They suggest that directors of the board can bring good resources for successful firm operations because of their professions and communities, hence, enhance the legitimacy in society of the firm and accomplish goals of efficiency and better performance (Pfeffer, 1972). For instance, those directors can be actively involved in the strategic arena through advice and guidance to the firm's CEO, by introducing their own evaluates or alternatives. Thus, directors can shape these creativities directly by recommending new business ideas or introducing their analyses. However, developing and executing those strategies are tasks of CEOs (Zahra and Pearce, 1989).

Early empirical evidence on the RDT focuses on the BoD's composition, which indicates the board's ability to provide critical resources to the organisation. Typically, Pfeffer (1972) finds that the size of the boards is likely to be associated with corporate environmental needs and those with higher interdependence require a greater ratio of independent/outside directors. Specifically, firms with bigger BoDs are likely to require a higher percentage of independent directors to have access to external resources. Sanders and Carpenter (1998) also support this idea by providing evidence for the positive link between board size and a firm's level of internationalisation. Other scholars have subsequently emphasised the great need to "match" the resources brought by the boards to corporate needs (Hillman et al., 2009). Boyd (1990) contends that board size is a hindrance, whereas interlocking directorates or multiple directorships are a benefit, implying that "resource-rich" directors should be the focus of board composition. Thus, "it's not just the number, but the type of directors on the board that matters" (Hillman et al., 2009, p. 1408). Moreover, because the theory recognises the

significant role of external factors on firm behaviours, management committee acts to mitigate environmental uncertainty and dependence (Hillman et al., 2009). However, banks that operate in a stricter regulated environment are less flexible in terms of determining their board size and independence. In addition, as argued by Engelberg et al. (2012), these banks often employ personal relationship in situations that client screening is not easy and active scrutinising is required. Therefore, from RDT perspective, they tend to consider board composition while focusing on directors' multiple directorships as an effective way of accessing external resources. The resource-rich directors can help fulfil the banks' demands regarding outside resources or environmental interdependency.

In sum, while agency theory describes problems related to the conflicting interests of managers and shareholders, RDT theory focuses on the role of directors in providing access to firms' resources and securing these resources for a company through their linkages to the market and outside environments. In this research, based on the research questions set in the Introduction Chapter, agency theory and RDT are chosen and applied as two fundamental theories because they are evidenced to be the most common and biggest theoretical frameworks in the CG field. They have been shown to be particularly useful when analysing the characteristics and functioning of BoDs in relation to corporate outcomes. With regard to agency theory in CG as well as corporate finance, it is gaining momentum for all the right reasons. In the context of increasingly volatile markets, this theory becomes indispensable when the interests of both shareholders and banks need to be taken into account. The former should place their trust in the bank managers and make efforts to understand the corporate business decisions on a daily basis. Likewise, managers should preserve the trust and confidence of shareholders by keeping the interests of the firm's owners in their minds. There should be rich communication between these two parties; for example, managers are encouraged to send out valuable information to explain to the shareholders the rationale behind key business decisions or any substantial changes.

Equally, RDT theory is also imperative in the context of the CG of banks due to their need for external resources under conditions of environmental uncertainty. Many of these resources appear to be controlled either directly or indirectly by governments; thus, recruiting BoDs, especially those who have a substantial

impact on accessing key regulators and the government due to their knowledge and connections, is considered to be one of the crucial strategies for bank survival. This may, in turn, improve the legitimacy of banks in society and help them enhance performance and achieve their ultimate objectives. Consequently, this thesis argues that RDT can provide a convincing justification for the creation of linkages between banking institutions and their outside environment through BoDs since banks that create linkages are more likely to secure their survival and performance.

More importantly, agency and RDT are directly linked to two opposing hypotheses of board busyness (i.e. the main variable of interest in this study). They are indeed theoretical foundations of the busyness and reputation hypotheses, respectively. Drawing on these two theories, board busyness can facilitate the contagion of corporate policies and strategies by enhancing the knowledge, skills and experiences of outside directors, which are effectively utilised in their monitoring role (i.e. agency theory) and in their information, networking and advising function (i.e. RDT theory). Therefore, compared to other common theoretical frameworks in CG research, these two theories are superior in the context of testing board busyness, particularly in the banking sector. Hence, they are sensibly employed as key theories in this thesis. More detailed discussions are provided in Section 2.4.

The above theories are used as the dominant theoretical rationales to explain why busy boards are related to bank financial outcomes through factors such as financial stability, market value and dividend policy. In addition, this study also includes two additional theoretical frameworks, i.e. *stakeholder* and *legitimacy* theories that agency and RDT are narrow forms of, respectively. They are expected to add supplementary values and explanations for the study results in some cases, including the evaluation of the SSBs' current role in fulfilling the required religio-social legitimacy of IB operations. Specifically, this research examines the busyness of SSBs using stakeholder and legitimacy theories, which suggest that IBs need to "uphold ethical and religious compliance as a key operational characteristic to operate business and to demonstrate ultimate accountability to stakeholders" (Haridan et al., 2018, p.1036). The next section provides critical in-depth discussions about how *stakeholder* and *legitimacy* theories could be understood and applied to the particular context of this thesis.

2.3.3 *Stakeholder and Legitimacy Theories*

Both stakeholder and legitimacy theories claim a broader concept of CG that is applied in modern businesses (see Haridan et al., 2018). They therefore help to strengthen the arguments in this study. In *general* terms, these two theories could be considered to be extended forms of agency and RDT. While agency theory focuses on the conflicts of interests between managers and shareholders, stakeholder theory extends these conflicts to the case of a broad range of stakeholders. Likewise, whilst RDT discourses the role of directors in offering valuable resources to their firms such as knowledge and expertise, networking, experience and skills, the legitimacy may influence RDT as well as other institutional theories because it could be related to the reputational gain of an organisation through legitimacy.

To be more specific, *stakeholder* theory emphasises that the decision making of managers and the interests of all stakeholders have intrinsic value; no one set of interests is expected to dominate the others (Freeman et al., 2018). In this thesis, the theory is reflected through the unique role of bank boards in balancing the different interests of several stakeholders. In other words, it provides greater latitude in widening the concept of CG as managers and directors need to serve both the interests of the bank owners and the interests of other stakeholders such as regulators, policy makers, local communities, creditors, customers, employees, investors and market participants (Garcia-Torea et al., 2016). Given that unlike non-financial firms, banks themselves should be thought of as groupings of stakeholders, managing their interests, needs and viewpoints might be the main purpose of banking institutions. This management of stakeholders' interests is the duty of bank managers, who are expected to control their business for the stakeholders' benefits. This ensures their rights and participation in the bank's decision-making process (Elyasiani and Zhang, 2015). These managers should also act as the agents of the stakeholders to guarantee the bank's survival and hence ensure the long-run stakes of each interest group.

Existing research has found a significant role for effective CG practices, but this depends on how well a firm can manage the diverse expectations and interests of various groups of stakeholders. Nevertheless, building a good model to devise a principle for making trade-offs among diverse stakeholders appears to be

challenging. In the context of IBs, this issue seems more acute because the CG objectives of this type of bank comprise reassuring stakeholders that they will receive fair investment returns and Shari'ah compliance. Indeed, from the IBs' perspective of the stakeholder theory, it is essential to provide a more enduring and solid justification regarding the qualification of stakeholders, as well as the rights and duties that both IBs and their various stakeholders may assume. Based on the concept of a stakeholder (i.e. having property rights that are at stake or at risk because of voluntary or involuntary actions of the company), an IB is expected to preserve the property rights of all shareholders and other people involved in the process of acquiring or earning the IB's property, in addition to those who can be threatened as a consequence of the IB's activities. Stakeholders of IBs, therefore, include those having obligations arising from either explicit or implicit contracts. The former is clearly indicated in the Shari'ah rulings of contracting while the latter is "*unwritten codes of conduct*" for the various stakeholders, influenced by IBs' operations (Iqbal and Molyneux, 2016). Furthermore, the need to conform with Shari'ah law in IB transactions suggests that these banks are driven not only by the principle of profit maximisation, but also by the pursuit of social and moral responsibilities for the well-being of fellow men such as consumers, shareholders, etc. Therefore, the Shari'ah framework of stakeholders is likely to strive for the balanced and harmonised interests of various groups of stakeholders, built upon moral and ethical principles (Metwally, 1997). For that reason, this thesis argues that social norms and Islamic values in the IB sector should exert a significant influence on the use of the stakeholder's concept and on the management of CG issues.

With regard to *legitimacy* theory, the term 'legitimacy' refers to "a generalized perception or assumption that the actions of an entity are desirable, proper, or appropriate within some socially constructed system of norms, values, beliefs, and definitions" (Suchman, 1995, p.574). Against this concept, legitimacy theory has become one of the most popular theoretical constructs used for making viable predictions. It plays a vital role in describing the behaviours of firms when they implement and improve the voluntary disclosures of social, economic and environmental information. This development of disclosure aims to fulfil the corporate social contract, which helps to recognise firms' goals and their survival in a turbulent environment (Idowu, 2013). Vitally, the activities of organisations

should be in accordance with the expectations of society regarding social and moral values. They need to justify their existence through legitimate economic and social actions that will not endanger the existence of society and the natural environment. If they do not, they will be severely sanctioned by the society in which they operate, leading to their possible failure (Burlea and Popa, 2013).

Furthermore, previous studies highlight that *legitimacy* theory could influence RDT and other organisational theories. It is observed as an "anchor-point of a vastly expanded theoretical apparatus addressing the normative and cognitive forces that constrain, construct, and empower organisational actors" (Suchman, 1995, p.571). As such, corporate managers have earned the firm's reputation by formulating different strategies to maintain the legitimacy of the firm's operations, thus enhancing the corporate stakeholders' confidence (Patten, 1992). One can translate this theory into the way that firms commit themselves to adopting organisational social behaviour in their CG mechanism for the purpose of ensuring compliance with the values and social norms of the respective societies that they operate in (Golant and Sillince, 2007). This argument implies that the integrity of a firm might be undermined when the activities of that organisation show less legitimate social behaviour (Dowling and Pfeffer, 1975). Also, a firm's legitimacy and reputation could represent assessments of a corporation by a social system (Deephouse and Carter, 2005).

However, the quality of the legitimacy appears to depend a great deal on the bank's management team, which has a central role in assuring the interaction between the internal and external environment and in stopping, in time, the destruction of the bank's image. In that way, firm managers and the management of legitimacy should be interconnected, as they critically affect one another to fulfil the main objectives of economy, society and environment (Idowu, 2013). Accordingly, the sustainability of this theory rests upon the management's heritage, which links the conventional social norms and values to modern ethics.

From the IB perspective, if we assume that there is no religious or ethical legitimacy, IBs will certainly become meaningless because the crucial requirement of these banks is societal legitimacy, which can attract constituent support. Note that this thesis refers to legitimacy and reputation as complicated and multi-dimensional concepts and they can be connected to a wide range of stakeholders, who have the "significance of being the be all and end all of an IB's

survival" (Haridan et al., 2018, p.1024). Moreover, in IBs, it is not difficult to identify their motives for social information disclosure or the critical role of religious boards (i.e. SSBs) in delivering compliance with social, ethical and moral norms, as well as Islamic rulings in the Muslim community. In other words, SSBs are responsible for issuing transparent and independent assurances of religion to stakeholders that upsurge public confidence in the survival, position and robustness of IB governance in a dual banking system, and endorse the religio-ethical legitimacy required by IB stakeholders (Bougatef, 2015; Ullah et al., 2018). Subsequently, SSBs' competency, independence and capability in providing quality and religious assurance are considered to be vital CG features, showing the role of reliability and soundness in assuring ethical legitimacy, as well as adding more value for a wide range of stakeholders. Without this board, there would be no CG mechanisms available in IBs, whose main duties are to provide the ethical, institutional and religious legitimacy expected by stakeholders. As a result, SSBs could be powerful boards that serve the faith of the Muslim community. Their members (i.e. Shari'ah scholars) should possess rich experiences and qualifications in various disciplines, including Islamic law, accounting and finance, auditing, etc. (Gambling et al. 1993; Ginena, 2014).

In overall, this thesis argues that agency theory in the context of CBs will limit the accountabilities of their operations to those of investors alone. Meanwhile, for IBs, due to the wide spectrum of IB accountability, agency theory under Islamic rulings is broadened by including moral integrity, an appropriate socio-political environment and socio-religious compliance by the CG system of this type of bank (e.g. Chapra and Ahmed, 2002; Safieddine, 2009). As such, the concepts of stakeholder interest and business legitimacy have been extended.

2.3.4 Dividend Theories with a Dominance of Agency Hypothesis

This section presents popular theories related to dividend payouts policy of a firm. Dividend policy is regarded as one of the cornerstones of financial economics, and numerous empirical studies have been conducted since the irrelevance of dividend policy was introduced by Miller and Modigliani (MM, 1961). Those studies try to examine the MM proposition, which hypothesises that dividend policy does not influence firm value in a perfect capital market with no taxes, no transaction costs and no information asymmetry, to see if the results derived from

theory hold in the real stock markets (e.g. Lease et al., 2000). Subsequent research extents a range of areas covering payout decisions and how it associates with *tax clienteles* (Elton and Gruber, 1970), *agency costs* (Easterbrook, 1984), *signalling effects* (Aharony and Swary, 1980), *life-cycle factors* (DeAngelo et al., 2006), *catering incentives* (Baker and Wurgler, 2004), and *behavioural factors* (Turner et al., 2013).

Accordingly, existing studies offer some theoretical explanations for ex-ante firm pay-out behaviour including agency conflicts, catering, clientele, the birth in hand, investment opportunities, and signalling perspective (e.g. Healy and Palepu, 1988; Li and Lie, 2006; Jo and Pan, 2009). While the catering theory argues that firms tend to pay dividends when the market reaction to corporate payout is greater (Baker and Wurgler, 2004), the clientele theory contends that investors often prefer dividends if tax on dividends are more favourable (Miller and Modigliani, 1961). Behavioural hypotheses related to dividend clientele suggest that individual investors often prefer capital gains than dividends but they form dividend clienteles depending on their age, income or risk aversion (*see* Shefrin and Statman, 1984; Shefrin and Thaler, 1988; Graham and Kumar, 2006). Further, dividends might mitigate the potential overconfidence of managers retaining earnings to fund suboptimal investments (Graham and Kumar, 2006). In addition, the theory of birth in hand contends that due to information asymmetry between foreign owners and the firm, foreign shareholders are likely to show preference on dividends over retain earnings (Balachandran et al., 2017). Therefore, firms having more foreign investors tend to pay future dividends and rise current dividends (Baba, 2009). Moreover, some other studies support the signalling hypothesis indicating that firms tend to pay dividends to signal future earnings and strong financial and earnings performance (Healy and Palepu, 1988; Koch and Sun, 2004) and/or earnings persistence (Chen et al., 2007).

Among all the above highlighted theories, none of them can solely explain dividend pay-outs behaviours in firms (Frankfurter and Wood Jr, 2002; Baker and Weigand, 2015). The agency theory, however, represents one of the dominant views on dividend policies (see Nohel and Tarhan, 1998; Denis and Osobov, 2008; Jo and Pan, 2009; Renneboog and Szilagyi, 2015). This theory postulates that management boards are self-serving, they have strong incentives to control firm's operating, investing and financing policies to allocate firm resources for

their self-interest at the shareholder expenses. For instance, prior studies have long argued that managers (e.g. CEOs) have their strong incentives to engage in discretionary acts (Williamson, 1964), take excessive compensation and perquisites (Sharma, 2011), and utilise excess free cash flow in unprofitable projects. Easterbrook (1984) highlights that the monitoring and risk-aversion preferences might lead to agency problems between managers and shareholders, and hence, result in the arisen of cash dividends. When managers decide to finance investments out of internally generated funds rather than via financial markets, they mitigate their personal risks as well as the risks of debtholders but exacerbate the shareholders' risks. Dividend payments, therefore, may diminish the available free cash flows and in turn, force managers to finance investment through financial markets.

As rational capital suppliers seek regular monitoring and continuous discipline over managers, dividend pay-outs appear to play a similar role as an implicit governance tool in dealing with managerial discretion over the usage of excess free cash flow (Easterbrook, 1984; Sharma, 2011). As such, periodic cash dividends can serve as a quasi-contract to restrain wasteful expenditures incurred by those managers (DeAngelo and DeAngelo, 2000; Edmans, 2011; Harford et al., 2008), especially when managers are more reluctant to return cash to stakeholders (Jensen, 1986). Furthermore, in line with risk aversion perspective, managers are likely to have lower risk tolerance than shareholders since those managers might have substantial personal gains/incentives tied up with the firm's performance. Those managers can change the firm risks through lowering debt to equity ratio (i.e. lower bankruptcy risk) by financing projects from retained earnings which would transfer wealth from the owners to the creditors (Sharma, 2011). The research of Easterbrook (1984) then contends that shareholders might have preference on higher dividend pay-out since it would mitigate the retained earnings and force management to raise outside funds. This helps shareholders to avoid being taken advantage of by debtholders. In turn, leveraging on the monitoring and risk aversion hypotheses, dividend mechanism is concluded to be served to reduce agency conflicts between managers and shareholders within a firm.

Moreover, managers are also likely to manipulate and shift the amounts of dividends across future periods (i.e. the earnings smoothing effect) if they have

motives to increase the dividend ratios despite the low level of permanent earnings. A managerial discretion to establish the payout policy can exacerbate the agency problems between managers and shareholders; such conflict is particularly more severe in banks due to their highly levered capital structure (John et al., 2010). Specifically, banking firms have greater level of opaqueness, and thereby, their agency conflicts are known to be more severe than non-financial busineses. For that reason, the signalling role of cash payouts in banks appears to be more important than for any other sectors (Forti and Schiozer, 2015).

In a comparison between IBs and CBs, there are several factors which could affect the different dividend strategies between these two bank types. For example, due to the Shari'ah compliance and religious monitoring, IBs must face additional agency problems (see details in Section 2.7.2) which is not present in CBs (Mollah and Zaman, 2015). Besides that, IBs tend to adopt a more cautious capital structure because they have more limited financing sources than CBs due to the prohibition of using derivatives, limited access to short-run borrowing markets, and the operation in less developed Islamic capital markets (Abedifar et al., 2013). This prevents them from their engagements in asset liability management, and thereby, IBs are likely to be more conservative in establishing their dividend strategies in order to build capital suffers (Duqi et al., 2019). Beck et al. (2013) find that IBs reveal better capitalisation ratios than CBs, which is consistent with these assumptions. To avoid repetition, more in-depth discussions about payouts theories as well as theoretical differences in dividend policy between IBs and CBs are provided in Section 2.7.1 and Section 5.3.3.

2.4 Competing Hypotheses of Board Busyness

Driven by the two aforementioned theories (i.e. Agency and RDT theories), scholars have proposed two competing hypotheses of board busyness for corporate outcomes and strategies: the "reputation hypothesis" and "busyness hypothesis". They assert that multiple directorships are not only observed as a positive indicator for the benefits of directors, but also as a negative sign for the risks of directors being stretched thin. The effect of multiple directorships on financial indicators (e.g. financial stability, market valuations and dividend policy) is, in general, an open question, and placing this relationship in the context

27

of specialised settings and particular circumstances is required to explore this idea further.

2.4.1 *Reputation Hypothesis*

Under the RDT theory, the reputation hypothesis for outside directors' multiple directorships is established. This hypothesis postulates that the number of outside board seats held by outside directors, as a proxy for their reputation capital in the external labour market (Fama and Jensen, 1983a; Zajac and Westphal, 1996; Harris and Shimizu, 2004), is related to their managerial performance as monitoring specialists (Fich and Shivdasani, 2006). As such, multiple board appointments can signal director quality (Fama and Jensen, 1983a) and may improve a board's decision-making ability, leading to a positive outcome for firms in which directors hold more outside board seats (Ahn et al., 2010). These directors can be a source of valuable knowledge, experience and business connections, and they can consequently provide better advice (e.g. Kaplan and Reishus, 1990; Gilson, 1990; Haunschild, 1993; Ferris et al., 2003; Harris and Shimizu, 2004). Their social ties make them excellent advisors and value-enhancing directors (Field et al., 2013). The resources that they bring to the organisation can reduce bank uncertainty (Pfeffer, 1972), transaction costs (Williamson, 1984) and mitigate the firms' dependency on external contingencies (Pfeffer and Salancik, 1978). If this is the case, they should help in increasing the level of board monitoring, lessening agency costs and protecting shareholders' interests. As a result, firms with busy outside directors might exhibit superior performance and board decision-making (Fama and Jensen, 1983a). This, in turn, can be beneficial to the firm's financial stability, market valuations and dividend policy.

2.4.2 *Busyness Hypothesis*

Although the arguments presented in the section above are consistent with RDT predictions (Hillman and Dalziel, 2003), it is only part of the story (Laurent, 2016), and so, it is an ongoing debate. Previous reviews of multiple directorships show an overwhelmingly strong opposite view: the Busyness Hypothesis, which is derived from agency theory. Indeed, busy directors have been criticised as being ineffective, and it is stated that a reduction in their workload is associated

with improved operating profits and higher book-to-market ratios (Hauser, 2018). Board busyness can lead to a lower monitoring and advisory capacity of the board for the following reasons. First, busy outside directors may not have the necessary reputation and networking contacts to generate benefits to the institution (Jackling and Johl, 2009). Second, they cater to managers (i.e. CEOs) and their busyness can be associated with excess CEO rent extraction (Shivdasani and Yermark, 1999; Falato et al., 2014). Third, outside directors with multiple board seats usually ignore board meetings through non-attendance. Hence, they may neglect their tasks by not participating in vital and strategic decision-making processes (Jiraporn et al., 2008; Falato et al., 2014).

Fourth, outside directors may not fulfil their monitoring responsibilities if they are too busy with multiple board duties, and they are likely to have less time available to devote effort to collecting information about the business's affairs or acquiring related knowledge, above what is provided by the management (Hart, 1995). As such, they are associated with weak governance structures, giving rise to agency problems (Core et al., 1999). Last but not least, busy outside directors could be stretched thin; their limited information processing capacity may cause information overload (Carpenter and Westphal, 2001). They may also have experienced negative socio-cognitive externalities from their outside jobs, resulting in the ineffective monitoring of managers (Ferris et al., 2003). This suggests that busyness can lead to a shirking of the board's responsibilities, and therefore, this can exacerbate agency conflicts between managers and shareholders; for instance, those related to dividend payouts (Jiraporn and Chintrakarn, 2009; Sharma, 2011). Taken together, the busyness hypothesis predicts an inverse relation between the board's busyness and corporate outcomes (e.g. Fich and Shivdasani, 2006; Ahn et al., 2010; Sharma, 2011; Cashman et al., 2012; Zhang, 2016), implying a predicted decline in firm stability, market valuations and the effectiveness of payout policy.

2.5 Board Busyness in Non-financial and Financial Firms

Previous research has documented the positive relationships between busy directors and industrial firms' outcomes, which supports the *reputation hypothesis*. Pioneering evidence consistent with this assertion can be found in the studies of Fama (1980), Fama and Jensen (1983a), Mace (1986), Kaplan and

Reishus (1990), Gilson (1990), Lang and Lockhart (1990), Shivdasani (1993), Beasley (1996), Mizruchi (1996), Burt (1997), Cotter et al. (1997), Haunschild and Beckman (1998), Brickley et al. (1999), Brown and Maloney (1999) and Miwa and Ramseyer (2000). Fama (1980) and Fama and Jensen (1983a) were among the first scholars to introduce the concepts and knowledge of multiple directorships. They generally certify the outstanding ability of individual directors in the external labour market because their appointments to numerous boards help them to gain diversified experience and exceptional advisory ability, and to extend their business networks and contacts. Corporations with such directors, hence, might exhibit superior performance and board decision making. Mace (1986) further finds that multiple directorships held by an executive could add more value to the company since they can permit this executive to either establish a wide network or scrutinise corporate relations. Supporting these arguments, a number of subsequent empirical studies relating to directors' busyness and interlocking were developed during the 1990s. Typically, Kaplan and Reishus (1990) report that top managers who reduce firm dividends tend to obtain 50 per cent less external directorships. Gilson (1990), Shivdasani (1993) and Harford (2003) conclude that directors related to better-performing firms hold more board seats while those related to poorly performing firms hold fewer board seats. Beasley (1996) finds a negative relationship between firms with "busy" outside directors and their likelihood of financial statement fraud. This implies that these firms are less likely to commit fraud.

Another work of Booth and Deli (1996) finds that CEOs holding multiple directorships can transfer decision rights to their eventual successor. Cotter et al. (1997) report that the merger premium offered will be greater if a merger target's board comprises "busy" individuals. In the same line with these research, Haunschild and Beckman (1998) argue that such directors positively contribute to the entire corporate system by the dissemination of innovations throughout corporate networks. Brickley et al. (1999) find a positive relationship between a retired CEO who sits on his own board or on other boards, and his firm's performance while he was the CEO. Brown and Maloney (1999) also report a superior acquisitions' returns of companies recruiting multiple directors. Miwa and Ramseyer (2000) document that during the first decade of the 20th century, multiple directors are strongly associated with firm success in the cotton spinning

industry in Japan. With regards to interlocking directorate, Lang and Lockhart (1990), Palmer et al. (1993) and Ahuja (2000) claim that indirect interlocks are considered as a form of board social capital which has a significantly positive effect on firm outcomes (e.g. patents development). This is subsequently supported by numerous studies such as Mizruchi (1996), Burt (1997), Carpenter and Westphal (2001), Hillman and Dalziel (2003). These works generally find that board interlocks of directors can add value to the firm because they could enhance the BoD's advising and supervising effectiveness on managers. Also, interlocks are found to influence BoD ability through improving directors' knowledge, skills and expertise, which is elucidated by agency and RDT theories.

More recently, Ferris et al. (2003) find no evidence that busy directors neglect their board responsibilities or harm the firm's performance, while there is evidence that busy directors are important sources of extensive knowledge, represent an important complement to inside directors (Harris and Shimizu, 2004) and contribute positively to firm value (Field et al., 2013). Although Lei and Deng (2014) document a positive relation between independent directors' multiple directorships and firm value, they find that the effect of busyness is stronger under better governance standards and that the positive effect declines at higher levels of busyness. Interestingly, Harford (2003) finds that directors related to better performing firms hold more board seats while those related to poor performing firms hold fewer board seats. In addition, Harris and Shimizu (2004) highlight a positive effect of "busy" directors on acquirer returns. Moreover, Field et al. (2013) emphasise that directors with multiple board seats are excellent advisors and are in demand by newly-public venture-backed firms. Chakravarty and Rutherford (2017) find that, through a hostile takeover framework, busy outside directors tend to mitigate a corporate hostile takeover vulnerability and US firm's cost of debt. Chou and Feng (2018) further explore a positive relation between busy BoD and dividend payouts when non-financial US firms have more limited investment opportunities. They also conclude that BoD busyness leads to a more efficient use of cash, and providing direct benefits to shareholders. The studies mentioned above advocate for a positive alignment between board members' multiple directorships and shareholders' interests in the non-financial sector.

However, the contribution of a director to the board advisory and monitoring performance not only depends on their knowledge or skills, but also on the time

availability to perform their duties and the time for preparing of the board meetings. Therefore, another line of thought within the existing literature on the non-financial sector has provided some contrasting evidence for the *busyness hypothesis*. Typically, earlier studies, such as Eisenhardt (1989), Core et al. (1999) and Shivdasani and Yermark (1999) argue the potential risks and consequences associated with multiple board appointments. They generally indicate that directors sitting on several boards affect negatively firm performance. They emphasize these directors tend to overstretched themselves and spend less time on each individual board. They may also compromise their responsibilities and neglect their duties, resulting in ineffective advising and monitoring management. This causes decline in firm value. This is followed by Forbes and Milliken (1999) who contend that less time to prepare readings distributed in advance of meetings also reduces the level of his expected involvement. In addition, Granovetter (1973) argues that multiple indirect interlocks are observed as weak ties which are only influential if the BoD room depends upon them as final connection tools.

Recent work on this negative effect of busyness (e.g. Fich and Shivdasani, 2006; Jiraporn et al., 2008; Jackling and Johl, 2009; Cashman et al., 2012; Falato et al., 2014; Zhang, 2016) contend that busy directors are criticised for being too busy to monitor, being unlikely to provide thoughtful advice to and exercise active control over executives, and being detrimental to monitoring quality, business valuation and shareholder wealth. Chen (2008) also finds that busy directors have a positive (negative) impact on the performance of firms having low (high) agency conflicts and high (low) growth opportunities. Similarly, Falato et al. (2014) find that busyness functioning of outside directors is detrimental to BoD monitoring quality. However, Cashman et al. (2012) conclude that the conflicting findings of previous research are potentially the result of differences in both the samples studied and the empirical designs.

Moreover, Jackling and Johl (2009) and Fich and Shivdasani (2006) also contend that over-boarded directors are related to weak CG and thus to poor firm performance. News about an overcommitted director leaving the board positively affected the returns announcement of the incumbent firms. In contrast, news about a director accepting a third board seat adversely impacted the announcement returns. Likewise, Jiraporn et al. (2008) find that overcommitted directors suffer larger diversification discounts and lower firm value. Ahn et al. (2010) then report

that firms experienced more negative acquisition announcement returns if they employed over-boarded directors. Faleye et al. (2011) find a positive relationship between busy directors and CEO remunerations. Along the same lines, Hauser (2018) finds that a reduction in the number of board seats held by outside directors will increase the earnings, book-to-market ratio and pay-performance sensitivity in the CEO compensation contracts. Moreover, Sharma (2011) finds that busy outside directors are negatively associated with a fim's dividend policy. Specifically, busy outside directors tend to reduce the propensity to pay a dividend.

Reconciling the two opposing hypotheses, Jiraporn et al. (2009) indicate a nonlinear U-Shape association between overcommitted directors and the number of board committees they serve on. Specifically, at lower degrees of busyness, directors holding more board seats are likely to serve on fewer board committees, and this idea is supported by the busyness hypothesis. However, at higher degrees of busyness, directors holding more board seats tend to serve on a higher number of board committees, and this idea is supported by the reputation hypothesis. They also emphasise that busy directors tend to miss their board meetings.

In the financial sector, research into internal governance quality (e.g. board directorships, size, independence, CEO duality and ownership structure) of banks is imperative to improve its managerial quality and CG structure. Almost all existing banking literature focuses on examining the effect of other board characteristics (i.e. board size, board independence) and CEO's characteristics (i.e. CEO duality, CEO Tenure) on bank performance and risk-taking (e.g. Sierra et al., 2006; Pathan, 2009; Adams and Mehran, 2012; Wintoki et al., 2012). However, little attention (except for Cooper and Uzun, 2012; Elyasiani and Zhang, 2015; Nguyen et al., 2015; Kutubi et al., 2018) has been paid to bank boards' busyness and the manner in which such functioning affects banks' financial stability, market valuation and decisions to pay dividends. Cooper and Uzun (2012) find a direct and positive effect of multiple board appointments on US banks' idiosyncratic risk and total risk. This result suggests that multiple directorships of directors tend to increase banks' risk-taking behaviour, which is supported by the busyness hypothesis. Similarly, Nguyen et al. (2015) also find a negative link between board busyness and market performance of US banks.

Conversely, Elyasiani and Zhang (2015) investigate the association between busy directors and US bank holding companies' performance and risks. However, their results contrast the findings of Cooper and Uzun (2012) and Nguyen et al. (2015). They find that the presence of busy directors has positive impacts on banks' performance indicators (return on equity, Tobin's Q and Earnings before interest and tax over total assets) and negative influences on risk indicators (total, market, idiosyncratic, credit and default risks). This evidence supports the reputational hypothesis that because of their vast interactions with many industries in the economy system, busy directors possess more extensive knowledge, information and rich experience than their non-busy counterparts. As such, these directors should serve as catalysts in their interactions as BoD members. More importantly, Elyasiani and Zhang (2015) argue that busy bank directors are often monitored more intensively by regulators and they are often unwilling to take high risks as it may affect their reputation as expert directors, and hence, they tend to become more effective board members. More recently, Kutubi et al. (2018) have examined the relationship between board busyness and bank performance and risk in concentrated ownership and weak-external governance regimes in South East Asia. They find an inverted U-shaped association between busy BoDs and bank performance and a U-shaped association between such boards and banks' financial risk.

Current banking literature demonstrates that no studies to date have investigated the role of busy outside directors in the board's decision-making processes, and in turn, their role in financial stability, market valuations and dividend policy, especially in countries having the dual banking system (IBs and CBs). This thesis, therefore, fills this important gap. Table 2.1 reports relevant literature, testing for the influences of board busyness on the outcomes of both non-financial and financial firms.

Panel A: Prior literature				Panel B: Research gaps in literature							
Authors	Research focus	Independent variables	Key findings	BoD Busyness	SSB Busyness	Financial Stability	Market Valuation	Dividend Payouts	Banking Sector	International context	Comparing IBs-CBs
Chou and Feng (2018)	Dividend payouts; Cash holdings' value (2090 industrial firms, US, 1998-2012)	Multiple directorships	When industrial US firms have more limited investment opportunities, busyness of BoD is positively related to greater dividend payouts. In addition, BoD busyness results in a more efficient use of cash, and providing direct benefits to shareholders.	Yes	No	No	No	Yes	No	No	No
Kutubi et al. (2018)	Performance and risk (South East Asia)	Board busyness	They find an inverted U-shaped association between busy BoD and bank performance and a U-shaped association between such board and bank financial risk.	Yes	No	Yes	No	No	Yes	Yes	No
Chakravarty and Rutherford (2017)	Cost of debt (US industrial firms)	Busy directors	Through a hostile takeover framework, this study find that busy directors are likely to reduce a firm hostile takeover vulnerability and cost of debt.	Yes	No	No	No	No	No	No	No
Elyasiani and Zhang (2015)	Performance and risk (116 BHCs, US, 2001-2010)	Busyness of directors	There is positive linkage between bank performance and director busyness but negative linkage between risks and director busyness. Performance (risk) benefits of having busy directors strengthened (weakened) over the crisis. Busy directors are not more likely to become problem directors.	Yes	No	Yes	Yes	No	Yes	No	No
Nguyen et al. (2015)	Performance (US banks)	Board busyness	There is a negative relation between board busyness and US performance	Yes	No	No	Yes	No	Yes	No	No
Falato et al.	Shareholder	Independent	Independent director busyness is	Yes	No	No	Yes	No	No	No	No

Study	Topic (sample)	Busyness measure	Findings								
(2014)	wealth (2551 firms)	director busyness	detrimental to board monitoring quality.								
Field et al. (2013)	Firm value (1331 IPO firms)	Busy boards	Busy boards to be common and to contribute positively to firm value.	Yes	No	No	Yes	No	No	No	No
Cashman et al. (2012)	Firm performance (11494 observations, 1999-2008)	Busy directors	There is a negative link between board busyness and firm performance.	Yes	No	Yes	Yes	No	No	No	No
Cooper and Uzun (2012)	Risk-taking (363 banks, 2006)	Busy directors	Bank risk is positively related to multiple board appointments of directors.	Yes	No	Yes	No	No	Yes	No	No
Sharma (2011)	The propensity to pay dividends (994 listed firms, US, 2006)	Board busyness and composition	This study finds a positive relation between the propensity to pay dividends and (i) board independence and (ii) director tenure, and a negative relationship between the propensity to pay dividends and (i) busy directors and (ii) greater equity incentive compensation in the director pay structure.	Yes	No	No	No	Yes	No	No	No
Jiraporn et al. (2009)	Board committees (1471 firms, 1999-2003)	The number of outside directorships	The association between the number of outside directorships and the number of board committees is non-linear U-shaped.	Yes	No	No	No	No	No	No	No
Jackling and Johl (2009)	Firm performance (180 observations, India, 2005-2006)	Board busyness	Outside directors with multiple appointments appeared to have a negative effect on performance, suggesting that "busyness" did not add value in terms of networks and enhancement of resource accessibility.	Yes	No	Yes	Yes	No	No	No	No

Jiraporn et al. (2008)	Corporate diversification (3,605 firm-year observations, 1998-2002)	Multiple directorships	Directors' busyness is inversely related to firm value. In other words, firms where board members hold more outside board seats suffer a deeper diversification discount.	Yes	No	No	Yes	No	No	No	No
Fich and Shivdasani (2006)	Performance (industrial firms, US, 1989-1995)	Board busyness	Firms with busy BoD are related to weak corporate governance; lower market-to-book ratios, weaker profitability, and lower sensitivity of CEO turnover to firm performance.	Yes	No	Yes	Yes	No	No	No	No
Harris and Shimizu (2004)	Abnormal returns (Top 100 M&A Deals, 1981-1989)	Director busyness	Busy directors are important sources of knowledge and enhance acquisition performance.	Yes	No	No	Yes	No	No	No	No
Ferris et al. (2003)	Firm performance (2002 firms and 1188 firms)	Director busyness	Firm performance affects positively on the number of board seats held by a director.	Yes	No	No	Yes	No	No	No	No.
Harford (2003)	Directorships (91 firms, 1988-1991)	Performance	Directors related to better performing firms hold more board seats whilst those related to poor performing firms hold fewer board seats.	Yes	No	No	No	No	No	No	No

Notes: This table summarises the prior studies on busyness in non-financial firms and banks and research gaps. "No" implies not being examined in the relevant study and "Yes" means the opposite.

Table 2.1: Typical Prior Studies on Board Busyness in Non-Financial and Financial Firms

2.6 Background on Islamic Banking

2.6.1 *A Brief History of Islamic Banks*

During the 1960s and 1970s, the financial markets in Islamic countries (i.e. those where Islamic rulings were dominant) emerged considerably, becoming more mature. This enlargement appears to make the concept and principles of IBs more feasible and practical. Accordingly, numerous empirical studies were conducted – Al-Araby (1967), Siddiqi (1961, 1969) and Al-Sadr (1974). Besides, several scientific conferences around the Islamic world were held to discuss issues of IBs; typically, the Conference of Finance Ministers held in Karachi in 1970 and the International Economic Conference in London in 1977 (Gafoor, 1995). Resulting from these activities, several large IB institutions[2] capturing an increasing market share growth (e.g., 10 per cent per annum) were established in the 1970s, leading to a huge, global expansion of this (Olson and Zoubi, 2008; Mallin et al., 2014). For example, Iran and Sudan are transforming their entire banking system to comply with Islamic rulings (i.e. Shari'ah standards). This rapid growth of IBs has resulted in the exponential increase in the demand for Islamic financial products and services by the Muslim population worldwide. Till date, IBs have become profitable business entities, playing a monopolistic role in the Islamic financial market. Moreover, CBs are currently attracted by the significant progress in growth and absolute income of IBs; therefore, they have commenced activities with Islamic windows to serve customers interested in Shari'ah-compliant products and to mitigate competitive pressures from IBs.

Despite the increasing pains and loss of confidence in global financial systems, IBs, representing a subset of the banking industry, have continued to demonstrate their fast growth over the past four decades (Safieddine, 2009; Saeed and Izzeldin, 2016), holding approximately $1.5 trillion in assets in the end of 2015 (Islamic Financial Services Board - Stability Report, 2017; Farag et al., 2018). This figure is anticipated to reach $3.4 trillion by 2018 (Ernst and Young, 2013) and $6.5 trillion by 2020 (IFSB, 2010; Čihák and Hesse, 2010). Figure 2.3 shows that IB assets remain geographically concentrated, with about 88 per cent of them being held in nations which clarify the Islamic financial industry as systemically

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[2] The world's first IB is the Dubai Islamic bank established in 1975 (Olson and Zoubi, 2008)

dominant, such as Iran, Saudi Arabia, Malaysia, the United Arab Emirates (UAE), Kuwait, Qatar, Turkey, Bangladesh, Bahrain, Indonesia, Sudan, Pakistan, Egypt, Jordan, Brunei and Oman. IB operations contribute to social justice and fairness in business in economic transactions (Mollah and Zaman, 2015). Such social objectives are as important as making profits (Haniffa and Hudaib, 2007), which is allowed in Islam. The proposition of IBs is to build an interest-free banking system, based on the concept of profit sharing and cost-plus instruments (Gafoor, 1995). Since IB and the finance system have expanded globally, the sector is likely to face several challenges including the issue of Shari'ah governance (Malkawi, 2013).
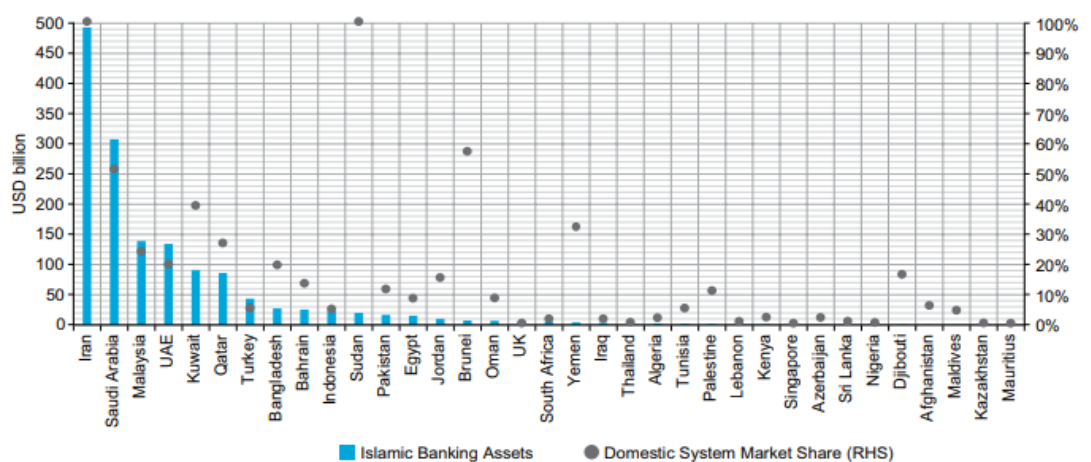
Source: PSIFIs, IFSB; IFSB Secretariat Workings

Figure 2.3: Islamic Banking Assets and Market Share (2Q2016)

Sources: Islamic Financial Service Industry Stability Report (2017)

2.6.2 *Prior Literature on Islamic versus Conventional Banks*

Existing studies on IBs versus CBs can be classified into two main strands of literature. The *first* strand of literature primarily focuses on the theoretical assessments in IBs compared to CBs (e.g. Sundararajan and Errico, 2002; How et al., 2005). Typically, How et al. (2005) suggest that IBs could have lower credit risk than CBs. IBs can share their losses with their depositors through the Profit and Loss Sharing (PLS) paradigm on the liabilities side, an unavailable option in CBs. Additionally, due to religious norms, the credit risk of IBs appears to be lower, since they must operate in a Shari'ah-compliant business unit and are a relationship-type banking system, which helps them better understand and connect to their depositors and discern their level of creditworthiness. Contrarily,

Sundararajan and Errico (2002) argue that the credit risk of IBs can be increased due to the nature of the PLS modes of finance like the Mudaraba and Musharaka. Using these modes, IBs have to heavily rely on their partners (i.e. the borrowers). Furthermore, there exists a higher chance for the issue of information asymmetry, which IBs seem to have little influence over in the decision-making of the funded business, with limited access to accounting information. Additionally, since IBs must be obliged to absorb any loss in part (Musharaka) or full (Mudaraba), a risky borrower is likely to default, thus leading to higher credit risk of IBs. Such theoretical evidence suggests that it is unclear whether IBs have lower or higher risks as compared to CBs.

The *second* strand of research includes an empirically-comparative analysis of financial indicators (e.g. stability, performance, efficiency and earnings management) between the IBs and CBs; results are mixed. Beck et al. (2013) and Bourkhis and Nabi (2013) obtain findings showing no significant difference in the business orientation between these two types of banks. However, Beck et al. (2013) find strong evidence that IBs are likely to exhibit less cost efficiency but greater intermediation ratio, greater asset quality and higher capital-to-asset ratio (better capitalisation) than CBs. This implies a more conservative approach to risk-taking. Abedifar et al. (2013) and Olson and Zoubi (2008) highlight that IBs must face extra risks due to their complex Islamic modes of financing and the limitations in their funding, investment and risk management activities. Rashwan and Ehab (2016) indicate that IBs have lower cost efficiency, revenue efficiency and profit efficiency in comparison with that of CBs; furthermore, they have found that the efficiency of IBs is more likely to affect bank profitability as compared to CBs. Alternately, Hasan and Dridi (2010) argue that business models between IBs and CBs are likely dissimilar and IB business models can contribute to mitigating the effect of crisis on corporate profitability. Bourkhis and Nabi (2013) also believe that IBs have appeared cost-effective during the recent crisis. Furthermore, Khediri et al. (2015) report greater profits, more liquid, better capitalised risks and lower credit risks of IBs as compared to CBs.

Interestingly, Johnes et al. (2014) find that although there exists no difference between IBs and CBs in terms of gross efficiency, IBs have greater net efficiency owed to high managerial capability and lower type efficiency caused by lack of product standardisation, as compared to CBs. Therefore, they conclude that IBs

"need to look at the conventional banking system for ideas on how to make their own system more efficient" (p. S105). Saeed and Izzeldin (2016) find that for CBs and the Gulf Cooperation Council (GCC), a decline in the default risk is related to lower efficiency levels. Thus, the trade-off between efficiency and risk is evident. For IBs, efficiency and risk are plausible early warning indicators of bank instability. Profit efficiency of IBs is positively related to their financial stability; there does not exist a trade-off relation between efficiency and risk. Moreover, Athari et al. (2016) emphasise a lower competitive operating environment and a higher agency problem in IBs relatively to that of CBs' in Arab markets.

Few other studies contend that the IB model is perceived to face lower credit risks (Elnahass et al., 2014) and to enjoy better performance (Mollah and Zaman, 2015) as compared to CBs, owed to contractual arrangements largely driven by and conducted in conformity with religious orientations and ethical principles, compliant with Shari'ah. Kabir et al. (2015) compare the level of credit risks between IBs and CBs using different methods to find mixed results. Employing a market-based credit risk measure and the Merton distance to default (DD) model, they find IBs to have a significantly lower credit risk than conventional counterparts. Contrarily, IBs exhibit a greater level of credit risk than CBs when using the z-score and non-performing loan (NPL) ratio. These findings imply that the selection of measures has a significant effect on the actual credit risk assessment of IBs as compared to CBs.

Furthermore, IBs are expected to positively influence the investors' perceptions and create confidence, credibility and trust in stakeholders (El-Gamal, 2006; Rammal, 2006; Safieddine, 2009; Elnahass et al., 2014). Moreover, the higher complexities of IBs, with younger age and smaller size as compared to most CBs, could possibly result in higher cost structures; greater administration, legal and operating costs and consequent higher operational risk and lower efficiency of IBs as compared to CBs (Beck et al., 2013; Johnes et al., 2014; Rashwan and Ehab, 2016). Cost efficiency can be associated with bank performance (Fries and Taci, 2005). Abdelsalam et al. (2016) find that IBs are less likely to manage their earnings and that they tend to adopt the higher conservative accounting policies due to religious norms and issues of moral accountability. Additionally, Elnahass et al. (2018) have found a significant evidence of capital and earnings management in CBs, more prominent for large and loss-generating CBs.

However, irrespective of the firm size, earnings profile or the structure of the loan-loss model, IBs are unlikely to employ loss loan provisions in either capital or earnings management. This difference is justified through the detailed explanation of the constrained IBs business model, their strict CG and their ethical orientation.

Evidence on the governance and financial indicators across two bank types are more limited. While Mollah et al. (2017) highlight an insufficient research addressing whether the risk-taking behaviour of IBs depends on their governance, Mollah and Zaman (2015) call for additional research on the effectiveness and the role of boards related to their governance and accountability. Furthermore, the latter study finds a positive association between the SSB's role and the IBs' performance. They emphasise that this board has a potential to make a more substantive contribution to the future of this system. Additionally, they suggest the importance of enhancing Shari'ah supervision by improving multiple directorships of Shari'ah advisors for future studies. Moreover, Mollah et al. (2017) have found that the IBs' governance structure plays a crucial role in helping them undertake greater risks and achieve better performance. They have constructed an IB's governance index, based on twelve boardroom characteristics dimensions, including board size, independent directors, female directors, board meeting, board attendance, board committees, chairman independence, CEO duality, internal CEO, CEO qualification, CEO banking experience and CEO tenure. However, the study does not focus on the role of the SSB; further research is thus suggested.

Moreover, Alman (2012) find a positive relationship between SSB characteristics (i.e. size, the number of top twenty-ranked Shari'ah scholars on board and the board composition annual changes) and loan-portfolio risk-taking behaviour of IBs in the Middle East and North Africa (MENA) and Southeast Asia from 2000–2010. Mallin et al. (2014) indicate that SSB size has a significantly positive influence on the corporate social responsibility (CSR) disclosure index, which covered ten dimensions. This is in line with the finding of Rahman and Bukair (2013), which shows a positive association between the level of CSR disclosure and the combination of SSB attributes (SSB size, cross memberships, secular education qualifications, reputable SSB members and the expertise of SSB). More recently, Safiullah and Shamsuddin (2018a) explore that the SSB attributes do not

have significant effects on liquidity and credit risks. However, an increase in SSB size and SSB members' academic qualifications leads to a decline in the IBs' operational and insolvency risks. Meanwhile, an increase in the number of reputed Shari'ah scholars on the SSB would lead to an increase in the operational and insolvency risks. Similarly, Safiullah and Shamsuddin (2018b) have found a positive and significant relationship between a strong SSB (SSB size, SSB members' academic qualifications and the number of reputed Shari'ah scholar on the SSB) and the IBs' profit efficiency. Consistently, Farag et al. (2018) have found that a larger SSB relates to better performance, which reinforces the fundamental role of this board to certify permissible financial instruments. Evidence supporting the operation hypothesis towards both SSB and the BoD have been found, since IBs are characterised by a higher level of complex operations. It is argued that a larger SSB experiences lower agency costs and that unrestricted PLS contracts are a primary cause of the unique agency relationships in IBs.

This thesis differs these lines of investigations, at least in a three-fold manner. First, the existing studies do not look at the BoD busyness across IBs and CBs. Second, they do not investigate for the influences of SSB busyness within IBs. The first empirical study of this thesis differs from Mollah and Zaman (2015) and Safiullah and Shamsuddin (2018a, b) in that they only focus on other SSB attributes (size, academic qualifications and the number of reputed Shari'ah scholars) and their effects on performance/efficiency, while this chapter examines the effects of SSB busyness attributes besides that of the BoD busyness. Mollah et al. (2017) evaluate the impact of regular board governance (an overall governance index, but not the BoD busyness) instead of SSB governance on the IBs' risk-taking. Third, all three chapters in this thesis differs from existing banking literature, in that they do not test for the influences of board busyness (i.e. BoD and SSB) on the banks' financial stability, market valuations and dividend payouts policy across IBs and CBs.

Table 2.2 illustrates the summary of existing literature on the banking sector, especially IBs versus CBs, and CG studies comparing these two bank types.

Panel A: Prior literature				Panel B: Research gaps in IB-CB literature					
Authors	Research focus	Independent variables	Relevant key findings	BoD Busyness	SSB Busyness	Financial Stability	Market Valuation	Dividend Payouts	Comparing IBs-CBs
Safiullah and Shamsuddin (2018a)	Risk-taking (94 IBs, 94 CBs)	SSB size, qualification, and reputation	SSB size/qualifications and the number of reputed Shari'ah scholars has negative and positive, respectively, impact on IB operational and insolvency risks.	No	No	Yes	No	No	Yes
Safiullah and Shamsuddin (2018b)	Efficiency (94 IBs, 94 CBs)	SSB size, qualifications, and reputation	Strong SSB positively affects bank profit efficiency.	No	No	No	No	No	Yes
Farag et al. (2018)	Profitability (90 IBs, 13 countries)	SSB/BoD size	Larger SSB is related to the better financial performance.	No	No	Yes	No	No	No
Elnahass et al. (2018)	The ratio of loan loss provisions to total assets - LLP (34 IBs, 29 CBs)	The ratio of the total bank Tier 1 capital to risk weighted assets.	Capital and earnings management in CBs is more prominent for large and loss-generating CBs. However, irrespective of the firm size earnings profile, or the structure of loan loss model, IBs are not likely to employ LLP in in either capital or earnings management.	No	No	No	No	No	Yes
Mollah et al. (2017)	Risk and performance (52 IBs, 104 CBs, 14 countries, 2005-2013)	Governance index	Governance structure in IBs allows them to take higher risks and achieve better performance than CBs because of product complexities and transaction mechanisms.	No	No	Yes	No	No	Yes
Abdelsalam et al. (2016)	Earning management (24 IBs, 76 CBs, 12 MENA)	Governance and Ownership variables	IBs are less likely to manage earnings and they adopt more conservative accounting policies due to religious norms and moral accountabilities.	No	No	No	No	No	Yes
Saeed and Izzeldin (2016)	Default risk and Efficiency (23 IBs, 83 CBs)	Efficiency and Default risk	There exists a causality/reverse causality between efficiency and default risk	No	No	No	No	No	Yes
Mollah and Zaman (2015)	Performance (86 IBs, 86 CBs, 2005-2011)	SSB size; BoD size and independence; and CEO power	SSB positively impact on IB performance when they perform a supervisory role, but the impact is negligible when they have only advisory role. The effect of board structure	No	No	Yes	Yes	No	Yes

			and CEO power on the performance of IBs is overall negative.						
Elnahass et al. (2014)	Bank value (34 listed IBs, 72 listed CBs, MENA)	Loss Loan Provisions (LLP)	LLP has positive value relevance to investors in both types of IBs and CBs.	No	No	No	Yes	No	Yes
Johnes et al. (2014)	Efficiency (45 IBs, 207 CBs, 18 countries)	Method: Data envelopment analysis and meta-frontier analysis	In the second stage, the low type efficiency of IBs might be attributed to lack of product standardization while high net efficiency suggests high managerial capability in IBs.	No	No	No	No	No	Yes
Abedifar et al. (2013)	Risk-taking (553 banks, 24 countries, 1999-2009)	Islamic bank dummy	Small IBs that are leveraged or based in countries with predominantly Muslim populations have lower credit risk than CBs. In terms of insolvency risk, small IBs also appear more stable.	No	No	Yes	No	No	Yes
Beck et al. (2013)	Business orientation, efficiency, asset quality and stability (510 banks, 22 countries, 1995-2009)	Bank characteristics	There is no significant difference in business orientation between these two types of banks. IBs seem to be less cost effective but greater intermediation ratio and higher capital ratio than CBs.	No	No	Yes	No	No	Yes
Bourkhis and Nabi (2013)	Bank soundness (34 IBs, 34 CBs, 16 countries, 2007-2008)	Types of banks; interaction of bank type with the crisis period	There is no significant difference in business orientation between these two types of banks. IBs appear cost-effective during the recent crisis.	No	No	Yes	No	No	Yes
Adams and Mehran (2012)	Market value (35 BHCs, 1986-1999)	Board size and independence + Subsidiary directorships	BoD independence is not related to performance. However, board size is positively related to performance. Increases in BoD size due to additions of directors with subsidiary directorships may add value as BHC complexity increases.	No	No	No	Yes	No	Yes
Grove et al. (2011)	Performance (236 banks, US, 2005–2008)	Governance factors	The performance of banks with smaller boards are found better in the later crises' duration. The duality of CEO plays a negative role in financial performance.	No	No	Yes	Yes	No	Yes

Hasan and Dridi (2010)	Performance (30 IBs, 90 CBs, 2007-2009)	Crisis	Factors related to IBs' business model helped limit the adverse impact on profitability in 2008, while weaknesses in risk management practices in some IBs led to a larger decline in profitability in 2009 compared to CBs.	No	No	Yes	No	No	Yes
Cornett et al. (2009)	Earnings management (593 bank-year observations, US, 1994-2002	Corporate Governance variables	CEO pay-for-performance sensitivity, BoD independence, and capital are positively related to earnings and that earnings, board independence, and capital are negatively related to earnings management.	No	No	No	No	No	No
Olson and Zoubi (2008)	Types of banks (12 IBs, 13 CBs, GCC region)	26 accounting ratios	Profitability, efficiency ratios, asset-quality indicators, and cash/liability ratios are good discriminators between IBs and CBs.	No	No	No	No	No	Yes
Andres and Valledado (2008)	Performance (620 observations, 1996-2006)	Board size	Bank board composition and size are related to directors' ability to monitor and advise management.	No	No	Yes	No	No	No
Sierra et al. (2006)	Performance and compensation (76 BHCs, 1992–1997)	Board strength	A strong board is associated with higher firm performance, lower levels of executive pay and lower growth rates of executive pay.	No	No	Yes	No	No	No
Adams and Mehran, 2003	Board size and composition (35 BHCs, 1986-1996)	BHCs or manufacturing firms	BoD size (18.2 versus 12.1 members) and the percentage of outside directors (68.7 percent versus 60.6 percent) are significantly larger on average.	No	No	No	No	No	No

Notes: This table summarises the previous studies on IBs and CBs' financial indicators and research gaps. "No" implies not being examined in the relevant research and "Yes" means the opposite.

Table 2.2: Typical Prior Studies in Islamic and Conventional Banks

2.7 Comparison between Islamic and Conventional Banks

2.7.1 *Business Models*

The key feature differentiating Islamic from conventional financial intermediaries is the additional monitoring through a Shari'ah governance board, and the dominance of Islamic principles over the business model (i.e. the prohibition of interests and of speculative and uncertain trading activities) (Alandejani et al., 2017; Farag et al., 2018; Safiullah and Shamsuddin, 2018a). Specifically, the first distinguishing feature of IBs is the prohibition of the receipt and payment of interest (riba), regardless of its form or source, in all transactions. The rationale for this is that under the holy book of Islam, the credit system relating interests tend to result in an unfair income distribution in society. The interest may not be a "payment for taking risks, nor is it the rewards for a constructive activity" (Olson and Zoubi, 2008, p. 47). Despite this, IBs cannot charge fixed riba in advance, since they still obtain profits from their fund investments.

The second differentiating function of IBs relative to CBs is the risk sharing. Under the CBs' finance paradigm, a bank is likely to shift the credit risk to the depositor under an interest-based contractual arrangement (Safiullah and Shamsuddin, 2018a). Contrarily, as per Shari'ah guidelines, IBs are expected to perform their intermediation functions through PLS contractual agreements between the banks, depositors and investment account holders (IAHs) (Hearn et al., 2012; Saeed and Izzeldin, 2016; Farag et al., 2018; Safiullah and Shamsuddin, 2018a). Given that the concept of interest in CBs is replaced by the PLS in IBs, risks are primarily shared among parties under the PLS arrangement, which is likely to increase the additional monitoring costs of IBs to diminish the moral hazard of borrowers with a chance to share ex-post losses with lenders (Safiullah and Shamsuddin, 2018a). Specifically, the two most popular forms of PLS are profit sharing (Mudaraba) and profit-loss sharing (Musharaka)[3]. IBs are expected

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[3] *Profit-sharing* (or, *Mudaraba*) is a mode of equity-based financing of a limited partnership between the labour/experience provider and the fund providers where the PLS is established contractually (Elnahass et al., 2014). *Mudaraba* is the riskiest type of Islamic contract which come into two categories which are *unrestricted* and *restricted* investment accounts (Farag et al., 2018). Unlike restricted accounts, depositors of unrestricted accounts allow managers of IBs to invest in any Shari'ah compliant investment. Unrestricted accounts are often recorded as off liabilities accounts (Farag, 2016) and in such accounts, managers of IBs have more chances to act in their self-interest (Safieddine, 2009). Nevertheless, restricted contracts can allow IAHs to have their say in how IBs employ the funds provided by them and are often recorded in the IBs' balance sheet (Karim, 2001). In both forms, IAHs do not have any rights to interfere in capital management and they might be reliable to financial losses (Safieddine, 2009; Farag, 2016). *Profit- and loss-sharing* (or,

to receive funds from public investments on the basis of Mudaraba and find borrowers (i.e. entrepreneurs) to employ these funds for investments approved by the IBs (Musharaka). However, existing arguments indicate that in practice, IBs are more likely to engage in mark-up finance, replacing interest payments with fees and contingent payment structures (Olson and Zoubi, 2008; Mollah et al., 2017). This tends to be driven by IBs protecting their market share, being in competition with conventional banking systems.

Thirdly, according to the PLS paradigm, entrepreneurs share their profits and losses with IBs according to a pre-determined ratio. IBs pool all profits and losses from different investments and share the profits with the depositors of funds taking into account the relative contributions of capital and equity and the investment deposits (Khan and Mirakhor, 1989; Olson and Zoubi, 2008). A proportion of the remaining earned profits is used to pay dividends to equity holders, for which dividends on common equity is discretionarily allocated and distributed by the bank managers (Khan and Mirakhor, 1989).

The IB dividend model is, in fact, characterised as being more constrained than CBs. Several structural differences do exist between two bank types, concerning their dividend distribution principles, motives, mechanics and techniques, and flexibility of payouts. These differences are expected to affect their governance monitoring effectiveness and the overall levels of payouts. In general terms, profit distribution decisions of IBs must be compliant with Shari'ah principles (Schaik, 2001; Safiullah and Shamsuddin, 2018; Duqi et al., 2019) and, hence, their payouts involve a nexus of contracts between the bank, depositors and shareholders (Alhabshi, 2002). Accordingly, IB managers' motives to pay dividends are likely to be driven by the preferences of both investors and depositors, while those of their conventional counterparts tend to be driven solely by investors' preference (Al-Hunnayan and Hashem, 2011). Furthermore, IB distributions of profits and their payouts policy are more complex and less flexible than that of CBs. IBs are usually challenged by liquidity management issues and accessing short-term borrowings from external sources (Čihák and Hesse, 2010; Beck et al., 2013). Subsequently, they tend to hold substantial excess free cash flow or other liquid assets at a low rate of return to meet expected/unexpected

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Musharaka) is equity-based financing mode where each party contribute to a partnerships' fund upon on a pre-determined PLS ratio (Elnahass et al., 2014).

capital challenges. These constraints can have implications on the dividend payout strategies in IBs, leading to low payouts ratios and less stable dividends distributions in the long-term (Athari et al., 2016). In contrast, CBs have quicker access to market sources as well as alternative financial instruments such as derivatives and options, and this is likely to promote greater flexibility when it comes to their dividend payouts strategies (Bitar et al., 2017). Moreover, the use of hedging by these banks, not permitted under the IB model, is associated with a low cost of debt (Deng et al., 2017). When compared to their Islamic counterparts, both the reduced cost of debt and the availability of fund sources promote more stable and frequent payouts of dividends at high rates.

The fourth difference is the capital financing. While CBs employ both debt and equity financing for investments, IBs mostly depend on the financing of equity capital and the deposit accounts of customers, including current, savings and investment accounts (Karim and Ali, 1989). The customers' current accounts are fundamentally understood as safekeeping accounts. Depositors could instantly access such accounts and hold the right to withdraw their capital at any time of their choosing. Savings accounts have fixed-term profit sharing arrangements, which cannot be cashed before maturity without a substantial penalty. The profit-sharing ratio of the savings account is dependent on future profits; however, the expected returns of the savings-type deposits are similar to those of the CBs' savings accounts of the same maturity. Secured interest-bearing loans of CBs are replaced by investments in IBs, which is anticipated to be riskier than the former. However, the arrangements of Mudaraba and Musharaka are expected to diminish the risks of IBs. Entrepreneurs who wish to use funds under such contracts must document their investment feasibility to be undertaken with these funds (Olson and Zoubi, 2008).

Lastly, the fifth difference relates to the cost of capital. In CBs, this cost of capital represents the cost of debt and cost of equity. However, in IBs, this cost of capital is replaced by the PLS of depositors and shareholders. Return of equity in IBs might be more variable than in CBs, yet the default risk of not paying a return to the depositors under the IB model is reduced. However, the failure of IBs in compensating depositors may result in a significant withdrawal of deposits and cause an insolvency risk (Olson and Zoubi, 2008).

2.7.2 *Agency Conflicts*

Agency relationships in IBs are expected to be more complex than those faced by CBs, including two main conflicts: the traditional conflicts and the IBs' unique conflicts (Safieddine, 2009; Abdelsalam et al., 2016; Farag et al., 2018). Besides traditional conflicts (e.g. agent-principal, majority-minority shareholding and shareholders-creditors) that both types of banks might face (Fama and Jensen, 1983a; Bowie and Freeman, 1992; La Porta et al., 1999), the IBs must encounter additional conflicts between the managers and depositors leading to higher agency costs and a greater legal liability for executives within these organisations (Abdelsalam et al., 2016). This is in line with the more effective competition and deposit insurance in CBs and the unique institutional settings of the IBs (Nienhaus, 2007; Archer and Karim, 2009). Thus, in IBs, the traditional agency conflicts are compounded by a separation between the depositors' and IAHs' control right (Safieddine, 2009; Farag et al., 2018). Since the returns of IBs are based on Mudaraba or Musharaka contracts, the IAHs' returns tend to depend on how well an IB performs financially that is mostly dictated by the actions and manners of the IB managers (Farag, 2016). Subsequently, this complicated multiple agency problem can arise where IAHs (principals) entrust their investment to the IB managers (agents) appointed by another principal (shareholders) (Farag et al., 2018).

Furthermore, IBs might face the increased agency costs on both sides of the balance sheet, in respect to depositors investing their wealth in firm loans/assets and where IBs perform tasks as their agent, as well as on the asset side where the borrowers play an agent's role employing the depositors' money to investment (Beck et al., 2013). A signed debt contract between the bank and depositors/borrowers with deterministic (Diamond, 1984) and stochastic monitoring (Townsend, 1979) is considered as the optimal choice for IBs with the numerous savers and entrepreneurs. Nonetheless, IBs must face the obvious maturity mismatch between deposits, demandable on sight and long-run loans, which has high probability leading to the firm runs and default (Diamond and Dybvig, 1983). Moreover, potential agency problems might arise in IBs between the protection of IAHs' rights and shareholders which are unresolved (Claessens, 2006). Profits from investments are expected to be shared between the IAHs and the IBs upon on mutual agreement between them regarding proportion.

Nonetheless, the IAHs must completely bear all losses from investments, except for cases of misconducting or negligence on part of the bank (Belal et al., 2015). They do not entitle a directly monitoring of their investment, having representatives seating in the BoD resulting in higher agency costs and the IAHs' risk of exploitation by the firm executives (Farag et al., 2018).

2.7.3 *System of Governance*

Governance mechanism of IBs is different than that of CBs owed to the former's nature and characteristics (Farag et al., 2018). In the "single-layer" CB governance model (which typically includes the BoD and executive/board subcommittees), the BoD defines appropriate CG and practices for its own work; more importantly, the BoD "put in place the means for such practices to be allowed and periodically reviewed for ongoing effectiveness" (Shibani and Fuentes, 2017, p. 1006). CBs thus have no religious preoccupations or an extra layer of governance, such as the SSB (Kettell, 2011; Mollah et al., 2017). Conversely, the "multi-layer" Shari'ah governance[4] of IBs, argued to be a unique dual-board structure, comprises of the BoD, the SSB and executive/board subcommittees (Mollah and Zaman, 2015; Farag et al., 2018). Besides the main responsibilities of execution, protecting the shareholders' interest and maximising their value, the BoD in IBs has additional functions regarding the introduction of comprehensive policies, processes and infrastructure to ensure all activities, transactions or policies are compliant with Shari'ah law, as well as to establish an appropriate Shari'ah governance framework (see Figure 2.4). This suggests that the BoD in CBs are more independent in their decision-making process (Alnasser and Muhammed, 2012; Mollah and Zaman, 2015; Mollah et al., 2017).

The extended layer of IB governance (i.e. SSB) is referred to as "*supra authority*", which protects the Islamic community and focuses on the compliance of the ethos of the Shari'ah on a firm's activities and transactions, monitors and controls the BoD and executive management team to ensure they only execute the ex-ante approved products and services compliant to Shari'ah law and helps the staff in IBs adhere to the morality principles instead of personal interests and greed

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[4] Shari'ah governance is defined as "a set of organizational arrangements concerning how the Shari'ah board is directed, managed, governed, and controlled" (Malkawi, 2013, p.544). It can be viewed as one of the unique kinds of governance in financial architecture because it is concerned with the religious aspects of the overall operations of IB system in comparison with traditional concept of CG in CBs (Malkawi, 2013). It concerns the management, establishment, as well as affairs of the SSB.

(Beekun and Badawi, 2005; Shibani and Fuentes, 2017). Specifically, the SSB has a profound influence on the day-to-day practices of finance in providing both consultative and supervisory services to IBs (Mollah et al., 2017), thus providing an additional check, which should add value to this bank type (Mollah and Zaman, 2015). The SSB members endeavour to respond to any issues for a transaction or product confirmation with the Shari'ah and offer advice and recommendations to the BoD (Kettell, 2011). They should seek to enhance knowledge regarding IB functionings among the employees. Additionally, they review bank activities and processes, supervise its development of Islamic financial products and services, endorse and validate relevant documentations, as well as the internal policies, manuals and marketing advertisements (Alnasser and Muhammed, 2012), and determine the Shari'ah compliance of these products and investments (Choudhury and Alam, 2013; Elnahass et al., 2014). SSB members act as investigators in conducting their own independent audit to certify that nothing relating to the bank's operations involves any element prohibited by Shari'ah (Safieddine, 2009). The SSB then issues an independent report to certify that all financial transactions comply with the Shari'ah principles. This is often an integral part of the IBs' annual report (Grais and Pellegrini, 2006).

In sum, the main roles of the SSB might normally involve three different areas including the issuance of fatwa[5] (a non-binding advisory opinion to an individual questioner in connection with ongoing human affairs) via collective ijtihad[6] (use of independent reasoning by qualified scholars to obtain legal rules), internal supervision/control mechanism (raqabah), and internal audit (mutabaah) (Malkawi, 2013). Within the framework of Shari'ah governance, the SSB is expected to restrain the BoD and managers from aggressive lending, risk-taking and unethical behaviours (Mollah and Zaman, 2015). Contrarily, the BoD is expected to enforce the SSB's authority to perform their supervisory or advisory roles, or both (Mollah et al., 2017). Shari'ah requirements, therefore, lead to unique agency relations of IBs, especially since financial turmoil can be produced by the Shari'ah non-compliance risk (Safieffine, 2009). Thus, the CG system of IBs is more complicated than that of CBs to control for their unique agency

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[5] It covers issues of mosques, intergenerational transmission of property, and marriage of children, and banking operations and interest (Malkawi, 2013).
[6] Being one of the sources of Islamic law, it refers to the reasoning and strict legal analogy (Malkawi, 2013).

conflicts (Lewis, 2008). As Mollah and Zaman (2015) claim, "the governance features of IBs with Shari'ah supervision as an additional mechanism suggest that IBs ought not to face the type of financial difficulties that have been experienced by their conventional counterparts. The role of SSBs in IBs means that their products are likely to be Shari'ah compliant and less risky. This may in turn influence the performance of IBs" (p. 421).

Due to the rapid growth of the IBs' sector, along with the recent banking crisis, the SSB requires an enhanced governance framework. Specifically, in performing its activities and fulfilling imperative tasks, this board requires a clear framework/structure to ensure its independence and effectiveness. The presence of the SSB tends to play a catalytic role in promoting public acceptance for this banking industry. Thus, effective SSB is vital to strengthen the creditability of the IBs. Alternately, the failure to provide an effective SSB is likely to inevitably result in serious disruptions in the financial market, leading to dire consequences for the IBs and the finance sector (Mollah and Zaman, 2015).

In practice, notable governance challenges encounter the SSB's roles (Grais and Pellegrini, 2006) and would relatively affect their moral responsibility. Members of this board are appointed by shareholders at the Annual General Meeting (AGM) or by the BoD (Farag et al., 2018). The International Association of Islamic Bank points out that Shari'ah members must not be recruited by the bank and, especially, should not subject to the BoD's authority. This is to ensure the freedom and independence of the SSB. However, in most cases, the SSB appointments made by the AGM are based on recommendation by the BoD (Farag et al., 2018). In such cases, the SSB members are allowed to attend the BoD meetings to discuss religious aspects of the BoD's decisions. Furthermore, in numerous IBs, the BoD can directly appoint Shari'ah scholars, as in Pakistan, Jordan or Malaysia. This is evidenced by the survey of the International Institute of Islamic Thought (see Malkawi, 2013), with 80 per cent of SSB appointments made by the BoD. Since the assumption of SSB independence could only be guaranteed if the appointments of their members is by the AGM, practitioners claim that this assumption is not truly convincing, since the practice of appointments varies among the IBs. Even if the appointments are made by the AGM, the BoD may still influence the shareholders during the recruitment process. Additionally, SSB members will receive the remunerations from the IBs

where they are working for, and the BoD has strong power to amend and approve such remuneration (Gooden, 2001). Therefore, some loyalty to managers, banks or the BoD who proposed them in the first place is highly anticipated (Hart, 1995). This may create some potential conflicts of interests. Moreover, the SSBs employment status as both advisors and supervisors breed a financial stake in the bank. This further generates agency costs because of the opportunities for compromised independence and a potential conflict.

SSB members should be knowledgeable in Islamic commercial jurisprudence and equipped with relevant expertise in modern business disciplines, economic developments and accounting and financial practices, being armed with adequate training and continued education (Farag et al., 2018). In practice, very few religious scholars are well educated, trained and highly experienced in the disciplines of *both*, Shari'ah law and finance (Alnasser and Muhammed, 2012). As Nasser Mohammed bin Hussein Alshaali, appointed as a CEO of the Dubai International Financial Centre (DIFC) Authority in November 2006, said, "Graduating Shari'ah scholars, who reach their status through religious rather than financial education, remains a challenge" (Khalaf, 2007). Bearing in mind the fact that audit committees are expected to monitor the managers' financial reporting, their role tends to be quite limited among IBs, showing increasing agency problems (Safieddine, 2009). Furthermore, a survey by Mollah and Zaman (2015) documents that IBs only review the SSB qualifications and expertise without assessing the board's performance throughout their employment. The responses from this survey have been mixed regarding SSB training and the understanding of internal controls and risk management processes.

More importantly, a limited number of the most prominent and respected scholars control the IB industry and sit on multiple SSBs on a part-time basis (Khalaf, 2007; Alnasser and Muhammed, 2012; Mollah and Zaman, 2015). Since there are not many scholars qualified in both Shari'ah law and finance, there is an unusual high concentration of positions in the hands of a few. Many of these scholars are highly regarded along with their opinions (i.e. having reputational capital) and advise several financial organisations at the same time and are hence overworked with multiple duties (Al-Rai, 2009). Additionally, there exists several problems related to the selection criteria and qualifications of SSB members among IBs. Their education is not properly regulated and coordinated; particularly, no specific

curricula for them is established (McMillen, 2006). These has led to a reduction in the SSB roles' effectiveness, especially in providing solid and concrete fatwa rulings that require professional skills and expertise in Shari'ah and its compliance (Malkawi, 2013). Furthermore, as the industry grows rapidly, the efficacy of too-busy SSB members who are overcommitted has been called into question. Under this tremendous growth, one must worry that the number of potential conflicting fatwa among SSB members of the different SSBs may increase. Thus, it is imperative to examine the knowledge, experience, skills and time/efforts of those Shari'ah scholars. Additionally, the SSB normally meets weekly, monthly, semi-annually, quarterly or annually, as per the needs of the IBs. This signifies the large number of meetings[7] of several Shari'ah scholars, which makes them spend much time and effort to fully be involved in the banks they are working for.

Additional concerns could also be raised whether scholars are a part of the competing banks or if they must regulate the bank of which they are a part. Such scarcity and "busyness" of SSB members could undermine the confidence of stakeholders in the credibility of their assessments. Hence, while theory suggests that the additional layer of monitoring through SSBs can restrain excessive risk-taking (e.g. Elnahass et al., 2014; Abdelsalam et al. 2016), the SSBs' monitoring effectiveness depends on the time and efforts allocated by individual members. This represents an ultimate indicator of the activity level exercised by its members in advising and supervising the BoD. Academics and practitioners contend it is essential to have a legal provision that clearly states the restrictions on serving multiple SSBs of IBs at the same time, to avoid any perception of conflicts of interest (Malkawi, 2013). Such policy can ensure the full-time availability of the SSB to provide supervisory services to the IBs more effectively. A well-functioning SSB, working with the regular BoD, routines executive and other operational committees, is necessary to ensure that the IBs' noble goals are achieved in practice. As a result of rapid expansion of IBs, along with the increasing number of SSB, the issues of competency of SSB members and issues

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[7] In these meetings, the SSB will discuss issues related to the concept and structure of new and existing products, documentation, operations, and the investment portfolio. SSB members will receive all necessary documents for the respective IB prior meetings at least seven days in order to allow sufficient time to read and examine the documents. Those meetings normally will be chaired by the SSB chairman and all decisions made by the meetings must be taken by unanimity (Malkawi, 2013).

of conflicts of interest require a legal framework regulating the SSB qualifications and the ability to sit on multiple boards.

Theoritical framework of the whole thesis is summaried and presented in the Appendix 1.
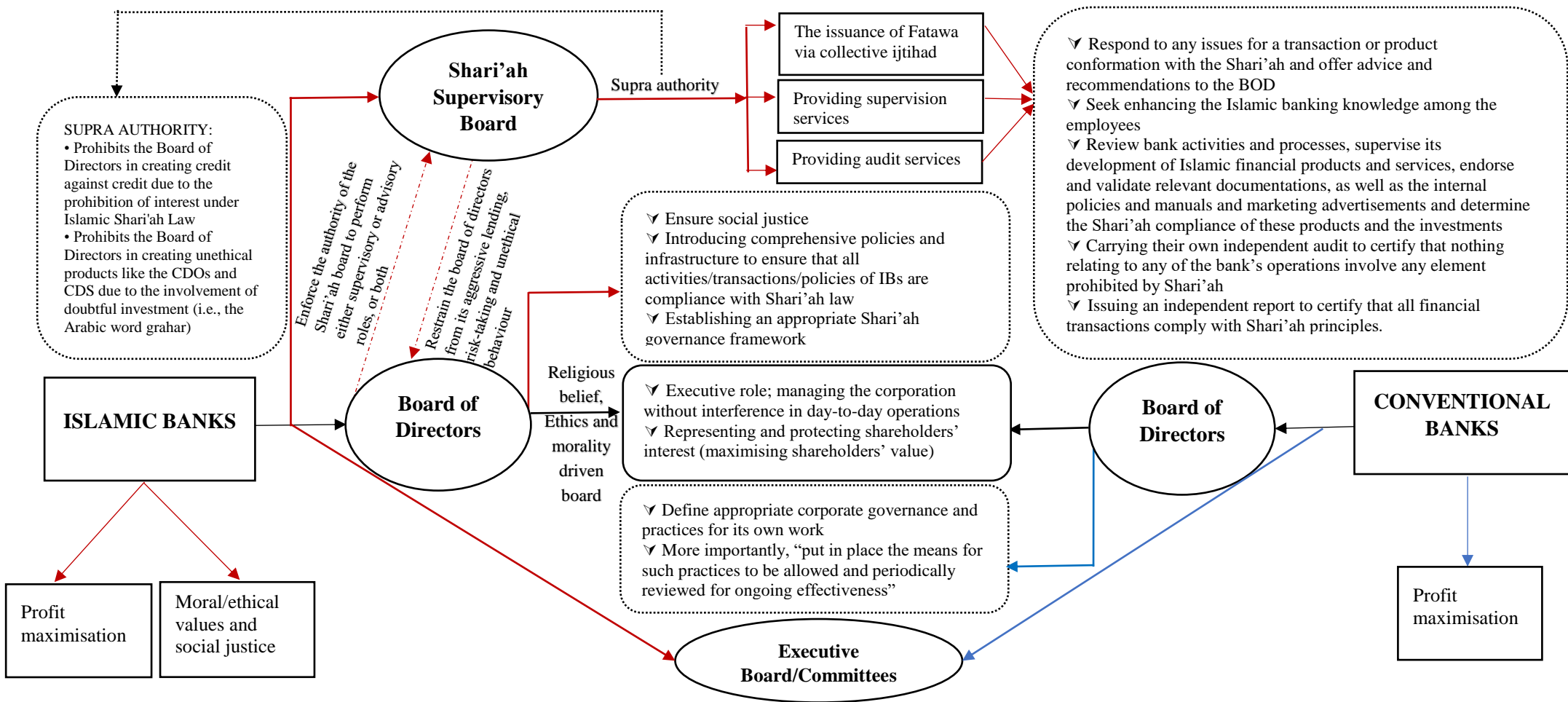
Figure 2.4: Similarities and Differences in Corporate Governance Framework between IBs and CBs
(*Source: Proposed by author*)

2.8 Summary of Methodology

Literature in board busyness practices show that endogenous problems can be occurred. Thus, seeking suitable methods to solve such issues is indispensable to obtain reliable results. In this thesis, as banks are likely to differ in the opportunities and challenges that they may encounter over years, this can lead to a situation that disclosure of board directorships, other board characteristics and bank outcome measures (i.e. financial stability, market valuations and dividend policy) are jointly and dynamically determined by unobserved bank-specific variables (e.g. quality and style of management, business strategy, market perception and bank complexity) (Guest, 2009; Henry, 2008), which pooled Ordinary Least Square (OLS)[8] regressions may not be able to detect (Kraatz and Zajac, 2001; Wooldridge, 2002). Therefore, given the panel nature of the data, this study estimates the models employing panel data estimation[9] to mitigate endogeneity problems[10] arising from potential unobserved bank-specific heterogeneity. This is consistent with Henry (2008) and Guest (2009).

Furthermore, there is a likelihood that busy outside directors choose banks with high financial stability (study 1) or high dividend pay-out policy (study 3). Similarly, although better governance practices of a firm can enhance its profit, investors may value high profit rather than the governance attributes (study 2). These raise the potential causal relationships between busy boards and bank outcomes. To avoid misinterpreting the investors' behaviour and the relation between busy boards and bank stability, market value and dividend policy, this study includes a comprehensive set of control variables to reduce the omitted-variable bias and the possibility that the findings are impacted by endogeneity.

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[8] The assumption of OLS is that among others, the independent variables are truly exogenous that there is only one-way causation between the regressand and regressor. If this is not correct, the assumption will be violated and a single equation OLS technique might give biased and inconsistent estimates. To rectify this issue, simultaneous equation models (e.g. the robust multivariate regression procedure or 3SLS) should be alternatively employed (Alih and Ong, 2014).

[9] Panel data (or, longitudinal data) is the data set that combine both time series and cross sections. However, panel data set are likely to be more oriented toward cross-section analysis. Panel data can help enhance the efficiency of econometric estimates by producing more accurate inference of model parameters (Hsiao, 2007); higher capacity for capturing the complexity of human behaviour than a single cross-section or time series data (e.g. controlling the influence of omitted variables); and simplifying computation and statistical inference (e.g. analysis of nonstationary time series can be simplified if panel data are available and observations among cross-sectional units are independent (see Baltagi and kao, 2000; Levin et al, 2002). However, the main challenge of panel data analysis is to control the influence of unobserved heterogeneity to obtain valid inference on the structural parameters (Hsiao, 2007).

[10] The sources of endogeneity include (1) omitted variables, (2) measurement error; and (3) simultaneity. This may result in bias in estimation of econometric model.

However, it is obvious that this study cannot completely exempt from the endogeneity from the busy boards. It, therefore, performs the usual and common solution using Three-Stage Least-Square (3SLS) estimations and instrumental variables (e.g. Elyasiani and Zhang, 2015; Chakravarty and Rutherford, 2017) to minimise endogeneity between busy directors and bank outcome measures. In brief, 3SLS is similar to 2SLS, however, it utilises the fact that these equations could be correlated through their error terms. Thereby, 3SLS could be considered as an extended 2SLS with the same first and second stages as 2SLS but add a third stage to compete generalised least square (GLS) estimator and construct the new covariance matrix. Given that the GLS can handle a wide range of unequally spaced panel data patterns. More details are discussed in each empirical chapter (Chapter 3, 4 and 5).

Another instrumental variable approach (i.e. GMM) will be also used to examine the robustness of the findings.

2.9 Summary

This chapter provides the fundamental knowledge of main theories, which have been used to build the theoretical framework and research hypotheses of this thesis. Specifically, it discusses CG in banking, agency theory and RDT, along with the reputation versus busyness hypothesis built on board busyness and previous literature. Furthermore, existing evidence on two bank types do not focus on an important governance attribute such as the busyness of outside directors and Shari'ah advisors. This thesis therefore attempts to fill this void by implementing three empirical chapters (3, 4 and 5), which examine the influences of board busyness on financial stability, market valuations and the dividend payout policy, while identifying differences in the two banking models, IB and CB. The chapter finally reports key differences between both these types of banks. Generally, IBs are argued to be more complex than CBs in terms of business operations, products and services, CG structure and agency conflicts.

CHAPTER 3 *STUDY 1* - BOARD BUSYNESS AND FINANCIAL STABILITY: EVIDENCE FROM ALTERNATIVE BANKING MODELS

3.1 Abstract

This study examines the impact of board busyness on the financial stability of banks in a dual banking system (IBs and CBs). It considers banks from fourteen countries for the period 2010-2015. Results for the whole sample provide strong evidence that banks with busy boards exhibit high financial stability (high profitability, low cost to income and low insolvency and credit risk). These findings are in line with the reputation hypothesis, which asserts that busy outside directors bring their expertise and connections, leading to better decision-making, the efficient utilisation of resources and effective monitoring. However, conditional on the bank type, those reputational benefits from busy boards are more pronounced for CBs. IBs' financial stability and other indicators are adversely affected by the presence of busy board (both BoD and SSB) members, with IBs portraying low profitability, high cost to income and high risk-taking. This might be attributed to the IBs' complex governance structure and the uniqueness of their financial products, which require additional effective monitoring.

3.2 Introduction

The complexity of banking transactions and financial instruments lead to substantial information asymmetries. At the same time, evidence relating to effective governance structures and to bank performance and stability is still developing. The uniqueness of governance mechanisms in banks implies the dominant role of the BoD in both performance and risk-taking behaviour (Elyasiani and Zhang, 2015; Faleye and Krishnan, 2017). Theorists of resource dependence argue that monitoring by the BoD is vital for efficient resource allocation and for risk mitigation (Johnson et al., 1996). It has long been argued that holding multiple board seats across manys firms (i.e. busy boards) have reputational and networking benefits, which contribute to the corporate performance and risk control (Jiraporn et al., 2009; Brennan et al., 2016). Furthermore, the impact of busy outside directors on financial stability is driven by agency conflicts and the nature of the respective

banks' business models (Chen, 2008). Ultimately, the value added by multiple directorships depends on the relative importance of effective monitoring and the structure of governance employed. Arguably, directors are unable to monitor their firms effectively when they are "over-boarded", having limited time to scrutinise a bank's operations and strategic decisions. This can adversely affect the banks' performance, increasing risk-taking behaviour (Ferris et al., 2003) and give rise to agency problems (Core et al., 1999). The disadvantages of board members' multiple affiliations are thus particularly severe for large and complex financial firms (Kress, 2018; Trinh et al., 2019).

Till date, no empirical work has investigated the effect of board busyness on financial stability across different types of banks (i.e. IBs and CBs). Only two studies exist that focus on the conventional bank setting. They include Elyasiani and Zhang (2015) and Kutubi et al. (2018). To the best of knowledge, empirical evidence on board busyness within the Islamic banking context is meagre. Thus, the present study fills this important gap.

As argued earlier (Chapter 2), in principle, IBs are expected to conduct operations on the basis of PLS arrangements, in which contracts between banks and their depositors are commonly equity-based. In practice, IBs are more likely to engage in mark-up finance, replacing interest payments with fees and contingent payment structures (Olson and Zoubi 2008; Mollah et al. 2017). Thereby, IBs protect their market share in competition with CBs. Moreover, the governance structures of IBs are more complicated. Unlike the single governance layer in CBs (i.e., BoD), IBs are subject to a double-governance mechanism with a SSB in addition to their regular BoD. Thus, decisions of the BoD must accommodate additional supervision for Shari'ah compliance (Mollah and Zaman 2015). In both bank types, the BoD is responsible for the execution of strategic decisions, protection of the shareholders' interest and maximisation of the bank value. Furthermore, for IBs, additional agency costs are likely to be associated with the IB model. This is due to a peculiar institutional environment in IBs, including the special bank-depositors' relationship.

The nature, qualities and commitments of the regular BoD in the IB and CB models are different (Mollah et al., 2017). The popularity, reputation and scarcity of experts in Shari'ah legitimacy on a global scale have contributed substantially to the busyness of the BoDs' and SSBs' members in IBs. The greater complexities

in the Islamic business model imply that reputational effects might not be attained by appointing such busy boards. This is owed to the limited time and attention given by those two boards (i.e. BoD and SSB) to scrutinise the bank's operations against risky (non-Shari'ah compliant) activities. Alternately, in CBs, it is possible that the cost of ineffective monitoring may be offset by the expected reputational benefits of recruiting busy boards (Elyasiani and Zhang, 2015; Brennan et al., 2016).

Due to structural differences between the CB and IB business models, this study comparatively assesses the impact(s) of board busyness on the financial stability of the two bank types. It employs performance measures (i.e. profitability ratio and cost to income ratio) and different risk indicators (i.e. insolvency and credit risks). The analysis is based on a sample of 880 bank-year observations (154 banks) in fourteen countries for the period between 2010 and 2015. For the full sample (i.e. CBs and IBs together), banks with busy BoDs have a significantly higher financial performance and lower bank risks. Conditional on the bank type, board busyness exhibits a differential impact on bank performance and financial stability. Compared to CBs, IBs with busy boards show low performance and high risk-taking. These findings are intensified as the degree of board busyness increases. Furthermore, IBs with a less busy SSB are relatively more stable and have a better financial performance, when compared to IBs with a busy SSB.

This is the first study about the impact of busy boards on a bank's financial stability across different bank types. The findings contribute to the broad existing literature that considers the relative impacts of distinct degrees of board busyness on financial stability. This study thus adds to the sizeable literature on bank financial stability (e.g. Chan and Milne, 2014; Ashraf and Rizwan, 2016; Bitar et al., 2017; Arnaboldi et al., 2018). Moreover, by presenting evidence on the differential effects of board busyness across the two bank types, the research extends the Islamic and conventional banking literature (e.g. Abedifar et al., 2013; Beck et al., 2013; Mollah and Zaman, 2015; Mollah et al., 2017). Furthermore, it identifies the damaging effect that busy SSBs have on Islamic banking performance and stability, thereby extending earlier work (e.g. Field et al., 2013; Elyasiani and Zhang, 2015; Chakravarty and Rutherford, 2017).

Findings provide valuable insights and policy implications to regulators and investors engaging with the two banking sectors. Regulators and market

participants in CBs can benefit from this empirical evidence portraying that busyness and networking of the BoDs are likely to enhance both bank performance and stability, which offers important implications for wealth creation. The reputational benefits associated with recruiting busy boards might not be invoked in the presence of unique institutional characteristics, as presented by the experiment of IBs. IBs, by virtue of their unique and illiquid products, require effective monitoring. Thus, the substantial role of effective Shari'ah monitoring appears to be essential for promoting financial stability in Islamic banking.

3.3 Background and Hypotheses Development

3.3.1 *Busy Board and Bank Financial Stability*

Corporate risk-taking, risk monitoring and financial performance are central concerns of the BoD. The board's role in risk management and financial stability has led to increased public and regulatory scrutiny of multiple directorships. Excessive risk-taking during the financial crisis of 2007 has brought an added emphasis to the relationship between board busyness and the effective monitoring in banks (Trinh et al., 2019).

According to Adams and Mehran (2003), directors' duties and obligations arise in two contexts: a discrete decision brought to the board for approval that increases directors' legal responsibility on bank safety and soundness and their obligation to provide firm oversight on whose boards they serve. Alongside their advisory roles, outside directors are also expected to provide vigilant oversight over executives and perform their duties independently from insiders. Unlike inside directors, they should serve as monitors on inside board members and managers on behalf of capital providers and, therefore, are expected to mitigate agency conflicts (Fama and Jensen 1983).

Prior studies suggest that investors do not usually favour the appointment of busy outside directors. Typically, Falato et al. (2014) find that the busyness of outside directors is detrimental to effectiveness of board monitoring, hence reducing both firm performance and shareholder value. Nguyen et al. (2015) show that the appointment of an executive who holds several non-executive directorships is associated with negative returns for US banks. Another strand of the literature is in favour, arguing that overcommitted board members bring reputational and

preferential benefits to their firms. Fich and Shivdasani (2006) argue that a board member who holds multiple directorships is an indicative measure for their high reputation and superior managerial performance in the external labour market. In line with this, Harris and Shimizu (2004) show that a busy director is a valuable source of extensive knowledge to a firm, offering a vital supportive role to inside directors. Furthermore, Lei and Deng (2014) have found a positive relationship between multiple directorships and firm value; however, they indicate that this positive association is significantly lower at higher degrees of busyness. Recently, Elyasiani and Zhang (2015) have shown a positive (negative) relationship between busy directors and performance (risk), respectively, for the US bank holding companies. Moreover, Chakravarty and Rutherford (2017) find that busy directors can reduce the firm's cost of debt.

Considering the above evidence, the research expects that a busy BoD is more likely to enhance the financial performance and moderate risk-taking. This leads to the following hypotheses, stated in alternative forms:

 H_1: Banks with a busy board of directors are financially stable.

3.3.2 *Board of Directors' Busyness in Islamic and Conventional Banks*

With regards to IB activities and operations, the "no money for money" principle suggests that risk-sharing practices might be embedded on both the asset and liability sides of the balance sheet. This has implications on both performance and risk-taking. IBs operate within a young and small industry, associated with high operating costs and low-cost efficiency (Johnes et al., 2014; Ashraf and Rizwan, 2016) relative to their conventional counterparts. Prior studies document that IBs and CBs significantly differ in their performance, financial stability and aspects of operations. For instance, Čihák and Hesse (2010) have found that larger IBs are less financially stable than CBs due to challenges in controlling credit risks. Beck et al. (2013) have found that better capitalisation and greater asset quality make IBs less vulnerable to financial distress than CBs. However, IBs are generally less cost efficient. Abedifar et al. (2013) highlight that IBs encounter an additional type of risks (generic plus unique risks)[11] due to the complexity of the Islamic

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[11] Unique risks include a rate of return risk, Shari'ah non-compliance risk, displaced commercial risk and equity investment risk (Abedifar et al., 2013).

finance modes and imposed restrictions on their funding, investment and risk management activities. Overall, IBs have a distinctive survival rate as compared to CBs (Pappas et al., 2017).

The different business models employed by IBs and CBs imply the monitoring requirements in IBs to be more complex. This can be justified by the additional Shari'ah governance incorporated into the business model and the peculiar definitions of rights and obligations for the Islamic products and contracts. Therefore, the characteristics and attributes of BoDs are expected to have differential effects on the two bank types' financial stability.

According to the busyness hypothesis (Jiraporn et al., 2009; Cashman et al., 2012), outside directors who serve on multiple boards might lack time to perform monitoring tasks effectively. Furthermore, this study does not expect that all outside directors have good networks links, which could bring reputational benefits. Hence, a reduction in their workload is more associated with improved operating profits and higher market-to-book ratios (Hauser, 2018). Therefore, an inverse relationship is expected between the board's busyness and the bank's financial stability (Fich and Shivdasani, 2006). Unlike CBs, the scarcity of the BoD specialised in Shari'ah legitimacy alongside the nature of the business model, including complex monitoring mechanisms, suggest that a busy BoD in IBs would be less able to provide effective oversight, as justified by the busyness hypothesis. Although busy directors in CBs can use their networking or experience to advise some efficient financing sources to the firm they are serving, this is less likely to be obtained in IBs. This follows from the fact that IBs cannot raise funding through direct access to market operations (e.g. derivatives and options), which are impermissible under their Shari'ah governance. Moreover, IBs have a distinctive regulatory framework; they operate within less developed financial markets. As a result, CBs are expected to benefit more from the reputation and experience of busy directors than IBs.

Accordingly, the study conjectures that the costs of ineffective monitoring by a busy BoD in IBs are expected to offset reputation benefits. This leads to the second hypothesis in an alternative form as the following:

> *H_2: Islamic banks with a busy board of directors are less financially stable than conventional banks.*

3.3.3 *Shari'ah Supervisory Board busyness in Islamic Banks*

Religious, social norms[12] (i.e., values extracted from religious texts), should reduce agency costs in religiously-oriented banks (Abdelsalam et al., 2016). Under the assumed dominance of moral accountability and additional monitoring in the IB model, this study extends the assessments to identify the effect of busy SSB on the financial stability of IBs.

The SSB's role goes beyond that of a principal investigator for scrutinising bank activities. Depositors and investors view SSB members as the "*custodians*" *of* social, ethical and systemic welfare. Since a SSB has a unique role in ensuring the mandatory compliance of IBs to the rulings of Shari'ah, this mitigates reputational risk[13]. This risk is an indispensable element of operational risk and likely to affect the banks' financial stability.

In practice, Shari'ah scholars in IBs are very few and tend to be overcommitted across several banks, countries or even continents (Unal and Ley, 2011; Alnasser and Muhammed, 2012; Mollah and Zaman, 2015). This can have an adverse impact on their Shari'ah monitoring function, potentially contributing to additional agency costs. Furthermore, the limited availability of Shari'ah scholars worldwide suggests that they might be expensive to appoint, leading to higher charges of salaries and remunerations. This can thus lead to cost inefficiency (see Brick et al., 2006). Accordingly, the study conjectures that a busy SSB weakens the double-governance mechanism employed for IBs, leading to the following hypothesis stated in the alternative form:

   H₃: Busy SSB has a significant detrimental impact on Islamic banks' financial stability.

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[12] 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 common values and beliefs. Accepted attitudes are likely to be widely supported and socially approved by the community.

[13] Reputational risk is defined as the probability that activities of IBs are not compliant with the rules of *Shari'ah.*

3.4 Data and Methodology

3.4.1 *Data collection*

The consolidated financial data (in U.S. dollars) used in this study is obtained from Thomson One Reuters, DataStream and Bloomberg databases. Governance-level data and data for outside directors, Shari'ah advisors and board information, are hand-collected from annual reports. Country macroeconomic and governance indicators are retrieved from the World Bank's World Development Indicators database.

In defining busy outside directors and Shari'ah advisors, the thesis follows previous studies which identify a director as busy if he/she serves on at least two outside boards (Core et al., 1999; Perry and Peyer, 2005; Fich and Shivdasani, 2006; Jiraporn et al., 2008; 2009; Cashman et al., 2012; Field et al., 2013; Elyasiani and Zhang, 2015). This cut-off is recommended by the Council for Institutional Investors. The thesis follows Field et al. (2013), Fich and Shivdasani (2006) and Chakravarty and Rutherford (2017), to count the number of directorships held by outside directors in all *for-profit* private and public firms. It, hence, excludes directorships related to activities in sport clubs, non-for-profit, trusts and charitable institutions.[14]

The initial sample comprises a total of 3038 banks (196 IBs and 2842 CBs) in 36 countries. The final sample includes unbalanced panel data of 154 banks (880 bank year-observations) for both listed and unlisted banks, operating in 14 countries[15] over the period 2010-2015[16]. The selection of the sample period avoids the potential effect of the financial crisis period of 2007-2009. The study filtered the sample following similar criteria applied in other banking studies (see Beck et al., 2013; Mollah et al., 2017). These include: (a) countries having both types of

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[14] For example, the annual report in 2014, Albarala Banking Group in Bahrain, indicates the profile of Mr Abdulla Saleh Kamel (Vice Chairman of the BoD) that is "…*Mr. Abdulla Kamel has also been and remains very active in public and charitable activities through his membership of many international and local organizations and associations, such as Jeddah Chamber of Commerce (twice as Board Member), Young Presidents' Organization, Friends of Saudi Arabia, The Centennial Fund and the Board of Trustees of the Prince of Wales Business Leaders Forum.*" (Page 11).

[15] These countries include *Bahrain, Bangladesh, Indonesia, Kuwait, Malaysia, Turkey, Pakistan, Qatar, Saudi Arabia, UAE, Oman, Lebanon, Egypt* and *Jordan*

[16] For the treatment of the outliers, this study winsorises each variable in our test model at the 1st and 99th percentiles.

banks[17] and at least four banks[18]; (b) banks which have full annual reports available from official websites, published as of the financial year of 31 December[19]; (c) only commercial full-ledged banks were kept, and Islamic windows[20] are excluded; and (d) banks having full data availability of at least three consecutive years[21]. The data collection procedure for empirical study 1 including five screening criteria steps, are reported in Table 3.1.

	Islamic Banks	Conventional Banks	Pooled Sample
Initial Sample	196	2842	3038
Less:			
Countries having both types of banks and have at least *four* banks (at least one bank for each type of bank)	39	1781	1820
Annual reports are retrieved from official website and reported as of the financial Year 31 December	60	937	997
Classified as Commercial bank +Full-ledged IBs and CBs	21	32	53
At least three consecutive years' full data availability	6	8	14
Final Sample	**70**	**84**	**154**

Notes: The table presents the data collection procedure. This process comprises of five screening criteria steps consistent with Beck et al. (2013), Abedifar et al. (2013), Mollah and Zaman (2015), and Mollah et al. (2017). The initial sample includes 196 IBs and 2842 CBs in 36 countries. The final sample comprises 70 IBs and 84 CBs in 14 countries.

Table 3.1: Sample Determination Criteria for Empirical Study 1

Table 3.2 below presents the sample distribution by country and bank, with 70 IBs (403 observations) and 84 CBs (477 observations). The percentage of bank representations between IBs and CBs is 46% and 54% respectively. This shows that the sample is representative of both bank types. The highest concentration of IBs is represented by Bahrain and UAE while Indonesia and Turkey report the highest concentration of CBs. Both IBs and CBs in the estimated sample follow

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[17] Including only countries having both bank types will allow this research to capture for any unobserved time-variant effect by introducing country-year dummies (see Beck et al., 2013).

[18] This is in line with the research design of Beck et al. (2013) and Mollah et al. (2017).

[19] All banks kept in the final sample reported their annual reports (including financial statements) following an accounting period running from January 1 to December 31. This is consistent with the study of Saghi-Zedek and Tarazi (2015).

[20] CBs with Islamic windows refer to banks with an independent department providing Islamic products with an SSB (Elnahass et al., 2014). Consistent with Elnahass et al. (2014, 2018) and Johnes et al. (2014), the reason for excluding these banks is that *supervisory issues* and *accountancy requirements* are expected to be substantially different to those of full-ledged Islamic banks (Islamic Financial Service Board, 2005).

[21] The minimum requirement of 3 consecutive years helps to reliably distinguish between random noise and bank outcomes in the errors (Mollah et al., 2017).

the same accounting standard. Given that IBs worldwide adopt International Financial Reporting Standard (IFRS) from 2006 in line with their national standard (Alexakis and Tsikouras, 2009; Elnahass et al., 2014). Thus, the study can reasonably compare the data over estimated period 2010-2015 (Johnes et al., 2014).

Country	Observations (IBs)	Observations (CBs)	Observations (Full Sample)	% (IBs)	% (CBs)	% (Full sample)
Bahrain	88	45	133	21.84	9.43	15.11
Bangladesh	12	58	70	2.98	12.16	7.95
Egypt	6	15	21	1.49	3.14	2.39
Indonesia	42	111	153	10.42	23.27	17.39
Jordan	18	41	59	4.47	8.60	6.70
Kuwait	18	18	36	4.47	3.77	4.09
Malaysia	57	24	81	14.14	5.03	9.20
Pakistan	42	11	53	10.42	2.31	6.02
Qatar	24	24	48	5.96	5.03	5.45
Saudi Arabia	24	6	30	5.96	1.26	3.41
Lebanon	6	36	42	1.49	7.55	4.77
Turkey	6	78	84	1.49	16.35	9.55
UAE	48	6	54	11.91	1.26	6.14
Oman	12	4	16	2.98	0.84	1.82
TOTAL	**403**	**477**	**880**	**100**	**100**	**100**
Number of banks	**70**	**84**	**154**	-	-	-

Notes: This table presents the sample distribution of the study 1. The study sample comprises of 154 banks (880 observations) with 70 IBs (403 observations) and 84 CBs (477 observations) in 14 countries for the period from 2010 to 2015. The country-wise distribution (observations and percentage) of each types of bank and full sample is shown in collums 2-7.

Table 3.2: Sample Distributions of Empirical Study 1

The data collection process of board busyness for the two bank types, revealed that there is a shortage of Shari'ah scholars (i.e. a small group of reputable Shari'ah advisors) who tend to dominate the Shari'ah assurance process across various Islamic institutions worldwide. Therefore, multiple directorships of SSBs have been observed operating in several individual Islamic financial institutions within the MENA region, GCC region countries and globally. Unal and Ley (2011) document that around 121 Shari'ah scholars are acting for IBs located in 17 different countries[22]. Appendix 1A presents the multiple directorships of top 20 Shari'ah scholars and the respective ranking based on their total number of directorships across different countries during the year of 2011. According to Unal and Ley (2011), the top 20 Shari'ah scholars, statistically, hold about 341 SSB positions constituting about 17 positions per scholar. On the contrary, a total of 121 scholars, who are less popular, hold about 498 board positions; with 4

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[22] These include Bahrain, Kuwait, Qatar, Saudi Arabia, UAE/Abu Dhabi/Dubai, Malaysia, Sudan, Iran, Pakistan, Yemen, Jordan, Tunisia, Lebanon, Turkey, South Africa, Indonesia, and the UK

board positions per scholar. These numbers indicate that around 16.5% of the active scholars tends to dominate 69% of the total Shari'ah advisors sitting on boards of IBs operating globally. Appendices 1B, 1C and 1D provide illustrative examples on cross-country directorships of the top three most popular Shari'ah scholars, who, together, make up about 26% of the total share of SSB memberships worldwide.

3.4.2 *Measures for Bank Financial Stability*

This study captures bank financial stability by estimating several accounting-based indicators, which include operating performance (i.e. profitability and cost to income) and risks (i.e. insolvency risk and credit risk).

First, to examine whether corporate controls via busy boards influence the bank financial performance, this study uses the accounting-based performance measure return on average equity (ROAE), defined as the ratio of net come to average total equity, to gauge the outcome of busy directors' profitable (unprofitable) decisions. The higher the reported ROAE, the better the profitability performance of a bank. The ROAE serves as a robust and inclusive measure of the bank financial performance by gauging the extent of operational efficiency and capturing the nuances of banks' diversifying earnings through non-interest income activities and management of their costs (see Mollah and Zaman, 2015; Elyasiani and Zhang, 2015). Moreover, to measure bank operating efficiency, the study uses the cost-to-income ratio (COST/INCOME) which measures overhead costs relative to gross revenues. A higher COST/INCOME ratio suggests lower levels of a bank operating efficiency (Beck et al., 2013).

Second, the study investigates the effect of busy outside directors on two alternative risk measures: insolvency risk and credit risk. It measures insolvency risk by the bank *Z-score* as a measure of individual bank probability to default. This popular measure of bank soundness has widely adopted by most of the prior empirical studies (e.g. Pathan, 2009; Laeven and Levine, 2009; Beck et al., 2013; Abedifar et al., 2013; Saghi-Zedek and Tarazi, 2015; Mollah et al., 2017). Its popularity stems from the fact that *Z-score* is inversely associated with the probability of an individual bank's defaultness, i.e. the probability that the total assets' value of the bank becomes smaller than the debt value. It is calculated as a sum of return on assets and capital assets ratio, scaled by the standard deviation of

return on assets (i.e. return volatility). Capital assets ratio equals the subtraction of total assets and total liabilities divided by total assets (Bhagat et al., 2015). A high value of *Z-score* implies a good solvency position or lower probability of default risk, and hence, a high stability for the bank (Saghi-Zedek and Tarazi, 2015). The study uses the natural logarithm of *Z-score* (LogZscore) to control for outliers if any and highly skewness of distribution (Laeven and Levine, 2009; Abedifar et al., 2013).

The second risk measure is credit risk which is used to proxy for the quality of bank loans portfolio (Abedifar et al., 2013). Despite the behest of non-interest payments, IBs still must face credit risk that alludes the incapacity of a debtor in complying with their commitments in the contract. For instance, a debtor can fail to repay their loan to the bank, resulting in bank's loss or risk (Aggarwal and Yousef, 2000; Elnahass et al., 2014). Literature contends that credit risks of IBs should be lower than that of CBs due to contractual arrangement (Adbedifar et al., 2013; Beck et al., 2013). Credit risk is measured by the ratio of loan loss reserves to gross loans (*LLR/GR*) in line with Abedifar et al. (2013). The higher the ratio, the higher the credit risk for a bank. This proxy is widely employed by many prior studies including Kwan and Eisenbeis (1997), Angbazo (1997), Lepetit et al. (2008), Abedifar et al. (2013).

3.4.3 *Measures for Boards Busyness*

As mentioned in Section 3.4.1, this thesis including the current study identifies an outside director as busy if he/she serves in two or more outside boards (e.g. Jiraporn et al., 2009; Cashman et al., 2012; Field et al., 2013; Elyasiani and Zhang, 2015). This cut-off is recommended by the Council for Institutional Investors. The research follows prior literature to measure the number of directorships held by directors in all for-profit private and public firms. It excludes directorships related to activities in sport clubs, non-for-profit, trusts and charitable institutions.

Based on the above classifications, this study uses alternatively two most popular traditional proxies of board busyness. First, busy BoD and busy SSB are measured as the ratio of *outside directorships per outside director* (ABOD) and *outside directorships per Shari'ah advisors* (ASSB), respectively, representing the average number of other outside board seats held by each outside

director/Shari'ah advisor. It is computed as the total number of outside boards occupied by outside directors/Shari'ah advisors divided by the number of outside directors/Shari'ah advisors on the board (Ferris et al., 2003).

Second, the study also measures busy BoD and busy SSB by the percentage of busy outside directors (%BBOD) and the percentage of busy Shari'ah advisors (%BSSB), respectively. The former (%BBOD) is the percentage of busy outside directors on the board, calculated as the number of outside directors serving on two or more outside firms divided by the number of outside directors on the board. The latter (%BSSB) is the percentage of busy Shari'ah advisors on the board, estimated as the number of Shari'ah advisors serving on at least two outside organisations divided by the number of Shari'ah advisors on the board. The greater percentage of busy outside directors/Shari'ah advisors reflects higher busyness of BoD/SSB which influences the monitoring quality of overall board (Ferris et al., 2003; Chakravarty and Rutherford, 2017). Utilising the percentage of directors' busyness provides a plausible assessment of the board advising and monitoring intensity under the assumption of high independence, substantial contributions in the firm strategic decisions and their sound reputation maintained in the industry (Fich and Shivdasani, 2006).

3.4.4 *Methodology and Empirical Models*

The empirical analyses employ a panel data analysis, and the estimations account for the unobservable and constant heterogeneity (i.e. *management style, business strategy* or *other bank-specific features*). However, some independent variables in the model (e.g. board structure, composition and functioning) are determined simultaneously with dependent variables, leading to possible simultaneity bias. To mitigate potential endogeneity between busy boards and financial performance/risk (Field et al., 2013; Elyasiani and Zhang, 2015), this study utilises the Three-Stage Least-Square (3SLS) estimations and instrumental variables (Elyasiani and Zhang, 2015; Mollah and Zaman, 2015).

3SLS is regarded as a system technique, which could be applied to all equations of the empirical models at the same time; it provides simultaneously estimates of all the parameters (Zellner and Theil, 1962). This method is thus viewed as a logical extension of two stage least square (2SLS) or specifically, the combination of 2SLS and Seemingly Unrelated Regressions (SUR). This method is employed

in a system of simultaneous endogenous equations. It involves the application of the method of least square in three successive stages (Koutsoyiannis, 2001). The first two stages are the same as 2SLS except the reduced form of all the equations of the system and hence, they refer to the first 2SLS part. In each equation, there are endogenous variables on both the left- and right-hand sides. However, the error terms in each equation can be correlated to each other, and thus the method should take this consideration into account to obtain an efficient estimation. This part is the SUR. This third stage theoretically involves the application of the generalised least square (GLS), which is seen as the application of least squares to a set of transformed equations, where the transformation required might be obtained from the reduced form residuals of the previous stage. Therefore, 3SLS is a convenient technique when the analyst aims at estimating simultaneous equation models in the presence of dynamic random effects (Zellner and Theil, 1962; Arellano, 1990). By taking into considerations the cross-equation correlation, this method can yield more efficient estimates for simultaneous equation system than both 2SLS and single equation OLS while accounting for the possible endogeneity issues. Additionally, 3SLS is argued to have desirable features of leaving the auto covariance matrix of errors unrestricted; thus, the approach does not require the normal distribution of errors (Zellner and Theil, 1962). This technique might be robust to the residual autocorrelation of an arbitrage form. Consequently, it renders unbiased coefficients (Tamirisa and Igan, 2008).[23]

The study selects two main Instrumental Variables (IVs) for BoD and SSB busyness.[24] The first IV follows from Elyasiani and Zhang (2015), which is the number of public firms headquartered in the same country of the bank (source: World Bank). It is argued that outside directors and Shari'ah advisors of the bank headquartered in countries with more public firms tend to find more jobs in other institutions and might also work in different cities across the country. It, thereby,

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[23] This thesis including the current study uses the command *reg3* with option 3sls, in STATA 15 to estimate a system of structural equations, where some equations contain endogenous variables (i.e. busy boards) among the independent variables. Estimation will be via 3SLS and the endogenous regressors will be dependent variables from other equations in the system. The *reg3* can estimate systems of structural equations by 2SLS and SUR.

[24] Across all models, this study performs Durbin-Wu-Hausman endogeneity test (Hausman, 1978; Wooldridge, 2008). The unreported statistics of the test indicate the presence of endogeneity bias. The null hypothesis is that the specified endogenous independent variable can actually be treated as endogenous. The test assumes two selected IVs are valid instruments for board busyness. The F-statistics report that p-values of all models are less than 1%, 5% or 10% rejecting the null hypothesis. Therefore, busy board variables are endogenous and need to be solved.

predicts that the number of busy outside directors and busy Shari'ah advisors are positively associated with the number of public firms headquartered in the same country. Another IV for busy directors is the country-level income generating category (recorded in World Bank), which is a dummy variable taking a value of one if the "home" bank is in a country classified as a middle and high-income generating[25] nation, and zero otherwise. The research argues that a developed economic system with high-income levels is likely to feature skilled and high-paying job opportunities for directors (World Bank, 2016). Highly skilled and reputable directors with professional knowledge in those nations, therefore, can easily find job opportunities through accessing open labour markets. The study, therefore, expects that directors of banks headquartered in high-income countries with more skill-job opportunities are more likely to find director positions in other companies. This might positively influence the number of directorships they hold. Both IVs are correlated with possible endogenous variables[26] (i.e. BoD and SSB busyness) and should predict bank performance/risk only indirectly, through their effects on endogenous variables (see Black et al., 2006). Indeed, in this study setting and sampled banks, those IVs can indirectly affect bank performance/risk because the country-level indicators are less likely to influence individual banks' performance and risk-taking endogenously.

To test the hypothesis for the possible impact of busy BoD on bank financial performance, this study treats both busy outside directors and bank performance as endogenous variables and build simultaneous equations models, *eq.3.1* and *eq.3.2*. The first equation, *eq.3.1,* estimates the impact of busy BoD on bank financial performance measured by ROAE and COST/INCOME while the second equation, *eq.3.2*, estimates the influence of the financial performance indicators on the busy BoD. Accordingly, simultaneous equations models estimated for banks are specified as:

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[25] Middle and high-income nations are classified by World Bank (2015). If As of 1 July 2015, countries are defined as low-income if their Gross National Income (GNI) per capita is equal to or less than $1,045 or less in 2014; as middle-income countries if GNI per capita is between $1,045 -$12,736; and as high-income countries if GNI per capita is $12,736 or more.

[26] In line with Elyasiani and Jia (2008), an appropriate IV must be correlated with that endogenous variable (predicting reasonably the endogenous variable) and uncorrelated with the error term. This study performed two diagnostic tests to identify the validity of both the IVs and the specification of the system equations, the Sargan test and the Breusch and Pagan LM test. Both IVs theoretically and statistically satisfy the necessary conditions for validity and relevance, and hence, 3SLS results tend to be consistent and more efficient than OLS.

$$Performance_{it} = \beta_0 + \beta_1 BBOD_{it} + \phi P + \mu Year\ effects + \partial Country\ effects + \varepsilon_{it}\ (eq.3.1)$$
$$BBOD_{it} = \beta_0 + \beta_1 Performance_{it} + \phi P + \mu Year\ effects + \partial Country\ effects + \varepsilon_{it}\ (eq.3.2)$$

Where, Performance$_{it}$ represents {ROAE, COST/INCOME}; BBOD$_{it}$ represents {ABOD; %BBOD}; ϕP is a vector of control variables in the performance model. *Year effects* and *Country effects* capture the year-fixed and country-fixed effects; ε_{it} is the error term.

Similarly, bank risk and busy BoD are expected to be mutually interdependent since busy outside directors may have responsibilities to control bank risk. Thus, the study also constructs a simultaneous equations model for banks which treats risks and busy BoD as endogenous variables (*eq.3.3* and *eq.3.4*). These models are specified as:

$$Risk_{it} = \beta_0 + \beta_1 BBOD_{it} + \phi P + \mu Year\ effects + \partial Country\ effects + \varepsilon_{it}\ (eq.3.3)$$
$$BBOD_{it} = \beta_0 + \beta_1 Risk_{it} + \phi P + \mu Year\ effects + \partial Country\ effects + \varepsilon_{it}\ (eq.3.4)$$

Where, *Risk$_{it}$* represents {LogZscore, LLR/GR}. *Year effects* and *Country effects* capture the year-fixed and country-fixed effects; ε_{it} is the error term.

3.5 Control Variables Measurements

3.5.1 *Corporate Governance Variables*

This study first includes three main aspects of the corporate governance including BoD size, BoD independence and CEO duality, as they are expected to affect the bank's quality of decision-making and in turn, bank financial stability. Specifically, the study includes board size (LogBSIZE) to capture the boards' role and effectiveness, calculated by the natural logarithm of the total number of board members at the end of each fiscal year (e.g. Pathan, 2009; Minton et al., 2014; Brown et al., 2015; Mollah and Zaman, 2015; Farag et al., 2018); board independence (%INDEP) measured by the percentage of independent non-executive directors on BoD (e.g. Fich and Shivdasani, 2006; Mollah and Zaman, 2015; Farag et al., 2018); and CEO duality (DUAL) taking a value of one if CEO is also a Chairman and zero otherwise (e.g. Brown et al., 2015; Mollah et al., 2017; Faleye and Krishnan, 2017).

3.5.2 *Bank-level Characteristics Variables*

Moving to the bank-level characteristics variables reflecting a bank's control environment, complexity and experience, the study controls for bank size (LogTA) which is computed by the natural logarithm of total assets measured in thousands of USD of a bank at the end of the fiscal year in the sample period (e.g. Fich and Shivdasani, 2006; Saghi-Zedek and Tarazi, 2015; Brown et al, 2015). The research also includes bank age (LogAge) which reflects the bank experience and informational advantages, measured by the natural logarithm of the difference between the sample year and the bank establishment year (Pathan and Skully, 2010; Bhagat et al., 2015). It additionally adds Big4 auditor (BIG4) by employing a dummy variable which takes a value of 1 if the bank is audited by Big 4 audit firm, and zero otherwise (Mollah and Zaman, 2015); and subsidiaries dummy variable (SUB) to control for bank ownership structure (Abedifar et al., 2013). The study also captures the bank listing status of banks through a dummy variable (LISTED) taking the value of 1 is the bank is listed and 0 if it is unlisted (e.g. Liang et al., 2013; Saghi-Zedek and Tarazi, 2015; Elnahass et al., 2018).

Following Mollah et al. (2017), Liu et al. (2018) and Arnaboldi et al. (2018), the study uses Herfindahl-Hirschman Index (HHI) to capture the possible effect of banking sector concentration (activity diversification) on performance and risks. In other words, including the HHI in the models can account for cross-country differences in financial stability which is caused by variations in market concentration (Čihák and Hesse, 2010). This indicator is calculated by the square of the sum of the ratio of total assets of each bank-year to total assets of all banks each year. It has a value between zero and one. Higher value shows the more concentration (Mollah et al., 2017). Total assets used to calculate HHI are collected from Bloomberg, Datastream and bank websites. Although these sources are not entirely comprehensive in its coverage, omitted banks tend to be small and thus HHI computed on this basis might adequately reflect the competitive environment. This is consistent with the study of Johnes et al. (2014). Because the existing research provides opposite views[27] on the association between the HHI

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[27] While Allen and Gale (2004) argued that more concentrated markets tend to be higher financially stable, Mishkin (1999) put forth arguments why more concentrated systems are likely to be characterised by higher risks by banks.

and firm financial stability, this study does not have a strong prior on the effect of the index.

Moreover, the study includes the inverse of log (Z-score) (1/z) in all the profitability models to capture the positive effect of risk-taking on bank profitability (see Mollah and Zaman, 2015). It also includes the bank financial leverage (LEV) which is measured by total liability divided by Equity (Elyasiani and Zhang, 2015). The study also includes the COST/INCOME in all the bank risk models to capture for bank operational efficiency (see Čihák and Hesse, 2010; Abedifar et al., 2013; Saghi-Zedek and Tarazi, 2015). Lower cost efficiency (higher value of COST/INCOME) is expected to increase bank risks because inefficiency illustrates a poorly-run bank which has more risk-taking incentives (Kwan and Eisenbeis, 1997; Barry et al., 2011).

3.5.3 *Country-level Characteristics Variables*

Country-specific control variables are used to control for differences in economic development and institutions across countries and adjust for the influences of the macroeconomic cycle (Čihák and Hesse, 2010). The study uses the real annual growth rate in the gross domestic product (GDP_GROWTH) and the annual rate of inflation (INFL) to capture the macroeconomic environment and economic development of the region/country (e.g. John et al., 2008; Čihák and Hesse, 2010; Borisova et al., 2012; Mollah et al., 2017; Alqahtani et al., 2017). These variables take the same value for all IBs and CBs in a given country. In addition, following Abedifar et al. (2013), the study captures for the degree of religiosity through an index representing legal system of the country (LEGAL). The index takes value of zero for countries not using Shari'ah law to define their legal system, the value of one for countries combining both Shari'ah law and others to define their legal system, and the value of two for countries, such as Saudi Arabia, only using Shari'ah law to define their legal system.

Finally, the research controls for differences in the national quality of governance across countries by including Control of Corruption (Barth et al., 2013; Kutubi et al., 2018). According to the World Bank (2016), this variable reflects the perceptions of petty/grand forms of corruption and capture of the state by elites and private interests. It ranges from approximately -2.5 (weak) to 2.5 (strong) governance performance. Higher values infer better control of corruption (Barth et

77

al., 2013). Prior studies documented the impact of country's level of corruption on bank performance/risk (see Barth et al., 2013).

3.5.4 *Type of Bank Variables*

For the full sample (pooled IBs and CBs), the study controls for the type of banks by constructing a dummy variable which takes value of 1 if it is classified as IBs and otherwise zero (see Čihák and Hesse, 2010; Beck et al, 2013; Mollah et al., 2017; Alqahtani et al., 2017; Elnahass et al., 2018). This variable reflects the difference in the financial stability between these two banking models. In other words, including the variable allows the study to distinguish the influence of bank type on the firm stability (i.e. ROAE; COST/INCOME; LogZscore and LLR/GR) (see Čihák and Hesse, 2010). For instance, if IBs are relatively financially weaker than CBs, the Islamic banking dummy variable would have negative signs in the regressions explaining ROAE and LogZscore and positive signs in the regressions explaining COST/INCOME and LLR/GR.

Table 3.3 presents the summary of controls used in the study 1. Appendix 2 provides definitions of all variables used in all tested models.

Variable	Control variables	Abbreviations
Corporate Governance	Board of Directors Size	LogBSIZE
	Board Independence	%INDEP
	CEO Duality	DUAL
Bank-level Characteristics	Bank Size	LogTA
	Bank Age	LogAge
	Herfindahl-Hirschman Index	HHI
	Bank Leverage	LEV
	Big 4 Audited	BIG4
	Subsidiaries dummy	SUB
	Listed Bank	LISTED
	Bank Risk-Taking	1/z
	Cost Efficiency	COST/INCOME
Country-level characteristics	GDP Growth rate	GDP_GROWTH
	Inflation rate	INFL
	Legal system	LEGAL
	Control of corruption	CORRUPTION
Type of bank	Islamic banking dummy	ISLAMIC

Table 3.3: Study 1 - Content of Each Group of Independent Variables

3.6 Descriptive Statistics

Table 3.4 presents descriptive statistics of all tested variables for the full sample (pooled IBs and CBs) and the subsamples of IBs and CBs.

	FULL SAMPLE						IBs Sample	CBs Sample	Two-Sample *t*-Test
Variables/ Ratios	**N**	**Mean**	**Median**	**Std.**	**Min**	**Max**	**Mean**	**Mean**	**(two-tailed)**
ROAE	880	0.098	0.112	0.123	-1.272	0.476	0.067	0.124	7.034***
COST/INCOME	880	0.637	0.502	0.803	0.005	12.442	0.787	0.51	-4.958***
LogZscore	878	3.509	3.549	1.009	-1.714	5.941	3.301	3.683	5.619***
LLR/GR	830	0.041	0.032	0.056	0	1	0.047	0.036	-2.617***
ABOD	778	2.587	2	2.270	0	11	2.999	2.251	-4.582***
%BBOD	778	51.870	50	0.388	0	100	57.87	47	-3.946***
ASSB	394	12.308	11	9.744	0	40.667	12.308	-	-
%BSSB	394	81.130	100	0.286	0	100	81.130	-	-
BSIZE	868	8.578	9	3.055	2	23	8.445	8.688	2.292**
%INDEP	823	40.2	40	0.241	0	100	42.3	38.2	-2.421**
LogTA	880	15.22	15.127	1.684	8.938	18.586	14.837	15.544	6.332***
LogAge	880	3.106	3.367	0.961	0	5.220	2.655	3.488	13.756***
LEV	880	0.795	0.773	0.403	0.005	2.757	0.764	0.821	2.057**
HHI	880	0.127	0.105	0.088	0.051	0.672	0.139	0.116	
GDP_GROWTH	880	0.047	0.047	0.026	-0.024	0.196			
INFL	880	0.044	0.043	0.031	-0.037	0.139			
LEGAL	880	0.545	1	0.563	0	2			
CORRUPTION	880	-0.079	0.055	0.666	-1.071	1.569			

Dummy Variable	**Count**	**Percent**
DUAL (full sample, IBs, CBs)	22 (4; 18)	2.50% (0.99%; 3.77%)
BIG4 (Full sample, IBs, CBs)	743 (351; 392)	84% (87%; 82%)
SUB (Full sample, IBs, CBs)	233 (148; 85)	27% (37%; 18%)
LISTED (Full sample, IBs, CBs)	538 (207; 331)	61% (51%; 69%)
ISLAMIC	403	45.80%

Table 3.4: Study 1 - Descriptive Statistics

3.6.1 Financial Stability

According to Table 3.4, IBs report a lower average profitability relative to CBs; with lower means for ROAE. IBs have a higher average cost (lower operating efficiency) than CBs; with higher means for COST/INCOME ratio. IBs also report a riskier profile than CBs; with a lower mean of LogZscore (higher insolvency risk) and as higher mean of LLR/GR (higher credit risk). The significant two-sample t-test for all these variables shows that CBs are likely to perform better and tend to be less risky than IBs.

3.6.2 Boards Busyness

Table 3.4 also reports the descriptive statistics of board busyness factor (i.e. ABOD; %BBOD; ASSB; %BSSB) that determines bank financial stability. Specifically, IBs show higher average busyness (ABOD) for their BoD compared to CBs; with higher means of 2.999 (2.251) for IBs (CBs) respectively. These average numbers of outside directorships hold by a BoD is similar to those reported in previous literature including Ferris et al. (2003), Elyasiani and Zhang (2015). This variable is significantly different between the two bank types. Similarly, IBs show higher percentage of busyness (%BBOD) for their BoD compared to CBs; with higher means of 58% (47%) for IBs (CBs) respectively. The variable is also significantly different between IBs and CBs. Moreover, each member of SSB hold about 12.308 outside directorships (ASSB). In addition, results indicate that the percentage of busy Shari'ah advisors serving on the SSB (%BSSB), on average, is substantially high with a mean of 81.13%. This result can be explained by the scarcity of experts in Shari'ah law on a global basis.

The Figure 3.1 presents the mean distribution of ABOD in IBs and CBs across countries. It shows that the countries having highest average number of outside directorships hold by a BoD for IBs (CBs) include Bahrain: 4.2, Malaysia: 4.19 and Kuwait: 4.01 (Jordan: 5.21, UAE: 3.5 and Malaysia: 3.23) whilst the countries having lowest average number of outside directorships hold by a BoD of IBs (CBs) compose of Turkey: 0.67, Qatar: 0.77, Bangladesh: 1.0 and Indonesia: 1.31 (Kuwait: 0, Indonesia: 0.87, Pakistan: 1.36 and Turkey: 1.80).
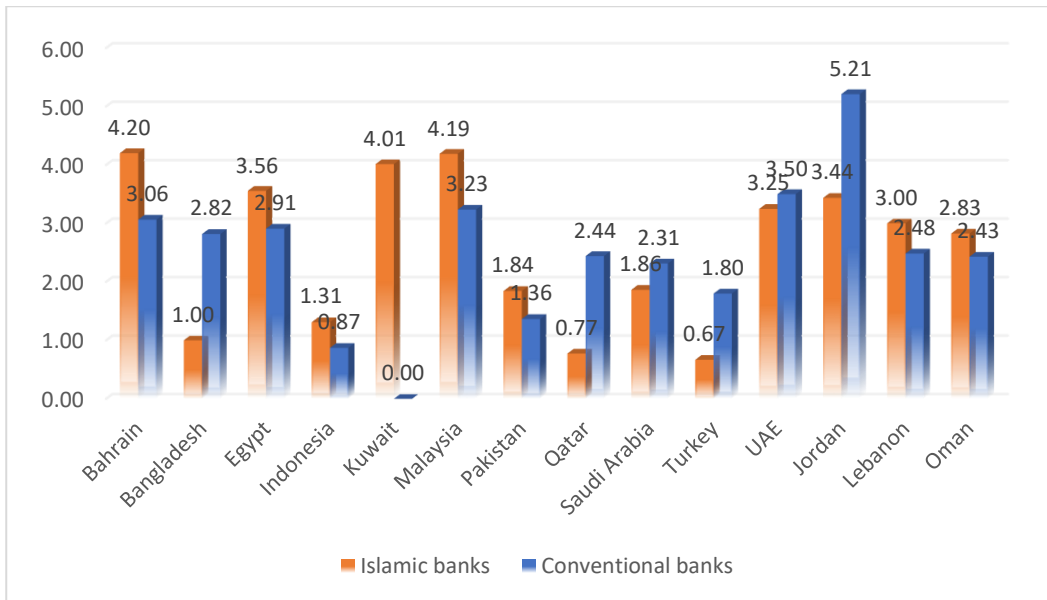
Figure 3.1: Mean Distribution of ABOD in IBs and CBs across Countries

Furthermore, Figure 3.2 presents the mean distribution of ASSB in IBs across countries. It shows that the average number of outside directorships hold by a SSB is much higher than the number of outside directorships hold by a BoD. Specifically, Jordan (27 outside directorships) and Bahrain (22.69 outside directorships) are two countries revealing the highest ASSB. By contrast, SSBs in Bangladesh (0 outside directorships) and Turkey (1 outside directorships) are likely to have lowest average numbers of outside directorships.
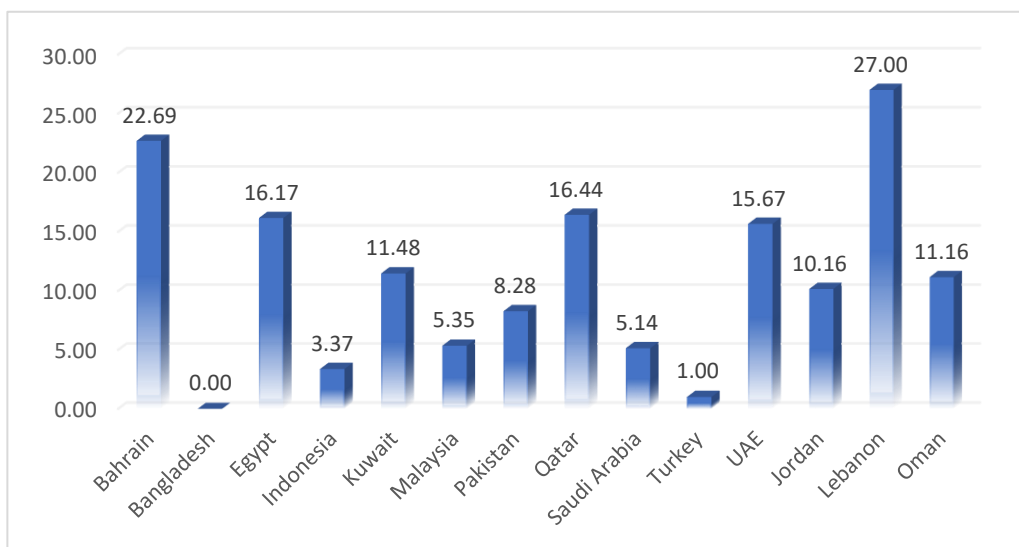
Figure 3.2: Mean Distribution of ASSB in IBs across Countries

3.6.3 Corporate Governance Variables

Table 3.4 shows that the mean of BoD size (BSIZE) of the whole sample is 8.578 with the median of 9 directors. The smaller mean of this variable comparing to median suggests its positively skewed distribution. As this is a control variable in the multivariate estimating models, a natural logarithm form of BoD size (LogBSIZE) is used to tackle such skewness. Results from descriptive table indicate that CBs have higher means of BoD size (BSIZE: 8.578) but the lower mean of the percentage of independent directors on board (%INDEP: 38.2%) than IBs (8.445 and 42.3%, respectively). Moreover, the CEO duality variable for full sample (IBs, CBs) contains roughly 2.5% (0.99%; 3.77%) of all of the observations showing that CEO and Chairman are the same persons, and hence, the majority of 97.5% (99.01%; 96.23%) of observations exhibits that CEO and Chairman are two different individuals.

3.6.4 Bank-level Variables

Table 3.4 next provides the descriptive statistics of bank-level characteristics variables. Following previous studies (e.g. Fich and Shivdasani, 2006; Abedifar et al., 2013; Bhagat et al., 2015; Mollah and Zaman, 2015; Mollah et al., 2017), the variables measuring bank size and bank age are measured in logarithm form to solve their potential skewness and outliers. Results show that IBs appear to be smaller and younger than their conventional counterparts, with the means of LogTA and LogAge of 14.837 and 2.655 (compared to 15.544 and 3.388 in CBs, respectively). These findings are supported by two-sample t-test significant coefficients and in line with previous studies (e.g. Abedifar et al., 2013). In addition, IBs (0.764) appear to be lower leveraged (0.821) than CBs. The mean of HHI index for IBs and CBs are 0.139 and 0.116, respectively. The Big 4 auditor (BIG4) variable in full sample (IBs, CBs) contains about 84% (87%; 82%) of all observations which are audited by Big 4 companies and hence, 16% (13%; 18%) of all observations audited by non-Big4 companies. The next variable representing for bank ownership in full sample (IBs, CBs), i.e. subsidiaries dummy (SUB), indicates that the bank is classified as subsidiaries for 27% (37%; 18%) of all observations. Finally, the full sample (IBs, CBs) comprises a larger portion of 61% (51%; 69%) of listed firms who are traded on stock markets than non-listed counterparts (39%; 49% and 31%, respectively).

3.6.5   Country-level Variables and Type of Bank Variable

Table 3.4 demonstrates that the average annual GDP growth rate (and inflation) of each country is 4.7% (4.4%) with the median of 4.7% (4.3%). Furthermore, the median value of one of LEGAL index for the full sample implies the majority of all observations combining both Shari'ah law and others to define their legal system. Finally, the indicator of control for corruption in each country shows the average score ranged from (-1.071) to 1.569, with the mean of (-0.079) and median of 0.055.

The count of ISLAMIC dummy variable indicates that 403 bank-year observations represents for IBs and hence, 477 bank-year observations represents for CBs. This reveals that full sample includes a smaller percentage of IBs (45.8%) than that of CBs (54.2%).

3.6.6   Correlation Matrix of All Independent Variables

The study uses both, the Pearson pair-wise correlation matrix and VIFs, to test for multicollinearity between each independent variable and the others. The coefficients of Pearson correlation are reported in Table 3.5 (full sample and CBs) and Table 3.6 (IBs), in which pairs of independent variables with significant correlation coefficient are marked in bold, and the VIF values are shown in Table 3.8 and Table 3.10. Based on the guidelines of Nunnally and Bernstein (1994), Pearson correlation results for full sample (CBs; IBs) show that most of significantly correlated coefficients are in the weak correlation range ($/r/ < 0.3$) except from 13 (10; 19) pairs of independent variables with absolute correlation coefficients are higher than 0.3. However, most of those correlation pairs above are in the moderate range, their absolute correlation coefficients are within acceptable limits (0.8) and raise no serious concerns on multicollinearity (Kennedy, 2008). This is supported by the low individual VIF values (<10), low means of VIFs (<6) and low condition numbers (<15) (Section 3.7). Some exceptional pairs such as %BBOD and ABOD (full sample, CBs and IBs) are highly correlated; however, this study do not include them into the same empirical models, so multicollinearity might not a concern.

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)
1. ABOD	1	**0.815**	**0.296**	0.018	0.042	-0.060	**0.143**	0.037	-0.084	0.064	-0.038	**0.166**	0.008	-0.024	**-0.115**	**-0.157**	**0.240**	**0.199**	-
2. %BBOD	**0.825**	1	**0.305**	0.031	0.045	**-0.108**	**0.107**	-0.017	-0.086	**0.141**	-0.047	**0.146**	-0.076	-0.003	-0.055	**-0.147**	**0.277**	**0.252**	-
3. LogBSIZE	**0.237**	**0.251**	1	**-0.425**	0.073	0.019	**0.324**	0.017	**-0.137**	-0.048	**-0.289**	**0.115**	**0.121**	**0.213**	**-0.160**	0.084	**0.206**	**0.141**	-
4. %INDEP	**0.156**	**0.161**	**-0.357**	1	**-0.109**	0.054	0.014	-0.052	-0.017	0.079	**0.177**	**-0.098**	0.067	**-0.165**	0.136	**-0.100**	**-0.231**	-0.033	-
5. DUAL	0.021	0.042	0.027	**-0.080**	1	0.010	-0.029	0.050	-0.069	-0.052	-0.064	**0.182**	0.054	0.060	**-0.137**	**0.185**	**0.246**	-0.055	-
6. 1/z	0.011	-0.039	-0.010	0.043	-0.004	1	**0.153**	0.066	**-0.690**	-0.059	0.033	0.004	**0.120**	0.068	-0.006	0.057	-0.076	-0.080	-
7. LogTA	0.044	0.032	**0.286**	0.010	-0.013	0.017	1	0.358	**-0.381**	0.346	**-0.167**	-0.060	**0.104**	**0.296**	-0.055	-0.009	0.038	**0.332**	-
8. LogAge	-0.048	-0.030	**0.076**	**-0.092**	0.077	-0.021	**0.377**	1	-0.073	**0.293**	-0.047	**-0.137**	-0.026	0.020	**-0.159**	0.014	**-0.118**	0.075	-
9. COST/INCOME	0.065	0.053	-0.049	0.022	-0.046	0.059	**-0.338**	**-0.218**	1	-0.076	0.075	-0.052	-0.032	-0.087	0.035	0.078	**-0.104**	**-0.142**	-
10. BIG4	**0.145**	**0.157**	0.015	0.102*	-0.032	-0.021	**0.215**	**0.075**	0.033	1	**0.102**	0.065	**-0.393**	-0.036	**-0.143**	**-0.275**	**0.187**	**0.421**	-
11. SUB	**0.122**	**0.075**	**-0.192**	**0.135**	-0.031	0.016	-0.063	**-0.120**	-0.062	0.036	1	-0.053	**-0.142**	**-0.154**	0.055	0.065	**-0.101**	**-0.117**	-
12. HHI	-0.022	-0.027	**0.137**	**-0.191**	0.076	-0.007	-0.007	**-0.076**	-0.002	0.023	-0.040	1	**0.189**	0.087	-0.077	**-0.168**	**0.558**	**0.172**	-
13. LEV	-0.016	-0.052	-0.038	-0.007	0.016	0.014	**0.212**	**0.164**	**-0.206**	**-0.383**	**0.159**	**-0.134**	1	-0.053	0.060	**0.284**	**-0.42**	**-0.431**	-
14. LISTED	**-0.097**	**-0.080**	**0.304**	**-0.166**	0.023	-0.003	**0.374**	**0.301**	**-0.159**	**-0.092**	**-0.254**	**0.137**	0.008	1	0.071	0.032	**0.196**	**0.169**	-
15. GDP_GROWTH	**-0.121**	**-0.077**	**-0.119**	0.098	**-0.097**	-0.015	-0.024	**-0.118**	-0.047	**-0.091**	0.053	-0.071	0.027	0.002	1	0.028	**-0.232**	0.099	-
16. INFL	**-0.241**	**-0.210**	0.018	**-0.220**	0.134	-0.005	-0.029	**0.166**	-0.073	**-0.334**	0.049	**0.145**	**0.285**	0.070	-0.032	1	**-0.398**	**-0.448**	-
17. LEGAL	**0.162**	**0.164**	**0.255**	**-0.148**	**0.130**	-0.006	0.058	**-0.142**	0.085	**0.205**	**0.138**	**0.485**	**-0.389**	**0.239**	**-0.210**	**-0.326**	1	**0.529**	-
18. CORRUPTION	**0.235**	**0.222**	**0.126**	0.082	-0.050	-0.017	**0.232**	**-0.162**	0.008	**0.416**	-0.070	-0.035	**-0.377**	0.048	**0.108**	**-0.626**	**0.436**	1	-
19. ISLAMIC	**0.164**	**0.139**	-0.026	**0.085**	-0.089	**0.088**	**-0.209**	**-0.432**	**0.172**	0.068	**0.219**	**0.135**	-0.071	**-0.184**	-0.045	**-0.256**	**0.342**	**0.271**	1

Notes: The table presents the Pearson pair-wise correlation matrix among all independent variables used in the regression analysis for the Full sample (**lower-left triangle**) and CBs subsamples (**higher-right triangle**) from 2010-2015. **Bold figures** are significant at the 5% level. See *Appendix 2* for all variable definitions.

Table 3.5: Pearson Pair-Wise Correlation Matrix for Full Sample (N = 880) and Conventional Banks (N = 477)

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)
1. ABOD	1																			
2. %BBOD	**0.835**	1																		
3. ASSB	**0.284**	**0.284**	1																	
4. %BSSB	**0.220**	**0.200**	**0.564**	1																
5. LogBSIZE	**0.180**	**0.185**	**0.270**	**0.136**	1															
6. %INDEP	**0.254**	**0.278**	-0.034	0.015	**-0.302**	1														
7. DUAL	0.034	0.086	0.030	-0.022	-0.087	-0.028	1													
8. 1/z	**0.116**	0.082	**0.182**	0.077	-0.075	0.014	-0.024	1												
9. LogTA	0.013	0.007	**-0.127**	**-0.159**	**0.241**	0.039	-0.046	**-0.222**	1											
10. LogAge	0.013	0.075	0.075	0.018	**0.122**	-0.067	0.048	-0.048	**0.309**	1										
11. COST/INCOME	0.074	0.072	**0.201**	**0.129**	-0.031	0.013	-0.038	**0.552**	**-0.368**	**-0.194**	1									
12. BIG4	**0.234**	**0.170**	**0.128**	-0.010	-0.058	**0.119**	0.039	0.055	0.091	-0.041	0.060	1								
13. SUB	**0.205**	**0.154**	**-0.123**	**-0.142**	-0.078	0.071	0.079	-0.075	**0.117**	-0.017	**-0.159**	-0.079	1							
14. HHI	**-0.198**	**-0.214**	-0.080	0.002	**0.170**	**-0.266**	-0.007	-0.059	0.082	0.038	-0.024	-0.026	-0.086	1						
15. LEV	-0.022	-0.019	**-0.348**	**-0.224**	-0.046	-0.045	-0.064	**-0.151**	**0.290**	**0.255**	**-0.257**	**-0.384**	**0.413**	-0.093	1					
16. LISTED	-0.100	-0.105	0.059	**0.180**	**0.414**	-0.142	-0.103	-0.100	**0.405**	**0.427**	**-0.170**	**-0.138**	**-0.281**	**0.225**	0.035	1				
17. GDP_GROWTH	**-0.118**	-0.097	**-0.117**	-0.090	-0.069	0.069	-0.030	-0.026	-0.010	**-0.153**	-0.072	-0.012	0.076	-0.060	-0.008	-0.094	1			
18. INFL	**-0.277**	**-0.237**	**-0.301**	**-0.174**	-0.086	**-0.297**	-0.012	-0.062	**-0.172**	**0.101**	-0.064	**-0.399**	**0.159**	**0.435**	**0.274**	0.016	**-0.128**	1		
19. LEGAL	0.005	-0.039	**0.295**	**0.205**	**0.368**	-0.146	0.045	0.035	**0.250**	**0.101**	0.067	**0.204**	**-0.355**	**0.429**	**-0.363**	**0.458**	**-0.181**	**-0.125**	1	
20. CORRUPTION	**0.208**	**0.125**	**0.315**	**0.196**	**0.140**	**0.137**	0.024	0.024	**0.283**	**-0.141**	-0.024	**0.414**	**-0.163**	**-0.234**	**-0.328**	0.041	**0.154**	**-0.743**	**0.237**	1

Notes: The table presents the Pearson pair-wise correlation matrix among all independent variables used in the regression analysis for the IBs subsample from 2010-2015. **Bold figures** are significant at the 5% level. See *Appendix 2* for all variable definitions.

Table 3.6: Pearson Pair-Wise Correlation Matrix for Islamic Banks (N = 403)

3.7 Empirical Results

3.7.1 Tests for Board of Directors' Busyness

In Table 3.7, the study reports the 3SLS estimations for financial performance for the full sample, IBs and CBs sub-samples. Panel (A) shows the full-sample results while Panel (B) and (C) present the results for IBs and CBs respectively.

In Table 3.7 (Panel A), the research finds that the coefficient of BoD busyness (i.e. ABOD, %BBOD) is positively related to ROAE and negatively related to COST/INCOME for the full sample. These results indicate that having BoD with multiple directorships significantly increases both profitability performance and operating efficiency. Concerning the control variables, results for independent non-executive directors (%INDEP) indicate that a high representation of those directors in boards tends to significantly reduce both bank profitability and cost efficiency, consistent with findings of Wintoki et al. (2012) and Elyasiani and Zhang (2015). In contrast, DUAL has a significant and negative impact on COST/INCOME, indicating that banks with the separation between the Chairman and the CEO tend to enjoy higher cost efficiency. Moreover, the study finds that large banks (LogTA) and higher levered banks (LEV) are likely to experience higher operating performance as well as high-cost efficiency. Also, banks audited by Big4 companies have lower financial performance. This might be attributable to their higher audit fees, leading to reduced profitability. Furthermore, listed banks (LISTED) tend to exhibit better financial performance (ROAE) than non-listed banks (Mollah and Zaman, 2015), whereas subsidiary banks (SUB) exhibit lower ROAE. In addition, higher value of HHI is related to higher profitability and cost efficiency. With regards to macro-economic factors, GDP_GROWTH is associated with higher bank performance. Finally, the ISLAMIC dummy variable indicates a negative association with ROAE and a positive association with the COST/INCOME ratio; which imply a lower financial performance and cost efficiency of IBs compared to their conventional counterparts (Beck et al., 2013).

When examining the effect of BoD busyness across the two bank types, in Panels B and C of Table 3.7, the results indicate that IBs with busy BoD (i.e. ABOD, %BBOD) report low profitability and poor cost efficiency. This is evident by the significant and negative (positive) coefficient on ROAE (COST/INCOME) respectively. In contrast, CBs having busy BoD show significantly high

profitability and cost efficiency; implying higher bank performance than IBs. For other board characteristics across the two banking sectors, the study finds that IBs with large BoD report significantly higher cost efficiency (COST/INCOME) whilst CBs show opposite. Also, similar to results obtained for full sample, CBs with more independent directors are likely to have lower profitability (ROAE). Regarding DUAL and LogTA, results for both IBs and CBs are the same to those for full sample. Matured IBs (LogAge) shows higher profitability, whereas matured CBs exhibit lower ROAE. Furthermore, SUB in IBs is positively linked to ROAE and negatively related to COST/INCOME; however, such findings are opposite for the sample of CBs. By controlling for risky bank activities as measured by the inverse of Z-score (1/z), the results show that IBs exhibiting a risk-taking behaviour show lower performance while CBs engaging with higher risk-taking behaviour report better financial performance (Mollah and Zaman, 2015).

Results for examining bank risk indicators are reported in Table 3.9: full sample (Panel A), IBs (Panel B); and CBs (Panel C). For the full sample, the coefficient of busy BoD (i.e. ABOD, %BBOD) is significantly and positively associated with logZscore while negatively associated with LLR/GR ratios. These findings suggest that banks with busy BoD have, on average, lower risk profile; exhibiting lower insolvency risk and lower credit risk. Those boards engage more frequently across many banks and review different risk-management strategies. Therefore, they are likely to have better expertise in credit risk management than less busy boards. For example, busy outside directors can provide more effective monitoring and advising services to indentify quality borrowers leading to greater quality loans and lower loan losses (see Elyasiani and Zhang, 2015). These findings are in accord with the ealier results for bank operating performance, indicating that banks with busy boards exhibit superior profitability and cost efficiency. The coefficient signs of other control factors for bank insolvency and credit risks are relatively consistent with the existing research (e.g. Bai and Elyasiani, 2013; Elyasiani and Zhang, 2015; Mollah et al., 2017). Comparing between IBs and CBs (in Panels B and C) shows that IBs with busy BoD have significantly high insolvency risk; with a significant and negative coefficient on LogZcore. Moreover, IBs exhibit significant and positive association between busy BoD and LLR/GR, implying high credit risk. Contrary, the study finds that

CBs with busy BoD have a low-risk profile; with significantly low insolvency and credit risks. Results on controls relatively remain consistent.

Overall, the findings of Table 3.7 and Table 3.9 support the hypothesis **H₁,** indicating the positive impact of busy BoD on bank performance and financial stability. Busy BoDs seem to possess valuable knowledge and proficiency that permit them to contribute positively to the bank operational activities. These findings are in line with those of Field et al. (2013). However, conditional on the bank type, board busyness shows a differential effect on financial stability; busy BoD reduces IBs' financial stability relative to CBs which is consistent with the **H₂** hypothesis. The positive effect of board busyness on CBs financial stability indicates that reputational benefits dominate their business model and hence, busy BoD is likely to facilitate CBs' access to market sources in addition to promoting greater expertise, skills/knowledge in profitability management (Zahra and Pearce II, 1989). In contrast, IBs operating on a complex business model appear to benefit less from their busy boards. Table 3.8 and 3.10 report very low individual (<10) and mean VIFs (<6) results, in addition to low condition index (<15), for all tested performance and risk models. This confirms that multicollinearity might not be a serious concern.

VARIABLES	Panel A: Full Sample (IBs and CBs)				Panel B: Islamic banks (IBs)				Panel C: Conventional banks (CBs)			
	ROAE (1)	ROAE (2)	COST/INCOME (3)	COST/INCOME (4)	ROAE (5)	ROAE (6)	COST/INCOME (7)	COST/INCOME (8)	ROAE (9)	ROAE (10)	COST/INCOME (11)	COST/INCOME (12)
ABOD	0.031***		-0.102***		-0.026**		0.073***		0.034***		-0.067***	
%BBOD		0.198***		-0.945***		-0.101**		0.610***		0.181***		-0.581***
Controls included	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
Intercept	-0.250***	-0.211***	2.511***	2.133***	-0.156**	-0.153**	5.220***	5.626***	-0.003	0.024	0.648**	0.430
Year-effects	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
Country-effects	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
Sample size	770	770	772	772	342	342	343	343	428	428	429	429
Adj. R-Square	0.065	0.017	0.130	0.005	0.307	0.455	0.405	0.398	0.002	0.019	0.341	0.202
Wald Chi2	430***	417***	337***	274***	401***	443***	251***	250***	169***	169***	349***	294***
LM Statistics	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.037	0.000	0.000	0.000	0.000
Sargan test	0.100	0.107	0.723	0.070	0.110	0.332	0.115	0.237	0.056	0.055	0.220	0.439

Notes: The table presents the results of the 3SLS estimations of the system of simultaneous equations (*eq.3.1*)-(*eq.3.2*) for the full sample (Panel A; models 1-4), IB subsample (Panel B; models 5-8) and CB subsample (Panel C; models 9-12) identifying the impact of busy BoD on a bank's operating performance. The study treats both over-boarded directors and performance as endogenous variables and builds simultaneous equations models. The return on average assets (ROAE) and the ratio of cost to income (COST/INCOME) are dependent variables which represent for bank operating performance, profitability and cost efficiency, respectively. The average outside directorships of outside directors (ABOD) and the percentage of busy outside directors on board (%BBOD) are two alternative main variables of interest for busy BoD. Models are tested for the period of six-year from 2010. The study controls for year and country fixed effects. P-values in parentheses, *p < 0.10, **p < 0.05, ***p < 0.01. LM and Sargan test show that all models are correctly identified, and the selected IVs are valid. See full table in Appendix 3A.

Table 3.7: 3SLS: Busy Board of Directors and Financial Performance - Within Islamic and Conventional Banks

VARIABLES	Panel A: Full Sample (IBs and CBs)				Panel B: Islamic banks (IBs)				Panel C: Conventional banks (CBs)			
	ROAE (1)	ROAE (2)	COST/INCOME (3)	COST/INCOME (4)	ROAE (5)	ROAE (6)	COST/INCOME (7)	COST/INCOME (8)	ROAE (9)	ROAE (10)	COST/INCOME (11)	COST/INCOME (12)
ABOD	1.29		1.29		1.46		1.44		1.24		1.23	
%BBOD		1.28		1.27		1.46		1.44		1.28		1.26
LogBSIZE	1.61	1.64	1.61	1.64	1.70	1.75	1.69	1.74	1.80	1.87	1.80	1.86
%INDEP	1.34	1.35	1.34	1.36	1.34	1.39	1.34	1.38	1.43	1.46	1.43	1.46
DUAL	1.11	1.16	1.11	1.11	1.08	1.09	1.08	1.09	1.27	1.27	1.27	1.27
LogTA	1.81	1.81	1.80	1.81	1.94	1.92	1.88	1.86	1.91	1.92	1.86	1.87
LogAge	1.48	1.48	1.48	1.49	1.43	1.45	1.42	1.44	1.26	1.26	1.27	1.26
BIG4	1.58	1.58	1.57	1.58	1.40	1.38	1.40	1.38	1.79	1.79	1.78	1.77
SUB	1.23	1.22	1.23	1.22	1.59	1.53	1.59	1.54	1.23	1.23	1.22	1.22
HHI	1.58	1.58	1.58	1.58	1.87	1.87	1.86	1.87	1.52	1.51	1.50	1.50
LISTED	1.62	1.62	1.62	1.62	2.11	2.14	2.11	2.13	1.31	1.30	1.30	1.30
GDP_GROWTH	1.25	1.23	1.25	1.23	1.18	1.17	1.18	1.17	1.40	1.40	1.40	1.40
INFL	1.92	1.91	1.92	1.91	2.42	2.42	2.42	2.42	1.67	1.66	1.67	1.66
LEGAL	2.70	2.71	2.70	2.71	2.50	2.50	2.49	2.48	3.13	3.16	3.14	3.16
CORRUPTION	2.42	2.41	2.42	2.41	2.43	2.43	2.43	2.43	2.57	2.57	2.56	2.56
LEV	1.73	1.72	1.73	1.72	1.98	1.97	1.97	1.96	1.82	1.81	1.83	1.82
1/Z	1.02	1.01			1.11	1.10			1.08	1.09		
ISLAMIC	1.58	1.58	1.56	1.56								
Mean VIF	1.60	1.60	1.64	1.64	1.72	1.72	1.75	1.76	1.65	1.66	1.68	1.69
Conditional Index	3.44	3.44	3.43	3.44	3.54	3.52	4.54	3.51	3.91	3.94	3.91	3.94

Table 3.8: VIFs in Bank Financial Performance Models – For Full sample (Panel A), IBs (Panel B) and CBs (Panel C) Sub-samples

VARIABLES	Panel A: Full Sample (IBs and CBs)				Panel B: Islamic banks (IBs)				Panel C: Conventional banks (CBs)			
	LogZscore (1)	LogZscore (2)	LLR/GR (3)	LLR/GR (4)	LogZscore (5)	LogZscore (6)	LLR/GR (7)	LLR/GR (8)	LogZscore (9)	LogZscore (10)	LLR/GR (11)	LLR/GR (12)
ABOD	0.290***		-0.493***		-0.090***		0.172**		0.136***		-0.099***	
%BBOD		0.678***		-0.239**		-0.480**		1.220**		0.891***		-0.599***
Controls included	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
Intercept	1.145**	0.663	-5.399***	-5.023***	-0.338	-1.218	-4.571***	-4.780***	2.368***	2.531***	-5.176***	-5.062***
Year-effects	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
Country-effects	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
Sample size	770	770	725	725	342	342	307	307	428	428	418	418
Adj. R-Square	0.168	0.353	0.588	0.329	0.312	0.343	0.242	0.261	0.583	0.560	0.537	0.517
Wald Chi2	470***	476***	301***	387***	184***	187***	230***	232***	669***	618***	523***	498***
LM Statistics	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Sargan test	0.154	0.377	0.177	0.100	0.192	0.591	0.103	0.070	0.873	0.928	0.692	0.124

Notes: The table presents the results of the 3SLS estimations of the system of simultaneous equations (*eq.3.3*)-(*eq.3.4*) for the full sample (Panel A; models 1-4), IB subsample (Panel B; models 5-8) and CB subsample (Panel C; models 9-12) identifying the impact of busy BoD on a bank's risks. The study treats both over-boarded directors and risks as endogenous variables and builds simultaneous equations models. The log of Z-score (LogZscore) and the ratio of loan loss reserves to gross loans (LLR/GR) are dependent variables which represent for bank risks, insolvency and credit risks, respectively. The average outside directorships of outside directors (ABOD) and the percentage of busy outside directors on board (%BBOD) are two alternative main variables of interest for busy BoD. Models are tested for the period of six-year from 2010. The study controls for year and country fixed effects. P-values in parentheses, *p < 0.10, **p < 0.05, ***p < 0.01. LM and Sargan test show that the models are correctly identified, and the selected IVs are valid. See full table in Appendix 3B.

Table 3.9: 3SLS: Busy Board of Directors and Risks - Within Islamic and Conventional Banks

VARIABLES	Panel A: Full Sample (IBs and CBs)				Panel B: Islamic banks (IBs)				Panel C: Conventional banks (CBs)			
	LogZscore (1)	LogZscore (2)	LLR/GR (3)	LLR/GR (4)	LogZscore (5)	LogZscore (6)	LLR/GR (7)	LLR/GR (8)	LogZscore (9)	LogZscore (10)	LLR/GR (11)	LLR/GR (12)
ABOD	1.28		1.28		1.43		1.43		1.23		1.23	
%BBOD		1.27		1.27		1.45		1.45		1.26		1.26
LogBSIZE	1.61	1.64	1.61	1.64	1.69	1.74	1.69	1.74	1.76	1.82	1.76	1.82
%INDEP	1.34	1.36	1.34	1.36	1.31	1.36	1.31	1.36	1.42	1.44	1.42	1.44
DUAL	1.11	1.11	1.11	1.11	1.08	1.09	1.08	1.09	1.26	1.26	1.26	1.26
LogTA	1.67	1.68	1.67	1.68	1.70	1.69	1.70	1.69	2.03	2.04	2.03	2.04
LogAge	1.49	1.49	1.49	1.49	1.41	1.43	1.41	1.43	1.26	1.26	1.26	1.26
COST/INCOME	1.20	1.20	1.20	1.20	1.26	1.26	1.26	1.26	1.24	1.24	1.24	1.24
BIG4	1.42	1.42	1.42	1.42	1.29	1.28	1.29	1.28	1.62	1.61	1.62	1.61
SUB	1.24	1.23	1.24	1.23	1.55	1.49	1.55	1.49	1.19	1.19	1.19	1.19
HHI	1.58	1.59	1.58	1.59	1.85	1.86	1.85	1.86	1.50	1.49	1.50	1.49
LISTED	1.61	1.61	1.61	1.61	2.12	2.15	2.12	2.15	1.30	1.29	1.30	1.29
GDP_GROWTH	1.25	1.24	1.25	1.24	1.18	1.17	1.18	1.17	1.40	1.40	1.40	1.40
INFL	1.92	1.91	1.92	1.91	2.44	2.45	2.44	2.45	1.68	1.68	1.68	1.68
LEGAL	2.52	2.53	2.52	2.53	2.34	2.34	2.34	2.34	2.93	2.95	2.93	2.95
CORRUPTION	2.32	2.32	2.32	2.32	2.35	2.35	2.35	2.35	2.48	2.49	2.48	2.49
ISLAMIC	1.50	1.50	1.50	1.50								
Mean VIF	1.57	1.57	1.57	1.57	1.67	1.67	1.67	1.67	1.62	1.63	1.62	1.63
Conditional Index	3.29	3.28	3.29	3.28	3.40	3.40	3.40	3.40	3.83	3.84	3.83	3.84

Table 3.10: VIFs in Bank Risk Models – For Full sample (Panel A), IBs (Panel B) and CBs (Panel C) Sub-samples

3.7.2 Tests for the classifications of Degrees of Board of Directors' Busyness

Based on the findings above, board busyness could bring either reputational benefits or detrimental effects depending on the bank type. According to Jiraporn et al. (2009), the link between directorships and bank stability might not be fully captured using a simple linear regression[28]. At lower degrees of board memberships, directors' reputation and expertise might not be yet established. However, at higher degrees, directors with a greater number of board seats can observe that the reputation benefits tend to outweigh the cost of the busyness effect.

To test the impact of the different degrees of busyness on bank financial stability, this study defines four different classifications for the degree of board busyness: "*Non-busy*", "*Less-busy*", "*More-busy*" and "*Super-busy*" across the two bank types. The study follows Field et al. (2013) to define the degrees of busyness for BoD by employing quantiles which are based on the average number of directorships held by each BoD. BoD in the top quantile 4 is classified as "*Super-busy*"; BoD in the middle quantile 3 and 2 are defined as "*More-busy*" and "*Less busy*" respectively; and otherwise "*Non-busy*" BoD[29]. Based on these, the study creates four dummy variables (super-busy BoD dummy, more-busy BoD dummy, less-busy BoD dummy and non-busy BoD dummy) and then consider separate tests for the sub-samples of the different classifications of board busyness.

Table 3.11 presents the results for bank performance and risk for IBs (Panel A) and CBs (Panel B). In Panel A, the study finds that within IBs, when BoD is characterised as being "Less-busy", "*More-busy*" and "*Super-busy*" BoD, this significantly reduces bank profitability performance and promotes higher insolvency and credit risks. In contrast to the busy boards' findings in IBs, results for the "*Non-busy*" BoD show significant positive effects on IBs financial stability. The study finds significantly positive coefficients on, both, ROAE (i.e. higher profitability) and LogZscore (i.e. lower insolvency risk) with negative

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[28] At lower degrees of board directorship, board busyness is expected to increase more than proportionally as the board seats increase. This effect is associated with the learning curve effects, and once this learning curve is mature, board busyness may increase only proportionally or even less with board seats. However, at higher degrees of board directorship, the reputation effect may grow more than proportionately with an increase in board seats (Jiraporn et al., 2009).

[29] The cut-off for the quantile 75 in IBs (CBs) is *4.5* (3.33) directorships; cut-off for the quantile 50 in IBs (CBs) is *2.75* (2) directorships, and the cut-off for the quantile 25 in IBs (CBs) is *1* (0.5) directorships.

coefficients on COST/INCOME (i.e. better operating efficiency) and LLR/GR (i.e. lower credit risk).

In Panel B, the study finds that CBs with "*More-busy*" and "*Super-busy*" BoD tend to significantly enhance the bank financial performance and reduce bank risk, consistent with the reputation hypothesis and prior studies (e.g. Elyasiani and Zhang, 2015). Nonetheless, "*Less-busy*" and "*Non-busy*" BoDs are associated with low financial performance as well as high risk-taking. This suggests that due to the higher advisory demand of CBs, BoD with a small degree of busyness may not have superior advising capacities, enough valuable experience and resource connections to benefit their banks.

In sum, findings for the BoD classifications suggest that the adverse effects of busy BoD on IBs financial stability are more pronounced as the degree of busyness increases. Extremely busy BoD within IBs tend to fail in effectively monitoring risk-taking activities. These findings support the distinctiveness of the roles played and value added from BoD in both CBs and IBs. They also support the main findings for the preferential impacts of board busyness on CBs financial stability. Unlike IBs, the reputation effects within CBs seem to increase proportionally as the board multiple directorship increases. Hence, the reputation effect seems to outweigh the cost of the busyness effect in this banking model.

	Panel A: Islamic Banks				Panel B: Conventional banks			
	Quantile 1 (0-25)	*Quantile 2 (25-50)*	*Quantile 3 (50-75)*	*Quantile 4 (75-100)*	*Quantile 1 (0-25)*	*Quantile 2 (25-50)*	*Quantile 3 (50-75)*	*Quantile 4 (75-100)*
Cut-offs	*<=1 directorship*	*1-2.75 directorships*	*2.75-4.5 directorships*	*>4.5 directorships*	*<=0.5 directorships*	*0.5-2 directorships*	*2-3.33 directorships*	*>3.33 directorships*
Degrees of busyness	Non-busy BoD	Less-busy BoD	More-busy BoD	Super-busy BoD	Non-busy BoD	Less-busy BoD	More-busy BoD	Super-busy BoD
ROAE	0.125***	-0.079***	-0.322***	-0.184***	-0.407**	-0.329***	1.616***	0.547**
	(0.008)	(0.010)	(0.005)	(0.003)	(0.020)	(0.001)	(0.001)	(0.049)
COST/INCOME	-0.557***	2.075***	0.987***	0.590***	0.681***	1.235***	-1.654***	-1.178**
	(0.009)	(0.007)	(0.009)	(0.004)	(0.001)	(0.001)	(0.000)	(0.044)
LogZscore	0.665***	-2.366***	-6.844***	-0.658***	-0.863***	-2.190***	4.320***	0.773***
	(0.005)	(0.003)	(0.000)	(0.010)	(0.001)	(0.000)	(0.000)	(0.000)
LLR/GR	-0.649**	1.427***	6.107***	1.212***	4.441***	1.307***	-2.200***	-0.452***
	(0.019)	(0.009)	(0.000)	(0.004)	(0.005)	(0.001)	(0.006)	(0.006)

Notes: This table presents comparative analysis when BoDs are characterised as "non-busy", "less busy", "more-*busy*" and "*super-busy*" across IBs and CBs. This study follows the design of Field et al. (2013) to define BoD as "super-busy" if the average number of directorships of BoD is in the top quantile 4 (75-100), "more-busy" if the average number of directorships of BoD is in the quantile 3 (50-75), "less-busy" if the average number of directorships of BoD is in the quantile 2 (25-50), otherwise "*Less-busy*" BoD. P-values in parentheses, $*p < 0.10$, $**p < 0.05$, $***p < 0.01$. Control variables are included but not reported.

Table 3.11: Sensitivity Tests for the Board of Directors' Degrees of Busyness - Within Islamic and Conventional banks

3.7.3 SSB Busyness within Islamic Banks

In this section, the study extends the base models in Equations (3.1) – (3.4) to further explore the association between busy SSB and IB financial stability. Specifically, it tests H_3 to identify whether a busy SSB contributes positively/negatively to the IB financial stability.

Table 3.12 (Panel A) reports the results for bank performance and (Panel B) shows the results of the bank risk. Table 3.13 shows low values of VIFs across all tested models, confirming no multicollinearity concerns. In Panel A, the results show that busy SSB (ASSB; %BSSB) significantly reduces financial performance, with a negative coefficient on ROAE and a positive coefficient on the COST/INCOME ratio. Results in Panel B report a considerably high bank risk; with a significant and negative coefficient on logZscore (i.e. high insolvency risk) as well as a significant and positive coefficient on LLR/GR ratio (i.e. high credit risk). Overall findings support H_3 and suggest that SSB busyness significantly damages an IB financial stability. Busy SSB may fail to ensure the mandatory compliance of IBs to the rulings of Shari'ah, which promotes a reputation risk and hence, could trigger the failure of IBs and cause systematic risk[30].

The study further observes that busy BoD, consistently, shows an adverse impact on IBs financial stability. To examine whether there is a significant difference between the two-board busyness (BoD versus SSB), the study compares the coefficients on ABOD and ASSB, as well as %BBOD and %BSSB. The reported F-test (i.e. Wald test) (see Wald, 1943; Pathan and Skully, 2010) indicates that the two coefficients are statistically different.

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[30] In unreported sensitivities, this study captured cross-country variations in governance perceptions for the sample. It followed Čihák and Hesse (2010) to develop a country governance index (COUNTRY_GOV) as an additional control variable. This variable is estimated as the average of six key country-governance measures: corruption, government effectiveness, political stability, and regulatory quality, rule of law, and voice and accountability. The study relatively obtained consistent results to the main findings across all estimated models. Tables will be provided upon request.

	Panel A: Bank Financial Performance				Panel B: Bank Risks			
VARIABLES	ROAE (1)	ROAE (2)	COST/INCOME (3)	COST/INCOME (4)	LogZscore (5)	LogZscore (6)	LLR/GR (7)	LLR/GR (8)
ABOD	-0.024**		0.158***		-0.092***		0.068***	
ASSB	-0.008***		0.092***		-0.091***		0.029***	
%BBOD		-0.093**		0.491***		-1.323**		0.333**
%BSSB		-0.179**		0.303***		-1.997***		1.410***
Controls included	YES	YES	YES	YES	YES	YES	YES	YES
Intercept	0.187	-0.108	1.821	5.534***	1.639	-0.883	-5.422***	-5.165***
Year-effects	YES	YES	YES	YES	YES	YES	YES	YES
Country-effects	YES	YES	YES	YES	YES	YES	YES	YES
Sample size	336	336	337	337	336	336	301	301
Adj. R-Square	0.138	0.352	0.027	0.397	0.059	0.022	0.363	0.329
Wald Chi2	325***	340***	241***	265***	364***	191***	410***	310***
LM Statistics	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Sargan test	0.210	0.100	0.468	0.489	0.560	0.172	0.083	0.405
ABOD = ASSB (F-Test)	0.000		0.000		0.000	0.000		0.000
%BBOD = %BSSB (F-Test)		0.000		0.000		0.000		0.000

Notes: The table presents 3SLS estimations for the IB subsample identifying the impact of busy BoD or busy SSB on a bank's profitability (models 1-2), cost efficiency (models 3-4), insolvency risk (models 5-6) and credit risk (models 7-8). The study treats both over-boarded boards and risks as endogenous variables and builds simultaneous equations models. The return on average assets (ROAE), the ratio of cost to income (COST/INCOME), the log of Z-score (LogZscore) and the ratio of loan loss reserves to gross loans (LLR/GR) are dependent variables which represent for bank profitability, cost efficiency, insolvency risk and credit risk, respectively. The average outside directorships of outside directors/Shariah advisors (ABOD; ASSB) and the percentage of busy outside directors/Shariah advisors on board (%BBOD; %BSSB) are alternative main variables of interest for busy BoD/SSB. Models are tested for the period of six-year from 2010. The study controls for year and country fixed effects. P-values in parentheses, *p < 0.10, **p < 0.05, ***p < 0.01. LM and Sargan test show that all models are correctly identified, and the selected IVs are valid. The reported F-test (i.e. Wald test) in all models indicates that the two coefficients are statistically different. See full table in Appendix 3C.

Table 3.12: 3SLS: Boards Busyness and Financial Performance/Risks - Within Islamic Banks

VARIABLES	Panel A: Bank Financial Performance				Panel B: Bank Risks			
	ROAE (1)	ROAE (2)	COST/INCOME (3)	COST/INCOME (4)	LogZscore (5)	LogZscore (6)	LLR/GR (7)	LLR/GR (8)
ABOD	1.52		1.50		1.48		1.48	
ASSB	1.70		1.69		1.63		1.63	
%BBOD		1.56		1.55		1.55		1.55
%BSSB		1.40		1.40		1.38		1.38
LogBSIZE	1.85	1.83	1.83	1.82	1.82	1.81	1.82	1.81
%INDEP	1.33	1.39	1.33	1.39	1.29	1.35	1.29	1.35
DUAL	1.09	1.10	1.08	1.09	1.08	1.10	1.08	1.10
LogTA	2.03	2.10	1.99	2.04	1.88	1.94	1.88	1.94
LogAge	1.56	1.49	1.55	1.48	1.53	1.48	1.53	1.48
BIG4	1.36	1.39	1.36	1.39	1.20	1.24	1.20	1.24
SUB	1.58	1.53	1.58	1.53	1.52	1.46	1.52	1.46
HHI	1.91	1.89	1.90	1.89	1.88	1.87	1.88	1.87
LISTED	2.16	2.36	2.15	2.35	2.16	2.35	2.16	2.35
GDP_GROWTH	1.20	1.19	1.20	1.19	1.20	1.18	1.20	1.18
INFL	2.36	2.35	2.36	2.35	2.38	2.37	2.38	2.37
LEGAL	2.72	2.62	2.70	2.60	2.55	2.39	2.55	2.39
CORRUPTION	2.46	2.42	2.46	2.42	2.40	2.34	2.40	2.34
1/Z	1.13	1.11						
LEV	2.14	2.07	2.14	2.06				
COST/INCOME					1.27	1.26	1.27	1.26
Mean VIF	1.77	1.75	1.80	1.78	1.70	1.69	1.70	1.69
Conditional Index	3.77	3.67	3.77	3.65	3.60	3.52	3.60	3.52

Table 3.13: VIFs in Bank Performance/Risk Models – Within Islamic Banks

3.7.4   Tests for the Classifications of the Degree of Shariah Board Busyness

In this section, the study additionally examines the influence of different classifications of the SSB busyness (i.e. characterised as "*Non-busy*", "*Less-busy*", "*More-busy*" and "*Super-busy*") on IBs' financial stability[31]. It creates four dummy variables (super-busy SSBs dummy, more-busy SSBs dummy, less-busy SSBs dummy and non-busy SSBs dummy) and then tests them in separate models.

Table 3.14 reports the results and show that only "*More-busy*" and "*Super-busy*" SSBs significantly reduce bank performance and increase bank risk across all models. These results support the main findings and highlight the detrimental effect of employing busy SSB on IBs' financial stability. Meanwhile, "*Less-busy*" and "*Non-busy*" SSBs report significantly longer financial stability. Overall findings indicate that as the degree of SSB busyness increases, this board might inversely jeopardise the IBs' financial stability due to substantial lax screening.

	Quantile 1 (0-25)	Quantile 2 (25-50)	Quantile 3 (50-75)	Quantile 4 (75-100)
Cut-offs	<=4 directorships	4-11 directorships	11-19 directorships	>19 directorships
Degrees of busyness	Non-busy SSB	Less-busy SSB	More-busy SSB	Super-busy SSB
ROAE	0.767***	0.782***	-1.203***	-0.068***
	(0.001)	(0.001)	(0.006)	(0.005)
COST/INCOME	-0.691***	-1.068***	2.718***	0.963***
	(0.009)	(0.006)	(0.004)	(0.002)
LogZscore	0.652**	0.861***	-3.172***	-0.835***
	(0.046)	(0.001)	(0.000)	(0.003)
LLR/GR	-0.755***	-0.600***	0.906***	0.627***
	(0.003)	(0.000)	(0.000)	(0.003)

Notes: This table presents comparative analysis when SSBs are characterised as "non-busy", "less busy", "more-*busy*" and "*super-busy*" within IBs. The study follows the design of Field et al. (2013) to define SSBs as "super-busy" if the average number of directorships of SSB is in the top quantile 4 (75-100), "more-busy" if the average number of directorships of SSB is in the quantile 3 (50-75), "less-busy" if the average number of directorships of SSB is in the quantile 2 (25-50), otherwise "*Less-busy*" SSB. P-values in parentheses, $*p < 0.10$, $**p < 0.05$, $***p < 0.01$. Control variables are included but not reported.

Table 3.14: Sensitivity Tests for the Shari'ah Supervisory Boards' Degrees of Busyness - Within Islamic Banks

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[31] The study classified the levels of busyness for SSBs using quantiles which are based on the average number of directorships held by each SSB. SSBs in the top quantile 4 are categorised as "Super-busy"; SSBs in the quantile 3 and 2 are categorised as "More-busy" and "Less-busy" respectively; otherwise SSBs in the bottom quantile 1 are categorised as "Non-busy" SSBs. The cut-off for the quantile 75 is 19.083 directorships; cut-off for the quantile 50 is 11 directorships; and cut-off for the quantile 25 is 4 directorships.

3.8 Robustness Checks

This study further tests the robustness of the main findings employing Two-step system Generalized Method of Moments (GMM) as adopted by Arellano and Bover (1995); Blundell and Bond (1998). The strength of GMM is that it can solve autocorrelation and heteroscedasticity through the function of robust standard error. This method controls for the unobserved effects by transforming the variables into first-differences to eliminate unobserved heterogeneity and omitted variable bias. It also allows us to treat all bank characteristics variables as endogenous and orthogonally employs the lag values of endogenous variables as IVs. In this research, GMM estimation[32] procedures employ lagged values as IVs for the endogenous variables such as board busyness (see Hermalin and Weisbach, 2003; Mollah and Zaman, 2015; Mollah et al., 2017). The logic is that these factors in earlier years could not have resulted from bank financial stability in subsequent years, hence, endogeneity problem is unlikely (Liang et al., 2013). Country and macroeconomics control variables are treated as strictly exogenous.

The results for GMM are reported in Table 3.15 (Panel A and B) and Table 3.16 (Panel A and B). Table 3.15 presents the comparison results of the effects of busy boards (i.e. BoD and SSB) on performance between IBs and CBs while Table 3.16 presents the regression results of these two boards' busyness on risks between IBs and CBs. The dianostics tests reported in those tables indicate that all models are well-fitted with stastistically insignificant test statistics results for both second-order autocorrelation (AR (2) p-values>10%, implying that the residuals in the second-difference are serially uncorrelated by way of construction) and Hansen J-statistics of over-identifying restrictions (p-values>10%). Results for first-order autocorrelation (AR (1) p-values<10%) indicate that the residuals in the first-difference are serially correlated. The Hansen test examines the null hypothesis of the IVs validity and reports the statistically insignificant J-statistics for all models suggesting that the IVs are valid in two-step dynamic GMM estimations. Main GMM findings are found to be consistent with main findings identified through 3SLS. It can be seen that the final story remains unchanged such that IBs with busy BoD (i.e. ABOD; %BBOD) exhibit lower financial performance and higher risks whilst CBs with busy BoD show their better

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[32] The GMM estimates are obtained by employing Roodman's (2009) *xtabond2* module (with robust standard errors) in STATA 15.

financial stability. Furthermore, for IBs, busy SSB (i.e. ASSB; %BSSB) significantly reduce IBs operating performance and significantly induce a high risk-taking behaviour for this bank type. Overall results identify the negative effect of SSB busyness on IB financial stability. This robustness check indicates that main findings continue to hold after controlling for unobserved heterogeneity, simultaneity and dynamic endogeneity.

VARIABLES	Panel A: Islamic banks (IBs)				Panel B: Conventional banks (CBs)			
	ROAE (1)	ROAE (2)	COST/INCOME (3)	COST/INCOME 4)	ROAE (5)	ROAE (6)	COST/INCOME (7)	COST/INCOME (8)
ABOD	0.002		0.037**		0.013**		-0.013*	
ASSB	-0.007**		0.015*					
%BBOD		-0.221***		0.220**		0.225**		-0.067*
%BSSB		-0.436***		0.281*				
Controls included	YES	YES	YES	YES	YES	YES	YES	YES
Intercept	-0.094*	-0.562***	1.543	0.476	0.978	-0.370**	-1.304*	-0.408
Performance$_{t-1}$	0.244*	-0.363*	0.373***	0.447***	-0.106***	-0.007***	0.759***	0.678***
Year-effects	YES	YES	YES	YES	YES	YES	YES	YES
Country-effects	YES	YES	YES	YES	YES	YES	YES	YES
Sample size	285	285	285	285	357	357	357	357
Wald Chi2 (p-value)	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
AR (1)	0.023	0.047	0.047	0.052	0.040	0.058	0.005	0.004
AR (2)	0.891	0.941	0.319	0.305	0.306	0.862	0.420	0.462
Hansen test	0.148	0.425	0.998	0.241	0.755	0.942	0.245	0.657

Notes: The table presents the robustness test results of the GMM estimations for the IB subsample (Panel A; models 1-4) and CB subsample (Panel B; models 5-8) identifying the impact of busy BoD/SSB on a bank's operating performance. All right-hand side factors are assumed as endogenous variables except strictly exogenous country-level variables and dummies. The return on average assets (ROAE) and the ratio of cost to income (COST/INCOME) are dependent variables. The average outside directorships of outside directors/Shariah advisors (ABOD; ASSB) and the percentage of busy outside directors/Shariah advisors on board (%BBOD; %BSSB) are alternative main variables of interest for busy BoD/SSB. Models are tested for the period of six-year from 2010. The study controls for year and country fixed effects. P-values in parentheses, *p < 0.10, **p < 0.05, ***p < 0.01. AR (1) and AR (2) are dianogtic tests for no serial correlation of first-order and second-order, respectively, in the first-differenced standard errors. Hansen is the test of over-identifying restrictions. See full table in Appendix 3D.

Table 3.15: Robustness Check: GMM regression - Busy Boards and Financial Performance - Within Islamic and Conventional Banks

	Panel A: Islamic banks (IBs)				Panel B: Conventional banks (CBs)			
VARIABLES	LogZscore (1)	LogZscore (2)	LLR/GR (3)	LLR/GR (4)	LogZscore (5)	LogZscore (6)	LLR/GR (7)	LLR/GR (8)
ABOD	-0.092**		-0.138		0.020***		-0.507*	
ASSB	-0.060**		0.097***					
%BBOD		-0.332***		0.496***		0.174***		-0.532**
%BSSB		-0.975***		0.955***				
Controls included	YES	YES	YES	YES	YES	YES	YES	YES
Intercept	-0.442	-2.784	-0.336	-4.318***	0.307	2.099***	4.036	-2.138
Riske$_{t-1}$	0.433**	0.886***	-0.891***	-0.674***	0.592***	0.589***	0.957***	0.542***
Year-effects	YES	YES	YES	YES	YES	YES	YES	YES
Country-effects	YES	YES	YES	YES	YES	YES	YES	YES
Sample size	284	284	301	301	356	356	347	347
Wald Chi2 (p-value)	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
AR (1)	0.043	0.033	0.004	0.000	0.000	0.002	0.045	0.000
AR (2)	0.968	0.996	0.607	0.995	0.440	0.409	0.849	0.339
Hansen test	0.223	0.966	0.529	0.816	0.736	0.934	0.333	0.909

Notes: The table presents the robustness test results of the GMM estimations for the IB subsample (Panel A; models 1-4) and CB subsample (Panel B; models 5-8) identifying the impact of busy BoD/SSB on a bank's risks. All right-hand side factors are assumed as endogenous variables except strictly exogenous country-level variables and dummies. The log of Z-score (LogZscore) and the ratio of loan loss reserves to gross loans (LLR/GR) are dependent variables. The average outside directorships of outside directors/Shariah advisors (ABOD; ASSB) and the percentage of busy outside directors/Shariah advisors on board (%BBOD; %BSSB) are alternative main variables of interest for busy BoD/SSB. Models are tested for the period of six-year from 2010. The study controls for year and country fixed effects. P-values in parentheses, *p < 0.10, **p < 0.05, ***p < 0.01. AR (1) and AR (2) are dianogtic tests for no serial correlation of first-order and second-order, respectively, in the first-differenced standard errors. Hansen is the test of over-identifying restrictions. See full table in Appendix 3E.

Table 3.16: Robustness Check: GMM regression - Busy Boards and Bank Risks - Within Islamic and Conventional Banks

3.9 Summary

Motivated by the long ongoing controversy regarding multiple directorships, this study investigates whether board busyness affects firm performance and risk-taking behaviours. The analysis is novel in two respects. This study is the first to identify the impact of institutional bank characteristics on board busyness. This institutional context is particularly interesting under, both, the ongoing debate of the influence of bank type on financial stability and the growing arguments around the Islamic banking model. Moreover, this study is among first attempts to recognise that different degrees of board busyness might correspond to distinctive performance and risk profiles across the two banking sectors. In addition to examining busy BoDs in both IBs and CBs, the research takes a step ahead to analyse if busy Shari'ah boards can affect IBs' stability.

Consistent with the expectations, findings indicate that a busy BoD generally promotes high financial performance and lower risk. However, differential effects of board busyness do exist and are conditioned to the bank type. For CBs, the study finds strong evidence for the beneficial effect of the busy board on financial stability. Contrarily, IBs exhibit poor financial performance and a high overall risk profile. These findings provide strong evidence supporting for the first two hypotheses of this study which show that banks with a busy BoD are financially stable (H_1), and IBs with a busy BoD are less financially stable than CBs (H_2). Additionally, the study finds that as the degree of the BoD busyness increases, IB financial stability deteriorates. However, the opposite finding applies to CBs. Furthermore, the results show that within IBs, lax monitoring by busy Shari'ah scholars has an adverse effect on their financial stability, consistent with the third hypothesis ($H3$). Results can be briefly justified by the complexity of IBs in terms of business model, agency conflicts and CG structure than CBs, which requires more effective monitoring from both BoD and SSB within this bank type.

Findings imply that although the IBs' multi-layer governance model creates a certain level of comfort, convenience and trust for stakeholders, these objectives may be lost with the limited availability of outside board members. This new insight contributes to an ongoing debate about the need to reconsider double mechanisms of governance in mitigating risky activities in global banking business models. IBs might learn from their conventional counterparts on how to

utilise the reputational, expertise and preferential resources that can accrue from employing a busy BoD. Moreover, the study sheds lights on the scarcity of scholars experienced in the considerations of Shari'ah-compliant banking. Furthermore, the findings raise a call to regulators and policymakers for the need to develop stricter criteria and guidelines to govern multiple directorships by the SSB. Finally, the comparative research of banking business models between Islamic and conventional sectors can investigate the busyness issue under the consideration of financial expertise, professional training and continued education of the different boards.

CHAPTER 4. *STUDY 2* - MARKET VALUATIONS OF BUSY BOARDS: EVIDENCE FROM ALTERNATIVE BANKING MODELS

4.1 Abstract

This study comparatively assesses the influence of board busyness on stock market valuations of both IBs and CBs. For a sample of listed banks from eleven countries for the period 2010–2015, results show that board busyness, depending on the type of bank, is differentially priced by investors. In CBs, board busyness is significantly and positively valued by the stock market, suggesting that investors perceive some reputational benefits arising from a busy board (e.g. extended industry knowledge, established external networks or facilitation of external market sources). In contrast, the study finds no supporting evidence for the market valuations of board busyness in IBs. This result might be attributed to its complex governance structure and the uniqueness of its business model, which require additional and effective monitoring relative to that employed in conventional banking. Moreover, as the results also indicate, investors provide significantly low market valuations for a busy SSB, which acts as an additional layer of governance in IBs.

4.2 Introduction

Regulators and market participants in capital markets have long emphasised the critical role of the BoD as a core CG mechanism in promoting a country's economic growth and financial stability. A weak system of governance tends to offer substantial managerial opportunities to engage in risk-taking activities and fraudulent acts. Extant literature (e.g. Mallette and Fowler, 1992; Faleye et al., 2018; Lu and Boateng, 2018) documents that an effective BoD can monitor the top management on behalf of the shareholders to reduce information asymmetry between managers and shareholders and, thereby, lessen agency costs. Resource dependence theorists assert that a BoD is "a provider of resources, such as legitimacy, advice and council links to other organizations" (Hillman and Dalziel 2003, p. 383). Therefore, the quality of board monitoring and their engagements in managerial decision-making can have direct implications on firm value (Yermack, 1996; Lin and Liu, 2009; Liu, 2015; Meng et al., 2018).

Moreover, the uniqueness of governance in banking alongside the opacity related to several banking transactions imply a dominant impact of effective monitoring by the BoD on investors' trust and optimism (Adams and Mehran, 2003; Faleye and Krishnan, 2017). Appointing an outside busy board member (i.e. holding multiple directorships) can, hence, affect investors' perceptions of their firm value. Furthermore, in line with the agency theory, investors are likely to pay more for bank equity when their interests are aligned with those of directors and managers. In other words, a bank market value is likely to increase as the agency conflicts diminish because such lower agency costs can effectively protect investors' wealth. From this perspective, board busyness can influence the bank market value by either restricting or encouraging managers from expropriating bank resources. This depends on the levels of agency costs and the complexity of a bank's business model (Elnahass et al., 2019).

Arguably, busy boards can offer reputational benefits (e.g. extended business networking/connections and quick access to market resources) to their firms, benefits that might enhance the quality of long-term decision-making and, hence, they might lead to favourable implications on the firm value (Field et al., 2013; Muravyev et al., 2016; Chou and Feng, 2018). In contrast, other prior studies (Fich and Shivdasani, 2006; Falato et al., 2014; Chou and Feng, 2018) still suggest that board busyness can result in over-commitment and the limited availability of boards, rendering them unable to fulfil their fiduciary duties and scrutinise risk-taking activities, leading to adverse impact(s) on firm valuation.

Evidence on the market valuations of busy BoDs is limited (e.g. Ferris et al., 2003; Cashman et al., 2012) and is focused on non-financial firms (i.e. the industrial sector) and provided mixed findings. Within the banking setting, examining stock market valuations (see Caprio et al. 2007; Belkhir 2009; Zulkafli et al. 2010) is restricted to focus only on other CG mechanism and characteristics (e.g., ownership structure, shareholder protection laws, board size, and CEO duality). Therefore, relatively little is known about whether board busyness can improve or detriment the bank market value. Moreover, none of the prior studies in banking has given attention to the possible systematic differences of stock market valuations for busy boards across alternative bank types. An ideal setting for such an investigation would be the unique systems of governance and business models employed by the IB versus CB. Recall that IBs conduct operations based

primarily on profit-loss sharing (PLS) arrangements, in which contracts between the banks and their depositors are equity-based (Mollah et al. 2017).

As mentioned earlier, the governance structure employed by IBs is likely to be more complicated than that of CBs (Safieddine, 2009; Mollah and Zaman, 2015). In both bank types, the BoD is responsible for the implementation of strategic decisions, protection of the shareholders' interest and maximisation of the bank value. However, for IBs, under the constrained banking model and the nature of the products/services offered, BoD has additional responsibilities related to the establishment of the appropriate Shari'ah governance framework besides the development of relevant policies to ensure that all activities are conducted in compliance with the Shari'ah law (Quttainah et al., 2013). Furthermore, for IBs, additional agency costs are likely to be associated with the Islamic banking model. This is due to a peculiar institutional environment in IBs including the special bank-depositors' relationship. Moreover, unlike the single governance-layer in CBs (i.e., BoD), IBs are subject to a double-governance mechanism by a SSB in addition to their regular BoD. Decisions by the BoD depend much on the supervision effectiveness of SSB for Shari'ah compliance (Mollah and Zaman 2015). SSB is hence referred as "supra authority" which monitors the BoD' decisions to ensure that they execute the ex-ante approved products/services (Mollah et al., 2017). Finally, the structure and features of IB governance indicate that the popularity and scarcity of experts in Shari'ah legitimacy on a global basis for both BoD and SSB have contributed to the busyness of the two boards in IBs.

Accordingly, the nature, qualities and commitments of the BoD in the two bank types are dissimilar (Mollah et al., 2017) and can have implications on investors' valuation of board busyness. Under the presence of structural differences between the business models of CBs and IBs, the premise is that differential stock market valuations of board busyness across the two bank types is plausible. Depending on the banking business model employed and the structure of governance, including the need for additional monitoring, such as Shari'ah governance, investors within the two banking sectors may hold different perceptions of the oversight and resource-creation roles of outside boards. When compared to their conventional counterparts, a lower firm valuation of board busyness in IBs is predicted. The extended agency conflicts and the unique business model of IBs, requiring effective scrutiny from two different boards (BoD and SSB), justify this.

This study empirically examines whether board busyness is differently valued by investors engaging with the IB versus CB sectors. It uses an international sample of 386 bank-year observations for listed IBs and CBs operating in eleven countries between years 2010–2015. Moreover, busy SSBs are also examined in this study because the impressive growth rate of IB industry has been accompanied by growing pains in the ear of human capital management. This is particularly true of the training and preparation of SSB scholars, who are often criticised due to the lack of uniformity in their decision rulings. In addition, Shari'ah requirements can lead to unique agency relations of IBs which can result in Shari'ah non-compliance risk and in turn, financial turmoil. Therefore, we can expect that in theory, SSBs should play an important role in matters related Shari'ah law and their existence may have significant effects on financial stability of IBs. Accordingly, we can also predict that this religious board might be valued by market participants because of its possible impact of risks and profitability.

For the full sample (i.e. IBs and CBs together), results indicate that a busy BoD is significantly associated with a high bank value. Conditional on the bank type, the research finds strong evidence for differential market valuations of busy boards between IBs and CBs. Unlike the investors in IBs, where insignificant results are reported, the CBs investors tend to perceive board busyness as a significant indicator of increasing bank value. Moreover, IBs with a busy SSB exhibit a significantly low market value.

This study is the first to offer comparative assessments between IB and CB market valuations by utilising an important board attribute such as busyness. The findings of the study are timely to the current debate of the complexity of CG of Islamic versus conventional banking (e.g. Mollah and Zaman, 2015; Mollah et al., 2017; Lassoued et al., 2018; Alandejani et al., 2017; Alqahtani et al., 2017; Elnahass et al., 2018). The study extends prior literature studies by highlighting the influence of institutional characteristics and governance structures on having distinct firm valuations for busy boards within the two banking sectors. The study also contributes to the stream of banking valuation studies in CBs (e.g. Caprio et al., 2007; Elyasiani and Zhang, 2015) and identifies the possible preferential impacts of having a busy board. Moreover, results highlighting the adverse effects of SSB busyness on an IB bank value also add to a sizeable body of literature on

CG in IBs that discuss the importance of this board (e.g. Quttainah et al., 2013; Abdelsalam et al., 2016).

The findings of this study provide valuable policy implications to regulators and market participants who are involved in the two banking sectors. For CBs, board busyness offers reputational benefits to banks which tend to contribute to shareholder wealth maximisation. However, such reputational benefits of busy boards tend not to hold in complex agency environments and constrained business models such as IBs. Furthermore, findings suggest that effective Shari'ah monitoring is an essential determinant in enhancing the market valuations of this banking sector. The market participants who engage with the IB sector are also suggested to be more sensitive to the SSB busyness than BoD busyness. A busy SSB seems to be negatively perceived by investors, probably due to concerns related to the effectiveness of Shari'ah governance and the moral accountability of the bank. The overall findings raise a call to regulators and policymakers for the need to develop stricter criteria and guidelines to govern outside board directorships. The study also provides valuable insights to inform the debates raised by several external organisations regarding the restrictions on the board multiple-directorship (e.g. National Association of Corporate Directors-NACD, 1996; Council of Institutional Investors-CII, 2003).

4.3 Background and Related Studies

Strong governance implies a board's active role in monitoring top managers, mitigating risks and enhancing long-term resilience, all of which should, in principle, be positively priced by investors. This argument is in line with the Slack Resource theory, which suggests that firms with higher market valuation tend to have more slack economic resources to invest in long-term improvements of their governance mechanisms and board monitoring quality, which will lead to future higher firm valuation, thus creating a virtuous circle (Pae and Choi, 2011). However, entrenched managers may have incentives to divert slack resources or free cash flows for their private interests (e.g. building an empire, increasing their compensation) (Jensen, 1986). In such cases, those managers are less likely to use slack resources to invest in strengthening different governance mechanisms. Therefore, the effectiveness of the outside directors assigned to those managers becomes indispensable. Any reputational damage to the BoD, thus, could

constitute a severe threat to the survival of the firm and, hence, hurt market valuations.

From an agency theory perspective, ineffective boards, by encouraging managerial perquisites and private control benefits, can exacerbate agency conflicts between investors and managers (Jensen and Meckling, 1976). Being financially independent of insiders, a board should be capable of withstanding pressure from their bank to manipulate earnings and monitor the operating process. Hence, appointing outside directors should, in principle, strengthen CG to alleviate the shareholder/manager and controlling-shareholders/minority-shareholders agency conflicts (Choi et al., 2007; Machuga and Teitel, 2009).

Previous studies on firm valuation and value relevance[33] (e.g. Ball et al., 2003; Goncalves et al., 2017) document that the value relevance of accounting information, since it offers useful insights into several accounting issues, is essential not only for investors but also for standard-setters. Moreover, information on non-financial indicators, such as CG mechanisms, can still influence the ability of investors to price their firms and forecast future stock performance (Bose, 2014).

Empirical research on the relationship between governance and firm value suggests that well-governed firms are associated with a higher stock market valuation (e.g. Yermack, 1996; Gompers et al., 2003; Sami et al., 2011; de Haan and Vlahu, 2013; Nguyen et al., 2015). Other sets of studies show that investors are likely to reward firms with effective governance by assigning a high firm value (e.g. Epstein et al., 1994; Brown and Caylor, 2006; Dittmar and Mahrt-Smith, 2007; Choi and Jung, 2008; Baek et al., 2009). Pae and Choi (2011) also state that investors often require a lower cost of equity for well-governed firms as these factors can mitigate agency costs and enhance disclosure transparency within firms. Caprio et al. (2007) study the effects of governance (i.e. ownership structure, shareholder protection laws, cash flow rights and empowering official supervisory and regulatory agencies) on the market valuations of banks. Similarly, Belkhir (2009) and Zulkafli et al. (2010) provide evidence on the relationship

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[33] Value relevance is defined as the ability of an accounting measure to capture and summarise information that affects the firm value. This measure is significantly associated with a set of information used by investors in a firm's valuation such as share prices, stock returns, or market capitalization (Barth et al., 2001).

between bank value and governance (i.e. board characteristics, board size and CEO duality).

With the growing opaqueness surrounding the banking industry, studies investigating the association between firm valuation and board busyness are still scarce. Only within the non-financial sector, studies (e.g. Ferris et al., 2003; Perry and Peyer, 2005; Fich and Shivdasani, 2006; Cashman et al., 2012) have provided mixed evidence for the relationship between board busyness and firm value. For example, Fich and Shivdasani (2006) show for a sample of large US industrial firms (i.e., Forbes 500) that busy outside directors might not be effective monitors on any board, and hence, negatively affect market-to-book ratios and governance. Cashman et al. (2012) also find that the presence of busy directors has a negative impact on market value, but only of large firms (i.e., S&P 500). Contrary, Perry and Peyer (2005) find that outside directorships for executives are likely to enhance firm value, possibly through either external networking opportunities or through signalling of high quality for the managerial decision-making process. They argue that outside directorships only negatively affect market valuations when the firm has high agency problems. Furthermore, Ferris et al. (2003) find no evidence that multiple directorships can shirk their responsibilities to serve on board committees and suggest an insignificant linkage between multiple directorships and the likelihood of securities fraud litigation.

Investigating the board busyness attribute emerges from two opposing perspectives. In brief, the first one is the *busyness view*, which contends that board busyness is associated with weak governance structures (Core et al., 1999). A weak governance structure is perceived by market participants as leading to low market valuations, and they are more likely to penalise their firms for poor monitoring (Fich and Shivdasani, 2006). The second view is the *reputational benefits* that emerge from appointing a busy board. Busy directors can be assessed as valuable assets for their firms, given their extensive and updated industry-specific knowledge. This board can, hence, offer a vital supportive role to inside directors (Clifford et al., 2018) as well as established outside networks that could facilitate access to market sources and other strategic benefits. These reputational benefits can be positively priced by investors, and board busyness can be perceived as value-enhancing for a firm (Muravyev et al., 2016).

Moreover, in line with the signalling theory, by holding the information content constant, firm valuations may depend on how information is categorised and presented (Peng and Xiong, 2006). The extent of disclosure, reporting transparency and news outcomes signal good news on the favourable aspects related to financial and corporate information, which in turn might lead to stock price over-valuing. Under a transactional setting, when an investor is considering purchasing stock from a listed firm, this firm might be interested in signalling the hidden value of the equity investment (Allen and Faulhaber, 1989), or reporting extended corporate information relating to strong governance mechanisms, including effective BoDs (Higgins and Gulati, 2006). Conveying information about strong CG to stakeholders eliminates the information asymmetry between firm managers and investors (e.g. Ballas et al., 2012; Bergh et al., 2014).

4.4 Hypotheses Development

With the lack of evidence related to the possible effect of board busyness on stock market valuations of banks in general terms, additional research gaps emerge, which particularly pertain to studying this effect within different bank types (i.e. IBs and CBs). Based on the two distinct and contradicting views of busy boards discussed above (i.e. the busyness versus reputational effects) and the limited evidence available within the banking setting, the study conjectures that board busyness can have either positive or negative implications on stock market valuations. However, the direction of the association will be ultimately conditional on the system of CG employed, the levels of the agency costs and the banking business model, all of which could vary depending on the bank type.

4.4.1 *Market Valuations of Busy Board of Directors in Islamic and Conventional Banks*

As mentioned earlier, IBs are distinguished from CBs by several aspects of their business models. Unlike CBs, depositors/investors in IBs have no right to intervene in the financial and operating management of their funds (Abdel Karim, 2001). Therefore, managers in IBs have full control of the investment process of depositors' funds. This offers them several opportunities to pursue their own benefits at the expense of their investors, which can result in investors carrying additional agency costs (Abdelsalam et al., 2016). Moreover, additional agency costs arise in IBs, given that outside directors, who are expert in Shari'ah

legitimacy, are scarce worldwide, and there are only a few prominent and expert outside directors who dominate the IB industry.

Under such complex agency-principle relationship in IBs, board busyness can reduce the monitoring ability of the outside board and effectively mitigate and prevent management wealth expropriation from minority shareholders, which occurs due to the limited time and attention given by outside directors to scrutinise the bank's operations against risky and opportunistic activities/transactions – strictly impermissible according to the Shari'ah governance in this banking sector. Furthermore, operating on a constrained banking model might result in investors' uncertainty regarding the streams of future cash flows that must be invested in compliance with the Shari'ah rules. Poor monitoring by busy boards can further destroy the trust of investors with regards to managers' discretion and expropriation of rents (e.g. Caprio et al., 2007). Therefore, investors may anticipate that additional cash flow might be diverted, and a smaller portion of the firm's profits will be paid off as dividends (La Porta et al., 2002).

In contrast, CBs operate on a relatively less complex business model that facilitates alternative investment channels, quick access to market sources and risk diversifications through trading in financial instruments which are prohibited from selling by IBs (e.g. derivatives and options). Therefore, when compared to IBs, the various reputational benefits associated with board busyness are more likely to be available and pervasive for CBs to enhance the bank equity value. Signalling such reputational effects to the stock market is expected to positively affect investors' perceptions of board busyness.[34]

Accordingly, due to high information risk, published information on board busyness in IBs is expected to signal weak systems of governance and/or increased cost of equity to the stock market. Investors are expected to perceive board busyness as leading to ineffective monitoring quality and may request higher rewards for the possibly arising risks, suggesting lower stock price

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[34] Moreover, in line with the representativeness heuristic theory, individuals are likely to overestimate "the probability of an event based on the similarity between its properties and the parent population's properties"; for example, comparing the firm position with its competitors using several benchmark indicators (Chan et al., 2004, p. 5). For a CB that appoints outside directors who serve in many banks, investors may overestimate the probability that these directors are more knowledgeable/reputable and might also overestimate the fact that busy independent directors are certified as effective monitors of the banking operations and, hence, investors could anticipate subsequently high returns and high firm value.

multiples in IBs when compared to their conventional counterparts.[35] This leads to the following hypothesis, stated in the alternative form:

H4: *Busy board of directors are more valued by conventional bank investors than by Islamic bank investors.*

4.4.2   *Market Valuations of Busy SSB in Islamic banks*

IBs operate on a double governance mechanism (i.e., BoDs and SSB). The presence of an extra layer of governance (i.e., SSB) could serve as an effective mechanism to monitor IBs' prioritisation of religious norms. The SSB's primary role is to ensure Shari'ah compliance and minimise reputation risk, which may result in capital erosion among IBs as well as in lawsuits by fund providers (Archer and Karim, 2007; Godlewski et al., 2016). Members of this board also serve as counterparts of conventional internal auditors who enhance the creditability and reliability of published financial and non-financial information in the stock market (Godlewski et al., 2016). Therefore, the Shari'ah governance is expected to promote investors' trust and confidence about the quality of published information by IBs, who are presumably targeting investments and trades that incorporate ethical and moral criteria (O'Sullivan, 1996; Pomeranz, 1997). Therefore, investment choices and stock price valuations are likely to be influenced by the outcomes of the screening process as well as decisions made by the SSB on the quality and sufficiency of the corporate information published by IBs in compliance with the Shari'ah laws (Elnahass et al., 2019).

To date, a limited number of Shari'ah advisors engage excessively in IBs' activities by sitting on many SSBs for banks operating globally (Wilson 2009; Godlewski et al. 2016). Reuters (2012) reports that the top 20 Shari'ah scholars hold about 55% of all board positions worldwide, and some scholars are much more in demand than others. As such, a busy SSB can adversely affect IB investors' valuation in two ways. First, given the high concentration of the workload undertaken by a small group of Shari'ah experts and the fact that SSBs' performance is not regularly evaluated by the BoDs (Mollah and Zaman, 2015), SSB is expected to be less effective in their Shari'ah monitoring as a result of

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[35] This prediction is in line with the good management theory (Jamali et al., 2008; Pae and Choi, 2011), which states that a positive relationship between low-quality monitoring by boards and the provision of low-quality corporate-level information. This relation is likely to be pervasive when operating under opaque/complex business models.

such board busyness. This might signal a weak Shari'ah governance to the stock market and, hence, reduce the bank value. Second, the scarcity and high reputation of Shari'ah scholars suggest that they might be expensive to appoint because their appointment reflects higher charges of salaries and remunerations which will have substantial implications on the bank financial performance leading to lower investor valuations. Prior studies suggest that expensive appointments of boards imply low-cost efficiency and poor firm performance (see Linn and Park, 2005; Brick et al., 2006). This will, in fact, directly affect the cost of equity and relative firm valuations in stock markets (Renneboog and Zhao, 2011)[36].

Accordingly, this study conjectures that SSB busyness is likely to signal of weak Shari'ah governance and low bank performance to the stock market leading to low market valuations for IBs. This leads to the following hypothesis, stated in the alternative form:

H$_5$: Busy SSB is negatively valued by Islamic bank investors

4.5 Data and Methodology

4.5.1 *Data Collection*

Due to the research objectives, this study focuses on listed IBs and CBs in global stock markets for the period 2010-2015. Because of the small number of listed commercial banks in countries including both bank types, this study changed the first criteria of the sampling procedure to obtain a comprehensive database. Indeed, in line with prior banking studies (e.g. Beck et al., 2013; Alqahtani et al., 2017; Mollah et al., 2017), this research applied four criteria to filter the sample: (1) countries with both types of banks and at least *two* listed banks; (2) banks which have annual reports (official websites) which are published as of 31 December; (3) full-service investment banks and banks with Islamic windows were dropped from the sample; (4) banks must have at least three consecutive years' full data availability. The final sample is an unbalanced panel data set covering 70 listed commercial banks (386 bank-year observations) operating in 11

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[36] In line with the equity theory (Dah and Frye, 2017), multiple directorships is associated with the board entrenchment caused by the over-payment for those members. The equity theory anticipates the reaction of individuals towards over- or under-reward situations. Specifically, directors make subjective assessments of the ratio of their efforts (input) and compensation (output) to those of other referents. They may experience dissonance if their perceived ratio is unequal to that of referents. Consequently, they often reduce their efforts or try to push their compensation to obtain the similar ratio to salient other referents.

countries.[37] Countries such as *Malaysia* and *Turkey*, where IBs have a significant share of the total banking industry, have been excluded from the sample as most IBs are not listed as separated entities on the stock markets (Saeed and Izzeldin, 2016). Table 4.1 reports the sample determination criteria for the full sample and each subsamples of this study.

	Islamic Banks	Conventional Banks	Pooled Sample
Initial Sample	196	2842	3038
Less:			
Countries having both types of banks and have at least *two* listed banks (at least one bank for each type of bank)	125	2189	2314
Annual reports are retrieved from official website and reported as of the financial Year 31 December	27	481	508
Classified as Commercial bank + Full-ledged IBs and CBs	9	127	136
At least three consecutive years' full data availability	8	2	10
Final Sample	**27**	**43**	**70**

Notes: The table presents the data collection procedure. This process comprises of five screening criteria steps consistent with Beck et al. (2013), Abedifar et al. (2013), Mollah and Zaman (2015), Mollah et al. (2017), and Elnahass et al. (2018). The initial sample includes 196 IBs and 2842 CBs in 36 countries. The final sample comprises of 27 listed IBs and 43 listed CBs in 11 countries from 2010-2015.

Table 4.1: Sample Determination Criteria for Empirical Study 2 and 3

Table 4.2 presents the sample distribution by country and bank, with 27 listed IBs (150 observations) and 43 listed CBs (236 observations). The percentage of bank representations between IBs and CBs is approximately 40% to 60% respectively. The highest concentration of IBs is represented by Bahrain and Bangladesh whilst Indonesia and Bangladesh report the highest concentration of CBs.

Country	Observations (IBs)	Observations (CBs)	Observations (Full Sample)	% (IBs)	% (CBs)	% (Full sample)
Bahrain	30	30	60	20.00	12.71	15.54
Bangladesh	36	44	80	24.00	18.64	20.73
Egypt	3	9	12	2.00	3.81	3.11
Indonesia	6	66	72	4.00	27.97	18.65
Jordan	12	29	41	8.00	12.29	10.62
Kuwait	3	12	15	2.00	5.09	3.89
Pakistan	24	6	30	16.00	2.54	7.77
Qatar	18	24	42	12.00	10.17	10.88
Saudi Arabia	6	6	12	4.00	2.54	3.11

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[37] For the treatment of the outliers, this study winsorises each variable in our test model at the 1st and 99th percentiles.

UAE	6	6	12	4.00	2.54	3.11
Oman	6	4	10	4.00	1.70	2.59
TOTAL	**150**	**236**	**386**	**100**	**100**	**100**
Number of banks	**27**	**43**	**70**	**-**	**-**	**-**

Notes: This table presents the sample distribution of the study 2 and 3. The study sample comprises of 70 listed banks (386 observations) with 27 IBs (150 observations) and 43 CBs (236 observations) in 11 countries for the period from 2010 to 2015. The country-wise distribution (observations and percentage) of each types of bank and full sample is shown in collums 2-7.

Table 4.2: Sample Distributions of Empirical Study 2 and 3

4.5.2 *Measures for Market Valuation and Boards Busyness*

Consistent with prior literature, this study measures the bank market value using a firm-level market measure, which is the Tobin's Q (e.g. Cheng et al., 2008; Ammann et al., 2011; Cashman et al., 2012; Black et al., 2015; Gyapong et al., 2016; Muravyev et al., 2016). Tobin's Q is a forward-looking approximation (i.e. incorporating all the current and expected future information) of firm value that captures the value of intangible corporate resources (e.g. goodwill and trust from good board structure). It is theoretically estimated as the sum of a bank year-end book value of debt and market value of equity, divided by its year-end book value of total assets. The market value of equity is computed as the end-year number of outstanding shares multiplied by the stock prices (e.g. Coles et al., 2008; Güner et al., 2008; Faleye et al., 2011; Busch and Hoffmann, 2011; Cashman et al., 2012; Gyapong et al., 2016). As this measure combines market value with book values, distortion of tax laws and accounting conventions are minimised (Wernerfelt and Montgomery, 1988). This calculation explains about 97 per cent of the variance of Tobin's Q (Chung and Pruitt, 1994).

Though previous studies have often used Tobin's Q as a measure for market valuation, it has faced criticism. Bertrand and Mullainathan (2003) argues that capital in the denominator of this measure may be endogenous because entrenched managers could enjoy a quiet life and underinvest. Companies which underinvest may operate below their company's profit-maximising scale. In spite of mitigating the NPV of a firm, underinvestment tends to increase the value of Tobin's Q. In addition, an active board governance may either reduce Tobin's Q by diminishing underinvestment or increase it by decreasing costs, thus possibly rendering it ambiguous (Dybvig and Warachka, 2010).

However, the selection of this measure is justified for several reasons. First, the aim of this current research is to investigate the long-term firm valuations of

boards' busyness. Therefore, whereas Tobin's Q measures long-term market valuations (e.g. Bhagat and Black, 2001; Thomas and Eden, 2004; Sami et al., 2011), using other short-term accounting performance measures, such as return on assets (ROA) or return on equity (ROE), are not feasible to the current research context. Second, relative to Tobin's Q, ROA and ROE are likely to be subject to many short-run earnings manipulation activities (Gyapong et al., 2016). Finally, its drawbacks notwithstanding (e.g. potential measurement errors), Tobin's Q is still known today as one of the standard dependent variables in firm value research within the context of CG (e.g. Yermark, 1996; Gompers et al., 2003; Fich and Shivdasani, 2006; Black et al., 2012; Black et al., 2014) and hence, this is still a sensible variable to include. As other things are equal, if CG (i.e. board structure) influences the firm market value, this should be reflected in this measure (Fich and Shivdasani, 2006; Black et al., 2012; Black et al., 2014). Following previous studies (e.g. Black et al., 2012; Black and Kim, 2012), the research takes the natural logarithm of Tobin's Q (*lnQ* hereafter) to mitigate the impact of high-q outlier banks.

This study employs the same measurements for busy BoD (ABOD; %BBOD) and busy SSB (ASSB; %BSSB) as the study 1. Details are presented in Section 3.4.3.

4.5.3 *Methodology and Empirical Models*

Banks are likely to differ in the opportunities and challenges that they may encounter over the years due to the peculiar nature of their sector. This can lead to a situation where disclosure of board directorships, other board characteristics and bank market value are jointly and dynamically determined by unobserved bank-specific variables (e.g. quality and style of management, business strategy, market perception and bank complexity) (Henry, 2008; Guest, 2009), which pooled Ordinary Least Square (OLS) estimation may detect and control (Kraatz and Zajac, 2001; Wooldridge, 2002). Therefore, like study 1, this current research also employs panel data estimations to mitigate endogeneity problems arising from potential unobserved bank-specific heterogeneity (e.g. Henry, 2008; Guest, 2009). Although better governance practices of a firm can enhance its profitability position, investors' valuation may only be capturing the high profitability performance rather than perceiving the specific board busyness attribute. To overcome possible misinterpretations of the investors' firm valuations, the study

includes a comprehensive set of control variables to mitigate omitted-variable bias as well as utilised Three-Stage Least-Square (3SLS) estimations with instrumental variables (IVs) (e.g. Bhagat and Black, 2001; Coles et al., 2008; Faleye et al., 2011) to mitigate the endogeneity between busy boards and bank valuation[38].

The choice of valid IVs implies a correlation with the endogenous variable, and not with the error terms of the dependent variable[39] (Elyasiani and Jia, 2008). Consistent with study 1, this research uses the same IVs which include the number of public firms headquartered in the same country of the bank, and the country-level income generating category. Discussion about IVs selection is presented in Section 3.4.4 in Chapter 3.

Both IVs are correlated with possible endogenous variables (i.e. board busyness) and should predict stock market valuations only indirectly, through their effects on endogenous variables (see Black et al., 2006). Indeed, in this study setting and sampled banks, those IVs can indirectly affect bank valuations because the country-level indicators are less likely to influence Tobin's Q endogenously. The research, accordingly, specify the simultaneous models as follows:

$$lnQ_{it} = \beta_0 + \beta_1 BBOD_{it} + \phi P + \mu Year\ effects + \pi Country\ effects + \varepsilon_{it}\ (eq.4.1)$$
$$BBOD_{it} = \beta_0 + \beta_1 lnQ_{it} + \phi P + \mu Year\ effects + \pi Country\ effects + \varepsilon_{it}\ (eq.4.2)$$

Where, lnQ_{it} represents the natural logarithm of Tobin's Q for bank i at time t; $BBOD_{it}$ represents {$ABOD; \%BBOD$}; ϕP is a vector of control variables in the bank valuation model. *Year effects* and *Country effects* capture the year-fixed and country-fixed effects; ε_{it} is the error term.

4.6 Control Variables Measurements

4.6.1 *Corporate Governance Variables*

In line with prior firm valuation literature, the CG variables include BoD size (LogBSIZE) and independence (%INDEP) to control for firm governance characteristics, which is measured by the number of directors on board and the

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[38] The Wu-Hausman endogeneity test (e.g. Wu, 1973; Hausman, 1978) statistics reveal the presence of endogeneity biases.
[39] Two diagnostic tests, Sargan test and Breusch and Pagan LM, suggest that both IVs theoretically and statistically satisfy the necessary conditions for validity and relevance.

percentage of outside non-executive directors on board, respectively (e.g. Faleye, 2007; Erkens et al., 2012; Black and Kim, 2012; Cashman et al., 2012; Li, 2014).

4.6.2 *Bank-level Characteristics Variables*

Bank-specific variables consist of bank size (LogTA) as measured by the natural logarithm of total assets measured in thousands of USD of a bank at the end of the fiscal year (e.g. Fich and Shivdasani, 2006; Black et al., 2012; Black et al., 2015), bank age (LogAge) measured by natural logarithm of the difference between the sample year and the year that bank's first appearance (e.g. Ahn and Shrestha, 2013; Bhagat et al., 2015). In addition, the research includes financial leverage (LEV), measured by the ratio of total liability over total equity since it can impact on lnQ by providing tax benefits and mitigating free cash flow problems (Black et al., 2012; Black and Kim, 2012). It also controls for Big4 auditor (BIG4) taking a value of 1 when the bank has a big4 auditor and 0 otherwise (Mollah and Zaman, 2015). Furthermore, subsidiaries dummy variable (SUB) is used to control for bank ownership structure. It takes a value of 1 if it is subsidiary of a parent company and 0 otherwise. In accordance to Mollah et al. (2017), the research controls for the possible effect of banking sector concentration on value by using Herfindahl-Hirschman Index (HHI).

This study additionally follows the prior firm valuation research on governance (e.g. Aggarwal et al., 2009; Ammann et al., 2011; Cashman et al., 2012) to control for the depreciation expense over sales (DEP/SALES), the ratio of property, plants and equipment to sales (PPE/SALES), the ratio of capital expenditure to total assets (CAPEX/ASSETS) and the ratio of cash to total assets (CASH/ASSETS). The first variable, i.e. DEP/SALES, is included to capture for the bank growth opportunities, which is estimated by the ratio of depreciation expense and total sales (Cashman et al., 2012). The second variable, i.e. PPE/SALES, is added into the empirical models because firms operating with greater (lower) portions of fixed (intangible) assets can consider it less optimal to adopt a strict practice of firm governance because of less scope to waste assets (Ammann et al., 2011). The last two control factors, i.e. CAPEX/ASSETS and CASH/ASSETS, are also included to capture for the market valuations towards the capital expenditure and cash reserves, respectively (Ammann et al., 2011).

4.6.3 *Country-level Characteristics Variables and Type of Bank Variables*

The country-level characteristics variables include the annual growth in the GDP (GDP_GROWTH), annual rate of inflation (INFL) and an index representing the legal system of the country (LEGAL). Moreover, the study also includes one of country governance indicators which is the political stability and absence of violence (POLITICAL). According to World Bank (2016), it is measured by the quality of governance performance that reflects perceptions of the likelihood of political instability and/or politically-motivated violence, including terrorism. It is estimated by ranging from -2.5 (weak) to +2.5 (strong). Against the expectation that political stability affects economic growth, stock markets, the profitability of banks, and investment, the study predicts that investors are more likely to invest their capital into the stock market in countries with higher political stability. In other words, the higher the likelihood political instability is, the lower the bank value. Moreover, for the whole sample, the study includes the type of banks variable (ISLAMIC) which is a dummy taking value of 1 if it is classified as IBs and 0 otherwise. This variable reflects the difference in the market valuations between these two banking models.

Table 4.3 summarises all control variables employed in this study. Appendix 2 provides definitions of all variables used in all tested models.

Group	Control variables	Abbreviations
Corporate Governance	Board of Directors Size	LogBSIZE
	Board Independence	%INDEP
Bank-level Characteristics	Bank Size	LogTA
	Bank Age	LogAge
	Bank Leverage	LEV
	Big 4 Audited	BIG4
	Subsidiaries dummy	SUB
	Herfindahl-Hirschman Index	HHI
	Depreciation over sales	DEP/SALES
	Property, plants and equipment over sales	PPE/SALES
	Capital expenditure to total assets	CAPEX/ASSETS
	Cash to total assets	CASH/ASSETS
Country-level characteristics	GDP Growth rate	GDP_GROWTH
	Inflation rate	INFL
	Legal system	LEGAL
	Political stability and absence of violence	POLITICAL
Type of bank	Islamic banking dummy	ISLAMIC

Table 4.3: Study 2 - Content of Each Group of Independent Variables

4.7 Descriptive Statistics

This section describes the data sample of this study by presenting the descriptive statistics of the dependent and independent variables included in the estimated models.

	FULL SAMPLE						IBs Sample	CBs Sample	Two-Sample t-Test
Variables/ Ratios	N	Mean	Median	Std.	Min	Max	Mean	Mean	(two-tailed)
lnQ	386	0.235	0.029	1.028	-0.219	6.558	0.258	0.220	-0.342
ABOD	386	2.257	1.8	2.046	0	11	2.071	2.374	1.419*
%BBOD	386	47.9	50	0.377	0	100	43.4	50.9	1.908*
ASSB	150	10.789	11.7	7.284	0.538	33.667	10.789		
%BSSB	150	77.8	100	0.299	11.1	100	77.8		
BSIZE	386	9.544	9	3.705	3	25	10.647	8.843	-4.512***
%INDEP	386	34.8	33.3	0.237	0	100	32.7	36.2	1.322
LogTA	386	15.407	15.427	1.287	11.999	18.047	15.228	15.522	2.196**
LogAge	386	3.234	3.500	0.750	0	4.771	3.066	3.341	3.438***
DEP/SALES	386	0.027	0.019	0.037	0	0.352	0.038	0.019	-4.064***
PPE/SALES	386	0.111	0.084	0.116	0	0.461	0.005	0.178	26.249***
CAPEX/ASSETS	386	0.316	0.207	0.418	0	3.685	0.300	0.327	0.616
CASH/ASSETS	386	0.091	0.080	0.059	0.004	0.420	0.102	0.084	-2.701***
LEV	386	8.039	7.775	3.774	-4.210	19.998	8.283	7.883	-0.945
HHI	386	0.142	0.109	0.095	0.058	0.672	0.159	0.131	-2.573**
GDP_GROWTH	386	0.049	0.048	0.029	-0.024	0.196			
INFL	386	0.047	0.048	0.032	-0.024	0.139			
LEGAL	386	0.637	1	0.542	0	2			
POLITICS	386	-0.662	-0.765	0.964	-2.812	1.211			
Dummy Variables								Count	Percent
BIG4 (Full sample, IBs, CBs)								277 (93; 184)	72% (62%; 78%)
SUB (Full sample, IBs, CBs)								64 (30; 34)	17% (20%; 14%)
ISLAMIC								150	39%

Table 4.4: Study 2 - Descriptive Statistics

4.7.1 *Market Valuations*

This study puts Tobin's Q in the logarithm form (lnQ) to solve the skewness issue and mitigate the impact of high-*q* outlier banks but achieve similar results if we do not take logs. This is supported by previous studies (e.g. Black et al., 2012). As can be seen from Table 4.4, IBs report a higher mean of *lnQ* (0.258) than that of CBs (0.220). However, the two-sample *t*-test shows an insignificant difference between these two sub-samples.

4.7.2 *Boards Busyness*

Table 4.4 reports that (listed) IBs reveals lower average busyness (ABOD) for their BoD compared to (listed) CBs; with lower means of 2.071 (2.374) for IBs (CBs) respectively. This figure is similar to those in previous studies including Ferris et al. (2003) and Elyasiani and Zhang (2015). In addition, (listed) IBs also show lower percentage of busyness (%BBOD) for their BoD compared to (listed) CBs; with lower mean of 43% (51%) for IBs (CBs) respectively. This variable is significantly different between the two bank types, supported by significant coefficient of the two-sample t test. Regarding busy SSB, the table shows that each Shari'ah advisor averagely hold about 11 outside directorships (ASSB). Also, SSB serving in IBs shows a substantially high level of busyness with a mean of 77.8% for %BSSB.

4.7.3 *Corporate Governance Variables*

Table 4.4 also presents the descriptive statistics of CG variables including BoD size (BSIZE) and BoD independence (%INDEP). For full sample (IBs and CBs together), the table presents an average of 10 directors on BoD and a median of 9 directors. Furthermore, (listed) IBs show the larger size of the BoD (11 directors) compared to CBs (9 directors), supported by significant coefficient of two-sample t-test. Following previous studies, BSIZE is transformed into logarithm form (LogBSIZE) which can help to mitigate the skewness of this variable. The statistics for independent non-executive directors show that, on average, the BoD in IBs (CBs) has 33% (36%) independent directors, with an insignificant t-test result.

4.7.4 *Bank-level Variables*

Consistent with prior literature (e.g. Beck et al., 2013; Elnahass et al., 2018), the findings of Table 4.4 suggest that IBs (15.2; 3.07) are significantly smaller in firm size (LogTA) and younger in age (LogAge) than CBs (15.5; 3.34). Together with unreported findings for market capitalisation across the two banking types, the study argues that CBs appear to have either higher market value in size or higher book value in size, compared to their Islamic counterparts. The study also finds that IBs subsample shows significantly and statistically higher CASH/ASSETS (0.102), DEP/SALES (0.038) but lower PPE/SALES (0.005) than CBs subsample (0.084; 0.019; 0.178, respectively). HHI mean value of IBs (0.159) is higher than that of CBs subsample (0.131). Regarding two dummies, BIG4 and SUB, the table shows that 72% (62%; 78%) of listed banks in full sample (IBs, CBs) is audited by Big 4 auditor companies, and similarly, 17% (20%; 14%) of listed banks in full sample (IBs, CBs) is subsidiaries.

4.7.5 *Country-level Variables and Type of Banks Variable*

Table 4.4 shows that the average annual GDP growth rate (and inflation) of each country is 4.9% (4.7%) with the median of 4.8% (4.8%). The indicator of political stability and absence of violence in each country shows the mean of (-0.662) and median of (-0.765). Furthermore, the median value of one of LEGAL index for the full sample implies the majority of all observations combining both Shari'ah law and others to define their legal system. The count of ISLAMIC dummy variable indicates that 150 bank-year observations represents for IBs and hence, 236 bank-year observations represents for CBs. This reveals that full sample includes a smaller percentage of IBs (40%) than that of CBs (60%).

4.7.6 *Correlation Matrix of All Independent Variables*

This study also tests for multicollinearity between each independent variable and the others by employing both the Pearson pair-wise correlation matrix and VIFs. As can be seen from Table 4.5 (full sample and CBs) and Table 4.6 (IBs), pairs of independent variables with significant correlation coefficients are marked in bold. According to Nunnally and Bernstein's guidelines (1994), most of significantly correlated independent variables are in the weak range ($/r/ < 0.3$). Meanwhile, the rest of pairs of correlated variables have coefficients which are higher than 30%. Nonetheless, the majority of these correlation pairs are in the moderate range,

their absolute correlation coefficients are still within acceptable limits (0.8) and raise no concerns on multicollinearity, which is further supported by the low individual VIF values (<10), low means of VIFs (<6) and low condition numbers (<15) (Section 4.8). Some exceptional pairs including %BBOD and ABOD (full sample, CBs and IBs) and ASSB and %BSSB (IBs sub-sample) are highly correlated; however, they are alternative proxies for busy BoD and busy SSB, respectively, and therefore, will not be included in the same empirical models. As a result, the estimations of this study might not subject to serious multicollinearity problem.

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)
1. ABOD	1	**0.792**	**0.267**	-0.073	-0.063	0.002	**0.175**	0.072	0.005	0.060	-0.034	0.042	0.061	**0.183**	-0.095	**-0.182**	**0.298**	-0.057	-
2. %BBOD	**0.813**	1	**0.311**	0.020	-0.015	-0.003	0.126	0.064	-0.042	-0.012	-0.119	**0.166**	-0.063	**0.181**	-0.034	**-0.197**	**0.350**	-0.010	-
3. LogBSIZE	**0.128**	**0.191**	1	**-0.497**	0.000	0.051	-0.033	0.052	-0.008	**-0.038**	0.022	-0.083	-0.126	**0.149**	**-0.139**	0.018	**0.291**	**-0.192**	-
4. %INDEP	**0.165**	**0.201**	**-0.403**	1	**0.141**	0.034	-0.001	-0.063	-0.027	-0.076	-0.095	**0.230**	**0.209**	-0.077	**0.129**	**-0.137**	-0.128	**0.193**	-
5. LogTA	-0.038	0.005	-0.039	**0.218**	1	**0.135**	**-0.170**	**-0.321**	**-0.418**	**-0.133**	**-0.185**	**0.426**	**-0.157**	0.096	-0.062	**-0.315**	**0.318**	**0.487**	-
6. LogAge	**0.102**	0.073	-0.073	0.045	**0.239**	1	0.104	0.071	**-0.284**	0.045	-0.005	**0.186**	**-0.165**	-0.068	**-0.234**	**-0.176**	**0.130**	**0.186**	-
7. DEP/SALES	0.025	-0.042	**-0.156**	0.041	**-0.386**	**-0.211**	1	**0.443**	0.046	**0.375**	0.040	-0.006	0.109	**0.276**	-0.029	0.021	0.119	-0.008	-
8. PPE/SALES	0.097	**0.108**	**-0.147**	0.023	-0.097	**0.167**	-0.082	1	**0.282**	**0.157**	-0.047	-0.091	-0.059	**0.177**	-0.035	-0.071	0.051	0.053	-
9. CAPEX/ASSETS	0.029	-0.004	0.004	0.024	**-0.297**	**-0.249**	0.096	**0.174**	1	0.061	-0.109	**-0.143**	0.075	-0.096	0.052	**0.135**	**-0.195**	**-0.241**	-
10. CASH/ASSETS	0.055	0.061	**0.209**	-0.081	-0.045	0.035	-0.038	-0.037	0.087	1	**0.294**	**-0.237**	-0.021	-0.095	0.117	**0.213**	**-0.374**	-0.101	-
11. LEV	-0.080	-0.053	**0.153**	**-0.170**	0.042	0.061	**-0.271**	-0.072	-0.084	**0.329**	1	**-0.540**	**-0.174**	**-0.287**	0.075	**0.489**	**-0.469**	**-0.373**	-
12. BIG4	**0.185**	**0.216**	**-0.248**	**0.387**	**0.466**	**0.219**	-0.074	0.082	-0.080	**-0.268**	**-0.457**	1	0.043	**0.319**	**-0.176**	**-0.456**	**0.489**	**0.367**	-
13. SUB	0.079	0.029	-0.070	**0.169**	0.014	-0.039	**-0.107**	-0.089	0.050	-0.041	-0.028	0.048	1	0.023	-0.005	0.103	-0.067	**-0.219**	-
14. HHI	0.022	0.011	-0.024	**-0.115**	0.071	-0.051	0.028	-0.033	-0.001	0.010	**-0.115**	**0.166**	**0.111**	1	-0.029	**-0.139**	**0.588**	**0.213**	-
15. GDP_GROWTH	**-0.138**	-0.094	-0.036	0.047	-0.020	**-0.155**	-0.064	-0.009	0.059	-0.022	-0.020	**-0.127**	0.010	-0.074	1	-0.076	**-0.268**	**0.173**	-
16. INFL	**-0.194**	**-0.178**	0.063	**-0.313**	**-0.313**	-0.044	-0.020	-0.044	0.090	**0.140**	**0.396**	**-0.516**	**0.162**	**0.128**	**-0.110**	1	**-0.514**	**-0.620**	-
17. LEGAL	**0.250**	**0.263**	0.049	0.048	**0.310**	0.037	0.059	**-0.104**	**-0.122**	**-0.180**	**-0.267**	**0.483**	-0.010	**0.482**	**-0.252**	**-0.450**	1	**0.304**	-
18. POLITICAL	-0.031	-0.018	**-0.114**	**0.263**	**0.432**	0.078	**-0.102**	**0.126**	-0.106	**-0.135**	**-0.400**	**0.421**	**-0.192**	-0.009	**0.207**	**-0.657**	**0.217**	1	-
19. ISLAMIC	-0.072	-0.097	**0.233**	-0.071	**-0.111**	**-0.179**	**0.246**	**-0.731**	-0.031	**0.148**	0.052	**-0.173**	0.073	**0.144**	-0.018	0.014	**0.181**	**-0.141**	1

Notes: The table presents the Pearson pair-wise correlation matrix among all independent variables used in the regression analysis for the Full sample (**lower-left triangle**) and CBs subsamples (**higher-right triangle**) from 2010-2015. **Bold** numbers are significant at the 5% level. See *Appendix 2* for all variable definitions.

Table 4.5: Pearson Pair-Wise Correlation Matrix for Full Sample (N = 386) and Conventional Banks (N = 236)

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)
1. ABOD	1																			
2. %BBOD	**0.847**	1																		
3. ASSB	**0.222**	**0.183**	1																	
4. %BSSB	**0.275**	0.124	**0.707**	1																
5. LogBSIZE	-0.051	0.076	**-0.333**	**-0.692**	1															
6. %INDEP	**0.481**	**0.418**	**0.277**	**0.306**	**-0.285**	1														
7. LogTA	-0.019	0.008	**0.162**	**0.213**	-0.032	**0.296**	1													
8. LogAge	**0.223**	0.139	**-0.228**	0.097	-0.141	0.030	**0.337**	1												
9. DEP/SALES	0.009	-0.078	0.099	**0.215**	**-0.363**	0.089	**-0.543**	**-0.297**	1											
10. PPE/SALES	**0.188**	0.104	0.127	**0.179**	-0.117	0.010	**-0.436**	0.039	**0.385**	1										
11. CAPEX/ASSETS	0.061	0.043	0.014	0.027	0.038	0.077	-0.146	**-0.229**	0.154	**0.220**	1									
12. CASH/ASSETS	0.078	**0.176**	**-0.169**	-0.136	**0.420**	-0.067	0.075	0.081	**-0.200**	0.094	0.125	1								
13. LEV	-0.134	0.031	**-0.299**	**-0.222**	**0.288**	**-0.231**	**0.298**	0.145	**-0.421**	**-0.396**	-0.057	**0.350**	1							
14. BIG4	**0.376**	**0.256**	**0.548**	**0.592**	**-0.396**	**0.540**	**0.496**	**0.204**	-0.049	-0.002	-0.017	**-0.263**	**-0.378**	1						
15. SUB	0.121	**0.175**	-0.135	-0.112	-0.040	0.140	**0.258**	0.137	**-0.236**	**-0.187**	0.025	-0.083	0.108	0.082	1					
16. HHI	-0.122	-0.125	0.110	**0.238**	-0.261	-0.130	0.085	0.009	-0.071	0.005	0.093	0.042	-0.012	0.099	**0.171**	1				
17. GDP_GROWTH	**-0.217**	**-0.194**	-0.033	**-0.206**	0.131	-0.054	0.037	-0.067	-0.090	-0.122	0.069	**-0.162**	-0.124	-0.075	0.032	-0.116	1			
18. INFL	**-0.217**	-0.158	**-0.612**	**-0.392**	0.114	**-0.478**	**-0.315**	0.094	-0.041	0.000	0.043	0.080	**0.315**	**-0.591**	**0.225**	**0.325**	-0.151	1		
19. LEGAL	**0.215**	**0.178**	**0.658**	**0.637**	**-0.462**	**0.312**	**0.370**	-0.011	-0.020	0.028	-0.002	-0.040	-0.068	**0.599**	0.039	**0.383**	**-0.231**	**-0.404**	1	
20. POLITICAL	-0.024	-0.059	**0.498**	**0.192**	0.034	**0.313**	**0.363**	-0.073	-0.096	-0.026	0.021	-0.129	**-0.418**	**0.448**	-0.150	-0.128	**0.249**	**-0.699**	**0.191**	1

Notes: The table presents the Pearson pair-wise correlation matrix among all independent variables used in the regression analysis for the IBs subsamples from 2010-2015. **Bold** numbers are significant at the 5% level. See *Appendix 2* for all variable definitions.

Table 4.6: Pearson Pair-Wise Correlation Matrix for Islamic Banks (N = 150)

4.8 Empirical Results

4.8.1 *Market Valuations of Busy Boards of Directors in Islamic and Conventional Banks*

Table 4.7 reports the 3SLS estimations examining the effect of board busyness on market valuations for the full sample (*Panel A*), IBs (*Panel B, BOD: column 1; and SSB: column 2*) and CBs (*Panel C*) subsamples. Table 4.8 reports very low individual (<10) and mean VIFs (<6) results, in addition to low condition index (<15), suggesting no concern with multicollinearity.

In Table 4.7 (Panel A), for the full sample, the coefficient on BoD busyness (ABOD; %BBOD) is significantly and positively associated with lnQ. This implies that investors, on average, perceive board busyness as value-enhancing board attribute that increases bank valuations. This result is in line with, both, the resource dependence and signalling theories suggesting that outside directors serving on many boards can promote strong governance and bring strategic resources (e.g. extended industry knowledge, expertise and access to market sources) to their firms, and hence, positively valued by investors.

With respect to the control variables, board size (LogBSIZE) shows a negative and significant coefficient, which is consistent with prior evidence predicting that small boards tend to perform more effectively than large boards (e.g. Yermack, 1996; Elyasiani and Zhang, 2015; Gyapong et al., 2016). Having a small board associated with high financial ratios (e.g. profitability and operating efficiency) and better CEO compensation. As a result, some empirical evidence (e.g. Kini et al., 1995; Yermack, 1996) indicate that small boards are preferred by institutional investors, dissident directors and corporate raiders. The coefficient on board independence (%INDEP) is negative and significant which suggests that more outside directors serving on many boards are associated with lower firm valuations. This is in line with conventional firm studies of Agrawal and Knoeber (1996), Ararat et al. (2010), Black et al. (2012), and Elyasiani and Zhang (2015). The coefficients of bank age (LogAge) are always significantly positive across models 1 and 2, which suggests that the advantages of mature banks, in average, are positively valued by the investors. Moreover, higher capital expenditure are associated with lower market valuations, as represented by the negative and significant coefficients on CAPEX/ASSETS ratio. These findings for both

variables, LogAge and CAPEX/ASSETS, are in line with Ammann et al. (2011). Results further show negative associations between lnQ and, both of, the LEV and BIG4. The negative LEV coefficient is consistent with the existing studies (e.g. Woidtke, 2002; Elyasiani and Zhang, 2015; Gyapong et al., 2016), which indicate that investors adversely price firms operating on high leverages. Moreover, the low valuation for Big4 firms might be attributable to investors' perception that those firms are either more expensive to appoint (Craswell et al., 2002) or offer similar quality of assurance services to those provided by non-Big4 firms (Lawrence et al., 2011). Finally, the significantly positive coefficients on DEP/SALES and SUB suggest that the banks having higher depreciation ratio, and banks classified as subsidiaries are higher valued by investors which is in line with prediction.

When examining the effect of the BoD busyness across the two bank types, in Table 4.7 (i.e. Panels B and C), the study finds insignificant evidence for the effect of busy outside directors on market valuations for IBs. This implies that investors in IBs seem not to price board busyness. For CBs (Panel C), the research finds a positive and significant association between busy BoD (ABOD; %BBOD) and lnQ, suggesting that investors in CBs tend to price board multiple directorships as increasing the firm value. Results for control indicators across the two bank types are generally consistent with the main findings for the full sample. However, the study finds the positive coefficients of bank age (LogAge) for IBs only, implying that the higher pricing towards matured banks of investors in full sample tends to be driven by IBs. Moreover, CAPEX/ASSET is negatively valued in CBs, with no significant evidence for IBs. As acknowledged that CBs are relatively older than their Islamic counterparts (Abedifar et al., 2013), investors may under-price high capital expenditure caused by the replacement of old physical assets, such as property and equipment, which might either not be well supported in terms of reasoning or not generating additional investment opportunities, from an investor point of view. Furthermore, higher cash reserves are related to higher market valuations on IBs, as represented by the positive and significant coefficients of CASH/ASSETS. This is in line with Ammann et al. (2011). Findings of LogAge, BIG4 and DEP/SALES obtained in full sample are only found for IBs subsample.

Taken together, the findings show that board busyness has a differential effect on the market valuations across both bank types. Having a busy board increases the market valuations for CBs with no significant evidence for IBs, which is in line with our prediction and supports the hypothesis H_4. The positive effect of board busyness on the market valuations of CBs indicates that some reputational benefits are likely to dominate investors' expectations. The emerging reputational benefits from board busyness seem to alleviate investors' uncertainty related to ineffective monitoring and agency conflicts between investors and bank managers. This, in turn, leads to high market valuations. The finding is consistent with prior literature within the industrial sector settings (e.g. Ammann et al., 2011; Field et al., 2013; Clifford et al., 2018). The absence of market valuations for IBs can be justified through the signalling theory. Investors in IBs seem to be well informed about the importance of effective monitoring as well as the relative implications of poor Shari'ah governance. These findings suggest that investors seem to be sceptical of board busyness and penalise IBs by not valuing busy outside directors, which is in line with the busyness view.

	Panel A: Full Sample (IBs and CBs)		Panel B: Islamic banks (IBs)				Panel C: Conventional banks (CBs)	
VARIABLES	lnQ (1)	lnQ (2)	lnQ (3)	lnQ (4)	lnQ (5)	lnQ (6)	lnQ (7)	lnQ (8)
ABOD	0.329***		0.030		0.016		0.294***	
ASSB					-0.138***			
%BBOD		2.063***		-0.093		-0.011		1.765***
%BSSB						-2.225***		
Controls included	YES	YES	YES	YES	YES	YES	YES	YES
Intercept	1.989**	1.846**	0.449	1.555	7.034***	3.837**	3.658***	5.542***
Year-effects	YES	YES	YES	YES	YES	YES	YES	YES
Country-effects	YES	YES	YES	YES	YES	YES	YES	YES
Sample size	386	386	150	150	150	150	236	236
Adj. R-Square	0.068	0.034	0.786	0.787	0.658	0.643	0.013	0.118
Wald Chi2	269***	242***	557***	566***	400***	540***	186***	147***
LM Statistics	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Sargan test	0.422	0.107	0.364	0.328	0.110	0.110	0.108	0.100
ABOD = ASSB (F-Test)					0.000			
%BBOD = %BSSB (F-Test)						0.000		

Notes: The table presents the results of the 3SLS estimations of the system of simultaneous equations (*eq.4.1*)-(*eq.4.2*) for the full sample (Panel A; models 1-2), IB subsample (Panel B; models 3-6) and CB subsample (Panel C; models 7-8) identifying the impact of busy BoD or busy SSB on a bank's market value. The study treats both over-boarded boards and bank market value as endogenous variables and builds simultaneous equations models. The log of Tobin's Q (lnQ) is the dependent variable. The average outside directorships of outside directors/ Shari'ah advisors (ABOD; ASSB) and the percentage of busy outside directors/ Shari'ah advisors on board (%BBOD; %BSSB) are alternative main variables of interest for busy BoD/SSB, respectively. Models are tested for the period of six-year from 2010. The study controls for year and country fixed effects. P-values in parentheses, *$p < 0.10$, **$p < 0.05$, ***$p < 0.01$. LM and Sargan test show that all models are correctly identified and the selected IVs are valid. The reported F-test (i.e. Wald test) in models 5-6 indicates that the two coefficients are statistically different. See full table in Appendix 4A.

Table 4.7: 3SLS - Board of Directors Busyness and Bank Valuation - Within Islamic and Conventional Banks

VARIABLES	Panel A: Full Sample (IBs and CBs)		Panel B: Islamic banks (IBs)				Panel C: Conventional banks (CBs)	
	lnQ (1)	lnQ (2)	lnQ (3)	lnQ (4)	lnQ (5)	lnQ (6)	lnQ (7)	lnQ (8)
ABOD	1.32		2.16		2.32		1.30	
ASSB					3.57			
%BBOD		1.42		1.88		1.94		1.41
%BSSB						3.72		
LogBSIZE	1.52	1.61	2.64	2.64	2.80	4.13	1.66	1.76
%INDEP	1.63	1.70	2.20	2.14	2.34	2.25	1.56	1.65
LogTA	2.30	2.32	4.75	4.74	4.83	4.76	2.04	2.08
LogAge	1.29	1.28	1.97	1.84	2.27	1.86	1.35	1.37
DEP/SALES	1.55	1.55	2.22	2.22	2.23	2.24	1.74	1.74
PPE/SALES	2.66	2.66	1.80	1.80	1.85	1.85	1.62	1.61
CAPEX/ASSETS	1.24	1.25	1.27	1.27	1.29	1.27	1.53	1.54
CASH/ASSETS	1.31	1.31	1.86	1.88	1.87	1.95	1.61	1.61
LEV	1.97	1.97	3.32	3.40	3.44	3.46	2.08	2.06
BIG4	2.64	2.68	4.85	4.79	4.95	5.13	2.08	2.10
SUB	1.22	1.21	1.43	1.46	1.43	1.51	1.33	1.34
HHI	1.93	1.94	2.16	2.16	2.16	2.18	2.13	2.14
GDP_GROWTH	1.29	1.29	1.38	1.37	1.38	1.38	1.39	1.39
INFL	3.28	3.24	4.80	4.78	4.92	4.87	2.72	2.63
LEGAL	2.98	3.07	3.18	3.19	3.69	3.20	3.88	3.99
POLITICAL	2.63	2.63	3.50	3.45	4.07	3.47	2.61	2.61
ISLAMIC	2.99	3.00						
Mean VIF	1.99	2.01	2.68	2.65	2.86	2.84	1.92	1.94
Conditional Index	4.76	4.81	6.22	6.23	6.88	6.72	4.88	4.98

Table 4.8: VIFs in Bank Market Valuation Models – For Full Sample (Panel A), IBs (Panel B) and CBs (Panel C) Sub-Samples

4.8.2 *Market Valuations of Busy SSB in Islamic Banks*

This study extends the analyses to test H_5, expecting negative market valuations for a busy SSB in IBs. In Table 4.7 (Panel B, models 5 and 6), results show a negative and significant coefficient on SSB busyness *(ASSB; %BSSB)* which suggests that SSB busyness reduces bank value[40]. This finding implies that investors seem to discount the value for banks appointing busy SSBs as such level of busyness can be perceived as a potential risk for their banks. This is because a lax involvement of the busy SSB may lead to a failure in ensuring the mandatory compliance of IBs to the rulings of Shari'ah, which promotes a reputation risk and, hence, could trigger the collapse of IBs and cause systematic risk. Moreover, busy SSB members might have limited time to review and offer advice on contractual arrangements/transactions which might incorporate high uncertainty and risk-taking. Results for other control variables remain qualitatively unchanged. The overall finding supports H_5.

The study further observes that busy BoDs show consistently an insignificant impact on IBs valuations [41]. To examine whether there is a significant difference between the two-board busyness (BoD versus SSB) results, we compare the coefficients on ABOD and ASSB, as well as %BBOD and %BSSB. The reported F-test (i.e. Wald test) (see Wald, 1943; Pathan and Skully, 2010) indicates that the two coefficients are statistically different. These findings suggest that investors seem to significantly perceive busyness of SSB and BoD differently, placing substantial valuation for busy SSB. This might be justified by the relative high trust and confidence that effective Shari'ah monitoring could have in preserving the religious/ethical orientation of this banking sector (Elnahass et al., 2018).

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[40] In unreported sensitivities, Tobin's Q was used to replace for its logarithm function (lnQ) (see Ammann et al., 2011; Cashman et al., 2012) across all models in Table 4.7, but the main findings remains qualitatively unchanged. Tables will be provided upon request.

[41] In unreported sensitivities, like study 1, this second study also captured cross-country variations in governance perceptions for our sample by developing a country governance index (COUNTRY_GOV) as an additional control variable. The study relatively obtained consistent results to the main findings across all estimated models.

4.9 Robustness Checks

4.9.1   *Using Alternative Measures for Bank Market Valuation*

To address potential measurement errors of lnQ, as a sensitivity, this research uses an alternative proxy for market value which is the market capitalisation (*lnMARCAP*). This variable is defined as the natural logarithm form of the bank's market capitalisation (i.e. the stock price per share multiplied by the number of common shares outstanding (Badenhorst and Brümmer, 2015)[42].

The study examines the two hypotheses (*H_4* and *H_5*) across both bank types using *lnMARCAP*. Results in Table 4.9 report that findings for both bank types generally remain the same. For IBs, results show no evidence on the firm valuation of busy BoD and a significantly high negative firm valuation of busy SSB. In contrast, CBs report a positive association between busy board and *lnMARCAP*. These results suggest that the main findings are not driven by potential measurement errors or model misspecifications when using *lnQ*.

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[42] Unreported descriptive statistics show that IBs have a significantly lower average market capitalisation of 13.501 relative to their conventional counterparts (13.883).

VARIABLES	Panel A: Full Sample (IBs and CBs)		Panel B: Islamic banks (IBs)				Panel C: Conventional banks (CBs)	
	lnMARCAP (1)	lnMARCAP (2)	lnMARCAP (3)	lnMARCAP (4)	lnMARCAP (5)	lnMARCAP (6)	lnMARCAP (7)	lnMARCAP (8)
ABOD	0.787**		0.518		0.291		0.790***	
ASSB					-0.478***			
%BBOD		4.450***		3.114		1.303		4.074***
%BSSB						-1.955***		
Controls included	YES	YES	YES	YES	YES	YES	YES	YES
Intercept	0.758	0.153	-3.911	-5.266	15.710***	0.766	6.029***	4.364**
Year-effects	YES	YES	YES	YES	YES	YES	YES	YES
Country-effects	YES	YES	YES	YES	YES	YES	YES	YES
Sample size	386	386	150	150	150	150	236	236
Adj. R-Square	0.011	0.077	0.685	0.599	0.141	0.626	0.041	0.264
Wald Chi2	461***	469***	377***	225***	290***	369***	304***	308***
LM Statistics	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Sargan test	0.111	0.071	0.140	0.336	0.251	0.178	0.258	0.120
ABOD = ASSB (F-Test)					0.000			
%BBOD = %BSSB (F-Test)						0.020		

Notes: The table presents the robustness test which uses the log of market capitalisation as the alternative proxy for bank market value. It reports 3SLS results for the full sample (Panel A; models 1-2), IB subsample (Panel B; models 3-6) and CB subsample (Panel C; models 7-8) identifying the effect of busy BoD or busy SSB on a bank's firm value. The study treats both over-boarded boards and bank market value as endogenous variables and builds simultaneous equations models. The log of market capitalisation (lnMARCAP) is the dependent variable. The average outside directorships of outside directors/Shari'ah advisors (ABOD; ASSB) and the percentage of busy outside directors/ Shari'ah advisors on board (%BBOD; %BSSB) are alternative variables of interest for busy BoD/SSB, respectively. Models are tested for the period of six-year from 2010. The study controls for year and country fixed effects. P-values in parentheses, *p < 0.10, **p < 0.05, ***p < 0.01. LM and Sargan test show that all models are correctly identified and the selected IVs are valid. The reported F-test (i.e. Wald test) in models 5-6 indicates that the two coefficients are statistically different. See full table in Appendix 4B.

Table 4.9: Alternative Firm Valuation Measure – Boards Busyness and Firm Value within Islamic and Conventional Banks

4.9.2 *Two-step System Generalized Method of Moments*

Like study 1, this research further tests the robustness of the results using a GMM (Arellano and Bover, 1995; Blundell and Bond, 1998) which can address the crucial issue of endogeneity in examining the impacts of corporate governance on firm value. In brief, GMM approach can control for a dynamic endogeneity (i.e. current actions of a bank influence future firm governance and performance, which might in turn influence the banks' future actions), unobservable heterogeneity, and simultaneity. More details are provided in Section 3.8, Chapter 3.

The dianostics tests (see Table 4.10) report that all models are well-fitted with stastistically insignificant test statistics for both second-order autocorrelation (AR (2) p-values>10%, implying that the residuals in the second-difference are serially uncorrelated by way of construction) and Hansen J-statistics of over-identifying restrictions (p-values>10%). Results for first-order autocorrelation (AR (1) p-values<10%) indicate that the residuals in the first-difference are serially correlated. The Hansen test examines the null hypothesis of the IVs validity and shows the statistically insignificant J-statistics for all tested models suggesting that the IVs are valid in the respective estimations.

Results in Table 4.10 are consistent with main findings identified through 3SLS. Busy BoD is positively valued in CBs with no significant evidence for IBs. SSB busyness still shows a detrimental impact on market valuations. These results show that the main findings remain the same after capturing for unobserved heterogeneity, simultaneity and dynamic endogeneity, and provide empirical evidence of a causal relationship between the board busyness variables and bank value.

| | Panel A: Islamic banks (IBs) | | Panel B: Conventional banks (CBs) | |
VARIABLES	lnQ (1)	lnQ (2)	lnQ (3)	lnQ (4)
ABOD	0.005		0.096**	
ASSB	-0.008***			
%BBOD		0.034		0.469***
%BSSB		-0.312*		
Controls included	YES	YES	YES	YES
Intercept	0.411	-0.549	-0.895**	-0.415
lnQ$_{t-1}$	0.978***	1.021***	0.413*	0.712***
Year-effects	YES	YES	YES	YES
Country-effects	YES	YES	YES	YES
Sample size	123	123	193	193
Wald Chi2 (p-value)	0.000	0.000	0.000	0.000
AR (1)	0.022	0.038	0.070	0.095
AR (2)	0.936	0.332	0.656	0.582
Hansen test	0.621	0.179	0.475	0.197

Notes: The table presents the robustness test results of the GMM estimations for the IB subsample (Panel A; models 1-2) and CB subsample (Panel B; models 3-4) identifying the impact of busy BoD/SSB on a bank's market value. The log of Tobin's Q (lnQ) is dependent variable. The average outside directorships of outside directors/Shariah advisors (ABOD; ASSB) and the percentage of busy outside directors/Shariah advisors on board (%BBOD; %BSSB) are the main variables of interest for busy BoD/SSB. Models are tested for the period of six-year from 2010. The study controls for year and country fixed effects. P-values in parentheses, *p < 0.10, **p < 0.05, ***p < 0.01. AR (1) and AR (2) are dianogtic tests for no serial correlation of first-order and second-order, respectively, in the first-differenced standard errors. Hansen is the test of over-identifying restrictions. See full table in Appendix 4C.

Table 4.10: Robustness Check – GMM – Boards Busyness and Bank Valuation – Within Islamic Banks and Conventional Banks

4.10 Summary

This study extends previous research on firm valuations and CG by examining a specific board's attribute: busyness (i.e. multiple directorships). It offers new insights on the stock market valuations of banks by identifying the possible influence of distinct bank institutional characteristics and business models. The study comparatively and empirically assesses the cases of CBs and IBs. The results indicate that a busy BoD generally promotes high market valuations in support of additional preferential benefits that a busy board can generate for their firms. However, investors across the two bank types showed differential pricing for appointing a busy BoD. The study finds that in CBs, investors assign a high valuation for a busy board while IB investors do not value such an attribute. This is consistent with the fourth hypothesis (*H₄*) that busy BoDs are more valued by CB investors than by IB investors. The researcher takes a step further to examine the effect of busy SSBs within IBs. The results show that having busy Shari'ah

advisors significantly lower their banks' market valuations, supporting for the fifth hypothesis (H_5). Investors in IBs consistently perceive busy SSBs as damaging the bank value, but there is no evidence for such perception for a busy BoD.

The overall findings suggest that, unlike their conventional counterparts, stock markets engaging with IBs tend to be more sensitive to the busyness level of SSB and not that for outside directors. These results imply that despite the importance of having a double-layer governance mechanism in an IB system, enhancing the credibility and trust in this banking business model might not hold in the presence of lax monitoring, particularly for a Shari'ah governance. Having busy SSBs might affect the moral accountability for IBs and substantially lowers investors' long-term confidence in this type of bank. Results showing the positive influence of board busyness on increasing CBs valuations can partially alleviate the concern that busy outside directors must be priced as over-boarded or less effective in general terms. These findings reinforce those of Conyon and Read (2006), indicating that limiting the number of directorships of the BoD is not necessarily an ideal regulatory response. Moreover, IBs can learn from CBs on how to effectively exploit the possible reputation effects of busy outside directors and how to successfully signal such information to stock markets and enhance equity valuations.

Findings in this study contribute to the continuous debate on the need to reconsider different mechanisms of board governance in increasing firm value in the global banking sector. Results can also inform both investors' investment choices and regulator governance reforms for the two bank types. Moreover, the listed banks in dual banking countries should consider providing detailed and transparent disclosure on the related board directorships information alongside assessing the stock market responsiveness to this information within different banking settings. Future research in this financial arena may extend the busyness issue and focus on evaluating the economic consequences of extending governance structures to include additional boards with sufficient and relevant accounting and financial expertise, appropriate training and continuing education and to assess the impact on market valuations.

CHAPTER 5. *STUDY 3* - BOARD BUSYNESS AND DIVIDEND PAYOUTS: EVIDENCE FROM ALTERNATIVE BANKING MODELS

5.1 Abstract

The study investigates the effect of a busy BoD on dividend policy across two alternative banking models (i.e. Islamic and conventional) for eleven countries from 2010 to 2015. Results for the full sample show that a busy BoD has a significantly positive impact on the bank's dividend payout ratio (dividends over net income), and this positive influence is more pronounced in CBs. IBs which employ a busy BoD report lower levels of cash payouts. These results highlight a potential challenge for the severe agency conflicts arising from the complex dividend payout model of IBs, which is subject to greater scrutiny and additional rulings when compared to the conventional model.

5.2 Introduction

Although dividend payout strategies have been investigated over more than 50 years, since Modigliani and Miller's seminal work (1958, 1961), it remains a '*puzzle*' from an agency perspective. Prior studies (e.g. Easterbrook, 1984; Ben-Nasr, 2015; Firth et al., 2016; Mulyani et al., 2016; Saeed and Sameer, 2017) suggest that dividend payouts play an important role in reducing agency conflicts by controlling the amount of free cash flow, which is likely to be exploited by managers for their self-interests (e.g. perquisites, risk aversion, and empire building). However, few empirical research studies (e.g. Dickens et al., 2002; Basse et al., 2014; Lepetit et al., 2018) analyse the dividend payouts for the banking industry, despite being of great importance for both regulators and policymakers. Earlier studies support that payouts decisions play a significant role in lessening severe agency problems in the banking sector (Onali et al., 2016). Restrictions imposed on cash fund when dividends are distributed to shareholders is likely to force bank managers to access market sources to raise outside funds and provide timely and credible information about the bank performance to stock markets. This can diminish asymmetric information and agency costs and support shareholders to scrutinise/discipline managers (Basse et al., 2014; Tran and Ashraf, 2018).

Accordingly, dividend payouts strategy in the banking industry constitutes a crucial pillar for their rigorous and prudent risk management (Kanas, 2013); and it has recently moved into the regulatory spotlight (Lepetit et al., 2018). An ineffective bank dividend strategy can lead to adverse implications on a bank's future performance and financial stability, causing long-term detrimental economic consequences (Kupiec and Ramirez, 2013). Agency and governance problems are more complicated in banking due to the high level of opacity in contractual and financial reporting practices (Mülbert, 2009), the generation of information asymmetries (Morgan, 2002) and the high levels of risk-taking and the complex leverage cost structures (Mehran et al., 2011). These interrelated qualities make a bank dividend payout policy more difficult to scrutinise than other industries (Abreu and Gulamhussen, 2013).

The uniqueness of governance mechanisms in banks implies a dominant influence by the BoDs on their firms' dividend payouts (Onali et al., 2016). This board has the final say on a firm's dividend payout ratios and, hence, can effectively mitigate possible agency issues that arise. Therefore, the quality of the BoDs' supervision and their engagements in managerial decision-making can have direct implications on the payout level (Sharma, 2011; John et al., 2015). Appointing busy outside directors (i.e. holding multiple board seats across many firms) can hence influence bank dividend policies and tend to be related to the extent of agency conflicts and/or the complication of a bank business model.

In line with the resource dependence theory, effective monitoring by a BoD is vital for efficient resource allocation and risk mitigation (Meng et al., 2018). Employing a busy BoD where outside directors hold multiple board seats across several firms is expected to bring some reputational benefits to firms (e.g. promoting extended business networking/connections and quick access to market resources) (Jiraporn et al., 2009; Brennan et al., 2016). As such, banks employing busy outside directors can positively influence their dividends policy through flexible access to capital markets to raise funds at lower costs. However, an accumulation of multiple directorships by outside directors can imply negative implications on bank governance and dividend strategy. Outside directors may ineffectively monitor their firms when they are ''over-boarded'' or busy. Such busy boards may not be able to fulfil their monitoring and advising role to managers due to their time and effort constraints and event conflicts (Fich and

Shivdasani, 2006; Ahn et al., 2010). Accordingly, board busyness can lead to higher agency costs related to free cash flow and promote adverse impacts on a bank's dividend policy (Sharma, 2011; Chou and Feng, 2018).

Till date, relatively little is known about the impact of effective systems of governance and the influence of busy boards on the dividend policy within the banking sector. In conventional banking, studies provide mixed evidence (e.g. Akhigbe and Whyte, 2012; Srivastav et al., 2014; Ashraf and Zheng, 2015; Onali et al., 2016; Kutubi et al., 2018). Prior studies highlighting the effect of busy boards on dividend payouts are mainly focused on industrial firms (i.e. Sharma, 2011; Chou and Feng, 2018) and also show inconsistent findings. To the best of my knowledge, studies in Islamic banking is scare. Investigating the influence of busy boards across IBs and CBs will contribute to the ongoing debate identifying the possible impacts of different institutional characteristics and governance system on the dividend strategies.

Prior theoretical studies highlight the presence of distinct differences in the governance as well as the dividend policies of IBs and CBs (e.g. Athari et al., 2016; Safiullah and Shamsuddin, 2018a). IBs operate on a non-interested based model which is governed by Shariah rulings and promote profit-loss sharing between the bank and depositors. Governance structures adopted by IBs tend to be more complicated compared to CBs (Mollah and Zaman, 2015) (see Chapter 2). Besides, the IB dividend model is characterised as being more constrained than conventional banking. Several structural differences do exist between the two bank types, concerning their dividend distribution principles, motives, mechanics and techniques and the flexibility of payouts. These differences are expected to influence the effectiveness of their governance monitoring and the overall levels of payouts. In general terms, the profit distribution decisions of IBs must be compliant with Shari'ah principles (Schaik, 2001; Safiullah and Shamsuddin, 2018a) and, hence, their payouts involve a nexus of contracts between the bank, depositors and shareholders (Alhabshi, 2002). Accordingly, IBs managers' motives to pay dividends are likely to be driven by the preferences of both investors and depositors, while those of their conventional counterparts tend to be driven solely by investors' preference (Al-Hunnayan and Hashem, 2011).

Furthermore, IBs distributions of profits and their payouts policy are more complex and less flexible than that of CBs. IBs are usually challenged by liquidity

management issues and accessing short-term borrowings from external sources (Čihák and Hesse, 2010; Beck et al., 2013). Subsequently, they tend to hold substantial excess free cash flow or other liquid assets at a low rate of return to meet expected/unexpected capital challenges. These constraints can have implications on the dividend payout strategies in IBs, leading to low payouts ratios and less stable dividends distributions in the long-term (Athari et al., 2016). In contrast, CBs have quicker access to market sources as well as alternative financial instruments such as derivatives and options, and this is likely to promote greater flexibility when it comes to their dividend payouts strategies (Bitar et al., 2017). Moreover, the use of hedging by these banks, not permitted under the IB model, is associated with a low cost of debt but also with higher credit risk (Deng et al., 2017). When compared to their Islamic counterparts, both the reduced cost of debt and the availability of fund sources promote more stable and frequent payouts of dividends at high rates.

Under the IB dividend model and complex governance structure, employing busy outside directors can have adverse implications on their monitoring abilities. It might encourage managers to ex-post deviate from the payout policy and engage in poor or risky investment decisions. The negative impact of board busyness is likely to be more pronounced as the BoD in this banking sector, generally, relied heavily on the effectiveness of the Shari'ah governance by SSB in scrutinising the risky banking activities (see Farag et al., 2018). Weak monitoring by the busy board can thus result in adverse selection and moral hazard problems on both sides of the IB balance sheet (Nienhaus, 2007; Visser, 2009). Conversely, CBs operating on a less constrained business/dividend model and a single-layer governance structure would have lower agency costs. They, therefore, can obtain the reputational benefits from busy boards through their improved internal monitoring ability. As a result, due to the presence of systematic differences between the business models of CBs and IBs, the premise is that having a busy board in IBs is likely to be associated with a lower payout ratio than that in CBs. This is also attributable to the extended agency costs of IBs, requiring effective monitoring from the BoD (see Abdelsalam et al., 2016; Athari et al., 2016).

The study measures the dividends payout by the ratio of dividends to net income and employs a comprehensive sample of 386 bank-year observations (70 listed banks) in eleven countries from 2010–2015. Findings show that for the full

sample (i.e. CBs and IBs together), banks with busy boards exhibit, on average, a higher payout ratio. This finding is consistent with the reputation hypothesis, suggesting that busy directors can use their expertise and connections to support effective dividends policy. Analyses conditioned on the bank type support the expectation and indicate that a CB with a busy board offers significantly high payout ratios. In contrast, having busy boards in IBs show a detrimental effect on the bank dividend level. These results suggest that dividend strategies of IBs are likely to be more sensitive to the board busyness level than their conventional counterparts, which can be attributable to the constrained dividend model of the former.

This study contributes to prior literature in several ways. It is the first to examine the implications of board busyness and dividend policies in the banking industry and within a broader international context. The results also contribute to the inconclusive evidence within the US context, which has focused on non-financial industries (e.g. Sharma, 2011; Chou and Feng, 2018). This study is also the first to investigate the possible differential impacts on payout policies across different bank types by utilising an important board attribute such as busyness and exploiting a unique business model of IBs. Although prior studies in IBs are still accumulating and have discussed the theoretical implications of the payout process for such a bank type (e.g. Shaheen, 2005; Al-Gurrah Daghi, 2009; Essa, 2010), empirical evidence on the relationship between dividends and board governance is still lacking. The study also extends previous research on the implications of overcommitted boards in governance studies in conventional banking (e.g. Sharma, 2011; Jiraporn et al., 2011; Smith et al., 2017; Chou and Feng, 2018) by introducing the comparative case with IBs. Moreover, the research contributes to the growing stream of Islamic-conventional banking literature (e.g. Mollah and Zaman, 2015; Mollah et al., 2017; Safiullah and Shamsuddin, 2018a). Finally, the study adds to the ongoing debate about the effect of institutional characteristics and stricter governance mechanisms on several firm outcomes such as firm performance, risk-taking, capital structure, cost of debt and cash holdings (e.g. Gompers et al., 2003; Brown and Caylor, 2006; Meng et al., 2018).

The findings in this study provide important implications to bank regulators, investors and stock markets that engage with both bank types. The differential impact of board busyness across the two bank types imply that distinct dividend

strategies employed under different business models are substantially affected by this attribute of the BoD (i.e. board busyness). Accordingly, the findings are likely to inform the investment decisions of market participants who engage with the two bank types. Furthermore, as the international capital markets and regulatory standards have been continuously engaged in promoting sound financial systems and effective mechanisms for governance, the results might assist regulators in explaining the differential payouts patterns when banks are operating on a busy board structure. Finally, IBs can learn from their conventional counterparts on how to promote reputational benefits, including the effective mitigation of extended agency issues when recruiting busy boards.

5.3 Background and Related Studies

5.3.1 *Theoretical Framework*

The agency theory represents one of the dominant views on dividend policies (see Nohel and Tarhan, 1998; Renneboog and Szilagyi, 2015). Prior studies have long argued that managers (e.g. CEOs) have strong incentives to engage in discretionary acts (Williamson, 1964), take excessive compensation and perquisites (Sharma, 2011) and utilise the excess free cash flow in unprofitable projects. Easterbrook (1984) highlights that the monitoring and risk aversion preferences might lead to agency problems between managers and shareholders, and, hence, result in cash dividends. Managers are likely to manipulate and shift the amounts of dividends across future periods (i.e. the earnings smoothing effect) if they have the motives to increase the dividend ratios despite the low level of permanent earnings. A managerial discretion to establish the payout policy can exacerbate the agency problems between managers and shareholders; such conflict is particularly more severe in banks due to their highly levered capital structure (John et al., 2010).

Dividend payout is not a governance mechanism; rather it plays a similar role as an implicit governance tool in reducing agency costs between shareholders and managers (Sharma, 2011; Onali et al., 2016). This is because the monitoring needs of capital providers are lower since the amount of free cash flow is reduced after distributing dividends, leading to a lower probability of managers wasting excess available cash (e.g. Easterbrook, 1984; Edmans, 2011). Furthermore, in line with the risk aversion perspective, managers are likely to have a lower risk tolerance

than firm shareholders since they might have substantial personal gains/incentives tied up with the firm's performance. As identified by Easterbrook (1984), shareholders might have the preference for higher dividends payout, which reduces retained earnings and forces managers to raise external funds.

Although managers would use dividend payment to lessen agency costs (DeAngelo and DeAngelo, 2000), they still retain discretion over dividend strategies. Because dividends reduce the proportion of the available discretionary funds, those managers may try to manipulate dividend strategies to guarantee that excess profits will be retained in the company for their self-purpose, ceteris paribus (Easterbrook, 1984). Therefore, the presence of a BoD provides an essential internal governance mechanism to prevent managerial discretion. This board has an ultimate oversight responsibility to scrutinise payouts policies, including the levels and ratios of payments before announcing dividends to the capital markets (White, 1996). Such responsibility involves the consideration of various factors related to a firm's growth opportunities, current leverage and potential emergencies before approving a payout. Therefore, the BoD has an important role in influencing and controlling the agency costs associated with the payouts process of dividends (Sharma, 2011).

5.3.2 *Previous Empirical Evidence*

The context of intense regulation and higher asymmetry in the banking sector lead to the unique relevance/role of the BoD who has a legal responsibility in approving a bank's policies, procedures and business strategies. This board would have an ultimate oversight function for bank decisions (Elyasiani and Zhang, 2015). The duties and obligations of the bank directors (i.e. inside and outside directors) serving on the board may arise in two main contexts. First, they need to bring a discrete decision to the board for approval which results in a rise of directors' legal responsibility on the bank safety and soundness. Second, they must provide an effective bank oversight for the bank operations (Macey and O'Hara, 2003; Adams and Mehran, 2003; Elyasiani and Zhang, 2015). Also, many stakeholders (e.g. authorities) have placed additional expectations on bank BoDs that delineate their responsibilities even further. Outside directors serving on the BoDs should have either, advisory or oversight role, or both over executives. They should also perform their tasks independently from inside

directors in which they can provide vigilant scrutiny over inside board members on behalf of shareholders and, thus, may reduce agency problems (Fama and Jensen, 1983). To scrutinise managers more effectively, those outside directors might be required to invest their time, attention and efforts to analyse any information provided by managers, banks as well as consultants (Leblanc, 2004).

Prior studies provide mixed evidence for the effect of CG on dividend policies. Within the industrial sector, the literature identifies the impact of BoD characteristics on firms' dividend payout. This includes board size (e.g. Abdelsalam et al., 2008; Van Pelt, 2013), independent directors (e.g. Al-Najjar and Hussainey, 2009; Boumosleh and Cline, 2015), CEO duality (e.g. Officer, 2006; Sawicki, 2009), age and experience (e.g. Custódio and Metzger, 2014), CEO entrenchment (e.g. Hu and Kumar, 2004), and board gender diversity (e.g. Saeed and Sameer, 2017; Chen et al., 2017). Other studies find a significantly positive impact of corporate governance index (G-Index) on the likelihood of paying dividends and/or dividend yield in the US market (e.g. Jiraporn and Ning, 2006; Officer, 2006; Jo and Pan, 2009; Jiraporn et al., 2011). Hu and Kumar (2004) show that CEO entrenchment is likely to increase dividend payout ratios. Setia-Atmaja (2010) also indicates a positive influence of board independence and dividends paid in family-controlled firms. Renneboog and Trojanowski (2011) argue that the voting power of executive directors has a significant relation to the propensity to pay dividends or the combination of dividends and share repurchases. Deshmukh et al. (2013) find that an over-confident CEO pays lower levels of dividends than a rational CEO to accumulate higher financial slack for future investment needs. Caliskan and Doukas (2015) document that inside debt induces CEOs to pay dividends while convex CEO compensation is related to lower payouts.

Investigating board busyness and dividend policies have previously focused on non-financial firms within the US context. For a sample of US non-financial firms, Sharma (2011) shows that the decision to pay out dividends is associated with the strength of board governance, which is measured through the level of board busyness. Chou and Feng (2018) find that when industrial US firms have more limited investment opportunities, board busyness is positively associated with higher dividend payouts. They explain that multiple directorships are likely to enhance internal board monitoring and reduce the agency problems of a firm's

liquid assets. Board busyness, they also suggest, results in using cash more effectively and, thereby, providing direct benefits to shareholders. Other studies identify the influences of busy BoDs while focusing on firm performance, market value, and cost of debt and/or risk-taking (e.g. Ferris et al., 2003; Field et al., 2013; Chakravarty and Rutherford, 2017).

Studies in the banking sector offer limited evidence of the association between governance and dividends payouts. Theis and Dutta (2009) examine the relationship between inside ownership and dividend payout policies after controlling for the levels of bank capitalisation. Akhigbe and Whyte (2012) find a negative effect of managerial stock ownership and payouts across the financial firms. Onali et al. (2016) find a negative impact of director ownership and CEO power on the dividends of European-listed banks.

Accordingly, evidence on the board busyness and dividends payouts within the banking industry is scant. Moreover, none of the prior studies has tested for the influence of different bank types as a mediating factor for this possible association between board busyness and firm dividend decisions. This study, hence, seeks to fill in these gaps through a comparative assessment of IBs and CBs.

5.3.3 *Structural differences in dividend models*

As discussed in Chapter 2, the key feature differentiating Islamic from conventional financial intermediaries is the additional monitoring through a Shari'ah governance board, and the dominance of Islamic principles over the business model (i.e. the prohibition of interests and of speculative and uncertain trading activities). Under the conventional banking finance paradigm, a bank is likely to shift credit risk to the depositors under an interest-based contractual arrangement (Safiullah and Shamsuddin, 2018). Contrarily, as per Shari'ah guidelines, IBs are expected to perform their intermediation functions through PLS contractual agreements between the banks, depositors and IAHs (Farag et al., 2018). According to the PLS paradigm, entrepreneurs share their profits and losses with IBs according to a pre-determined ratio. IBs pool all profits and losses from different investments and share the profits with depositors of funds taking into account the relative contributions of capital and equity and the investment deposits (Olson and Zoubi, 2008). A proportion of the remaining earned profits is used to pay dividends to equity holders, for which dividends on common equity is

discretionarily allocated and distributed by the bank managers (Khan and Mirakhor, 1989).

The IB dividend model under this PLS paradigm indicates substantial differences in the distribution principles, the extent of flexibility of payouts and the mechanics and techniques when compared to the conventional banking dividend model (e.g. Ayub, 2007; Beck et al., 2013; Athari et al., 2016). This study summarises these key differences in Table 5.1. These differences are expected to influence the governance monitoring effectiveness of both bank types and the overall levels of dividend payouts.

First, a payout policy in an IB is likely to be less flexible than that of a CB. While the dividend distribution decisions of the former are significantly affected by their challenges in managing liquidity and accessing short-term borrowings from outside sources (Beck et al., 2013; Elnahass et al., 2014), the latter has better liquidity opportunities promoted by their ease and quick access to external market sources and the availability of alternative instruments to raise funds such as hedging and derivatives (Bitar et al., 2017; Deng et al., 2017). IBs, therefore, are likely to hold greater capital buffers to mitigate their liquidity challenges as well as preserve their regulatory capital ratios. The existence of limited sources of finance, such as the issuance of Islamic bonds, to enhance the liquidity and capital position leads to substantial restrictions imposed on the bank business model and dividends strategies (Elnahass et al., 2014). As a result, CBs are better positioned to offer more frequent payouts of dividends at higher rates when compared to Islamic banking (Athari et al., 2016).

Second, IBs encounter additional challenges related to their actual (Shari'ah) profit determination compared to CBs. Under the constrained dividends model, any fraction of earnings which are generated from investments that do not comply with the Islamic principles cannot be distributed to shareholders or used to acquire assets (Safiullah and Shamsuddin, 2018a).[43] Given that an IB's contracts should, in principle, be backed by underlying assets or investment activity, in many occasions it is too complex to determine the estimated profits when some projects

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[43] Permissible earnings and profits must be calculated from the volume of money which participated in the bank trading activities and investments within the specific pre-determined contractual timeframe for example when the capital was initially deposited (Ahmed, 1996). Provisions, depreciation expensed, or other expenses related to the investment of depositors should be actual and not estimated, to arrive at the actual profits of depositors.

have not yet been realised before the end of the fiscal period. This can have implications on the bank's dividends payouts. Also, unlike their conventional counterparts, IBs cannot employ all the capital available to undertake investment opportunities, either because the regulations do not allow them, or because the capital available for investment is higher than the IBs' investment portfolio (Ahmed, 1996). However, such related complexities and issues are not raised in a CB business model as Islamic rulings will not constrain its distributable profits. Depositors in this bank type obtain their returns in the form of regular/composite interest payments which are treated as expenses when CBs compute their net profits and dividends for shareholders. As such, an important difference between IBs and CBs in this respect is the shift in treating returns payable to depositors as a distribution of shared profits and not an expense (Alhabshi, 2002; Saeed and Izzeldin, 2016). Moreover, in contrast to IBs, the interest expenses paid for depositors in CBs should be independent of the completion of investment projects. These banks, hence, may have lower difficulties of calculating profits distributable for shareholders. Accordingly, the IB financial structure of a dividend-based model differs from CBs (Schaik, 2001; Safiullah and Shamsuddin, 2018a), which may, in turn, lead to different payout levels between the two bank types.

Third, with the restrictions imposed on the IB dividends model, which must comply with the Shari'ah principles, profit distributions by IBs reflect an active process involving a nexus of contracts between the bank, depositors and equity holders (Schaik, 2001; Alhabshi, 2002; Safiullah and Shamsuddin, 2018a). Thereby, the profit and dividend payout decisions of IBs are associated with an agreement among these three parties. In other words, the basis and manner of profit distributions could change in future and are subject to the contract agreement among parties. This adds to the main structural differences in the distribution motives of IBs relative to their conventional counterparts. The payouts decisions by IBs' managers are ultimately driven by the preferences of both investors and depositors.[44] In contrast, a sound distribution policy in CBs

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[44] While the bank should ensure that the depositors contracted under PLS contracts are sufficiently rewarded (Wilson, 2007), there are several key challenges which will affect a profit distribution policy within Islamic banks. These are (i) the profit-sharing ratio; (ii) the concentration of asset risks; (iii) the amount of reserves maintained; and (iv) weights assigned to the various classes of investment deposits to calculate regulatory capitals; and (v) the distributions of earnings to non-investment deposits as well as to priority deposits in financing and investment (FAS 5 and 6, AAOIFI, 1997).

depends solely and mainly on the preference of investors (shareholders) to enhance the bank market value (Al-Hunnayan and Hashem, 2011). As such, compared to CBs, additional monitoring costs imposed on IBs might be needed to avoid disappointing the investors/depositors[45].

Finally, the mechanics and techniques of IB dividend distributions are likely to be more complicated than those of CBs (Athari et al., 2016). A survey by Al-Hunnayan and Hashem (2011) defines a commonly used dividend model in an IB and summarises its key structures based on four steps; (i) revenues and expenses allocation; (ii) reserves and provisions deductions; (iii) distributions for profit and loss saving and investment accounts (PSIA hereafter); and (iv) distribute dividends (see Figure 5.1). At each step of this payout process, there are potential variations in the practices of IBs. Moreover, under the PLS paradigm, the dividend decisions by IBs managers are subject to the interactions between PSIA and dividend distributions. In contrast, CBs are known as intermediates between depositors and borrowers, and their revenue is defined as the difference in the interest gains between the two parties. Thus, their net profit is calculated by the deduction of expenses from revenues (Saeed and Izzeldin, 2016). Payout decisions in CBs, nevertheless, are related to current bank profitability, future growth opportunities and optimal capital budget as well as the equity amount needed to finance the optimal budget via retained earnings (see Partington, 1989; Deshmukh et al., 2013; Onali et al., 2016).

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[45] When the rate of return of IBs is at a disadvantage, shareholders may have to scarify their profits to minimise withdrawal risk from depositors. Furthermore, the choice of an appropriate profit distribution principle in IBs can affect the depositors' perceptions of the fair return distribution.

Aspects	Islamic Banking Dividends Model	Conventional Banking Dividends Model
Shari'ah compliance and PLS principle is applied	*Yes*	*None*
Rate of return on deposits	*Uncertain, not guaranteed*	*Certain and guaranteed*
Motives of payouts	Preferences of both investors (shareholders) and depositors	Preference of investors (shareholders)
Conflicts between depositors and shareholders towards dividend payouts ratio for the latter	*High*	*Low*
Depositors' return is linked to the return on assets	*Yes*	*No*
Banks' pooling of depositors' funds to provide depositors with professional investment management	*Yes*	*No*
Process Activeness	*High.* Profit distribution is a more active process involving a nexus of contracts between the bank, depositors and shareholders. Hence, the profit distribution of Islamic banks is agreement among such three parties including depositors.	*Low.* Depositors will receive interest payment from the banks. Interests paid for depositors are treated as expenses when calculating net profits and dividends for shareholders. Hence, the profit distribution of conventional banks is only an agreement between shareholders and the bank.
Complexity of payouts mechanics and techniques	*High.* Dividend decision subjects to the interaction between PSIA and dividend distributions. It depends much on the effectiveness of profit distribution among parties under the PLS arrangements.	*Low.* Dividend decisions are not subject to the interaction between PSIA and dividend distributions; however, they are associated with current profitability, future growth opportunities, and optimal capital budget and equity amount needed to finance the optimal budget through retained earnings.

Difficulties in payouts	*High.* It is difficult to determine the actual (Shari'ah) profits for any financial year because some investment projects may not be finished before the end of the accounting year. In addition, Islamic banks cannot use all the available fund to undertake investment activities which challenges their profit/dividend distribution.	*Low.* Interest amounts are treated as expenses which are paid to depositors. Such expenses do not depend on the completion of investments and conventional banks can pool and employ all available capital. Net profits (after all expenses) will be distributed to shareholders according to the shareholding percentages.
Flexibility of payouts policy	*Low.* Dividend decisions appear to be significantly affected by Islamic banks' challenges in managing liquidity and accessing Shari'ah short-term borrowings from outside sources.	*High.* Higher liquidity position as they enable quicker access to external market sources and the use of hedging and financial instruments.
Agency conflicts arise during payouts process	*High.* The conflicts occur when managers, depositors and shareholders disagree about the profit distribution. Managers have more opportunities engage in discretionary acts comprising of controlling and managing dividend policy.	*Low.* The conflicts occur only when managers and shareholders disagree about the profit distribution. This lowers opportunities for bank managers' to engage in discretionary acts, relative to Islamic banks.
Prediction for the Levels of payouts	*Low*	*High*

Table 5.1: A Comparison between Islamic and Conventional Bank Dividend Model

Revenues & Expenses Allocation → **Reserves & Provisions Deduction** → **Distribute to PSIA** → **Distribute Dividends**

Two methods:

(1) **Sharing revenues and expenses** (between shareholders and PSIA on prorate basis)

(2) *Mudarabah* **Pool concept** (separate those revenues generated by the Mudarabah pool's assets from those revenues generated through banking

Statutory or legal
General or voluntary
Investment risk reserve (IRR)   *Mudarabah* pool reserve
Profit equalization reserve (PER)   Others (e.g. *exchange translation reserve, revaluation reserve for properties, and hedge reserve*)

Setting Reserve Requirement → Calculating Available & Invested Funds → Profit Distribution Frequency → Charging Mudarabah Fees → Book Mudarabah Reserves & Provisions → **Recommend PSIA Distribution**

Shareholders' Revenue → Deduction of Selling, General & Administrative Expense (SG&A) → Booking Reserves → Zakat Payment & Corporation Tax → Directors' Remunerations → **Net income**

After the Mudarabah fees and the Mudarabah net profit (Mudarabah profit attributed to shareholders after deducting the PSIA share and related expenses) are both calculated and channelled to shareholders as revenue.

After deducting SG&A, statutory and general reserves, Zakat and corporate taxes (if any), and directors' remunerations, the net income is then available for distribution to shareholders.

Figure 5.1: Four-step Dividend Payout Process in Islamic Banks

Source: Al-Hunnayan and Hashem (2011)

5.4 Hypotheses Development

Irrespective of the bank type (i.e. IBs or CBs), the agency conflicts of dividend payouts represent an ultimate cost occurring when managers and shareholders disagree about the distributable profits. However, IBs encounter additional agency costs due to the indirect monitoring by IAHs who cannot intervene in the banks' financial and business decisions. This offers opportunities for bank managers to engage in discretionary acts (Elnahass et al., 2018), possibly including controlling and managing dividends payouts. Moreover, conflicts among IAHs, managers and shareholders may arise from the overlap and interactions between the different components of the dividends model discussed above. Managers in IBs tend to have more opportunities to amend the reserves and provisions, the profit distribution rates on PSIA and the dividends which could lead to severe agency conflicts. Such a wide latitude of discretion further adds to the complexity in the structure of the dividend model employed by this banking sector.

Prior literature on the payouts of dividends within the context of IBs is particularly limited. Hassan et al. (2003) use the signalling theory to indicate that dividends are the only relevant financial information that helps managers to signal returns on investments to the stock market. As such, they emphasise the importance of investigating an IB's dividend model determinants. From a theoretical basis, Al-Gurrah Daghi (2009) and Essa (2010) describe the accounting process used in the profit distribution of IBs and refer to the relevant financial/accounting standards. For CBs, studies focus on the determinants of dividend payouts, such as insider holders (Theis and Dutta, 2009), growth opportunities (Collins et al., 1994; Casey and Dickens, 2000; Dickens et al., 2002), and the external rating of listed banks (Boldin and Leggett, 1995). Some other studies (e.g. Filbeck and Mullineaux, 1993; Collins et al., 1994) document that dividends are usually employed as a signalling mechanism by banks; for example, they can convey useful information to investors about the bank growth opportunities (Abreu and Gulamhussen, 2013). Thereby, a reduction in dividends can lead to lower equity valuations (Bessler and Nohel, 1996).

Under the assumed discrepancies in the dividend distribution strategies between IBs and CBs, the extent and effectiveness of governance within the two banking sectors are expected to have implications on their payouts. The BoD's

157

characteristics and attributes are likely to affect the dividend strategies for both bank types. A busy board, it is argued, can still promote reputational and preferential benefits to their firms.

When distinguishing between the business models of the two bank types, the monitoring needs in IBs are likely to be higher than CBs due to their complex governance structure and trading process, including constrained products/activities (Safieddine, 2009). Unlike CBs, the scarcity of outside directors having expertise and knowledge in Shari'ah legitimacy alongside the unique dividend model employed, busy outside directors of IBs who possess several board directorships would be less capable of providing the necessary level of oversight to an IB's policies and strategies. This is because a busy board might have less involvement (i.e. time, attention and efforts) to thoroughly review the long-term strategies and investment opportunities, which must be compliant with the Islamic principles, and make indicative decisions for dividend distributions. Hence, the pitfall related to less effective monitoring can lead to lower dividend levels as managers can pursue their interests at the expense of shareholders. According to the busyness hypothesis (e.g. Jiraporn et al., 2008; Sharma, 2011; Cashman et al., 2012), busy outside directors are less likely to effectively monitor managers' risk-taking and expropriation behaviours for banks as they overstretch themselves across too many companies and spend less time on each board (Ferris et al., 2003; Cashman et al., 2012). Moreover, busy boards may not have sufficient reputational benefits to contribute to their institutions (Jackling and Johl, 2009). As such, an increase in their workload is closely associated with a decline in dividend payouts (Sharma, 2011). Thereby, an inverse association between busy BoDs and dividend payouts in IBs is predicted.

Unlike IBs, CBs operating on a single layer of governance and a more flexible/stable dividend model tend to encounter relatively lower agency costs. For this specific banking business model, busy boards have several opportunities to promote additional reputational benefits for their banks (e.g. provides advising services on payouts policy, brings flexible and alternative funding sources) to the CBs' dividend models by enhancing the board's internal monitoring and mitigating the agency problems of a firms' liquid assets, managerial opportunism and uncertainties (see Chou and Feng, 2018). However, these benefits are less likely to be obtained by IBs because their business model is marked with greater

complexity (i.e. restriction in business and payouts model; constraint in using financial instruments/derivatives due to Islamic rulings; inconsistent regulatory standard; operating in less developed capital markets) and because of their unique structuring of governance, which would require substantial scrutiny and effective monitoring (Beck et al., 2013; Mollah and Zaman, 2015; Bitar et al., 2017). As a result, board busyness in CBs is predicted to be more beneficial from a reputational and expertise perspectives when compared to their Islamic counterparts. Such reputational benefits are likely to influence the dividends business model of CBs, leading to possibly higher payouts levels.

In contrast, the costs of ineffective scrutinising by busy boards in the IB dividend model are expected to offset their reputational benefits which can have an adverse impact(s) on their dividends model. Having a busy board is anticipated to cause pronounced negative consequences on the payouts levels in IBs relative to CBs. This forms the hypothesis stated in an alternative form, as below:

H$_6$: *Islamic banks with a busy board of directors pay lower levels of dividends than conventional banks*

5.5 Data and Methodology

5.5.1   Data Collection

This study employs the similar sample to the second study (see Section 4.5.1, Chapter 4). In brief, dividend and other consolidated financial data (in thousand U.S. dollars) are collected from DataStream and Bloomberg. Governance-level data is obtained from annual reports, which reflect board members' profile for both listed IBs and CBs, including the number of directorships of outside directors, the number of directors and independent directors on boards, among others. Macroeconomics and country governance indicators used in the tests are obtained from the World Bank database. Four criteria are then applied to filter the sample, which are consistent with prior Islamic-conventional banking literature (see Beck et al., 2013; Mollah et al., 2017; Alqahtani et al., 2017). These include (a) banks located in countries which have both bank types, and at least two listed banks; (b) banks with annual reports published in their official website and of the financial year of 31 December; (c) banks are classified as commercial full-ledged; and (d) banks have at least three consecutive years data availability. Availability

of corporate governance, dividend and financial data reduces the sample size to 70 listed banks in total, with 27 IBs (150 firm-year observations) and 43 CBs (236 firm-year observations) operating in 11 countries such as Bahrain, Bangladesh, Egypt, Indonesia, Jordan, Kuwait, Pakistan, Qatar, Saudi Arabia, UAE and Oman.[46]

5.5.2 *Measures for Dividend Payouts Policy and Boards Busyness*

This study follows prior literature to measure the dependent variable; cash dividends over total net income (*DIV/NI*) (e.g. John and Knyazeva, 2006; Jiraporn et al., 2011; Bøhren et al., 2012; Chen et al., 2017; Byrne and O'Connor, 2017b). This proxy represents the proportion of cash dividends paid to the shareholders over the earnings reported in a given period. The research treats *DIV/NI* as a censored variable since it cannot be below zero (Jiraporn et al., 2011).

Following previous literature (Onali et al., 2016; Jiang et al., 2017; Chen et al., 2017), this study further uses alternative measures of dividend strategies, comprising of the propensity to pay dividend (*LIKE_PAY*), dividends over total assets (*DIV/Assets*), dividends over sales (*DIV/Sales*) and dividends per share (*DIV/Share*), in the sensitivity tests.

This current research uses the same measures for BoD busyness (ABOD; %BBOD) as the first two studies.

5.5.3 *Methodology and Empirical Models*

To the extent that dividends are expected to mitigate agency costs of managerial expropriation and overinvestment (Rozeff, 1982; Easterbrook, 1984; Jensen, 1986) and under the predictions of relatively higher agency conflicts arisen from the payout process in IBs compared to CBs, the study conjectures that CBs with a busy BoD are more likely to pay higher dividends to shareholders than IBs. It tests the possible relation between busy BoD and dividend payout ratio. However, since managers pay dividends to shareholders in ways that align interests between shareholders, managers and directors, board busyness and payouts decisions are likely to be determined endogenously. For example, busy outside directors can

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[46] For the treatment of the outliers, this study winsorises each variable in our test model at the 1st and 99th percentiles.

choose to work for banks with high dividend payout (e.g. Sharma, 2011). Also, banks could simultaneously select busy outside directors and dividend policies to address agency problems of free cash flow. Therefore, like the first two research, this current study also performed the 3SLS estimations employing the same two IVs (i.e. the number of public firms headquartered in the same country of the bank; the country-level income generating category) to minimise the possible presence of endogeneity (e.g. Gugler, 2003; Elyasiani and Zhang, 2015; Onali et al., 2016; Chakravarty and Rutherford, 2017).

Under 3SLS estimations, this study treats both busy BoD and dividend payouts as endogenous variables[47] and establish the simultaneous equations as follows:

$$DIV/NI_{it} = \beta_0 + \beta_1 BBOD_{it} + \phi P + \mu Year\ effects + \pi Country\ effects + \varepsilon_{it}\ (eq.5.1)$$
$$BBOD_{it} = \beta_0 + \beta_1 DIV/NI_{it} + \phi P + \mu Year\ effects + \pi Country\ effects + \varepsilon_{it}\ (eq.5.2)$$

Where *DIV/NI* represents the cash dividends over net income. The study estimates the dividend payouts using busy BoDs (BBOD including *ABOD; %BBOD*). ϕP is a vector of control variables in the dividend regression model that account for the effect of corporate governance, bank-level and country-level characteristics on the dividend payout; *Year effects* and *Country effects* capture the year-fixed and country-fixed effects; ε_{it} is the error term.

5.6 Control Variables Measurements

Consistent with prior literature (e.g. Jiraporn et al., 2011; Sharma, 2011; Chen et al., 2017; Saeed and Sameer, 2017), the study also controls for other board characteristics, bank-level and country-level characteristics to mitigate potential omitted variables bias and capture other factors that have been found statistically significant in the previous dividend research.

5.6.1 *Corporate Governance Variables*

Managerial entrenchment is likely to affect dividend policy (Hu and Kumar, 2004) and dividend payout is considered as a collective decision of the board (Saeed and Sameer, 2017). Therefore, the study controls for a set of board-related variables to capture the quality of bank governance such as board size

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[47] The study performed the Wu-Hausman endogeneity test across all the test models to examine whether endogeneity exists or not. The test statistics suggest the presence of endogeneity bias.

(LogBSIZE) and board independence (%INDEP). Briefly, the former is measured by the number of directors on the board while the latter is measured by the percentage of outside non-executive directors on the board (Hu and Kumar, 2004; Chen et al., 2017; Saeed and Sameer, 2017; James et al., 2017).

5.6.2 *Bank-level Characteristics Variables*

The controls for other bank-level characteristics which have been found to significantly affect corporate dividend payouts. It includes bank size (LogTA) and bank age (LogAge) that are expected to positively relate to a payout (e.g. Fama and French, 2001; Sharma, 2011; Al-Najjar and Kilincarslan, 2016; Saeed and Sameer, 2017). It also includes bank financial leverage (LEV) measured as the ratio of total liabilities (long-term and short-term) to total equity. This measure affects dividend payouts due to its role in reducing agency problems and due to debt covenants on dividends imposed by debtholders (Sharma, 2011). Big4 Auditors dummy (BIG4) and subsidiaries dummy (SUB) variables are also included into the models to capture for the influences of the quality of auditing and ownership on the dividend decisions of the banks.

Furthermore, the inclusion of growth opportunities (CAPEX/ASSETS), defined as the ratio of capital expenditures to total assets, also helps capture potential mechanism though outside directors could affect decisions to pay dividends (see Fenn and Liang, 2001; Cuny et al., 2009; Sharma, 2011). The research also controls for the availability of cash/cash reserves through the ratio of cash and marketable securities divided to net assets (total assets minus cash and marketable securities), CASH/NETASSETS (Jiraporn et al., 2011; James et al., 2017). According to DeAngelo et al. (2006), retain earnings are essential determinants of dividend payouts. Therefore, the study controls for the ratio of retained earnings to total equity (RETAIN/EQUITY). In addition, it captures for profitability performance measured by the ratio of net income to total assets (ROA) which is expected to positively affect dividend payouts (Cuny et al., 2009; Sharma, 2011; Saeed and Sameer, 2017). This study finally controls for the possible impact of banking sector concentration (i.e. activity diversification) on dividend policy by using Herfindahl-Hirschman Index (HHI) (Mollah et al., 2017).

5.6.3 *Country-level Characteristics Variables and Type of Bank Variables*

The country-level characteristics variables include GDP growth rate (GDP_GROWTH) and annual rate of inflation (INFL) (Ashraf et al., 2016). In addition, it controls for the difference in the national quality of governance across countries by including determinants of regulatory quality (*REGLATORY*) (e.g. Bitar et al., 2017; Kutubi et al., 2018). This indicator measures the quality of governance performance that reflects perceptions of the ability of the government to formulate and conduct good polices and regulations to promote the private sector. It is estimated by ranging from -2.5 (weak) to +2.5 (strong) (World Bank, 2016). Furthermore, for the full sample, the research includes the type of banks variable (ISLAMIC) which is a dummy taking value of 1 if it is classified as IBs and 0 otherwise. This variable reflects the difference in the d between these two banking models. Table 5.2 presents the summary of controls used in the study 3. Appendix 2 provides definitions of all variables used in all tested models.

Group	Control variables	Abbreviations
Corporate Governance	Board of Directors Size	LogBSIZE
	Board Independence	%INDEP
Bank-level Characteristics	Bank Size	LogTA
	Bank age	LogAge
	Bank Leverage	LEV
	Profitability	ROA
	Big4 Auditor	BIG4
	Subsidiaries	SUB
	Capital expenditure to total assets	CAPEX/ASSETS
	Cash to total assets	CASH/NETASSETS
	Retain earnings to equity	RETAIN/EQUITY
	Herfindahl-Hirschman Index	HHI
Country-level characteristics	GDP Growth rate	GDP_GROWTH
	Inflation	INFL
	Regulatory quality	REGULATORY
Type of bank	Islamic banking dummy	ISLAMIC

Table 5.2: Study 3 - Control Variables

5.7 Descriptive Statistics

This section describes the data sample by reporting the descriptive statistics of variables which have not been discussed in the previous study 2 yet (Table 5.3).

Variables/ Ratios	FULL SAMPLE						IBs Sample Mean	CBs Sample Mean	Two-Sample *t*-Test (two-tailed)
	N	Mean	Median	Std.	Min	Max			
DIV/NI	386	0.269	0.248	0.271	0	0.982	0.229	0.295	2.345**
ROA	386	0.012	0.013	0.024	-0.34	0.064	0.005	0.016	3.830***
CASH/NETASSETS	386	0.106	0.087	0.083	0.004	0.723	0.122	0.095	-2.801***
RETAIN/EQUITY	386	8.357	7.817	6.066	-6.980	38.803	7.394	8.968	2.503**
REGULATORY	386	-0.062	-0.102	0.634	-0.963	2.024			

Table 5.3: Study 3 - Descriptive Statistics

5.7.1 Dividend Payouts, Boards Busyness and Corporate Governance

According to the descriptive table (Table 5.3), IBs (0.229) show significantly lower dividend payments than their conventional counterparts (0.295). This is supported by the significant coefficient of the two-sample t-test.

For the main independent variables (ABOD and %BBOD) and corporate governance variables (LogBSIZE and %INDEP), their descriptive statistics are reported in Chapter 4. Below presents the descriptive of control variables which were not reported in previous chapter.

5.7.2 Bank-level Variables

Descriptive of all variables including LogTA, LogAge, LEV, BIG4, SUB, CAPEX/ASSETS and HHI, were reported in Chapter 4. Therefore, in this section, only three additional bank-level variables (ROA; CASH/NETASSET; RETAIN/EQUITY) are illustrated.

According to Table 5.3, the mean of ROA, CASH/NETASSET and RETAIN/EQUITY for full sample (IBs; CBs) is 0.012 (0.005; 0.016), 0.106 (0.122; 0.095) and 8.357 (7.394; 8.968). Two sample t-test coefficients for three variables suggest that CBs exhibit higher profitability and higher retained earnings, but lower cash holdings than their Islamic counterparts.

5.7.3 Country-level Variables and Bank types variables

As can be seen from Table 5.3, the mean and median of this REGULATORY variable is -0.062 and -0.102, respectively. Its min-max range of value is from -0.963 to 2.024 and the standard deviation is 0.634.

5.7.4 Correlation Matrix of All Independent Variables

Pearson pair-wise correlation matrix and VIFs are also employed to check for multicollinearity. Table 5.4 (full sample) and Table 5.5 (IBs and CBs) show that pairs of independent variables with significant correlation coefficients are marked in bold. According to the guidelines of Nunnally and Bernstein (1994), the majority of significantly correlated independent variables are in the weak range (/r/ < 0.3). However, the coefficients of the rest of pairs of significantly correlated variables are greater than 30%. Most of those correlation pairs are in the moderate range, their absolute correlation coefficients are still within acceptable limits (0.8). This, alongside with the low individual VIF values (<10), low means of VIFs (<6) and low condition numbers (<15), indicates that there are no concerns on multicollinearity (Section 5.8). An exceptional pair of %BBOD and ABOD (full sample, CBs and IBs) are highly correlated; nevertheless, the study does not include them into the same models, thus, multicollinearity threat should not be a concern in the estimated models.

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)
1. ABOD	1																	
2. %BBOD	**0.813**	1																
3. LogBSIZE	**0.128**	**0.191**	1															
4. %INDEP	**0.165**	**0.201**	**-0.403**	1														
5. LogTA	-0.038	0.005	-0.039	**0.218**	1													
6. LogAge	**0.102**	0.073	-0.073	0.045	**0.239**	1												
7. LEV	-0.080	-0.053	**0.153**	**-0.170**	0.042	0.061	1											
8. ROA	-0.011	0.003	0.046	-0.008	**0.293**	0.042	0.046	1										
9. BIG4	**0.185**	**0.216**	**-0.248**	**0.387**	**0.466**	**0.219**	**-0.457**	0.099	1									
10. SUB	0.079	0.029	-0.070	**0.169**	0.014	-0.039	-0.028	0.064	0.048	1								
11. CAPEX/ASSETS	0.029	-0.004	0.004	0.024	**-0.297**	**-0.249**	-0.084	0.084	-0.080	0.050	1							
12. CASH/NETASSETS	0.058	0.068	**0.201**	-0.087	-0.048	0.033	**0.294**	0.047	**-0.257**	-0.051	0.079	1						
13. RETAIN/EQUITY	**-0.135**	-0.054	**0.163**	**-0.110**	**0.111**	**-0.145**	**0.382**	**0.341**	**-0.252**	0.049	**0.111**	**0.159**	1					
14. HHI	0.022	0.011	-0.024	**-0.115**	0.071	-0.051	**-0.115**	0.064	**0.166**	**0.111**	0.000	0.017	-0.048	1				
15. GDP_GROWTH	**-0.138**	-0.094	-0.036	0.047	-0.020	**-0.155**	-0.020	0.095	**-0.127**	0.010	0.059	-0.036	0.097	-0.074	1			
16. INFL	**-0.194**	**-0.178**	0.063	**-0.313**	**-0.313**	-0.044	**0.396**	-0.018	**-0.516**	0.162	0.090	**0.101**	**0.372**	**0.128**	**-0.110**	1		
17. REGULATORY	**0.203**	**0.225**	**-0.149**	**0.353**	**0.352**	0.025	**-0.485**	0.017	**0.679**	**-0.130**	**-0.110**	**-0.188**	**-0.405**	**0.133**	**-0.117**	**-0.758**	1	
18. ISLAMIC	-0.072	-0.097	**0.233**	-0.071	**-0.111**	**-0.179**	0.052	**-0.230**	**-0.173**	0.073	-0.031	**0.157**	**-0.127**	**0.144**	-0.018	0.014	0.029	1

Notes: The table presents the Pearson pair-wise correlation matrix among all independent variables used in the regression analysis for the Full sample from 2010-2015. **Bold figures** are significant at the 5% level. See *Appendix 2* for all variable definitions.

Table 5.4: Pearson Pair-Wise Correlation Matrix for Full Sample (N = 386)

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)
1. ABOD	**1**	**0.792**	**0.267**	-0.073	-0.063	0.002	-0.034	0.031	0.042	0.061	0.005	0.085	-0.108	**0.183**	-0.095	**-0.182**	**0.187**
2. %BBOD	**0.847**	1	**0.311**	0.020	-0.015	-0.003	-0.119	0.098	**0.166**	-0.063	-0.042	0.012	-0.078	**0.181**	-0.034	**-0.197**	**0.268**
3. LogBSIZE	-0.051	0.076	1	**-0.497**	0.000	0.051	0.022	0.111	-0.083	-0.126	-0.008	-0.032	0.058	**0.149**	**-0.139**	0.018	-0.074
4. %INDEP	**0.481**	**0.418**	**-0.285**	1	**0.141**	0.034	-0.095	0.081	**0.230**	**0.209**	-0.027	-0.088	-0.065	-0.077	**0.129**	**-0.137**	**0.260**
5. LogTA	-0.019	0.008	-0.032	**0.296**	1	**0.135**	**-0.185**	**0.174**	**0.426**	**-0.157**	**-0.418**	**-0.131**	0.042	0.096	-0.062	**-0.315**	**0.365**
6. LogAge	**0.223**	0.139	-0.141	0.030	**0.337**	1	-0.005	**-0.331**	**0.186**	**-0.165**	**-0.284**	0.044	**-0.302**	-0.068	**-0.234**	**-0.176**	**0.192**
7. LEV	-0.134	0.031	**0.288**	**-0.231**	0.298	0.145	1	**-0.392**	**-0.540**	**-0.174**	-0.109	**0.267**	**0.358**	**-0.287**	0.075	**0.489**	**-0.652**
8. ROA	-0.067	-0.080	0.128	-0.066	**0.381**	0.128	**0.213**	1	**0.228**	-0.125	**0.326**	**-0.128**	**0.404**	0.027	0.115	**-0.165**	**0.245**
9. BIG4	**0.376**	**0.256**	**-0.396**	0.540	0.496	**0.204**	**-0.378**	0.007	1	0.043	**-0.143**	**-0.221**	**-0.230**	**0.319**	**-0.176**	**-0.456**	**0.642**
10. SUB	0.121	**0.175**	-0.040	0.140	**0.258**	0.137	0.108	**0.181**	0.082	1	0.075	-0.022	-0.043	0.023	-0.005	0.103	-0.067
11. CAPEX/ASSETS	0.061	0.043	0.038	0.077	-0.146	**-0.229**	-0.057	-0.007	-0.017	0.025	1	0.061	0.094	-0.096	0.052	**0.135**	**-0.160**
12. CASH/NETASSETS	0.062	**0.161**	**0.370**	-0.071	0.057	0.079	**0.307**	0.150	**-0.254**	-0.101	0.108	1	**0.177**	-0.086	0.108	**0.177**	**-0.338**
13. RETAIN/EQUITY	**-0.212**	-0.050	**0.426**	-0.192	**0.183**	0.005	**0.445**	**0.371**	**-0.353**	**0.203**	0.128	**0.200**	1	**-0.196**	0.103	**0.355**	**-0.421**
14. HHI	-0.122	-0.125	**-0.261**	-0.130	0.085	0.009	-0.012	0.127	0.099	**0.171**	0.093	0.040	0.130	1	-0.029	**-0.139**	**0.309**
15. GDP_GROWTH	**-0.217**	**-0.194**	0.131	-0.054	0.037	-0.067	-0.124	0.106	-0.075	0.032	0.069	**-0.166**	0.085	-0.116	1	-0.076	-0.102
16. INFL	**-0.217**	-0.158	0.114	**-0.478**	**-0.315**	0.094	**0.315**	0.035	**-0.591**	**0.225**	0.043	0.046	**0.412**	**0.325**	-0.151	1	**-0.763**
17. REGULATORY	**0.239**	**0.185**	**-0.270**	**0.450**	**0.354**	-0.138	**-0.341**	-0.051	**0.751**	**-0.204**	-0.052	-0.093	**-0.392**	-0.004	-0.136	**-0.756**	1

Notes: The table presents the Pearson pair-wise correlation matrix among all independent variables used in the regression analysis for the IB subsamples (**lower-left triangle**) and CBs subsamples (**higher-right triangle**) from 2010-2015. **Bold figures** are significant at the 5% level. See *Appendix 2* for all variable definitions.

Table 5.5: Pearson Pair-Wise Correlation Matrix for Islamic Banks (N = 150) and Conventional Banks (N = 236)

5.8 Empirical Results

5.8.1   The level of cash dividend payouts within Islamic and conventional banks

Table 5.6 presents the regression results on the link between BoD busyness and the payout ratio (*DIV/NI*) in Panels A (full sample), B (IBs sample) and C (CBs sample), respectively, within the 3SLS simultaneous equations framework. Table 5.7 indicates very low individual (<10) and mean VIFs values (<6), in addition to low condition index (<15), suggesting no multicollinearity.

In Panel A, Table 5.6, the study finds that the coefficient of board busyness (*ABOD; %BBOD*) is positively associated with *DIV/NI* for the whole sample. This result suggests that banks with busy BoD are likely to exhibit a greater cash dividend payout policy, which is in line with resource dependence theory indicating that outside directors working in multiple companies can promote stronger governance mechanism and bring valuable resources (i.e. expertise, skills, experience, and access to external resources) to their firms. Such reputational benefits appear to reduce the conflicts between managers and shareholders related to the usage of free cash flows (see Sharma, 2011) and hence, mitigate the probability that managers abuse that available cash. This, in turn, leads to high dividend ratio. The evidence also implies that banks tend to use board multiple directorships to gain access to external sources from the markets and obtaining reputational benefits. Intrinsically, the resource-rich outside directors have significantly contributed to the high demand of banks regarding outside resources or environmental interdependence.

As for control variables (see Appendix 5A), the study finds support for several prior industrial firms' studies (e.g. DeAngelo et al. 2004; Cuny et al., 2009; Sharma, 2011; Jiraporn et al., 2011; Chen et al., 2017; Chou and Feng, 2018) indicating that dividends are employed to disgorge free cash flow to investors in the absence of other devices. Indeed, *LogTA* and *ROA* have significantly positive impacts on the payouts ratio, which are in line with what we expect to find. Larger and more profitable firms exhibit larger subsequent dividend amounts, in accordance with findings of numerous studies such as Adjaoud and Ben-Amar (2010), Sharma (2011), Esqueda (2016), Byrne and O'Connor (2017a) and Chou

and Feng (2018). In contrast, board independence (%IND) and retain earnings (RETAIN/EQUITY) have negative and significant effects on the dividend ratio. Although negative coefficient of %IND is not the expectation, it is a possible result as Hu and Kumar (2004) find that board independence is only positive linked to payout if it exceeds 40%. The negative coefficient of RETAIN/EQUITY is in line with the results of Jiraporn et al. (2011)[48].

When examining the effect of the bank type on levels of payouts paid, analyses within the two bank types in panels (B and C), Table 5.6, show that IBs with busy BoD exhibit lower cash dividend payout ratios; with significantly negative coefficients on ABOD and %BBOD. In contrast, CBs having busy BoD tend to pay out significantly high levels of cash dividends to their shareholders, supported by positive coefficients on the test variables ABOD and %BBOD. These results indicate that the reputational benefits of busy BoD for banks dividend payout strategies obtained in Panel (A) (full sample) tend to be more pronounced in CBs rather than IBs.

With regard to control factors (see Appendix 5A), the study finds board independence (%INDEP) has implications for distribution policy in CBs in that it is negatively related to the DIV/NI. For both bank types, the research finds that the effects of LogTA and ROA on DIV/NI are significantly positive. In addition, the study finds positive results for LEV in CBs, whereas IBs show insignificant. Although such effect is positive for CBs, it is still consistent with the study of Jiraporn et al. (2011) and Chou and Feng (2018) showing a positive relation between leverage and payouts. Finally, coefficients for RETAIN/EQUITY in both bank types are significant and negative, which is in line with those reported in Panel A[49].

Taken together, the findings provide evidence for the differing influence of board busyness on the dividend policy across the two bank types. Having a busy board increases the levels of cash dividends for CBs relative to IBs, which is in line with the hypothesis. The negative effect of busy boards on payouts of IBs can be

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[48] In unreported sensitivities, all three empirical studies replaced this GDP growth rate by log of GDP per capital (Borisova et al., 2012; Abedifar et al., 2013; Saeed and Izzeldin, 2016). Results remain relatively unchanged. Tables will be provided upon request.

[49] In unreported sensitivities, all three empirical studies excluded country dummies from all main models and obtained consistent results. For brevity, tables will be provided upon request.

justified by their constrained dividend model that is less flexible and dominated by several constraints and interactions. Hence, managers in IBs have more opportunities for discretion and control over the payout process. Having busy outside directors seems to have a detrimental impact on the bank levels of payouts. This result is in line with the predictions under the busyness hypothesis (Sharma, 2011) and are attributable to the possible inefficient monitoring ability for busy boards to review a constrained dividend model such as Islamic banking. This result also suggests that a busy board in IBs could lead to additional agency conflicts and/or opportunities for managerial discretion associated with their dividends model.

In contrast and in line with expectations, the positive impact of board busyness on the dividend payouts in CBs suggests that busy boards seem to offer this set of banks superior preferential access to funds and other networking benefits that appear to promote distributions of high levels of dividends. The finding is consistent with the reputational view of busy boards (Chou and Feng, 2018). The overall results suggest that the natures and commitments of the regular BoDs in the IBs tend to be unique, which seems to have direct implications on their dividend strategies as well as the trust of their investors/depositors and withdrawal risks.[50]

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[50] In unreported sensitivities, like study 1 and 2, this third study also captured cross-country variations in governance perceptions for our sample by developing a country governance index (COUNTRY_GOV) as an additional control variable. The research relatively obtained consistent results to the main findings across all estimated models.

VARIABLES	Panel A: Full Sample (IBs and CBs)		Panel B: Islamic banks (IBs)		Panel C: Conventional banks (CBs)	
	DIV/NI	DIV/NI	DIV/NI	DIV/NI	DIV/NI	DIV/NI
	(1)	(2)	(3)	(4)	(5)	(6)
ABOD	0.055***		-0.136***		0.128***	
%BBOD		0.419***		-0.684***		0.760***
Controls included	YES	YES	YES	YES	YES	YES
Intercept	-1.431***	-1.367***	-1.017***	-1.455***	-1.676***	-1.826***
Year-effects	YES	YES	YES	YES	YES	YES
Country-effects	YES	YES	YES	YES	YES	YES
Mean VIFs	1.79	1.80	2.56	2.53	2.10	2.11
Sample size	386	386	150	150	236	236
Adj. R-Square	0.408	0.347	0.548	0.360	0.130	0.159
Wald Chi2	442***	425***	332***	252***	300***	316***
LM Statistics	0.000	0.000	0.000	0.000	0.000	0.000
Sargan test	0.126	0.159	0.183	0.234	0.113	0.458

Notes: The table presents the results of the 3SLS estimations of the system of simultaneous equations (*eq.5.1*)-(*eq.5.2*) for the full sample (Panel A; models 1-2), IB subsample (Panel B; models 3-4) and CB subsample (Panel C; models 5-6) identifying the effect of busy BoD on a bank's dividend payout ratio. The study treats both over-boarded directors and the dividend payout ratio as endogenous variables and builds simultaneous equations models. The ratio of cash dividends to net income (DIV/NI) is the main dependent variable which represents for dividend payout ratio. The average outside directorships of outside directors (ABOD) and the percentage of busy outside directors (%BBOD) are two alternative main variables of interest for busy BoD. Models are tested for the period of six-year from 2010. The study controls for year and country fixed effects. P-values in parentheses, *$p < 0.10$, **$p < 0.05$, ***$p < 0.01$. LM and Sargan test show that all models are correctly identified, and the selected IVs are valid. See full table in Appendix 5A.

Table 5.6: 3SLS - Board of Directors Busyness and the Dividend Payout Ratio - Within Islamic and Conventional Banks

VARIABLES	Panel A: Full Sample (IBs and CBs)		Panel B: Islamic banks (IBs)		Panel C: Conventional banks (CBs)	
	DIV/NI	DIV/NI	DIV/NI	DIV/NI	DIV/NI	DIV/NI
	(1)	(2)	(3)	(4)	(5)	(6)
ABOD	1.25		2.07		1.30	
%BBOD		1.33		1.82		1.36
LogBSIZE	1.47	1.57	2.00	1.99	1.61	1.78
%INDEP	1.62	1.67	2.21	2.12	1.68	1.73
LogTA	1.94	1.95	3.98	3.88	1.68	1.72
LogAge	1.33	1.32	1.98	1.88	1.52	1.54
LEV	1.75	1.75	2.21	2.32	3.06	2.95
ROA	1.34	1.35	1.40	1.38	3.11	3.09
BIG4	2.85	2.89	5.77	5.62	2.17	2.17
SUB	1.19	1.18	1.49	1.55	1.44	1.41
CAPEX/ASSETS	1.24	1.24	1.22	1.22	1.64	1.65
CASH/NETASSETS	1.23	1.23	1.62	1.65	1.25	1.23
RETAIN/EQUITY	1.72	1.72	2.10	2.08	2.42	2.41
HHI	1.32	1.32	1.71	1.71	1.37	1.36
GDP_GROWTH	1.23	1.22	1.46	1.44	1.27	1.26
INFL	3.24	3.22	4.32	4.32	2.82	2.81
REGULATORY	4.27	4.33	5.46	5.52	5.18	5.24
ISLAMIC	1.34	1.36				
Mean VIF	1.79	1.80	2.56	2.53	2.10	2.11
Conditional Index	4.81	4.83	6.05	5.94	5.18	5.27

Table 5.7: VIFs in Bank Dividend Payouts Models – For Full sample (Panel A), IBs (Panel B) and CBs (Panel C) Sub-samples

5.8.2   *Robustness Checks*

This section presents several robustness tests for the main results. The aim is to examine whether or not the findings hold when using alternative measures for dividend policy (i.e. the likelihood to pay dividends and other payout ratios) and alternative model specifications/estimation procedures.

5.8.2.1 Analysis of the Propensity to Pay Dividends within IBs and CBs

The study first extends the main analyses by examining whether CBs with a busy BoD are more likely to pay cash dividends to shareholders than IBs. Because the dependent variable is dummy, the study test this prediction using a Logit function where the probability of *LIKE_PAY* variable is estimated utilising the functional form $\pi(x) = e^{g(x)}/ (1+e^{g(x)})$. This is in line with the propensity to pay cash dividend literature (e.g. DeAngelo et al., 2004; Denis and Osobov, 2008; Sharma, 2011; Chen et al., 2017). The base-line model is specified as follows: P (*LIKE_PAY*) = f {$\beta_0 + \beta_1 ABOD_{it} + \phi P + \mu Year$ effects $+ \varepsilon_{it}$} (*eq.5.3*). Where *LIKE_PAY* takes the value of 1 if the bank paid dividend in year t and otherwise 0. Robust standard errors are employed to account for potential correlation in errors. Across all models, the results of Nagelkerke pseudo R^2 (>0.6) are relatively high, and the models X^2 are significant at 1%. These suggest that models are appropriate and the chosen variables are good estimators for bank propensity to pay dividends.

Analyses for both bank types in Table 5.8 (Panels B and C) indicate that IBs with busy boards are less likely to pay dividends; this is evident from the significant and negative coefficient of *ABOD* and *%BBOD* on *LIKE_PAY*. By contrast, CBs with busy boards are positively associated with the likelihood of a payout, suggesting that BoDs with busy outside directors are likely to recommend the payment of a cash dividend. These findings imply that the reputational benefits of a busy BoD for payout decisions might be more pronounced in CBs than IBs, providing additional support for the main results reported in Table 5.6. The adverse influences of a busy BoD on the propensity to pay dividends can also be explained by the high complexity of IBs regarding constrained business/dividend models and a double-layer governance system. Managers in IBs, thus, have more opportunities to decide not to pay dividends and use the available cash for their self-interest. Having a busy BoD under the constrained model of IBs may have negative effects on the likelihood of bank payouts. This is consistent with the

busyness hypothesis, showing that multiple directorships can shirk the responsibilities of outside directors due to the significant overloads that lead to lower payouts propensity (Sharma, 2011). By contrast, CBs operating on a less complex business/dividend model would have more opportunities to enjoy the reputational benefits from their busy outside directors who have wider networking and considerable experience in monitoring dividend strategies of many firms. Those directors are, therefore, argued to bring their reputational benefits to the firm payout policy and improve board internal monitoring (Chou and Feng, 2018), which encourage (or even force) CBs' managers to pay cash dividends to shareholders. Overall, the findings support the differential impacts of BoD busyness on the propensity to pay dividends across the two banking models.

VARIABLES	Panel A: Full Sample (IBs and CBs)		Panel B: Islamic banks (IBs)		Panel C: Conventional banks (CBs)	
	LIKE_PAY (1)	LIKE_PAY (2)	LIKE_PAY (3)	LIKE_PAY (4)	LIKE_PAY (5)	LIKE_PAY (6)
ABOD	0.237***		-0.800**		0.434**	
%BBOD		0.860*		-0.108		1.377
Controls incl.	YES	YES	YES	YES	YES	YES
Intercept	-23.013***	-21.720***	-23.933***	-26.745***	-40.163***	-39.333***
Year-effects	YES	YES	YES	YES	YES	YES
Sample size	386	386	150	150	236	236
Pseudo R^2	0.637	0.630	0.695	0.671	0.765	0.749
Wald X^2	94***	96***	143***	53***	64**	62***

Notes: The table presents sensitivity of the pooled logit regression results of the equation (*eq.5.3*) for the full sample (Panel A; models 1-2), IB subsample (Panel B; models 3-4) and CB subsample (Panel C; models 5-6) identifying the effect of busy BoD on a bank's propensity/likelihood to pay dividends. The dummy likelihood to pay cash dividends (LIKE_PAY) taking the value of 1 if the bank paid cash dividend in year t and otherwise 0, is the dependent variable. The average outside directorships of outside directors (ABOD) and the percentage of busy outside directors (%BBOD) are two alternative main variables of interest for busy BoD. Models are tested for the period of six-year from 2010. The study controls for year fixed effects. P-values in parentheses, *p < 0.10, **p < 0.05, ***p < 0.01. See full table in Appendix 5B.

Table 5.8: Board of Directors Busyness and the Likelihood of Dividend Payouts - Within Islamic and Conventional Banks

5.8.2.2 *Alternative Measures of Dividend Payout Ratios*

While on-going dividend literature argues the effectiveness of measures for dividend payout, the study further examines the link between dividend policy and board busyness by exploring the effect of the alternative measures for dividends. Specifically, the study presents estimates of the predicted cash dividend payout ratios using dividends over total assets (DIV/Assets), dividends over sales

(DIV/Sales) and dividends per share (DIV/Share)[51]. Those measures are widely employed in literature such as La Porta et al. (2000), Grinstein and Michaely (2005), Jiraporn et al. (2011), Hwang et al., 2013, Chen et al. (2017), Cao et al., (2017), Saeed and Sameer (2017). In Table 5.9, the study finds consistently across all regressions that coefficients of BoD busyness (ABOD; %BBOD) in IBs are significantly negative while those in CBs are significantly positive. These results are in line with the main findings and confirm that main findings are not sensitive to alternative indicators for dividends payouts.

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[51] In unreported descriptive statistics, the means (medians) of *DIV/Assets, DIV/Sales* and *DIV/Share* for full sample are 0.473 (0.312), 0.074 (0.035) and 0.114 (0.01), respectively. In addition, the means of *DIV/Assets, DIV/Sales* and *DIV/Share* of IBs (CBs) are 0.379 (0.533), 0.069 (0.077) and 0.121 (0.110), respectively. These results generally show that CBs have a higher dividend payout ratio than IBs, supported by the significant two-sample t-test of *DIV/Assets*.

VARIABLES	Panel A: Islamic banks (IBs)						Panel B: Conventional banks (CBs)					
	DIV/Assets (1)	DIV/Assets (2)	DIV/Sales (3)	DIV/Sales (4)	DIV/Share (5)	DIV/Share (6)	DIV/Assets (7)	DIV/Assets (8)	DIV/Sales (9)	DIV/Sales (10)	DIV/Share (11)	DIV/Share (12)
ABOD	-0.162***		-0.036***		-0.140***		0.338***		0.048***		0.059***	
%BBOD		-0.732***		-0.141***		-0.284***		1.158***		0.130***		0.400***
Controls included	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
Intercept	-1.665***	-2.296***	-0.105	-0.284**	0.181	-0.418	-1.537***	-2.054***	-0.473***	-0.485***	-1.144***	-1.225***
Year-effects	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
Country-effects	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
Sample size	150	150	150	150	150	150	236	236	236	236	236	236
Adj. R-Square	0.737	0.695	0.748	0.745	0.676	0.843	0.165	0.625	0.042	0.578	0.516	0.403
Wald Chi2	513***	443***	618***	558***	672***	1117***	686***	1056***	273***	459***	583***	486***
LM Statistics	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Sargan test	0.672	0.109	0.456	0.148	0.125	0.101	0.640	0.250	0.512	0.267	0.102	0.270

Notes: The table shows the 3SLS results for the IB subsample (Panel A; models 1-6) and CB subsample (Panel B; models 7-12) using alternative measures for bank's dividend payout ratios. The study treats both over-boarded directors and the dividend payout ratios as endogenous variables and builds simultaneous equations models. The ratio of cash dividends to total assets (DIV/Assets), the ratio of cash dividends to sales (DIV/Sales), and the ratio of cash dividends per share (DIV/Share), are alternative dependent variables. The average outside directorships of outside directors (ABOD) and the percentage of busy outside directors (%BBOD) are two alternative variables of interest for busy BoD. Models are tested for the period of six-year from 2010. The study controls for year and country fixed effects. P-values in parentheses, *p < 0.10, **p < 0.05, ***p < 0.01. LM and Sargan test show that all models are correctly identified, and the selected IVs are valid. See full table in Appendix 5C.

Table 5.9: Sensitivity Tests: Alternative Measures of Dividend Payout Ratios for the IBs and CBs Sub-samples

5.8.2.3 Two-step System Generalized Models of Moments

Like the first two research, this study also investigates the robustness of the main findings by employing GMM technique (Arellano and Bover, 1995; Blundell and Bond, 1998). The dianostics tests reported in Table 5.10 show that all models are well-fitted with stastistically insignificant test statistics for both second-order autocorrelation (AR (2) p-values>10%, implying that the residuals in the second-difference are serially uncorrelated by way of construction) and Hansen J-statistics of over-identifying restrictions (p-values>10%). Results for first-order autocorrelation (AR (1) p-values<10%) suggest that the residuals in the first-difference might be serially correlated. The Hansen test examines the null hypothesis of the IVs validity and indicates the statistically insignificant J-statistics for all models implying that the IVs are valid. Table 5.10 show that main results using 3SLS are remain unchanged. Specifically, busy BoD in CBs tends to be positively linked to dividend payout ratio (*DIV/NI*) with negative impacts on IBs. The results reveal that main findings remain to hold, even after controling for unobserved heterogeneity, simultaneity and dynamic endogeneity.

VARIABLES	Panel A: Islamic banks (IBs)		Panel B: Conventional banks (CBs)	
	DIV/NI (1)	DIV/NI (2)	DIV/NI (3)	DIV/NI (4)
ABOD	-0.030***		0.024***	
%BBOD		-0.321**		0.158**
Controls included	YES	YES	YES	YES
Intercept	-0.071	-1.745**	-1.215***	-2.123***
DIV/NI$_{t-1}$	0.378***	0.058*	-0.044*	-0.072**
Year-effects	YES	YES	YES	YES
Country-effects	YES	YES	YES	YES
Sample size	123	123	193	193
Wald Chi2 (p-value)	0.000	0.000	0.000	0.000
AR (1)	0.007	0.012	0.004	0.003
AR (2)	0.998	0.233	0.298	0.603
Hansen test	0.100	0.144	0.269	0.102

Notes: The table presents the robustness test results of the GMM estimations for the IB subsample (Panel A; models 1-2) and CB subsample (Panel B; models 3-4) identifying the impact of busy BoD on a bank's dividend payout. The ratio of cash dividends to net income (DIV/NI) is dependent variable. The average outside directorships of outside directors (ABOD) and the percentage of busy outside directors on board (%BBOD) are two main variables of interest for busy BoD. Models are tested for the period of six-year from 2010. The study controls for year and country fixed effects. P-values in parentheses, *p < 0.10, **p < 0.05, ***p < 0.01. AR (1) and AR (2) are dianogtic tests for no serial correlation of first-order and second-order, respectively, in the first-differenced standard errors. Hansen is the test of over-identifying restrictions. See full table in Appendix 5D.

Table 5.10: Robustness check – GMM – Boards Busyness and Bank Dividend Payout Ratio

5.9 Summary

This study provides a new and novel perspective to the levels of the cash dividend paid to shareholders (i.e. the ratio of cash dividends over net income). It extends the payout model by integrating the impacts of BoD busyness for IBs and CBs. The analyses for the pooled sample (both bank types together) indicate that the representation of more busy outside directors on the board positively and significantly influence the payout ratio. The results support the RDT, which argues the reputational benefits brought to the banks by busy outside directors. This evidence suggests that busy outside directors are excellent resources of a bank through a high dividend payout of excess free cash flow. After controlling how this effect differs between IBs and CBs with different institutional environments and dividend models, the study finds the following significant opposing effects of busy boards on the dividend payment. That is, the dividend payout is stronger in CBs with busy BoD than IBs. This supports for the last hypothesis (H_6), which predicts that IBs with a busy BoD pay lower levels of dividends than CBs. The results attribute to the complicated IB dividend model that follow Islamic rulings. They also provide empirical evidence for the differences in agency conflicts between two bank types which leads to differential influences of busy BoDs on dividend decisions.

The overall findings imply that, unlike CBs, the dividend policy of IBs is likely to be more sensitive to the busyness level of outside directors serving on the board. The results indicating the positive impact of busy boards on the increasing levels of CB dividend payouts can partially reduce the concern that busy outside directors provide inefficient monitoring services to the firms. These results reinforce those of Chou and Feng (2018), showing that increasing the number of outside directorships of independent directors can enhance the board's internal monitoring function. IBs should learn from CBs on how to effectively exploit the possible reputational benefits of independent directors who hold multiple directorships and how to successfully use these benefits to control their payouts strategies.

The results reported in this study highlight the need to take into account the multiple directorships that influence a board's ability to monitor and advise managers in future dividend policy studies in both banking models. The study also documents a systematic difference in dividend behaviours of the two bank types

which could be explained by the board busyness attribute. Shareholders can improve their understanding of how bank managers choose between paying cash dividends and retaining net profits, especially in the dual banking countries. Hence, they can seek and build a better board monitoring mechanism to maximise their wealth.

CHAPTER 6. CONCLUDING REMARKS AND IMPLICATIONS

This thesis explores an important board attribute (i.e. board multiple directorships or board busyness) and it studies its impact(s) on banking resilience, stock market valuations and dividends payouts. The research approach employed comparative assessments between alternative banking systems (i.e. IBs versus CBs) alongside an examination of the role of Shariah governance and the effect(s) of a busy SSB. The three studies utilised cross-country data and employed unbalanced panel regression analyses with an instrumental variable approach.

With contradictory and limited evidence in conventional banking on the roles of busy outside directors in monitoring managers, no research, to the best of my knowledge, has comprehensively examined the effect of board busyness on Islamic banking. The analyses in this thesis provide the first evidence with which we can investigate whether board busyness exerts differential impacts on the financial stability of IBs and CBs, given the constrained IB business model. Furthermore, this thesis is among the early attempts to identify the differential market valuations for board busyness in IBs and CBs. It is also the first to test the relationship between board busyness and dividend payouts of the two banking models. The testing of three financial indicators (stability, market value and payouts policy) in this thesis aimed to provide empirical and updated evidence related to the board governance structures of both banking systems and contribute to the current literature on IBs and CBs. This thesis also uniquely identifies the influence of institutional bank characteristics and the business model on board busyness, something that prior studies have not investigated. This institutional context is particularly interesting in the context of the ongoing debate of the effect of banking models on financial indicators and the growing arguments around the IB model.

Empirical Study 1 (Chapter 3). *Board Busyness and Financial Stability: Evidence from Alternative Banking Models*

The findings in the *first* empirical study suggest that in CBs, busy BoDs are likely to increase bank financial stability (high profitability, high-cost efficiency, low insolvency and low credit risks). In line with the reputation hypothesis, these findings support the first hypothesis, suggesting that busy outside directors bring

their expertise and connections to market resources and effective monitoring services to their banks. However, IBs with busy BoDs tend to exhibit low financial stability (i.e. low profitability; poor cost efficiency; high insolvency and credit risks). By contrast, CBs having busy BoDs show significantly high financial stability, implying higher bank performance and lower risks than their Islamic counterparts do. These findings provide evidence supporting the second hypothesis indicating that a busy BoD is likely to reduce IBs' financial stability relative to CBs. This finding can be explained by the high complexity of IBs in terms of business model, agency problems and corporate governance mechanisms compared to CBs, which require more effective monitoring from the busy BoDs. Under the complicated monitoring demands and mechanisms, in addition to the scarcity of BoDs specialised in Shari'ah legitimacy and the nature of the business model, busy BoDs in IBs would be less able to provide effective oversight, as justified by the busyness hypothesis. In contrast, busy outside directors in CBs can use their networking/experience to advise some efficient financing sources to the firm they are serving.

Furthermore, the results for the BoD classifications reveal that the negative effects of a busy BoD on the financial stability of IBs are intensified when the degree of board busyness increases. Particularly, "*Super-busy*" BoDs within this banking model are likely to fail in effectively scrutinising risk-taking activities. These findings provide some support for the distinctiveness of the roles played and value added by BoDs in both CBs and IBs. They also support the main findings for the positive influences of BoD busyness on CBs' financial stability. Unlike IBs, the reputation impacts within CBs appear to upsurge proportionally as the board's multiple directorships increase. Therefore, the reputation impact appears to outweigh the cost of the busyness impact in this bank type.

Additional analyses show that busy SSBs in IBs are also adversely associated with a bank's financial stability, which is attributed to the complex business model of this type of bank. This is consistent with the third hypothesis and can be explained by (i) the scarcity and high reputation of Shari'ah scholars, leading to cost inefficiency (e.g. expensive compensation packages); (ii) the spreading of the time and efforts of busy SSB members (who have concurrent memberships of multiple SSBs and boards of different national and international Shari'ah standard-setting organisations) over several firms, which compromises their effective oversight of

bank-level performance and risk exposures. More interestingly, the results for the classifications of the degree of SSB busyness demonstrate that only "*More-busy*" and "*Super-busy*" SSBs significantly increase bank financial instability. This supports the main findings and highlights the detrimental influence of the presence of busy SSB members on IBs' financial stability. Meanwhile, "*Less-busy*" and "*Non-busy*" SSBs report significantly longer financial stability. Overall, as the degree of SSB busyness rises, this religious board tends to inversely jeopardise the IBs' financial stability due to substantial lax screening.

Summary (Study 1): *For the full sample (i.e., CBs and IBs together), busy BoDs are likely to increase bank financial stability (high profitability, high cost efficiency, low insolvency and low credit risks). However, conditional on the bank type, BoD busyness exhibits a differential impact on bank financial stability. In comparison with CBs, IBs with busy BoDs show low performance and high risk-taking. These findings become more apparent as the degree of board busyness increases. The study also finds strong evidence for the negative impact upon IBs' financial stability of appointing busy Shari'ah scholars.*

Empirical Study 2 (Chapter 5). *Market Valuations of Busy Boards: Evidence from Alternative Banking Models*

The *second* empirical study deals with the examination of the influence of BoD busyness on market valuations of IBs compared to CBs. Due to the objectives of the study, the final sample was built upon stock markets and hence, the sample includes only listed banks. The results indicate that investors across the two bank types valued a busy BoD differently. In CBs, investors assign a high valuation to busy boards, while IB investors do not value such a board attribute. The result supports the fourth hypothesis, and this can be explained in two ways. From one side, the absence of market valuations for IBs can be justified through the signalling theory. Investors in IBs tend to be well informed about the scarcity of outside directors having sufficient expertise to review and monitor a constrained busyness model like Islamic banking. Thus, a busy BoD is more likely to convey to the stock markets that it might have limited time/attention to scrutinise banking activities and reduce any related agency conflicts and/or managerial discretions. This finding is in line with predictions under the busyness view. On the opposite side, the positive effect of board busyness on the market valuations of CBs

indicates that some reputational benefits are likely to dominate investors' expectations. Stock markets appear to positively price BoD busyness for their CBs, as they are likely to facilitate access to market sources and promote greater expertise, and skills/knowledge in effective monitoring. The finding is in line with the reputation view of board busyness.

Further testing shows that having busy Shari'ah advisors significantly lowers their banks' market valuations, supporting the fifth hypothesis. Investors in IBs consistently perceive a busy SSB as damaging the bank value, with no evidence for such a perception for a busy BoD. This can be justified by the lax involvement of the busy SSB, which may result in a failure in ensuring the mandatory compliance of IBs to the rulings of Shari'ah. This promotes a reputation risk and hence, could trigger the collapse of IBs and cause systematic risk. Furthermore, busy SSB members might have limited time to review and advise on contractual arrangements/transactions, which might incorporate high uncertainty and risk-taking. The overall results suggest that, unlike CBs, stock market engagement with IBs is likely to be more sensitive to the busyness level of SSBs but not to that of outside director.

Summary (Study 2): *The results indicate that busy BoD generally promotes high market valuations in support of additional preferential benefits that a busy board can generate for their firms. However, investors across the two bank types showed differential pricing for appointing a busy BoD. In CBs, investors assign a high valuation for busy board while IB investors do not value such board attribute. Further testing shows that having busy Shari'ah advisors significantly lower their banks' market valuations. Investors in IBs consistently perceive busy SSB as damaging the bank value with no evidence for such perception for a busy BoD.*

Empirical Study 3 (Chapter 5). *Board Busyness and Dividend Payouts: Evidence from Alternative Banking Models*

Finally, a review of the literature on board busyness reveals that this study is the first to examine busy BoDs as a factor influencing banks' dividend payout policy (either the level of cash dividends or the likelihood of paying dividends). Building on the explanation of Sharma (2011) for her agency hypothesis of dividends (free

cash flow hypothesis), the board busyness-dividend hypothesis 6 is developed and tested for different banking models such as IBs and CBs. The findings show that BoD busyness in the two banking systems (i.e. IBs and CBs) has opposing impacts on the changes in dividend payout levels. That is, the level of dividends is greater in CBs with a busy BoD than in IBs. This provides empirical evidence for the differences in agency conflicts between the two bank types, leading to the differential influences of busy boards on dividend decisions. In IBs, due to their more complex and severe agency costs arising from the payout model, busy outside directors are unable to effectively reduce agency costs between shareholders and managers. Directors with multiple directorships may shirk their responsibilities due to their significant overload of work. Conversely, in CBs with lower agency conflicts compared to IBs, outside directors serving on multiple boards tend to be more effective advisors and monitors of managers' behaviour, encouraging them to pay dividends to shareholders. Overall, managers in CBs are better monitored and directed by a busy BoD than those in IBs; thus, they are more likely to recommend higher payments of a cash dividend.

An extended analysis of the propensity to pay dividends within IBs and CBs shows that IBs with busy BoDs are less likely to pay cash dividends. Meanwhile, CBs with busy BoDs are positively related to the likelihood of a payout, suggesting that BoDs with busy outside directors tend to recommend the payment of a cash dividend. These findings suggest that the reputational benefits of a busy BoD for payout decisions might be more intensified in CBs than in IBs, providing additional support for the main results.

Summary (Study 3): *The results indicate that the busyness of BoDs can explain differential dividend payouts behaviour between two banking systems. For CB dividend model, a busy board has a significantly positive impact on the bank's dividend payout level. However, IBs operating under a more constrained (Shari'ah-compliant) dividend model, which employ a busy BoD report significantly lower levels of payouts. These results highlight a potential challenge for the unique agency conflicts arising from the complex payout model of Islamic banks (in terms of profit distribution principles, motives, mechanics and techniques, and flexibility of payouts), which is subject to the demand for greater monitoring and additional rulings when compared to the*

> *conventional. Extended analysis further shows that CBs with busy BoDs have greater likelihood to pay a dividend than IBs.*

Overall thesis

Overall, this thesis has successfully addressed three crucial financial aspects of a bank in an international setting, i.e., financial stability, market valuations and dividend payout policies in relation to busy boards. These indicators reflect well the overall picture about banks' financial health through their profitability, cost effectiveness, risk-taking behaviour, investors' valuations of bank securities and the effectiveness of ultimate profit distribution decisions. The results obtained across three empirical studies have ultimately drawn an interesting and consistent story: divergences in financial health and performance between banking institutions in general, and between two banking models (Islamic and conventional) in particular, are clearly explained by the discrepancies in the monitoring and advising effectiveness of the busy outside directors recruited by those firms. Consequently, the thesis has successfully enhanced the understanding of related stakeholders about the real influences of board busyness on bank financial outcomes and decisions. In addition, it has also discovered that the busyness of SSBs is an essential factor causing differences in financial stability and market valuations within IBs. Busy SSBs are not investigated in the third study (Chapter 5) because to the best of my knowledge, there has been a lack of theoretical explanations and empirical evidence providing robust support for the substantial role of these religious boards in the dividend payout decision process of IBs. This may be a topic for future research, but not in this current thesis.

The findings of the thesis provide valuable insights and important policy implications for a wide range of stakeholders (e.g. regulators and policymakers, banks, investors) who engage with the two bank types. For CBs, regulators and market participants can benefit from the empirical evidence portraying that the busyness and networking of BoDs are likely to enhance bank financial stability, market valuations and dividend payout strategies. This offers important implications for wealth creation and the proper investment decisions of investors. Nonetheless, such reputational benefits associated with recruiting busy boards might not be invoked in the presence of unique institutional characteristics, as presented by IBs. IBs, by virtue of their unique and illiquid products, require

effective monitoring. Thus, effective Shari'ah monitoring is an essential determinant of the financial stability and market valuations of this banking sector. As IBs expand and experience rapid growth, regulators and policymakers need to understand the system of dual bank governance, in addition to the peculiarities and constraints imposed on the sector's practices. This is particularly necessary when implementing future governance reforms as well as when developing financial and CG reporting standards.

The findings also raise a call to regulators and policymakers for the need to develop stricter criteria and guidelines to govern outside BoD directorships and SSB busyness within the IB sector. They also raise awareness of IBs and regulators about the shortage of experienced outside directors and scholars, which is unlikely to be remedied quickly. Also, the way that BoDs and SSBs conduct their business, reach their findings and communicate them, should be more open. Opinions/rulings on Shari'ah matters should be published periodically and circulated. The BoD and SSB members must be obligated to disclose their directorships (affiliations with multiple boards) and any other issues that could lead to conflicts of interest. AAOIFI or IFSB can play a stronger role in standardising the interpretation and practical applications of standards related to Shari'ah. The stability of IBs in the past (i.e. the banking crisis 2007-2009) could be, in part, due to the excellent practice of BoDs and SSBs, and the morality, fairness and excessive risk avoidance practised by Shari'ah governance. Therefore, following the suggestions of the discussion above, there is scope related to the multiple directorships of BoDs/SSBs for the improvement of Shari'ah governance and for the reinforcement of the growth and stability of the Islamic finance sector in the future.

Future research can attempt to develop empirical models that include factors such as the financial expertise, appropriate training and continuing education of different boards; or they could construct a new board governance quality index. In addition, this thesis is a *quantitative* research; hence, future *qualitative* studies should be conducted via surveys using questionnaires and/or interviews with outside directors and Shari'ah advisors. By doing so, researchers can conduct new and more in-depth investigations; for example about the perceptions of outside directors and other stakeholders of multiple directorships. Furthermore, this thesis only examines the influences of board busyness on three bank outcomes: financial

stability, market valuations and dividend policy. Thus, future studies can explore other financial indicators such as financing and investment policy, risk management, accounting conservatism, innovations and so on. Moreover, it will also be interesting to comparatively and empirically assess board multiple directorships in both bank types from the perspectives of other stakeholders such as debtholders/creditors.

APPENDICES

Appendix 1: Theoritical Framework Summary

Agency Theory

Resource Dependence Theory

DOMINANT??? TEST!

Busyness hypothesis
(*Busyness effect*)
E.g. Fich & Elyasiani (2006)

Reputation hypothesis
(*Reputation effect*)
E.g. Elyasiani & Zhang (2015)

ISLAMIC BANKS

Differences between IBs and CBs
(IBs are more complicated than CBs
in terms of ...)

CONVENTIONAL BANKS

Business Model

Agency conflicts

Corporate governance

Interest prohibition

Capital financing & cost of capital

PLS arrangement

Traditional agency conflicts: e.g. agent-principal

Unique agency conflicts: a separation between depositors & IAHs

Dual-governance: Additional monitoring through a Shari'ah governance board

Complicated dividend pay-out (Shari'ah-compliant) model:
dividend distribution principles; motives; mechanics & technique; the flexibility of pay-outs

The scarcity of BOD and SSB members specialised in Shari'ah

Constrained IBs can't raise funding through direct access to market

IBs operate within less developed financial markets

Higher monitoring needs in IBs than CBs

CBs operate on a relatively less complex business model

More developed financial markets

Easily access to alternative investment channels & market sources

188

Appendix 2: FULL DESCRIPTION OF VARIABLES

The table shows descriptions of all dependent and independent variables. This appendix briefly describes the definitions of each variable, together with abbreviations used in the multivariable analysis.

Description of Variables		
Variables	**Abbreviations**	**Definitions and sources of data**
DEPENDENT VARIABLES		
Return on Average Equity	ROAE	Net income divided by average total equity. Source: annual report
Cost Inefficiency	COST/INCOME	Cost to Income ratio. Source: annual report
Insolvency Risk	LogZscore	The Z-score is the distance to default which calculated as a sum of the return on assets (ROA) plus Capital Assets Ratio (CAR) scaled by the standard deviation of ROA. This study proxies for insolvency risk by using the natural logarithm of Z-score. The higher the log of Z-score, the lower the insolvency risk. Source: annual report and author' estimation using STATA 15.
Credit Risk	LLR/GR	The ratio of loan loss reserves to gross loans. The higher the ratio, the higher the credit risk. Source: annual report
Tobin's Q	lnQ	Natural logarithm of Tobin's Q ratio, which is calculated by the natural logarithm of sum of a bank total debt and market value of equity, divided by its book value of total assets.

		The market value of equity is computed as the number of outstanding shares multiplied by the stock prices. Source: Datastream
Dividends over net income	DIV/NI	Dividends over net income. Source: Datastream
Market Capitalisation	lnMARCAP	Natural logarithm form of the bank's market capitalisation which is measured by stock price per share multiplied by the number of shares outstanding. Source: Datastream
Likelihood of a dividend payout	LIKE_PAY	Dummy variable, taking value of 1 if bank pays a cash dividend and 0 otherwise. Source: Datastream
Dividends over total assets	DIV/Assets	Dividends over total assets. Source: Datastream
Dividends over sales	DIV/Sales	Dividends over total sales. Source: Datastream
Dividends per share	DIV/Share	Dividends per share. Source: Datastream

INDEPENDENT VARIABLES

EXPLANATORY FACTORS

# Average directorships of outside directors	ABOD	Average outside directorships per independent director, calculated as total number of outside boards held by independent directors divided by number of independent directors on the board. Source: annual report
# Average directorships of Shari'ah advisors	ASSB	Average outside directorships per Shari'ah advisor, calculated as total number of outside boards held by Shari'ah advisors divided by number of Shari'ah advisors on the board. Source: annual report

% Busy outside directors	%BBOD	Percentage of busy independent directors on the board (%), calculated as number of independent directors serving on two or more outside firms divided by number of independent directors on the board. Source: annual report
% Busy Shari'ah Advisors	%BSSB	Percentage of busy Shari'ah advisors on the board, calculated as number of Shari'ah advisors serving on two or more outside firms divided by the number of Shari'ah advisors on the board. Source: annual report

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CORPORATE GOVERNANCE FACTORS

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Board of Directors Size	LogBSIZE	Natural logarithm of the total number of board of directors' members. Source: annual report
Board Independence	%INDEP	Percentage of independent non-executive directors on the board of directors. Source: annual report
CEO Duality	DUAL	Dummy variable, 1 if CEO is also the Chairman of board of directors; otherwise 0. Source: annual report

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BANK-LEVEL FACTORS

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Bank Size	LogTA	Natural logarithm of total assets of a bank at the end of the year. Source: annual report
Bank Age	LogAge	Natural logarithm of the difference between the sample year and the year of a bank's first appearance. Source: annual report
Profitability	ROA	The ratio of net income to total assets. Source: annual report and author's estimation

Capital expenditure/Total assets	CAPEX/ASSETS	The ratio of capital expenditures to assets. Source: Datastream
Cash/Total assets	CASH/ASSETS	The ratio of cash to total assets. Source: Datastream
Cash/Net assets	CASH/NETASSETS	The ratio of cash to net assets. Net assets are calculated as total assets minus cash and marketable securities. Source: Datastream
Retain Earnings	RETAIN/EQUITY	The ratio of retain earnings to total equity. Source: Datastream
Bank Leverage	LEV	Bank leverage which is measured by total liability divided by Equity. Source: annual report
Big 4 Audited	BIG4	Dummy variable: 1 if the bank is audited by Big4 company, 0 otherwise. Source: annual report
Listed Bank	LISTED	Dummy variable: 1 if the bank is listed in a stock market, 0 otherwise. Source: annual report
Bank Risk-Taking	1/z	Bank risk-taking behaviour which is calculated by the inverse of LogZscore. Source: author's estimation
The number of public firms	No of Public firms	The number of public firms headquartered in the same country. Source: World Bank
High income countries	HIGHINC	Dummy variable, 1 if a bank is based in a country classified as high-income nation. Source: World Bank

Herfindahl-Hirschman Index	HHI	The Herfindahl-Hirschman Index as a measure of bank concentration. Higher HHI shows higher bank concentration. It is calculated by the square of the sum of the ratio of total assets of each bank-year to total assets of all banks each year. It has a value between zero and one. Source: annual report and author's estimation
COUNTRY-LEVEL FACTORS		
GDP growth rate	GDP_GROWTH	Annual Gross Domestic Products (GDP) growth rate. Source: World Bank
Inflation rate	INFL	Annual inflation rate or year-on-year change of Consumer Price Index (CPI). Source: World Bank
Legal system	LEGAL	Taking value of zero for countries not using Shari'ah law to define their legal system, the value of one for countries combining both Shari'ah law and others to define their legal system, and the value of two for countries, such as Saudi Arabia, only using Shari'ah law to define their legal system. Source: Abedifar et al. (2013)
Control of corruption	CORRUPTION	Measuring the national quality of governance performance. It reflects the perceptions of petty and grand forms of corruption and capture of the state by elites and private interests. Its value range between -2.5 (weak) to +2.5 (strong) governance performance. Source: World Bank

Political stability and absence of violence	POLITICS	Measuring the quality of governance performance that reflects perceptions of the likelihood of political instability and/or politically-motivated violence, including terrorism. It is estimated by ranging from -2.5 (weak) to +2.5 (strong). Source: World Bank
Regulatory quality	REGULATORY	Measuring the quality of governance performance that reflects perceptions of the ability of government to formulate and conduct good polices and regulations to promote private sector. It is estimated by ranging from -2.5 (weak) to +2.5 (strong). Source: World Bank
BANK TYPE FACTOR		
Islamic Banking dummy	ISLAMIC	Dummy variable: 1 if the bank is Islamic, 0 otherwise. Source: annual report

***Independent (non-executive) directors (also called as outside directors or external directors) are defined as members of the board of directors who are deemed to be independent if they do not have any business or personal relationships/links with the bank or its executive board (Liang et al., 2013; Onali et al., 2016). In this thesis, the author follows the definition of independent directors as reported in the individual annual reports of each bank each year. In most cases, individual banks often self-reported the number of independent directors serving on the board. This study, therefore, use the same method for board independence computation for comparability of the results across different banks (*see* Onali et al., 2016).

Appendix 3A: EMPIRICAL STUDY 1 – 3SLS REGRESSION RESULTS FOR PERFORMANCE

Determinants of Bank Operating Performance. Dependent Variables: ROAE and COST/INCOME

VARIABLES	Panel A: Full Sample (IBs and CBs)				Panel B: Islamic banks (IBs)				Panel C: Conventional banks (CBs)			
	ROAE (1)	ROAE (2)	COST/INCOME (3)	COST/INCOME (4)	ROAE (5)	ROAE (6)	COST/INCOME (7)	COST/INCOME (8)	ROAE (9)	ROAE (10)	COST/INCOME (11)	COST/INCOME (12)
ABOD	0.031***		-0.102***		-0.026**		0.073***		0.034***		-0.067***	
	(0.000)		(0.005)		(0.018)		(0.004)		(0.010)		(0.008)	
%BBOD		0.198***		-0.945***		-0.101**		0.610***		0.181***		-0.581***
		(0.002)		(0.006)		(0.024)		(0.000)		(0.002)		(0.000)
LogBSIZE	-0.001	0.002	0.043	0.067	-0.005	-0.003	-0.416**	-0.404**	0.017	-0.007	0.047	0.111*
	(0.927)	(0.757)	(0.610)	(0.458)	(0.740)	(0.743)	(0.012)	(0.015)	(0.331)	(0.736)	(0.448)	(0.082)
%INDEP	-0.104***	-0.103***	0.205	0.333*	0.061	0.044	-0.185	-0.294	-0.091***	-0.091***	0.038	0.094
	(0.000)	(0.001)	(0.163)	(0.074)	(0.119)	(0.153)	(0.364)	(0.160)	(0.005)	(0.005)	(0.682)	(0.366)
DUAL	0.030	0.031	-0.291**	-0.313**	0.006	0.008	-0.962***	-1.060***	0.036	0.025	-0.180*	-0.201*
	(0.202)	(0.235)	(0.046)	(0.045)	(0.810)	(0.732)	(0.007)	(0.003)	(0.291)	(0.431)	(0.061)	(0.051)
LogTA	0.019***	0.017***	-0.159***	-0.154***	0.014***	0.015***	-0.280***	-0.296***	0.008	0.012**	-0.075***	-0.084***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.162)	(0.011)	(0.000)	(0.000)
LogAge	0.003	0.003	0.009	0.041	0.026***	0.025***	0.086*	0.072	-0.028***	-0.027***	-0.008	0.017
	(0.328)	(0.282)	(0.746)	(0.223)	(0.000)	(0.000)	(0.053)	(0.117)	(0.003)	(0.003)	(0.702)	(0.492)
BIG4	-0.035**	-0.053**	-0.036	0.143	-0.003	-0.017	-0.427***	-0.474***	0.010	-0.025	-0.119**	0.023
	(0.025)	(0.010)	(0.426)	(0.233)	(0.909)	(0.383)	(0.004)	(0.002)	(0.402)	(0.292)	(0.044)	(0.755)
SUB	-0.023**	0.002	-0.032	-0.033	0.026*	0.012	-0.181***	-0.103	-0.034**	-0.023*	0.096**	0.063*
	(0.035)	(0.727)	(0.399)	(0.331)	(0.079)	(0.268)	(0.009)	(0.233)	(0.022)	(0.087)	(0.022)	(0.068)
HHI	0.180***	0.160**	-0.353	-0.676*	0.080	0.087	0.017	-0.197	0.198*	0.201*	-0.054	-0.107
	(0.002)	(0.027)	(0.355)	(0.092)	(0.231)	(0.152)	(0.968)	(0.701)	(0.080)	(0.076)	(0.875)	(0.776)
LISTED	0.018**	0.019*	-0.088	-0.097	0.003	0.011	-0.496***	-0.441***	0.017	0.016	0.152***	0.132***
	(0.043)	(0.055)	(0.128)	(0.115)	(0.707)	(0.260)	(0.000)	(0.000)	(0.191)	(0.210)	(0.000)	(0.000)

195

GDP_GROWTH	0.338**	0.169	-1.297	-0.324	0.106	0.147	-0.629	-1.327	0.090	0.022	-0.178	0.107
	(0.050)	(0.404)	(0.222)	(0.615)	(0.477)	(0.302)	(0.764)	(0.533)	(0.570)	(0.933)	(0.813)	(0.899)
INFL	-0.012	-0.089	-1.518	-0.482	-0.152	-0.167	-1.734	-2.125	-0.005	-0.214	-0.710	0.056
	(0.912)	(0.715)	(0.258)	(0.536)	(0.597)	(0.532)	(0.464)	(0.307)	(0.975)	(0.500)	(0.437)	(0.957)
LEGAL	-0.088***	-0.108***	-0.443***	-0.130	-0.047	-0.073**	-0.324	-0.535	-0.084*	-0.102**	-0.221*	-0.044
	(0.001)	(0.006)	(0.007)	(0.520)	(0.172)	(0.022)	(0.365)	(0.142)	(0.068)	(0.043)	(0.082)	(0.766)
CORRUPTION	0.003	0.002	-0.017	-0.238	0.018	0.017	-0.596*	-0.510	0.014	0.003	-0.061	-0.065
	(0.855)	(0.905)	(0.838)	(0.267)	(0.523)	(0.520)	(0.088)	(0.161)	(0.771)	(0.958)	(0.685)	(0.696)
LEV	0.003**	0.003***	-0.013*	-0.015**	0.004***	0.003**	-0.014	-0.014	0.002	0.001	0.009**	0.010**
	(0.016)	(0.006)	(0.068)	(0.042)	(0.006)	(0.018)	(0.222)	(0.185)	(0.883)	(0.616)	(0.026)	(0.034)
1/Z	0.001	-0.001			-0.056***	-0.061***			0.026***	0.026***		
	(0.678)	(0.948)			(0.000)	(0.000)			(0.000)	(0.000)		
ISLAMIC	-0.019**	-0.021**	0.084*	0.121**								
	(0.014)	(0.016)	(0.076)	(0.032)								
Constant	-0.250***	-0.211***	2.511***	2.133***	-0.156**	-0.153**	5.220***	5.626***	-0.003	0.024	0.648**	0.430
	(0.000)	(0.001)	(0.000)	(0.000)	(0.024)	(0.016)	(0.000)	(0.000)	(0.979)	(0.806)	(0.013)	(0.138)
Year Fixed Effect	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
Country Fixed Effect	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
Observations	770	770	772	772	342	342	343	343	428	428	429	429
Overall R2	0.065	0.017	0.130	0.005	0.307	0.455	0.405	0.398	0.002	0.019	0.341	0.202
Wald Chi2	430***	417***	337***	274***	401***	443***	251***	250***	169***	169***	349***	294***
LM Statistics (p-value)	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.037	0.000	0.000	0.000	0.000
Sargan test (p-value)	0.100	0.107	0.723	0.070	0.110	0.332	0.115	0.237	0.056	0.055	0.220	0.439

Note: P-values in parentheses, *p < 0.10, **p < 0.05, ***p < 0.01.

Appendix 3B: EMPIRICAL STUDY 1 – 3SLS REGRESSION RESULTS FOR RISKS

Determinants of Bank Risks. Dependent Variables: LogZscore and LLR/GR

VARIABLES	Panel A: Full Sample (IBs and CBs)				Panel B: Islamic banks (IBs)				Panel C: Conventional banks (CBs)			
	LogZscore (1)	LogZscore (2)	LLR/GR (3)	LLR/GR (4)	LogZscore (5)	LogZscore (6)	LLR/GR (7)	LLR/GR (8)	LogZscore (9)	LogZscore (10)	LLR/GR (11)	LLR/GR (12)
ABOD	0.290***		-0.493***		-0.090***		0.172**		0.136***		-0.099***	
	(0.000)		(0.003)		(0.005)		(0.047)		(0.000)		(0.004)	
%BBOD		0.678***		-0.239**		-0.480**		1.220**		0.891***		-0.599***
		(0.002)		(0.037)		(0.028)		(0.020)		(0.000)		(0.009)
LogBSIZE	0.065	0.068	-0.043	0.118	0.689***	0.748***	-0.147	-0.106	-0.172*	-0.199	0.033	0.127
	(0.604)	(0.581)	(0.495)	(0.187)	(0.001)	(0.000)	(0.489)	(0.626)	(0.078)	(0.139)	(0.786)	(0.296)
%INDEP	-0.886***	-0.433**	0.191	0.091	0.721***	0.605**	-1.060***	-1.212***	-0.777***	-0.802***	-0.214	-0.209
	(0.001)	(0.021)	(0.592)	(0.484)	(0.002)	(0.023)	(0.003)	(0.002)	(0.000)	(0.000)	(0.212)	(0.237)
DUAL	0.424*	0.324	0.051	-0.134	1.123**	1.410***	-0.330	-0.233	0.285	0.268	0.244	0.246
	(0.053)	(0.126)	(0.751)	(0.416)	(0.016)	(0.002)	(0.598)	(0.687)	(0.157)	(0.197)	(0.180)	(0.187)
LogTA	0.096***	0.122***	0.128***	0.061**	0.129***	0.161***	0.062	0.053	0.041*	0.046	0.179***	0.167***
	(0.001)	(0.000)	(0.002)	(0.011)	(0.003)	(0.000)	(0.168)	(0.124)	(0.079)	(0.154)	(0.000)	(0.000)
LogAge	0.053	0.081*	0.153**	0.095***	0.104*	0.101*	0.162***	0.169***	0.143**	0.127**	-0.137***	-0.140***
	(0.132)	(0.054)	(0.029)	(0.006)	(0.072)	(0.077)	(0.008)	(0.007)	(0.010)	(0.027)	(0.007)	(0.008)
COST/INCOME	-0.384***	-0.311***	0.149**	0.063*	-0.167***	-0.173***	-0.002	0.010	-1.325***	-1.337***	0.033	0.002
	(0.000)	(0.000)	(0.043)	(0.097)	(0.002)	(0.001)	(0.965)	(0.795)	(0.000)	(0.000)	(0.893)	(0.994)
BIG4	-0.209	-0.103	0.591***	0.311***	0.317*	0.266	0.171	0.218	0.063	-0.128	0.163	0.129
	(0.127)	(0.416)	(0.010)	(0.001)	(0.069)	(0.164)	(0.364)	(0.247)	(0.612)	(0.359)	(0.139)	(0.303)
SUB	-0.258**	-0.036	0.459**	0.004	0.252**	-0.042	-0.280*	-0.180	-0.201**	-0.161*	0.257***	0.256***
	(0.011)	(0.647)	(0.013)	(0.953)	(0.048)	(0.685)	(0.100)	(0.204)	(0.022)	(0.075)	(0.002)	(0.002)
HHI	0.084	0.305	-0.291	0.079	-0.141	0.171	0.642	0.235	0.324	0.636	-0.668	-0.645
	(0.816)	(0.611)	(0.328)	(0.851)	(0.844)	(0.771)	(0.400)	(0.654)	(0.657)	(0.401)	(0.293)	(0.317)
LISTED	0.374***	0.375***	-0.238*	-0.228***	0.135	0.108	-0.005	-0.023	0.645***	0.653***	-0.307***	-0.313***
	(0.000)	(0.000)	(0.069)	(0.003)	(0.317)	(0.372)	(0.962)	(0.852)	(0.000)	(0.000)	(0.000)	(0.000)

197

GDP_GROWTH	1.211	0.527	0.271	1.595	-1.735	-0.566	1.202	1.922	1.387	1.593	0.876	0.768
	(0.461)	(0.761)	(0.921)	(0.206)	(0.534)	(0.780)	(0.651)	(0.477)	(0.380)	(0.345)	(0.551)	(0.606)
INFL	1.274	0.479	-2.933	-1.290	-0.929	0.854	-1.600	0.224	0.654	-0.315	-3.456**	-3.668**
	(0.515)	(0.808)	(0.334)	(0.479)	(0.749)	(0.785)	(0.612)	(0.943)	(0.736)	(0.877)	(0.050)	(0.042)
LEGAL	0.157	0.407	1.668***	0.623***	-0.461	-0.208	0.316	0.330	0.741***	0.566**	0.662***	0.692***
	(0.554)	(0.111)	(0.000)	(0.003)	(0.324)	(0.662)	(0.518)	(0.527)	(0.002)	(0.040)	(0.004)	(0.006)
CORRUPTION	-0.034	-0.037	-0.514	-0.235	0.193	0.088	-0.473	-0.618	0.127	0.051	-0.298	-0.235
	(0.864)	(0.906)	(0.262)	(0.315)	(0.660)	(0.851)	(0.301)	(0.172)	(0.691)	(0.879)	(0.310)	(0.435)
ISLAMIC	-0.279***	-0.222***	0.068	-0.038								
	(0.000)	(0.003)	(0.203)	(0.488)								
Constant	1.145**	0.663	-5.399***	-5.023***	-0.338	-1.218	-4.571***	-4.780***	2.368***	2.531***	-5.176***	-5.062***
	(0.042)	(0.218)	(0.000)	(0.000)	(0.728)	(0.215)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Year Fixed Effect	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
Country Fixed Effect	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
Observations	770	770	725	725	342	342	307	307	428	428	418	418
Overall R2	0.168	0.353	0.588	0.329	0.312	0.343	0.242	0.261	0.583	0.560	0.537	0.517
Wald Chi2	470***	476***	301***	387***	184***	187***	230***	232***	669***	618***	523***	498***
LM Statistics (p-value)	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Sargan test (p-value)	0.154	0.377	0.177	0.100	0.192	0.591	0.103	0.070	0.873	0.928	0.692	0.124

Note: P-values in parentheses, *p < 0.10, **p < 0.05, ***p < 0.01.

Appendix 3C: EMPIRICAL STUDY 1 – 3SLS REGRESSION RESULTS FOR ISLAMIC BANKS

Determinants of Bank Performance and Risks. Dependent Variables: ROAE, COST/INCOME, LogZscore and LLR/GR

VARIABLES	Panel A: Bank Financial Performance				Panel B: Bank Risks			
	ROAE (1)	ROAE (2)	COST/INCOME (3)	COST/INCOME (4)	LogZscore (5)	LogZscore (6)	LLR/GR (7)	LLR/GR (8)
ABOD	-0.024**		0.158***		-0.092***		0.068***	
	(0.018)		(0.005)		(0.001)		(0.001)	
ASSB	-0.008***		0.092***		-0.091***		0.029***	
	(0.006)		(0.000)		(0.001)		(0.000)	
%BBOD		-0.093**		0.491***		-1.323**		0.333**
		(0.025)		(0.003)		(0.012)		(0.041)
%BSSB		-0.179**		0.303***		-1.997***		1.410***
		(0.027)		(0.009)		(0.004)		(0.000)
LogBSIZE	-0.041*	0.011	-0.248	-0.454***	0.469*	0.837***	-0.065	-0.345
	(0.083)	(0.349)	(0.179)	(0.002)	(0.076)	(0.000)	(0.762)	(0.106)
%INDEP	0.024	0.051	-0.825***	-0.275	0.937***	1.110***	-0.814***	-0.788***
	(0.507)	(0.113)	(0.007)	(0.188)	(0.003)	(0.003)	(0.002)	(0.003)
DUAL	-0.054	0.023	-0.136	-0.955***	-0.132	1.304***	0.021	0.322
	(0.272)	(0.560)	(0.766)	(0.003)	(0.372)	(0.008)	(0.980)	(0.699)
LogTA	-0.001	0.012**	-0.103*	-0.280***	-0.017	0.103*	0.098**	0.107**
	(0.893)	(0.030)	(0.075)	(0.000)	(0.816)	(0.056)	(0.031)	(0.023)
LogAge	0.037***	0.019***	0.021	0.077*	0.222***	0.066	0.159***	0.203***
	(0.000)	(0.000)	(0.696)	(0.061)	(0.005)	(0.146)	(0.010)	(0.001)
BIG4	-0.048	-0.058*	-0.045	-0.322**	0.117	0.327	0.108	0.247
	(0.141)	(0.052)	(0.756)	(0.025)	(0.340)	(0.245)	(0.554)	(0.192)
SUB	0.066***	0.002	-0.537***	0.016	0.496***	0.196	-0.209	-0.072
	(0.000)	(0.825)	(0.003)	(0.719)	(0.010)	(0.180)	(0.152)	(0.613)
HHI	0.105	0.123*	-0.160	-0.152	0.437	0.029	0.892	0.772
	(0.189)	(0.062)	(0.676)	(0.620)	(0.645)	(0.972)	(0.217)	(0.281)

LISTED	-0.006	0.017	-0.178	-0.468***	-0.127	0.412**	0.095	-0.133
	(0.726)	(0.231)	(0.101)	(0.000)	(0.514)	(0.019)	(0.547)	(0.409)
GDP_GROWTH	0.625**	0.458*	-1.244	-2.347	2.650	0.940	2.124	2.231
	(0.031)	(0.082)	(0.341)	(0.217)	(0.412)	(0.740)	(0.400)	(0.376)
INFL	-0.260	-0.109	-0.396	-2.647**	2.275	4.176	-1.309	-1.899
	(0.443)	(0.702)	(0.785)	(0.032)	(0.564)	(0.181)	(0.676)	(0.541)
LEGAL	0.102	0.092	-2.114***	-0.886**	1.469**	1.994***	0.102	-0.452
	(0.126)	(0.204)	(0.001)	(0.012)	(0.036)	(0.003)	(0.822)	(0.367)
CORRUPTION	-0.020	0.023	-0.619*	-0.269	0.048	0.239	-0.821**	-0.943**
	(0.677)	(0.367)	(0.091)	(0.420)	(0.929)	(0.598)	(0.047)	(0.024)
LEV	0.002	0.003**	-0.019	-0.022**				
	(0.104)	(0.027)	(0.128)	(0.040)				
1/z	-0.054***	-0.059***						
	(0.000)	(0.000)						
COST/INCOME					-0.142**	-0.075*	0.047	0.028
					(0.031)	(0.055)	(0.360)	(0.587)
Constant	0.187	-0.108	1.821	5.534***	1.639	-0.883	-5.422***	-5.165***
	(0.232)	(0.341)	(0.108)	(0.000)	(0.279)	(0.433)	(0.000)	(0.000)
Year Fixed Effect	YES	YES	YES	YES	YES	YES	YES	YES
Country Fixed Effect	YES	YES	YES	YES	YES	YES	YES	YES
Observations	336	336	337	337	336	336	301	301
Overall R2	0.138	0.352	0.027	0.397	0.059	0.022	0.363	0.329
Wald Chi2	325***	340***	241***	265***	364***	191***	410***	310***
LM Statistics (p-value)	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Sargan test (p-value)	0.210	0.100	0.468	0.489	0.560	0.172	0.083	0.405
ABOD = ASSB (F-Test)	0.000		0.000		0.000		0.000	
%BBOD = %BSSB (F-Test)		0.000		0.000		0.000		0.000

Note: P-values in parentheses, *p < 0.10, **p < 0.05, ***p < 0.01.

Appendix 3D: EMPIRICAL STUDY 1 – ROBUSTNESS - GMM RESULTS FOR PERFORMANCE

Determinants of Bank Performance. Dependent Variables: ROAE and COST/INCOME

VARIABLES	Panel A: Islamic banks (IBs)				Panel B: Conventional banks (CBs)			
	ROAE (1)	ROAE (2)	COST/INCOME (3)	COST/INCOME (4)	ROAE (5)	ROAE (6)	COST/INCOME (7)	COST/INCOME (8)
ABOD	0.002		0.037**		0.013**		-0.013*	
	(0.627)		(0.035)		(0.044)		(0.088)	
ASSB	-0.007**		0.015*					
	(0.046)		(0.085)					
%BBOD		-0.221***		0.220**		0.225**		-0.067*
		(0.007)		(0.033)		(0.015)		(0.070)
%BSSB		-0.436***		0.281*				
		(0.006)		(0.089)				
LogBSIZE	-0.035	-0.243***	-0.245*	-0.007	0.214	-0.156**	-0.150	0.002
	(0.166)	(0.009)	(0.100)	(0.960)	(0.139)	(0.014)	(0.122)	(0.992)
%INDEP	-0.077*	0.179	-0.189	-0.659***	-0.238	0.569	-0.184	0.032
	(0.087)	(0.525)	(0.291)	(0.001)	(0.136)	(0.232)	(0.274)	(0.800)
DUAL	-0.079*	0.249*	-0.254	-0.379	-0.033	-0.231	0.029	-0.040
	(0.076)	(0.056)	(0.591)	(0.402)	(0.867)	(0.364)	(0.598)	(0.397)
LogTA	-0.004	0.001	-0.114**	-0.079*	-0.066	0.053***	-0.102*	0.001
	(0.826)	(0.988)	(0.035)	(0.094)	(0.171)	(0.000)	(0.095)	(0.968)
LogAge	0.012	-0.000	0.045	0.017	-0.106**	0.044	0.029	0.058*
	(0.156)	(0.997)	(0.285)	(0.674)	(0.026)	(0.421)	(0.458)	(0.092)
BIG4	-0.106**	-0.081	-0.600**	-0.237	-0.036	-0.102	-0.170**	-0.069
	(0.050)	(0.453)	(0.046)	(0.140)	(0.566)	(0.122)	(0.014)	(0.117)
SUB	0.049	0.052	-0.303	-0.220	0.009	0.118	0.076	0.075**
	(0.153)	(0.381)	(0.224)	(0.264)	(0.806)	(0.416)	(0.157)	(0.027)

HHI	0.035	0.197***	-0.482**	-0.140	-0.789	1.004	-0.202	-0.062
	(0.633)	(0.007)	(0.028)	(0.373)	(0.144)	(0.145)	(0.163)	(0.739)
LISTED	0.004	0.273*	-0.198	-0.447***	0.333**	0.136	-0.086	0.034
	(0.891)	(0.073)	(0.150)	(0.000)	(0.035)	(0.119)	(0.267)	(0.511)
GDP_GROWTH	0.475	0.403	-0.851	-0.904	0.040	-0.127	0.751	0.625
	(0.133)	(0.448)	(0.640)	(0.254)	(0.909)	(0.551)	(0.357)	(0.336)
INFL	0.815	0.351	-0.746	-2.451**	0.459	-1.639**	-0.028	-0.238
	(0.218)	(0.644)	(0.367)	(0.014)	(0.292)	(0.047)	(0.951)	(0.645)
LEGAL	-0.128	1.321	0.572	0.402	-0.228	-0.343	0.238	-0.018
	(0.251)	(0.105)	(0.419)	(0.531)	(0.265)	(0.306)	(0.393)	(0.947)
CORRUPTION	-0.055	-0.901***	-0.082	0.264	-0.341	0.800***	-0.141	0.073
	(0.717)	(0.001)	(0.650)	(0.197)	(0.200)	(0.000)	(0.513)	(0.693)
LEV	0.003	0.006	0.007	0.016	-0.007	-0.006	-0.004	0.004
	(0.157)	(0.240)	(0.633)	(0.106)	(0.443)	(0.319)	(0.649)	(0.469)
1/Z	-0.082*	-0.423*			0.020***	0.025***		
	(0.058)	(0.078)			(0.000)	(0.000)		
Performance$_{t-1}$	0.244*	0.363*	0.373***	0.447***	-0.106***	-0.007***	0.759***	0.678***
	(0.051)	(0.053)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Constant	-0.094*	-0.562***	1.543	0.476	0.978	-0.370**	-1.304*	-0.408
	(0.064)	(0.001)	(0.286)	(0.666)	(0.168)	(0.018)	(0.050)	(0.419)
Year Fixed Effect	YES	YES	YES	YES	YES	YES	YES	YES
Country Fixed Effect	YES	YES	YES	YES	YES	YES	YES	YES
Observations	285	285	285	285	357	357	357	357
Wald Chi2 (p-value)	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
AR(1) test statistics (p-value)	0.023	0.047	0.047	0.052	0.040	0.058	0.005	0.004
AR(2) test statistics (p-value)	0.891	0.941	0.319	0.305	0.306	0.862	0.420	0.462
Hansen J-statistics (p-value)	0.148	0.425	0.998	0.241	0.755	0.942	0.245	0.657

Note: P-values in parentheses, *p < 0.10, **p < 0.05, ***p < 0.01.

Appendix 3E: EMPIRICAL STUDY 1 – ROBUSTNESS - GMM RESULTS FOR RISKS

Determinants of Bank Risks. Dependent Variables: LogZscore and LLR/GR

VARIABLES	Panel A: Islamic banks (IBs)				Panel B: Conventional banks (CBs)			
	LogZscore (1)	LogZscore (2)	LLR/GR (3)	LLR/GR (4)	LogZscore (5)	LogZscore (6)	LLR/GR (7)	LLR/GR (8)
ABOD	-0.092**		-0.138		0.020***		-0.507*	
	(0.028)		(0.501)		(0.007)		(0.074)	
ASSB	-0.060**		0.097***					
	(0.028)		(0.008)					
%BBOD		-0.332***		0.496***		0.174***		-0.532**
		(0.003)		(0.010)		(0.000)		(0.017)
%BSSB		-0.975***		0.955***				
		(0.007)		(0.010)				
LogBSIZE	0.942	-0.127	-0.079	0.043	0.015	-0.118*	7.995*	0.119
	(0.107)	(0.636)	(0.959)	(0.817)	(0.770)	(0.063)	(0.085)	(0.653)
%INDEP	0.579**	-0.006	0.011	-1.380***	-0.055	-0.005	6.669	-1.358**
	(0.046)	(0.979)	(0.987)	(0.000)	(0.228)	(0.958)	(0.126)	(0.039)
DUAL	0.382	-0.319	-0.195	2.515	0.174***	-0.004	-0.590	-0.105
	(0.586)	(0.357)	(0.776)	(0.194)	(0.000)	(0.939)	(0.336)	(0.628)
LogTA	0.272***	0.058	0.718***	-0.000	0.025	0.011	-1.127	0.157
	(0.007)	(0.319)	(0.004)	(0.997)	(0.210)	(0.544)	(0.121)	(0.241)
LogAge	0.088	0.487***	-0.265	0.028	0.057**	0.043	-0.141	-0.006
	(0.711)	(0.004)	(0.595)	(0.664)	(0.034)	(0.172)	(0.300)	(0.964)
COST/INCOME	-0.060*	-0.233***	0.069	0.042***	-0.471***	-0.434***	2.715*	1.401**
	(0.061)	(0.000)	(0.509)	(0.000)	(0.000)	(0.000)	(0.100)	(0.027)
BIG4	1.176***	2.434*	1.102	-0.130	-0.091*	-0.424***	0.383	0.219
	(0.004)	(0.070)	(0.602)	(0.747)	(0.089)	(0.000)	(0.103)	(0.135)

SUB	0.702*	0.830	-1.056*	-0.634***	-0.316***	0.101	-0.711	-0.337
	(0.055)	(0.130)	(0.076)	(0.000)	(0.000)	(0.204)	(0.202)	(0.151)
HHI	-0.099	-1.270	0.509	-0.437***	0.814***	1.681***	-10.751*	-1.038
	(0.763)	(0.318)	(0.395)	(0.001)	(0.000)	(0.000)	(0.070)	(0.487)
LISTED	-0.794	0.594*	0.155	0.035	0.347***	0.503***	-0.789**	-0.383**
	(0.118)	(0.062)	(0.814)	(0.777)	(0.000)	(0.000)	(0.034)	(0.018)
GDP_GROWTH	0.207	-4.649	3.568	-0.864	0.589	0.368	-17.662*	0.234
	(0.839)	(0.119)	(0.151)	(0.498)	(0.118)	(0.465)	(0.059)	(0.904)
INFL	-7.272***	-2.849	-0.717	0.632	0.127	-0.097	-9.830	-6.096**
	(0.007)	(0.140)	(0.863)	(0.620)	(0.667)	(0.809)	(0.170)	(0.014)
LEGAL	3.676**	0.441	-15.628***	-0.274*	0.683***	0.627**	5.681*	-0.331
	(0.028)	(1.000)	(0.003)	(0.068)	(0.000)	(0.020)	(0.084)	(0.771)
CORRUPTION	-0.539	0.657***	0.754	-0.226*	-0.017	-0.018	2.484*	0.747
	(0.218)	(0.006)	(0.471)	(0.053)	(0.860)	(0.866)	(0.052)	(0.372)
$Riske_{t-1}$	0.433**	0.886***	-0.891***	-0.674***	0.592***	0.589***	0.957***	0.542***
	(0.023)	(0.000)	(0.002)	(0.001)	(0.000)	(0.000)	(0.001)	(0.000)
Constant	-0.442	-2.784	-0.336	-4.318***	0.307	2.099***	4.036	-2.138
	(0.500)	(0.337)	(0.703)	(0.000)	(0.325)	(0.000)	(0.360)	(0.402)
Year Fixed Effect	YES	YES	YES	YES	YES	YES	YES	YES
Country Fixed Effect	YES	YES	YES	YES	YES	YES	YES	YES
Observations	284	284	301	301	356	356	347	347
Wald Chi2 (p-value)	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
AR(1) test statistics (p-value)	0.043	0.033	0.004	0.000	0.000	0.002	0.045	0.000
AR(2) test statistics (p-value)	0.968	0.996	0.607	0.995	0.440	0.409	0.849	0.339
Hansen J-statistics (p-value)	0.223	0.966	0.529	0.816	0.736	0.934	0.333	0.909

Note: P-values in parentheses, *p < 0.10, **p < 0.05, ***p < 0.01.

Appendix 4A: EMPIRICAL STUDY 2 – 3SLS REGRESSION RESULTS FOR ALL SAMPLES

Determinants of Bank Market Valuation. Dependent Variables: lnQ

VARIABLES	Panel A: Full Sample (IBs and CBs)		Panel B: Islamic banks (IBs)				Panel C: Conventional banks (CBs)	
	lnQ (1)	lnQ (2)	lnQ (3)	lnQ (4)	lnQ (5)	lnQ (6)	lnQ (7)	lnQ (8)
ABOD	0.329***		0.030		0.016		0.294***	
	(0.009)		(0.805)		(0.848)		(0.008)	
ASSB					-0.138***			
					(0.000)			
%BBOD		2.063***		-0.093		-0.011		1.765***
		(0.009)		(0.901)		(0.919)		(0.008)
%BSSB						-2.225***		
						(0.000)		
LogBSIZE	-0.524***	-0.608***	-0.721**	-0.775**	-0.932**	-1.152***	-0.459**	-0.478*
	(0.001)	(0.000)	(0.048)	(0.045)	(0.014)	(0.001)	(0.019)	(0.065)
%INDEP	-1.533***	-1.946***	0.020	0.285	-0.506	-0.145	-1.116**	-1.111**
	(0.000)	(0.000)	(0.957)	(0.371)	(0.109)	(0.691)	(0.013)	(0.046)
LogTA	0.010	0.004	0.088	0.013	0.039	0.102	-0.098	-0.209***
	(0.815)	(0.939)	(0.409)	(0.869)	(0.711)	(0.328)	(0.114)	(0.005)
LogAge	0.160***	0.144**	0.714***	0.747***	0.387***	0.670***	-0.048	-0.074
	(0.003)	(0.020)	(0.000)	(0.000)	(0.006)	(0.000)	(0.500)	(0.490)
DEP/SALES	5.467***	8.722***	8.814***	8.403***	7.219***	10.372***	-7.069*	-5.877
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.093)	(0.341)
PPE/SALES	-0.339	-0.420	0.937	1.308	0.501	4.427	1.934***	1.364*
	(0.422)	(0.433)	(0.898)	(0.829)	(0.926)	(0.569)	(0.005)	(0.093)
CAPEX/ASSETS	-0.036***	-0.024**	0.008	0.008	-0.005	0.013	-0.073***	-0.077***
	(0.004)	(0.013)	(0.485)	(0.480)	(0.513)	(0.264)	(0.000)	(0.000)
CASH/ASSETS	-0.958	-1.105	2.213*	2.596**	1.262	2.712**	0.629	0.331
	(0.191)	(0.180)	(0.099)	(0.031)	(0.288)	(0.042)	(0.558)	(0.852)

LEV	-0.143***	-0.138***	-0.168***	-0.156***	-0.196***	-0.183***	-0.077***	-0.057**
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.008)	(0.044)
BIG4	-0.955***	-1.045***	-1.988***	-1.851***	-2.229***	-2.082***	-0.057	-0.363
	(0.000)	(0.000)	(0.004)	(0.006)	(0.000)	(0.000)	(0.782)	(0.220)
SUB	0.669***	0.825***	0.242	0.314*	0.532***	0.346*	1.242***	1.525***
	(0.000)	(0.000)	(0.194)	(0.099)	(0.000)	(0.070)	(0.000)	(0.000)
HHI	-0.239	-0.238	-0.233	-0.154	-0.447	-0.004	-0.145	0.608
	(0.651)	(0.724)	(0.725)	(0.806)	(0.337)	(0.986)	(0.882)	(0.701)
GDP_GROWTH	-0.217	0.567	0.013	-0.452	-0.826	-0.035	-0.868	-2.219
	(0.921)	(0.769)	(0.995)	(0.834)	(0.710)	(0.966)	(0.733)	(0.460)
INFL	-1.254	-1.082	-0.587	-0.951	-0.696	-0.109	-1.104	-5.023
	(0.565)	(0.715)	(0.852)	(0.758)	(0.811)	(0.926)	(0.708)	(0.298)
LEGAL	0.327	0.342	0.069	-0.012	-0.642	-0.290	-0.131	-0.136
	(0.373)	(0.369)	(0.851)	(0.973)	(0.107)	(0.394)	(0.795)	(0.816)
POLITICAL	-0.297	-0.322	-0.219	-0.154	0.159	-0.439	-0.150	-0.047
	(0.122)	(0.157)	(0.460)	(0.587)	(0.554)	(0.112)	(0.622)	(0.891)
ISLAMIC	0.100	0.119						
	(0.491)	(0.482)						
Constant	1.989**	1.846**	0.449	1.555	7.034***	3.837**	3.658***	5.542***
	(0.012)	(0.047)	(0.769)	(0.285)	(0.000)	(0.010)	(0.000)	(0.000)
Year Fixed Effect	YES	YES	YES	YES	YES	YES	YES	YES
Country Fixed Effect	YES	YES	YES	YES	YES	YES	YES	YES
Observations	386	386	150	150	150	150	236	236
Overall R2	0.068	0.034	0.786	0.787	0.658	0.643	0.013	0.118
Wald Chi2	269***	242***	557***	566***	400***	540***	186***	147***
LM Statistics (p-value)	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Sargan test (p-value)	0.422	0.107	0.364	0.328	0.110	0.110	0.108	0.100
ABOD = ASSB (F-Test)					0.000			
%BBOD = %BSSB (F-Test)						0.000		

Note: P-values in parentheses, *p < 0.10, **p < 0.05, ***p < 0.01.

Appendix 4B: EMPIRICAL STUDY 2 – 3SLS REGRESSION RESULTS FOR ALL SAMPLES

Determinants of Bank Market Valuation. Alternative Dependent Variables: lnMARCAP

VARIABLES	Panel A: Full Sample (IBs and CBs)		Panel B: Islamic banks (IBs)				Panel C: Conventional banks (CBs)	
	lnMARCAP (1)	lnMARCAP (2)	lnMARCAP (3)	lnMARCAP (4)	lnMARCAP (5)	lnMARCAP (6)	lnMARCAP (7)	lnMARCAP (8)
ABOD	0.787**		0.518		0.291		0.790***	
	(0.039)		(0.132)		(0.255)		(0.009)	
ASSB					-0.478***			
					(0.000)			
%BBOD		4.450***		3.114		1.303		4.074***
		(0.001)		(0.209)		(0.127)		(0.008)
%BSSB						-1.955***		
						(0.007)		
LogBSIZE	-0.427	-0.938***	0.710	0.665	-0.716*	-1.807***	-0.319	-0.530
	(0.299)	(0.001)	(0.342)	(0.554)	(0.075)	(0.001)	(0.351)	(0.195)
%INDEP	-2.704***	-3.318***	0.659	0.435	0.043	-1.745***	-0.567	-1.619*
	(0.001)	(0.000)	(0.332)	(0.615)	(0.949)	(0.007)	(0.267)	(0.097)
LogTA	0.912***	0.983***	0.943***	0.970***	0.794***	1.347***	-0.445***	-0.682***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
LogAge	0.128	0.256**	1.322***	1.301***	0.424	0.396***	-0.219**	-0.275*
	(0.257)	(0.013)	(0.000)	(0.001)	(0.155)	(0.009)	(0.047)	(0.077)
DEP/SALES	4.358***	9.754***	11.755***	12.291***	9.056***	11.526***	-5.434	-7.627
	(0.009)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.553)	(0.427)
PPE/SALES	-0.668	-1.612*	11.069	12.398	13.759	5.656	1.337*	1.790
	(0.257)	(0.068)	(0.408)	(0.457)	(0.393)	(0.651)	(0.053)	(0.107)
CAPEX/ASSETS	-0.033	-0.011	0.002	0.002	0.006	0.008	-0.106***	-0.066**
	(0.102)	(0.480)	(0.912)	(0.931)	(0.798)	(0.655)	(0.000)	(0.024)
CASH/ASSETS	-0.608	-2.201	3.053	2.460	-2.017	-1.412	2.263	1.677
	(0.601)	(0.111)	(0.210)	(0.408)	(0.472)	(0.239)	(0.125)	(0.549)

LEV	-0.291***	-0.277***	-0.338***	-0.374***	-0.330***	-0.283***	-0.257***	-0.179***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
BIG4	-1.519***	-1.738***	-5.310***	-4.399**	-4.770***	-1.799***	0.217	-0.721
	(0.008)	(0.000)	(0.003)	(0.033)	(0.001)	(0.000)	(0.582)	(0.202)
SUB	0.474	0.808***	0.419	-0.320	0.252	0.199	1.310**	2.239***
	(0.171)	(0.001)	(0.173)	(0.582)	(0.500)	(0.445)	(0.011)	(0.000)
HHI	-0.704	-1.252	-1.337	-1.533	-0.810	0.468	-1.474	1.359
	(0.348)	(0.273)	(0.227)	(0.304)	(0.505)	(0.396)	(0.560)	(0.582)
GDP_GROWTH	0.488	-0.441	0.204	0.269	0.854	2.992*	0.321	-2.746
	(0.809)	(0.887)	(0.958)	(0.957)	(0.842)	(0.094)	(0.899)	(0.565)
INFL	-0.554	-4.227	1.110	-0.014	-2.899	-2.053	2.876	-6.747
	(0.859)	(0.387)	(0.839)	(0.998)	(0.644)	(0.379)	(0.694)	(0.386)
LEGAL	1.434**	1.474**	1.809***	1.823**	-0.667	-0.073	1.866*	0.793
	(0.034)	(0.012)	(0.006)	(0.032)	(0.416)	(0.807)	(0.068)	(0.388)
POLITICAL	-0.421	-0.776**	-0.595	-0.669	-0.325	0.223**	-0.742	-0.608
	(0.123)	(0.039)	(0.304)	(0.359)	(0.565)	(0.044)	(0.173)	(0.255)
ISLAMIC	0.190	0.183						
	(0.484)	(0.505)						
Constant	0.758	0.153	-3.911	-5.266	15.710***	0.766	6.029***	4.364**
	(0.676)	(0.923)	(0.207)	(0.225)	(0.000)	(0.739)	(0.004)	(0.041)
Year Fixed Effect	YES	YES	YES	YES	YES	YES	YES	YES
Country Fixed Effect	YES	YES	YES	YES	YES	YES	YES	YES
Observations	386	386	150	150	150	150	236	236
Overall R2	0.011	0.077	0.685	0.599	0.141	0.626	0.041	0.264
Wald Chi2	461***	469***	377***	225***	290***	369***	304***	308***
LM Statistics (p-value)	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Sargan test (p-value)	0.111	0.071	0.140	0.336	0.251	0.178	0.258	0.120
ABOD = ASSB (F-Test)					0.000			
%BBOD = %BSSB (F-Test)						0.020		

Note: P-values in parentheses, $*p < 0.10$, $**p < 0.05$, $***p < 0.01$.

Appendix 4C: EMPIRICAL STUDY 2 – ROBUSTNESS CHECK: GMM

Determinants of Bank Market Valuation. Dependent Variables: lnQ

VARIABLES	PANEL A: ISLAMIC BANKS (IBs)		PANEL B: CONVENTIONAL BANKS (CBs)	
	lnQ (1)	lnQ (2)	lnQ (3)	lnQ (4)
ABOD	0.005		0.096**	
	(0.646)		(0.037)	
ASSB	-0.008***			
	(0.008)			
%BBOD		0.034		0.469***
		(0.348)		(0.001)
%BSSB		-0.312*		
		(0.078)		
LogBSIZE	-0.159***	-0.099**	-0.067	-0.070
	(0.003)	(0.047)	(0.861)	(0.631)
%INDEP	-0.063	-0.080	1.031	-0.109
	(0.523)	(0.293)	(0.174)	(0.721)
LogTA	0.009	0.002	-0.115	-0.053
	(0.615)	(0.865)	(0.360)	(0.259)
LogAge	-0.011	-0.009	0.211	-0.017
	(0.695)	(0.808)	(0.592)	(0.797)
DEP/SALES	-0.307	-0.147	-7.698*	1.475
	(0.191)	(0.597)	(0.071)	(0.450)
PPE/SALES	3.002**	2.694	0.875*	0.362
	(0.048)	(0.140)	(0.092)	(0.139)
CAPEX/ASSETS	0.000	0.002	-0.023	-0.014**
	(0.850)	(0.330)	(0.281)	(0.016)
CASH/ASSETS	0.349	0.343	4.779*	-0.386
	(0.224)	(0.442)	(0.081)	(0.419)

LEV	0.004	0.004	-0.046*	-0.015
	(0.410)	(0.515)	(0.085)	(0.212)
BIG4	0.021	0.025	0.092	-0.026
	(0.816)	(0.771)	(0.561)	(0.730)
SUB	-0.041	0.016	0.675	0.359
	(0.444)	(0.538)	(0.180)	(0.140)
HHI	0.224**	0.152	-0.014	0.130
	(0.033)	(0.234)	(0.971)	(0.245)
GDP_GROWTH	1.088**	0.464	0.247	0.919*
	(0.011)	(0.697)	(0.800)	(0.062)
INFL	-1.128*	-1.139	-1.248	-3.977**
	(0.091)	(0.135)	(0.588)	(0.028)
LEGAL	-0.110	0.468	0.370	0.068
	(0.113)	(0.159)	(0.581)	(0.729)
POLITICAL	0.046	0.073	-0.023	-0.139***
	(0.449)	(0.205)	(0.853)	(0.006)
Lagged lnQ	0.978***	1.021***	0.413*	0.712***
	(0.000)	(0.000)	(0.098)	(0.000)
Constant	0.411	-0.549	-0.895**	-0.415
	(0.207)	(0.135)	(0.047)	(0.214)
Year fixed effect	YES	YES	YES	YES
Country fixed effect	YES	YES	YES	YES
Observations	123	123	193	193
Wald Chi2 (p-value)	0.000	0.000	0.000	0.000
AR(1) test statistics (p-value)	0.022	0.038	0.070	0.095
AR(2) test statistics (p-value)	0.936	0.332	0.656	0.582
Hansen J-statistics (p-value)	0.621	0.179	0.475	0.197

Note: P-values in parentheses, *p < 0.10, **p < 0.05, ***p < 0.01.

Appendix 5A: EMPIRICAL STUDY 3 – 3SLS REGRESSION RESULTS FOR ALL SAMPLES

Determinants of the Level of Cash Dividends. Dependent Variables: DIV/NI

VARIABLES	Panel A: Full Sample (IBs and CBs)		Panel B: Islamic banks (IBs)		Panel C: Conventional banks (CBs)	
	DIV/NI (1)	DIV/NI (2)	DIV/NI (3)	DIV/NI (4)	DIV/NI (5)	DIV/NI (6)
ABOD	0.055***		-0.136***		0.128***	
	(0.009)		(0.000)		(0.007)	
%BBOD		0.419***		-0.684***		0.760***
		(0.002)		(0.006)		(0.000)
LogBSIZE	0.072	0.048	-0.101	-0.135	0.099	-0.039
	(0.108)	(0.254)	(0.331)	(0.320)	(0.185)	(0.522)
%INDEP	-0.264***	-0.342***	-0.254***	-0.248**	-0.289**	-0.568***
	(0.001)	(0.000)	(0.005)	(0.018)	(0.029)	(0.001)
LogTA	0.100***	0.106***	0.102***	0.149***	0.062***	0.093***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.004)	(0.000)
LogAge	0.015	0.006	-0.027	-0.050	0.044	0.050*
	(0.238)	(0.716)	(0.487)	(0.303)	(0.159)	(0.093)
LEV	-0.001	-0.001	0.003	0.005	0.020*	0.030***
	(0.653)	(0.750)	(0.664)	(0.668)	(0.050)	(0.000)
ROA	0.025***	0.027***	0.008*	0.004	0.210***	0.253***
	(0.000)	(0.000)	(0.090)	(0.451)	(0.000)	(0.000)
BIG4	0.002	-0.136**	0.509***	0.384*	-0.085	-0.248***
	(0.954)	(0.012)	(0.009)	(0.087)	(0.166)	(0.001)
SUB	-0.084**	-0.050	0.119***	0.106*	-0.022	0.001
	(0.019)	(0.127)	(0.006)	(0.078)	(0.739)	(0.976)
CAPEX/ASSETS	0.003	0.002	-0.004	-0.004	-0.002	-0.002

	(0.166)	(0.345)	(0.214)	(0.169)	(0.593)	(0.501)
CASH/NETASSETS	-0.122	-0.040	-0.006	0.051	0.107	0.069
	(0.301)	(0.717)	(0.976)	(0.777)	(0.547)	(0.753)
RETAIN/EQUITY	-0.021***	-0.024***	-0.014***	-0.012***	-0.038***	-0.045***
	(0.000)	(0.000)	(0.000)	(0.005)	(0.000)	(0.000)
HHI	-0.032	-0.049	-0.011	-0.007	0.175	0.353
	(0.808)	(0.693)	(0.942)	(0.962)	(0.450)	(0.186)
GDP_GROWTH	0.354	0.223	0.676	0.662	0.057	-0.253
	(0.342)	(0.666)	(0.301)	(0.389)	(0.898)	(0.647)
INFL	-0.036	-0.505	-0.368	-0.536	0.659	-0.809
	(0.947)	(0.492)	(0.608)	(0.469)	(0.559)	(0.468)
REGULATORY	-0.035	-0.022	-0.054	-0.043	0.120	0.174
	(0.558)	(0.712)	(0.441)	(0.550)	(0.323)	(0.160)
ISLAMIC	-0.036	-0.035				
	(0.166)	(0.265)				
Constant	-1.431***	-1.367***	-1.017***	-1.455***	-1.676***	-1.826***
	(0.000)	(0.000)	(0.005)	(0.001)	(0.000)	(0.000)
Year Fixed Effect	YES	YES	YES	YES	YES	YES
Country Fixed Effect	YES	YES	YES	YES	YES	YES
Observations	386	386	150	150	236	236
Overall R2	0.408	0.347	0.548	0.360	0.130	0.159
Wald Chi2	442***	425***	332***	252***	300***	316***
LM Statistics (p-value)	0.000	0.000	0.000	0.000	0.000	0.000
Sargan test (p-value)	0.126	0.159	0.183	0.234	0.113	0.458

Note: P-values in parentheses, *p < 0.10, **p < 0.05, ***p < 0.01.

Appendix 5B: EMPIRICAL STUDY 3 – SENSITIVITY 3SLS RESULTS FOR ALL SAMPLES

Determinants of the Propensity to Pay Dividends. Dependent Variables: LIKE_PAY

VARIABLES	Panel A: Full Sample (IBs and CBs)		Panel B: Islamic banks (IBs)		Panel C: Conventional banks (CBs)	
	LIKE_PAY (1)	LIKE_PAY (2)	LIKE_PAY (3)	LIKE_PAY (4)	LIKE_PAY (5)	LIKE_PAY (6)
ABOD	0.237***		-0.800**		0.434**	
	(0.006)		(0.046)		(0.016)	
%BBOD		0.860*		-0.108		1.377
		(0.091)		(0.914)		(0.114)
LogBSIZE	0.169	0.201	2.707*	1.526	1.034	1.196
	(0.755)	(0.724)	(0.059)	(0.204)	(0.372)	(0.284)
%INDEP	3.570***	3.297***	13.042***	9.412***	5.812***	4.330**
	(0.000)	(0.001)	(0.001)	(0.000)	(0.003)	(0.012)
LogTA	0.998***	0.937***	0.065	0.637	1.980***	1.896***
	(0.001)	(0.001)	(0.914)	(0.374)	(0.000)	(0.000)
LogAge	-0.224	-0.200	0.869	0.594	-1.984***	-1.829**
	(0.423)	(0.464)	(0.190)	(0.322)	(0.007)	(0.013)
LEV	0.682***	0.687***	0.731***	0.603***	1.473***	1.506***
	(0.000)	(0.000)	(0.001)	(0.001)	(0.000)	(0.000)
ROA	7.586***	7.490***	9.161***	8.227***	13.709***	13.064***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
BIG4	-1.016*	-1.065*	0.071	-1.251	-2.472**	-2.574**
	(0.064)	(0.058)	(0.979)	(0.531)	(0.026)	(0.019)
SUB	-0.974*	-0.695	0.114	-0.758	-2.168*	-1.332

	(0.092)	(0.227)	(0.938)	(0.421)	(0.095)	(0.254)
CAPEX/ASSETS	0.005	0.009	-0.055	-0.044	0.124	0.129
	(0.915)	(0.849)	(0.495)	(0.562)	(0.250)	(0.230)
CASH/NETASSETS	2.606	2.790	0.720	0.093	13.586*	13.523*
	(0.298)	(0.262)	(0.890)	(0.981)	(0.099)	(0.052)
RETAIN/EQUITY	-0.880***	-0.882***	-0.923***	-0.773***	-1.799***	-1.743***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
HHI	-3.900*	-3.792*	2.137	0.244	-6.106	-5.001
	(0.078)	(0.082)	(0.613)	(0.944)	(0.176)	(0.203)
GDP_GROWTH	-37.452***	-37.555***	-66.489***	-54.399**	-72.109***	-64.017***
	(0.000)	(0.000)	(0.004)	(0.038)	(0.001)	(0.001)
INF	31.964***	28.909**	65.955*	59.456**	48.213*	48.268**
	(0.005)	(0.010)	(0.055)	(0.013)	(0.071)	(0.043)
REGULATORY	-0.774	-0.677	0.627	0.508	-1.108	-0.293
	(0.303)	(0.328)	(0.581)	(0.603)	(0.470)	(0.830)
ISLAMIC	0.545	0.418				
	(0.299)	(0.403)				
Constant	-23.013***	-21.720***	-23.933***	-26.745***	-40.163***	-39.333***
	(0.000)	(0.000)	(0.007)	(0.002)	(0.000)	(0.000)
Year Fixed Effect	YES	YES	YES	YES	YES	YES
Observations	386	386	150	150	236	236
Pseudo R^2	0.637	0.630	0.695	0.671	0.765	0.749
Wald X^2	94***	96***	143***	53***	64**	62***

Note: P-values in parentheses, *p < 0.10, **p < 0.05, ***p < 0.01.

Appendix 5C: EMPIRICAL STUDY 3 – SENSITIVITY 3SLS RESULTS FOR ALL SAMPLES

Determinants of the Level of Cash Dividends. Alternative Dependent Variables: DIV/Assets, DIV/Sales and DIV/Share

VARIABLES	Panel A: Islamic banks (IBs)						Panel B: Conventional banks (CBs)					
	DIV/Assets (1)	DIV/Assets (2)	DIV/Sales (3)	DIV/Sales (4)	DIV/Share (5)	DIV/Share (6)	DIV/Assets (7)	DIV/Assets (8)	DIV/Sales (9)	DIV/Sales (10)	DIV/Share (11)	DIV/Share (12)
ABOD	-0.162***		-0.036***		-0.140***		0.338***		0.048***		0.059***	
	(0.007)		(0.001)		(0.000)		(0.006)		(0.009)		(0.004)	
%BBOD		-0.732***		-0.141***		-0.284***		1.158***		0.130***		0.400***
		(0.008)		(0.008)		(0.009)		(0.001)		(0.003)		(0.006)
LogBSIZE	0.088	0.098	0.018	0.020	0.018	0.085	0.152	-0.159*	0.014	-0.029*	-0.065*	-0.105**
	(0.631)	(0.623)	(0.616)	(0.602)	(0.752)	(0.194)	(0.317)	(0.058)	(0.596)	(0.099)	(0.073)	(0.020)
%INDEP	-0.673***	-0.596***	-0.107***	-0.106***	-0.254***	-0.395***	-0.418*	-0.767***	-0.090*	-0.126***	-0.231***	-0.384***
	(0.000)	(0.000)	(0.001)	(0.001)	(0.008)	(0.000)	(0.082)	(0.003)	(0.059)	(0.003)	(0.005)	(0.001)
LogTA	0.106**	0.165***	0.005	0.022**	-0.024	0.025	-0.008	0.075***	0.018***	0.026***	0.047***	0.054***
	(0.035)	(0.001)	(0.517)	(0.021)	(0.338)	(0.174)	(0.855)	(0.001)	(0.008)	(0.000)	(0.000)	(0.000)
LogAge	0.075	0.071	0.021	0.019	0.128***	0.132***	0.098*	0.097**	0.017**	0.022***	0.127***	0.136***
	(0.279)	(0.345)	(0.115)	(0.187)	(0.000)	(0.000)	(0.071)	(0.018)	(0.016)	(0.004)	(0.000)	(0.000)
LEV	-0.015	-0.015	-0.001	-0.003	0.003	-0.008	-0.000	0.057***	-0.001	0.006***	-0.001	0.006
	(0.270)	(0.303)	(0.644)	(0.355)	(0.662)	(0.151)	(0.986)	(0.000)	(0.736)	(0.002)	(0.986)	(0.277)
ROA	0.013	0.009	0.003*	0.002	0.005**	-0.000	0.674***	0.771***	0.044***	0.061***	0.101***	0.123***
	(0.118)	(0.291)	(0.089)	(0.305)	(0.047)	(0.843)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
BIG4	0.583*	0.324	0.110*	0.037	0.386***	-0.070	-0.132	-0.322***	-0.027	-0.044**	-0.074**	-0.161***
	(0.091)	(0.270)	(0.089)	(0.508)	(0.009)	(0.494)	(0.230)	(0.008)	(0.220)	(0.025)	(0.048)	(0.005)
SUB	0.177**	0.150*	0.018	0.012	-0.068	-0.052	-0.555***	-0.072	-0.073**	-0.007	-0.008	0.013
	(0.024)	(0.086)	(0.230)	(0.454)	(0.186)	(0.224)	(0.002)	(0.301)	(0.013)	(0.635)	(0.844)	(0.639)

CAPEX/ASSETS	-0.009*	-0.008*	-0.002**	-0.002**	0.001	-0.001	-0.007	0.002	-0.002**	-0.003***	0.002	0.003
	(0.063)	(0.099)	(0.024)	(0.048)	(0.389)	(0.688)	(0.450)	(0.701)	(0.046)	(0.009)	(0.471)	(0.220)
CASH/NETASSETS	0.084	0.062	0.009	0.031	-0.110	0.026	0.235	-0.092	0.054	0.026	0.367**	0.357**
	(0.807)	(0.851)	(0.892)	(0.622)	(0.360)	(0.818)	(0.650)	(0.812)	(0.611)	(0.752)	(0.020)	(0.033)
RETAIN/EQUITY	-0.016***	-0.014**	-0.002**	-0.002**	-0.004**	-0.005*	-0.071***	-0.090***	-0.007***	-0.009***	-0.010***	-0.013***
	(0.004)	(0.020)	(0.019)	(0.045)	(0.044)	(0.060)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
HHI	0.046	0.051	-0.021	-0.009	0.029	0.002	0.102	0.870*	-0.027	0.068	0.068	0.070
	(0.886)	(0.845)	(0.742)	(0.853)	(0.729)	(0.982)	(0.874)	(0.063)	(0.836)	(0.504)	(0.774)	(0.732)
GDP_GROWTH	5.356***	5.089***	0.624***	0.560**	-0.410	1.006**	1.157	-0.112	0.324	0.133	0.312	0.196
	(0.000)	(0.000)	(0.006)	(0.016)	(0.352)	(0.042)	(0.342)	(0.912)	(0.202)	(0.516)	(0.505)	(0.641)
INFL	-0.985	-0.978	-0.042	-0.122	-1.314*	-0.110	1.749	-2.051	0.619	0.115	0.609	0.053
	(0.441)	(0.456)	(0.862)	(0.621)	(0.082)	(0.863)	(0.413)	(0.213)	(0.164)	(0.735)	(0.432)	(0.951)
REGULATORY	0.041	-0.010	0.007	-0.007	0.061	0.014	0.140	0.319	0.071	0.094**	-0.073	-0.034
	(0.730)	(0.932)	(0.755)	(0.755)	(0.426)	(0.815)	(0.609)	(0.107)	(0.208)	(0.025)	(0.405)	(0.754)
Constant	-1.665***	-2.296***	-0.105	-0.284**	0.181	-0.418	-1.537***	-2.054***	-0.473***	-0.485***	-1.144***	-1.225***
	(0.009)	(0.000)	(0.346)	(0.021)	(0.563)	(0.122)	(0.004)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Year Fixed Effect	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
Country Fixed Effect	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
Observations	150	150	150	150	150	150	236	236	236	236	236	236
Overall R2	0.737	0.695	0.748	0.745	0.676	0.843	0.165	0.625	0.042	0.578	0.516	0.403
Wald Chi2	513***	443***	618***	558***	672***	1117***	686***	1056***	273***	459***	583***	486***
LM Statistics (p-value)	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Sargan test (p-value)	0.672	0.109	0.456	0.148	0.125	0.101	0.640	0.250	0.512	0.267	0.102	0.270

Note: P-values in parentheses, *p < 0.10, **p < 0.05, ***p < 0.01.

Appendix 5D: EMPIRICAL STUDY 3 – ROBUSTNESS CHECK: GMM

Determinants of the Level of Cash Dividends. Dependent Variables: DIV/NI

VARIABLES	Panel A: Islamic banks (IBs)		Panel B: Conventional banks (CBs)	
	DIV/NI (1)	DIV/NI (2)	DIV/NI (3)	DIV/NI (4)
ABOD	-0.030***		0.024***	
	(0.004)		(0.009)	
%BBOD		-0.321**		0.158**
		(0.011)		(0.014)
LogBSIZE	-0.189***	0.106	0.054	0.024
	(0.006)	(0.516)	(0.523)	(0.840)
%INDEP	-0.099	-0.343	0.038	-0.161
	(0.443)	(0.185)	(0.830)	(0.321)
LogTA	0.099***	0.160**	0.055*	0.099**
	(0.001)	(0.035)	(0.059)	(0.025)
LogAge	-0.016	0.016	0.040	0.002
	(0.762)	(0.878)	(0.202)	(0.962)
LEV	-0.000	-0.011	0.013	0.051***
	(0.956)	(0.480)	(0.260)	(0.000)
ROA	0.040***	0.035*	0.250***	0.281***
	(0.001)	(0.077)	(0.000)	(0.000)
BIG4	0.074	-0.341	-0.070	-0.060
	(0.559)	(0.177)	(0.261)	(0.410)
SUB	0.057	0.359***	-0.263***	0.163
	(0.192)	(0.007)	(0.010)	(0.168)

CAPEX/ASSETS	-0.002	-0.015	0.004	0.003
	(0.310)	(0.259)	(0.405)	(0.512)
CASH/NETASSETS	0.142	-0.885	0.646***	0.638
	(0.536)	(0.208)	(0.004)	(0.257)
RETAIN/EQUITY	-0.022***	-0.024***	-0.063***	-0.066***
	(0.000)	(0.004)	(0.000)	(0.000)
HHI	0.115	0.541	0.488	0.600
	(0.205)	(0.195)	(0.117)	(0.112)
GDP_GROWTH	0.487	5.566*	1.692**	-0.409
	(0.373)	(0.070)	(0.031)	(0.622)
INFL	0.364	0.836	0.332	-0.374
	(0.558)	(0.575)	(0.709)	(0.739)
REGULATORY	0.067	-0.068	0.132	0.199
	(0.627)	(0.566)	(0.408)	(0.176)
Lagged DIV/NI	0.378***	0.058*	-0.044*	-0.072**
	(0.003)	(0.089)	(0.051)	(0.049)
Constant	-0.071	-1.745**	-1.215***	-2.123***
	(0.881)	(0.029)	(0.008)	(0.001)
Year Fixed Effect	YES	YES	YES	YES
Country Fixed Effect	YES	YES	YES	YES
Observations	123	123	193	193
Wald Chi2 (p-value)	0.000	0.000	0.000	0.000
AR(1) test statistics (p-value)	0.007	0.012	0.004	0.003
AR(2) test statistics (p-value)	0.998	0.233	0.298	0.603
Hansen J-statistics (p-value)	0.100	0.144	0.269	0.102

Note: P-values in parentheses, *p < 0.10, **p < 0.05, ***p < 0.01.

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