



DETERMINANTS OF MAQĀSĪD AL-SHARĪ'AH-BASED PERFORMANCE MEASUREMENT PRACTICES: THE CASE OF MALAYSIAN ISLAMIC BANKS

Muslim Har Sani Mohamad^{a,b}, Muhammad Ahmar Ali^c,
Ros Aniza Mohd Sharif^{a,d}

^a*Department of Accounting, International Islamic University Malaysia, Jalan Gombak, 53100 Kuala Lumpur, Malaysia. (Email: ^bmuslimh@iium.edu.my, ^daniza@iium.edu.my)*

^c*Department of Accounting and Finance, Universiti Malaysia Perlis, Jalan Kangar - Alor Setar, 01000 Kangar, Perlis, Malaysia. (Email: ahmar@unimap.edu.my)*

ABSTRACT

This study aims at investigating the practice of *Maqāṣid al-Sharī'ah* based performance measures, determinants of its successful implementation and its impact on Islamic bank performance. Understanding the extent that Islamic banks are institutionalizing *Maqāṣid al-Sharī'ah* based performance measures (*Maqāṣid* PMs) will provide greater insights into the development of Islamic banking in achieving the Islamic financial system objectives. A total of 146 questionnaires were distributed to all business units of all 16 Islamic commercial banks in Malaysia. The study found that contrary to the contemporary scepticism, Islamic banks in Malaysia are indeed promoting and committed to achieving *Maqāṣid al-Sharī'ah* with the relevant performance measures in place. Specifically, the study found that performance measures for public interest and fairness are widely used by the Islamic banks. With communication technology and regulatory compliance, use of *Maqāṣid al-Sharī'ah* based performance measures as Islamic banks' performance driver becomes more potent.

JEL Classification: N25, G21, L25, A13

Keywords: Islamic banks, Performance measurement, *Maqāṣid al-Sharī'ah*, Organizational performance, Malaysia

1. INTRODUCTION

Islamic banks as an essential element of the Islamic financial system must be initiated and developed to achieve *Maqāṣid al-Sharī'ah*

(objectives of Islamic law) ranging from preserving the individual rights of ownership to keeping public *maṣlahah* (interest) (Khan and Mirakhor, 1989; Siddiqi, 2006). However, previous studies highlight that Islamic banks focus more on profit maximization than on social performance (Ibrahim, 2006; Farook et al., 2011; Hasan, 2014). Nevertheless, the empirical evidence showing Islamic banks supporting *Maqāṣid al-Sharī'ah* is sparse. With the significant growth of the Islamic financial market globally, the debate on whether Islamic banking is an economic or a social entity has gained prominence. One of the key elements of Islamic banks in promoting the *Sharī'ah* objectives is the sophistication of the performance measurement system (PMS) in accommodating the managers' information needs.

The diverse information provided by the PMS for organizational control, achieving organizational goals and enhancing organizational performance is well documented in the literature (for example: Baines and Langfield-Smith, 2003; Chenhall and Langfield-Smith, 2007; Tung et al., 2011). The PMS helps Islamic banks respond to the internal and external industry changes. For Islamic banks, performance measurement practices should cover all aspects related to the core values of *Maqāṣid al-Sharī'ah* (Mohamed, 2010). Without appropriate measures, Islamic bank development will be at risk when social performance is deficient. Prior studies on comparison between Islamic and conventional banks have highlighted differences in organizational performance (for instance, Ahmad and Abdul-Rahman, 2012; Eljelly and Elobeed, 2013), noting that the Islamic financial institutions (IFIs) require a broader scope of performance and decision making information than their conventional counterparts because of *Sharī'ah* compliance needs (for example, Abdul Rasid and Abdul Rahman, 2011). However, no studies specifically examine the development of *Maqāṣid* PMs in the IFIs. Accordingly, this study aims at investigating the practice of *Maqāṣid al-Sharī'ah*-based performance measures (*Maqāṣid* PMs) and determinants of its successful implementation. The relationship between this unique set of performance measures, its determinants and Islamic banks' organizational performance is also investigated.

This study is unique as it introduces comprehensive *Maqāṣid* PMs specifically relevant to contemporary Islamic banks. Understanding to what extent Islamic banks are institutionalizing *Maqāṣid al-Sharī'ah* based performance measures will provide greater insights into Islamic banking development in achieving Islamic financial system objectives in a highly competitive and regulated industry. The study provides empirical evidence that Islamic

banks have incorporated comprehensive *Maqāṣid* PMs into their management control systems. Interestingly, performance measures for public interest and fairness are widely used by Islamic banks. Regulatory compliance and communication technology are found to be significant in explaining successful implementation of *Maqāṣid* PMs in Islamic banks; differentiation strategy, innovation and communication infrastructure technology are becoming significant factors in improving Islamic banking performance through greater use of *Maqāṣid* PMs. However, we found strong evidence that Islamic banks support stakeholder engagement as a means of advancing their interest in improving economic performance and organizational growth.

The remainder of the paper is organized as follows. In the next section, the literature is reviewed and hypotheses are developed, followed by the methodology section. The fourth section presents the results, and the last section concludes the paper.

2. LITERATURE REVIEW AND HYPOTHESIS DEVELOPMENT

2.1 *MAQĀṢID AL-SHARĪ'AH* AND ISLAMIC BANKS

According to Iqbal and Mirakhor (2007) and Abdul Razak and Ismail (2011), Islamic banking and finance is unique; it is distinct from conventional banking as it includes striving for a just, fair and balanced society. Dusuki and Abdullah (2007) argue that the rationale behind the emergence of an Islamic banking system goes beyond conforming to *Sharī'ah* injunctions in offering Islamic financial products. The system aims at fulfilling socioeconomic objectives including establishing fair economic development and activities. The objective of *Sharī'ah* is to support the wellbeing of the people, which includes the preservation of faith, life, intellect, progeny and wealth (Abdul Rahman, 2003). While maximizing business profit is permissible, social welfare must be considered for conducting fair and just business deals (Abdul Rahman, 2010).

With their unique feature of endeavoring to bring economic and social objectives into equilibrium, multidimensional performance measures could provide Islamic banks with comprehensive performance indicators to enhance organizational performance besides achieving *Maqāṣid al-Sharī'ah*. Failing to incorporate *Maqāṣid al-Sharī'ah* in the PMS would cause Islamic banks to abandon their original aims of serving the Muslim ummah. Mohammed et al. (2008) identify the elements of *Maqāṣid al-Sharī'ah*

to include educating individuals, establishing justice and protecting the public interest. According to Lewis (2001) and Beck et al. (2013), the Islamic economic system ensures that people can earn their living in a lawful and advantageous way without resorting to the extortion of others. Income and wealth generated from Islamic banking operations should be utilized to meet shareholders' interests and for the welfare of society. Hence, the obligation of *zakāh* (similar to alms-giving) imposed on business operations including those of Islamic banks is the most important instrument for redistributing income and wealth in society (Abu Bakar and Abd Ghani, 2011; Lewis, 2001). Nevertheless, this does not mean that Islamic banks need to compromise profit maximization. Abdul Rahman (2003) recognizes the importance of the banks in instilling stronger ethical values among managers for achieving profit targets in harmony with serving public interest. This ethical development can be undertaken via training and talent development. With proper management control and performance measurement system, this process can be embedded into the banks' activities.

2.2 OVERVIEW OF THEORETICAL MODEL

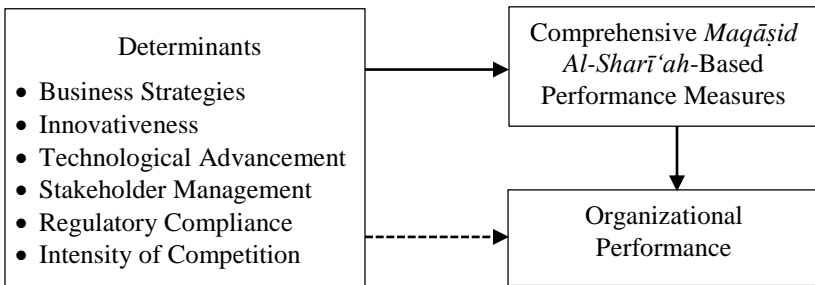
PMS is the backbone of the organization in achieving its strategic and operational objectives (Brignall and Ballantine, 1996; Ittner et al., 2003; Franceschini et al., 2013). Contingency theory posits that effective PMS design depends on its fit and alignment with internal and external forces (Mia and Clarke, 1999; Henri, 2006; Mohd Amir, 2011). This study aims at highlighting the determinants of the performance measures of Islamic banks and investigating the relationship between the *Maqāsid* PMs and organizational performance. Also, this study investigates the indirect relationship between the determinants of performance measurement practices and organizational performance through *Maqāsid* PMs. This indirect relationship test examines the determinants' effect on Islamic bank organizational performance via the implementation of *Maqāsid* PMs.

Six variables are considered as relevant determinants of PMS in Islamic banks in this study: business strategy, innovation, technological advancement, stakeholder management, regulatory compliance and intensity of competition. The business strategy variable is adopted from Mohd Amir et al. (2010), who tested it in relation to service-based industries in Malaysia. In the context of this study, business strategy consists of a differentiation strategy and a low cost/profit strategy. The inclusion of innovation is based on its use in several earlier studies (Damanpour, 1991; Das and Joshi 2007; Henri,

2006). The variable technological advancement is based on Zhu et al. (2004) and that of intensity of competition is in line with prior studies (Chong et al., 2005; Khandwalla, 1972; Mia and Clarke, 1999). The next determinant is stakeholder management, which is based on six critical factors in managing stakeholders introduced by Yang et al. (2009). Although regulatory compliance was excluded in previous studies, it is included here based on the results of the informal interview and commentary from the pilot study, and because the sector, including Islamic banking, is highly regulated.

With respect to the comprehensive *Maqāṣid* PMs, contemporary performance measures of Kaplan and Norton (1996) and performance measures based on the *Maqāṣid al-Sharī'ah* framework, including educating individuals, establishing justice and protecting public interest (Mohammed et al., 2008), are combined in this study. We argue that comprehensive performance measures are vital for all organizations and particularly for banks. Therefore, these multidimensional and contemporary performance measures could significantly contribute to PMS effectiveness (Tung et al., 2011) besides enhancing managerial performance (Hall, 2008). The performance measures present in the *Maqāṣid al-Sharī'ah* framework, based on the study of Mohammed et al. (2008), cannot be evaluated separately from contemporary comprehensive performance measures, and none of the dimensions of the comprehensive performance measures contradicts the *Sharī'ah*. Therefore, in this study, the combination of the diversity of performance measurement variables from Kaplan and Norton (1996) and Mohammed et al. (2008) could be considered as *Maqāṣid al-Sharī'ah*-based performance measures. The theoretical model of the study is illustrated in Figure 1.

FIGURE 1
Theoretical Model



Note: —> Direct Relationship, - - -> Indirect Relationship

2.3 DETERMINANTS OF COMPREHENSIVE PERFORMANCE MEASURES

2.3.1 BUSINESS STRATEGY

As Markus (1981) posits, strategy is a logic that guides choices; strategy in business is necessary for managing the internal as well as external environment for organizational market survival. Strategy is the key to identifying the critical success factors or focal points for operating control systems (Mohd Amir et al., 2010). Thus, organizations must develop and preserve appropriate strategies to align their decisions and actions with internal and external environments to enable successful competition.

Bastian and Muchlish (2012) found that business strategy is associated with non-financial PMSs. Using formal control through a PMS could be useful in generating and executing organizational strategies (Chenhall and Langfield-Smith, 1998; Langfield-Smith, 1997). In gaining market share, Islamic banks need diverse strategies supported by a contemporary PMS. Selecting an appropriate strategy and the right metrics in strategy execution could help Islamic banks to establish strong demand and to compete with other providers to improve their own performance. Thus the following hypothesis is constructed:

H1. There is a significant positive relationship between business strategy and *Maqāsid al-Sharī'ah*-based performance measures (Maqāsid PMs).

2.3.2 INNOVATION

The financial industry business environment is highly competitive given the rapid technology change, government regulations and global competition. Abdul Majid and Hassan (2011) suggest that the level of Islamic bank innovation in product development depends on staff experience in dealing with competitive demands from customers. Top management must foster innovation so that the organization can meet customer needs and complex business requirements. With PMS supporting innovation, management has the necessary information to cope with new product designs and processes. As innovation frequently requires trial and error, some unpredictability in the success rate is expected (Russell and Russell, 1992). Literature shows that diverse performance measures facilitate response to unpredictability and innovation (Abdul Rasid, 2009; Tillema, 2005). Therefore, the following hypothesis is proposed:

H2. There is a significant positive relationship between innovation and *Maqāṣid* PMS.

2.3.3 TECHNOLOGICAL ADVANCEMENT

Technology refers to how an organization's work processes operate in producing output from input. Advances in information technology (IT) often trigger adoption of a particular performance and management accounting system. Financial sector adoption of IT and technology in general enables the banking industry to respond faster to customer needs. Investment in IT is important because it can help the banking industry to remain interactive and competitive. According to Dangolani (2011), IT helps customers and employees to save time, reduces expenses and facilitate transactions.

Deng et al. (2011) studied bank productivity in Malaysia over the period 2001–2008 during the internet innovation era. They suggest that bankers should develop appropriate strategies to deal with the internet impact on the banking sector to enhance long term performance. Technological advancement has proven to be one of the contingent factors in a PMS. Chenhall (2003) claims that IT evolution is leading to PMS implementation in many organizations. Technology advances may be considered as added value to customers since they can provide non-financial as well as financial information in PMS (Abernethy and Lillis, 1995; Bledsoe and Ingram, 1997; Baines and Langfield-Smith, 2003) Hence, Islamic banks need to consider technological advancement for increased operational efficiency and improved organizational performance. The following hypothesis is formulated:

H3. There is a significant positive relationship between technological advancement and *Maqāṣid* PMS.

2.3.4 STAKEHOLDER MANAGEMENT

Stakeholder theory states that increasing the value to stakeholders is the main goal of an organization. Customers, co-workers, suppliers, management, stockholders, government and other groups are frequently dominant enough to merit being regarded as stakeholders (Johansson 2008; Simmons, 2008). Stakeholders offer the necessary financial resources or support for an organization. Failing to meet their expectations leads to withdrawal of support hence threatening organizational performance (Johansson, 2008). As Lo (2013) suggests, an organization should adopt a strategy integrating the

demands and needs of multiple stakeholder groups to sustain long term growth. With regard to stakeholder management and organizational performance, the literature shows mixed results on whether companies involved in managing stakeholders' interests can improve financial performance (e.g., Hillman and Keim, 2001; Galbreath, 2006; Moneva *et. al.*, 2007; Rais and Goedegebuure, 2009; Behery and Eldomiaty, 2010). Nevertheless, *Maqāṣid al-Sharī'ah* places special emphasis on the welfare of society and, as supported by Dusuki and Abdullah (2007), the proper response to stakeholder interests is one of the key determinants for Islamic banking development. We therefore propose that stakeholder management promotes greater use of *Maqāṣid PMs*. This leads to the following hypothesis:

H4. There is a significant positive relationship between stakeholder management and *Maqāṣid PMs*.

2.3.5 REGULATORY COMPLIANCE

The banking industry is a highly regulated sector, with the central banks providing the monitoring mechanism and enforcement. Regulatory restrictions permit economic expansion under a stable financial system (Barth *et al.*, 2004). Munir *et al.* (2013) show that regulation is one of the major contingent factors for banks' changing their PMS in emerging economies. As regulation positively affects performance, Alam (2013) found that higher supervisory power increases the Islamic bank technical efficiency. He indicated that one reason for this is that Islamic banks are governed by *Sharī'ah* law as well as a national banking laws system. Since Islamic banks must operate according to *Sharī'ah* law, the *Sharī'ah* supervisory system for Islamic banks is considered a necessity to assure the progression and stability of the Islamic finance industry (Grassa, 2013). The *Sharī'ah* committee was introduced to support the *Maqāṣid al-Sharī'ah* and preserve its purity through decisions based on in-depth discussion and consultation processes (Bank Negara Malaysia, 2010).

Currently, Malaysian Islamic banking institutions are governed by the Islamic Financial Service Acts 2013 issued by Bank Negara Malaysia that came into effect in March 2013. This Act covers rules, regulation and surveillance of Islamic financial institutions, payment systems and other related entities and the oversight of the Islamic money market and Islamic foreign exchange market to develop financial stability and compliance with *Sharī'ah* and for relative consequential or incidental matters (Law of Malaysia, 2013).

Clearly, the enactment of the Act aimed at promoting Islamic banking practice consistent with *Maqāṣid al-Shari'ah*. Therefore, the following hypothesis is posited:

H5. There is a significant positive relationship between regulatory compliance and *Maqāṣid* PMs

2.3.6 INTENSITY OF COMPETITION

Mia and Clarke (1999) highlighted that organizational performance is facing intense competition but failure to adapt and develop corresponding strategies will cause decline. Intense market competition requires firms to develop comprehensive performance measures to reduce the uncertainty and unpredictability (Chenhall and Morris, 1986; Chong et al., 2005; Fleming et al., 2009; Munir et al., 2013). Hence, if a firm implements an integrated PMS, it is expected that it will be able to grow and survive in a competitive market. This is consistent with Khandwalla (1972), who states that the sophistication of an accounting and control system is affected by intensity of competition.

Islamic banks could face similar circumstances in a competitive market. According to Abdul Majid and Hassan (2011), as the number of institutions providing Islamic banking services dramatically increases, major conventional banks have established Islamic banking subsidiaries to compete with the existing full-fledged Islamic banks. To maintain market share, Islamic banks must adopt diverse performance measures including *Shari'ah*-based performance measures. Since the vast majority of Islamic bank customers patronize Islamic banks in accordance with their religious obligations, every aspect of these banks' operations and activities must be measured according to *Sharī'ah* guidelines and principles. Based on this discussion the following hypothesis is constructed:

H6. There is a significant positive relationship between intensity of competition and *Maqāṣid* PMs.

2.4 MAQĀṢID AL-SHARĪ'AH-BASED PERFORMANCE MEASURES AND ORGANIZATIONAL PERFORMANCE

Prior studies have shown a strong positive relationship exists between diversity of performance measures and organizational performance (Davis and Albright, 2004; Mohamad et al., 2013). The balanced scorecards (BSC) in particular advocate using non-financial measures to complement financial measures to produce an extensive expression

of an organization's measurement and performance evaluation system (Lau and Berry, 2010). Measuring organizational performance by using diverse performance measures could help management to capitalize organizational capabilities beyond the financial aspects (Henri, 2006). Cumby and Conrod (2001) contend that reliance on financial measures is insufficient because continuous shareholder value is driven by non-financial factors such as customer loyalty, employee satisfaction and product innovation. Moreover, the financial measures alone do not support the internal decision-making process because it focuses only on measuring historical data, especially from financial reports. Consequently, consideration of non-financial indicators covering customers, internal business processes, employees, learning and growth is expected to improve Islamic bank performance. Based on this discussion, the following hypothesis is formulated:

H7. There is a significant positive relationship between *Maqāṣid* PMS and organizational performance

2.5 DETERMINANTS OF PERFORMANCE MEASUREMENT PRACTICES, *MAQĀṢID* PMS AND ORGANIZATIONAL PERFORMANCE OF ISLAMIC BANKS

Previous research shows that some of the determinants such as business strategy and intensity of competition are hypothesized to have an indirect relationship with organizational performance through a variety of performance measures (Mia and Clarke, 1999; Mohd Amir, 2011), while innovation and technological advancement are related to the performance measurement system (Abdul Rasid, 2009). It is proposed that the effects of the determinants on Islamic bank performance may occur through increased use of *Maqāṣid PMS*. Therefore, the following hypothesis is proposed:

H8. There is a significant positive indirect relationship between determinants (Strategy, Innovation, Technological advancement, stakeholders management, regulatory compliance, and intensity of competition) of performance measurement practices and organizational performance acting through *Maqāṣid PMS*.

3. DATA AND RESEARCH DESIGN

3.1 DATA COLLECTION PROCEDURES

In providing support for the hypotheses, this study adopts a cross-sectional design for data collection using a self-administered

questionnaire sent to all Islamic commercial banks operating in Malaysia. At the time of writing, there are sixteen Islamic commercial banks operating in Malaysia (Bank Negara Malaysia, 2014); five are classified as full-fledged Islamic banks, and eleven as Islamic banking subsidiaries. The target respondents of the study are head officers/senior managers at divisional/departmental level in the headquarters (HQs) of both types of Islamic bank. The divisions or departments include Finance, *Sharī'ah*, Product Development, Retail Banking, Corporate Banking, Human Resources and Risk (as well as several organization-specific departments). Head officers/senior managers are selected as respondents because they have sufficient experience and knowledge to answer the survey questions. This was confirmed by the results of the pilot study. Selecting Strategic Business Units (SBUs) managers as respondents is consistent with prior studies in PMS (e.g., Mia and Clarke, 1999; Baines and Langfield-Smith, 2003; Indjejikian and Matejka, 2006). These head officers are assumed to be involved in developing performance measurement and responsible for a successful organizational implementation process.

TABLE 1
Number of Divisions of Islamic Banks

No.	Islamic Bank	No. of divisions (SBUs)
1.	Affin Islamic Bank Berhad	8
2.	Al-Rajhi Banking & Investment Corporation (Malaysia) Berhad	10
3.	Alliance Islamic Bank Berhad	2
4.	AmIslamic Bank Berhad	6
5.	Asian Finance Bank Berhad	10
6.	Bank Islam Malaysia Berhad	20
7.	Bank Muamalat Malaysia Berhad	20
8.	CIMB Islamic Bank Berhad	6
9.	HSBC Amanah Malaysia Berhad	6
10.	Hong Leong Islamic Bank Berhad	8
11.	Kuwait Finance House (Malaysia) Berhad	12
12.	Maybank Islamic Berhad	10
13.	OCBC Al-Amin Bank Berhad	7
14.	Public Islamic Bank Berhad	8
15.	RHB Islamic Bank Berhad	8
16.	Standard Chartered Saadiq Berhad	5
	Total	146

To determine the number of respondents, a systematic review of organizational structure of each Islamic bank was undertaken, with

the number of divisions being confirmed by relevant officers of each bank. A total of 146 heads of divisions (SBUs) were identified as respondents in all sixteen Islamic commercial banks, as shown in Table 1. The majority of main offices of the Islamic banks in Malaysia are located in Kuala Lumpur.

TABLE 2
Questionnaire response rates

Type of Islamic bank	No. of questionnaires sent	No. of questionnaires collected	Percentage
Full-fledged Islamic bank	72	31	43.1
Islamic banking subsidiary	74	46	62.2
Total	146	77	52.7

Table 2 shows that 72 questionnaires were sent to full-fledged Islamic banks and the remaining 74 to Islamic banking subsidiaries. Out of 146 questionnaires sent, only 82 completed questionnaires were returned (36 from full-fledged Islamic banks and 46 from Islamic banking subsidiaries). The majority of questionnaires were collected, two were returned by post and 11 were completed and returned using the online version. Five questionnaires from full-fledged Islamic banks were found to be incomplete and were excluded from the sample. As a result, only 77 completed questionnaires were accepted (31 from full-fledged Islamic banks and 46 from Islamic banking subsidiaries), providing a 52.7% response rate. Consistent with Sekaran (2006), the response rate is considered adequate. The details of the total responses received based on the two types of Islamic bank are shown in Table 2.

The background of the respondents is presented in Table 3. From a total of 77 usable questionnaires, only 76 respondents indicated their gender. The result shows that there were more male respondents (68.4%) than female respondents (31.6%). The respondents were mainly in the age range of 41 to 45 years (26%) with the lowest percentage in the age range 31 to 35 years (6.5%). Only 75 respondents gave details about their education level. Most of them were well educated because they were in the postgraduate level group (60%). Even though the majority of respondents had been working in their organization for less than five years, most of them indicated

seniority in terms of age and length in current position. Head officers/senior managers who have worked for their organization for at least one year would have an understanding of the market in which their SBU operates (Mia and Clarke, 1999). Since approximately 80% of the head officers have been working in their current position for 2 years and more, the selected respondents were considered acceptable because they have sufficient experience in implementing performance measures in their organization.

TABLE 3
Demographic profile of respondents

	Frequency($n=77$)	Percent
Gender		
Male	52	68.4
Female	24	31.6
Age		
Under 31	9	11.7
Between 31–35	5	6.5
Between 36–40	12	15.6
Between 41–44	20	26.0
Between 45–50	18	23.4
Above 50	13	16.9
Education		
Undergraduate	26	34.7
Postgraduate	45	60.0
Others	4	5.3
Length of service in organization		
Less than 5 years	39	50.6
Between 5–10 years	15	19.5
Between 11–15 years	2	2.6
Between 16–20 years	7	9.1
Between 21–25 years	7	9.1
More than 25 years	7	9.1
Length of time in current position		
Less than 1 year	16	20.8
Between 2–5 years	46	59.7
Between 6–10 years	14	18.2
Between 11–15 years	0	0
More than 15 years	1	1.3

3.2 MEASUREMENT OF VARIABLES

Questions on the determinants of performance measurement practices focused on the six proposed determinants of performance

measurement practices: business strategy, innovation, technological advancement, stakeholder management, regulatory compliance and intensity of competition. The choice of variables was based on previous studies. The business strategy variables were adopted from the research of Mohd Amir et al. (2010) on service-based industries; the innovation variable was based on Damanpour (1991), Das and Joshi (2007) and Henri (2006); technological advancement was based Zhu et al. (2004); the intensity of competition variables were based on Chong et al. (2005), Khandwalla (1972) and Mia and Clarke (1999); the stakeholder management variables were based on the six critical factors for managing stakeholders outlined by Yang et al. (2009). Questions for regulatory compliance were self-developed, based on analysis of the informal interviews and comments from the pilot study. Factor analysis was used to select the questions within each group of variables and the results are summarized in Table 4. For more details, please refer to Appendix 1.

TABLE 4
Factor analysis of determinants for performance measurement practices

Items	Eigen-value	% of variance	Cronbach's alpha
Differentiation Strategy (<i>DS</i>)	3.141	52.348	0.801
Innovation (<i>INNO</i>)	4.112	58.748	0.881
Communication Infrastructure Technology (<i>CIT</i>)	5.437	32.739	0.855
Communication Technology (<i>CT</i>)	1.083	32.465	0.852
Stakeholder Management (<i>SM</i>)	3.132	52.206	0.795
Regulatory Compliance (<i>REG</i>)	3.158	78.939	0.908
Product-based Competition (<i>PBC</i>)	2.486	62.146	0.790
Non-product-based Competition (<i>NBC</i>)	2.571	64.282	0.781

Consistent with the theory, only items with loading factors > 0.60 obtained from confirmatory factor analyses were included for further testing. All items under innovation, stakeholder management, and regulatory compliance were loaded into one component. The Cronbach alphas for all determinants exceeded 0.7, indicating satisfactory internal reliability of the scale. The technological advancement determinant was loaded into two components: 'communication infrastructure technology' and 'communication technology'. Both components indicated a total variance of 32.74% and 32.47% and produced very high values of Cronbach's alpha, exceeding 0.8. The items under intensity of competition were also

loaded into two components: 'product-based competition' and 'non-products-based competition' with factor loading exceeding the minimum threshold and high Cronbach's alpha value reflecting reliability of the constructs.

The *Maqāṣid al-Sharī'ah*-based performance measures (*Maqāṣid* PMs) variable was developed based on the BSC framework adopted from Kaplan and Norton (1996) and *Maqāṣid al-Sharī'ah* framework by Mohammed et al. (2008). These measures were combined because comprehensive performance measures are essential for both strategic and operational concerns of banks. *Maqāṣid* PMs, developed by Mohammed et al. (2008), could not be assessed in isolation without considering other critical organizational aspects of performance. In addition, the BSC comprehensive performance measures should be integrated with the *Maqāṣid* PMs framework because these common but important categories of measures do not contradict *Sharī'ah* principles. Therefore the measures proposed in both studies (Kaplan and Norton, 1996; Mohammed et al. 2008) could all be considered as *Maqāṣid* PMs and, consequently, all these measures could act as performance indicators for how Islamic banks run their operations and activities in achieving their organizational objectives as well as *Maqāṣid al-Sharī'ah*. The items of *Maqāṣid* PMs were measured based on a seven-point interval scale ranging from 1 (not applicable) to 7 (successfully implementing). BSC measures have been tested by prior researchers including studies on the banking industry (for example, Al-Najjar and Kalaf, 2012; Wu, 2012; Zhang and Li, 2009). Measures for *Maqāṣid al-Sharī'ah* include the following themes: education, fairness and justice, and public interest.

Confirmatory factor analysis for each of BSC perspective measures was undertaken as shown in Table 5, producing results as expected except for 'training in instilling new skills for staff improvement', which showed low factor loading of below 0.5. For more details, please refer to Appendix 2. Nevertheless, the item was included for further analysis because it is a well-established item, as noted by Kaplan and Norton (1996). All the factors show Cronbach's alpha values above 0.8. With regard to specific *Maqāṣid* PMs, the education (educating the individual) measures were loaded into one component and showed a variance of 57.084% and a high Cronbach alpha of 0.797. None of the items was excluded from this variable. However, the 'interest-free products' item under the fairness and justice (promoting justice) measures was excluded from further analysis because it displayed a low factor loading. A second PCA was undertaken for fairness and justice measures after the two items were

dropped. As a result, the value of Cronbach's alpha increased to 0.565 with a variance of 69.71%. 'Corporate social responsibility activities' and 'collection and distribution of *zakāh* fund' were excluded from further analysis for the protection of public interest measures because of low factor loading resulting in an improved variance of 58.63% with an average Cronbach alpha value of 0.616. The performance measures index for each bank was determined by taking the mean score of all finalized items of the *Maqāṣid* PMs in which a higher score indicates a greater use of the diverse performance measures.

TABLE 5
Factor analysis of *Maqāṣid al-Sharī'ah*-based performance measures

Items	Eigen-value	% of variance	Cronbach's alpha
Financial	3.945	65.745	0.865
Internal Business	2.858	71.453	0.864
Learning and Development	3.002	60.039	0.811
Employees	2.451	49.002	0.733
Customers	4.090	81.808	0.924
Shareholders	4.662	77.025	0.940
Education	2.854	57.084	0.797
Fairness and Justice Measures	1.394	69.709	0.565
Public Interest	1.759	58.629	0.616

The organizational performance items were adapted from Hoque (2004). Five items of performance were return on investment, margin on sales, capacity utilization, customer satisfaction and product quality, with a rating scale ranging from 1 (below average) to 7 (above average). The mean of all items was computed to present the performance index for each bank. Perceptual performance as measured in this study has been widely used by other accounting researchers (e.g., Chenhall and Langfield, 1998; Govindarajan and Gupta, 1985; Hoque, 2004). The respondents were asked to rate their bank's organizational performance compared to that of their competitors.

4. RESULTS

4.1 DESCRIPTIVE STATISTICS AND THE CORRELATION MATRIX

Table 6 presents the mean scores for all variables; all are greater than 5.0, indicating that the score distribution is strongly skewed toward agreement. For comprehensive performance measures, all categories of measures have a mean greater than 3.5, indicating that the score

distribution is skewed toward successful use of diverse performance measures including the specific *Maqāṣid al-Sharī'ah* measures. The finding supports prior studies in Malaysia, showing significant use of multidimensional performance measures (Mohammad and Shahwan, 2013; Ruzita and John, 2008). However, education-based measures have the lowest mean score, suggesting that the Islamic banks have not yet given education as much importance as other performance dimensions. Finally, the organizational performance variable also has a relatively high mean score of 5.13.

TABLE 6
Descriptive statistics

Variables	No. of Items	Min	Max	Mean	Std Dev.
Differentiation Strategy (DS)	6	3.67	7.00	6.055	0.698
Innovation (INNO)	7	3.57	7.00	5.735	0.738
Comm. Infrastructure Technology (CIT)	6	3.67	7.00	5.596	0.825
Comm. Technology (CT)	4	4.00	7.00	6.130	0.797
Stakeholder Management (SM)	6	4.67	7.00	6.065	0.570
Regulatory Compliance (REG)	4	2.75	7.00	6.185	0.929
Product-based Competition (PBC)	4	2.00	7.00	5.708	0.787
Non-product-based Competition (NBC)	4	2.00	7.00	5.582	0.897
Financial	6	1.00	7.00	5.955	1.054
Internal Business	4	3.00	7.00	6.007	0.858
Learning and Growth	5	2.00	7.00	5.566	1.085
Employees	5	2.40	7.00	5.484	1.056
Customers	5	2.40	7.00	6.129	0.763
Shareholders	6	1.00	7.00	5.231	1.480
Education	5	1.60	7.00	4.816	1.231
Public Interest	3	3.00	7.00	5.836	0.885
Fairness	2	2.00	7.00	5.714	0.912
Performance	5	1.00	7.00	5.128	1.152

This study seeks to identify the factors affecting *Maqāṣid* PM practice and their relationship to Islamic bank organizational performance in Malaysia. The correlations in Table 7 show the strong positive effect of differentiation strategy and both communication technology variables on the *Maqāṣid* PMs. Organizational performance is also significantly correlated with the *MSPM*. This provides preliminary support for some of the expected relationships as hypothesized. Nevertheless, Table 7 also shows that none of the correlations exceeds 0.70; thus, multicollinearity does not pose a problem in the regression model.

TABLE 7
Correlation Matrix

	DS	INNO	CIT	CT	SM	REG	PBC	NBC	MSPM
INNO	.578**	1							
CIT	.397**	.302**	1						
CT	.285*	.233*	.688**	1					
SM	.376**	.433**	.462**	.436**	1				
REG	.273	.231*	.177	.194	.279*	1			
PBC	.460**	.548**	.133	.216	.196	.143	1		
NBC	.334**	.371**	.038	.017	.181	.126	.669**	1	
MSPM	.236*	.107	.429**	.305**	.147	.166	.025	-.075	1
PERF	.186	.124	.332**	.290*	.128	.223	.031	-.185	.687**

Note: **Correlation is significant at the 0.01 level (2-tailed)

* Correlation is significant at the 0.05 level (2-tailed)

4.2 HYPOTHESIS TESTING

Multiple regression analysis was conducted to investigate whether there is any direct relationship between the determinants of performance measurement practices and the *Maqāṣid* PMs of Islamic banks in Malaysia. The regression equation is as follows:

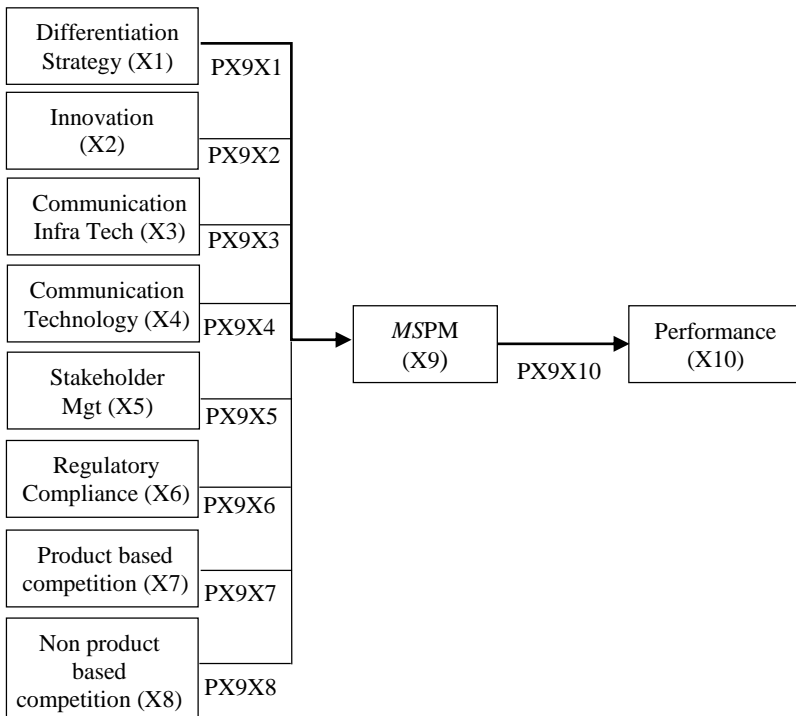
$$(1) \quad MSPM = \beta_0 + \beta_1 DS + \beta_2 INNO + \beta_3 CIT + \beta_4 CT + \beta_5 SM + \beta_6 REG + \beta_7 PBC + \beta_8 NBC + e$$

Table 8 shows the result of the regression; it reveals that communication technology (CT) ($p < 0.1$, two tailed) and regulatory compliance (REG) ($p < 0.1$, two tailed) are positive and significant in influencing the practice of *Maqāṣid* PMs. These results provide support for H3 and H5. However, stakeholder management (SM) negatively impacts PMS practice with the significant standardized coefficient (Beta) of -0.334 ($p < 0.05$, two tailed). With significant regulatory compliance, this seems to suggest that Islamic banks are more concerned with developing performance measures to manage central bank pressure than to address other stakeholders' interests. Thus, H4 is rejected. Although the standardized coefficients for DS, INNO, and CIT are insignificant and the relevant hypotheses are not supported, these variables seem to be positively associated with the *Maqāṣid* PMs. This implies that Islamic banks are in need of effective PMS to link their strategy, innovative initiatives and information systems. Contradictory to prior studies, competition is found to be insignificant for PMS use in Islamic banking.

TABLE 8
Multiple Regression Result (Dependent variable: *MSPM*)

Independent Variables	Standardized Coefficient Beta	p-value
Differentiation Strategy (DS)	0.146	0.365
Innovation (INNO)	0.125	0.405
Communication Infrastructure Technology (CIT)	0.200	0.250
Communication Technology (CT)	0.289	0.096
Stakeholder Management (SM)	-0.334	0.031
Regulatory Compliance (REG)	0.229	0.076
Product-based Competition (PBC)	-0.030	0.849
Non Product-based Competition (NBC)	0.049	0.734
Adjusted <i>R</i> ²	0.237	
<i>F</i> -Value	3.518	0.002

FIGURE 2
Path Diagram



In providing support for the effect of *Maqāṣid* PMs on organizational performance of Islamic banks, univariate regression was undertaken and the result shows significant relationship with the standardized coefficient of 0.669 ($R^2 = 0.440$, $p = 0.00$). The result suggests that increased sophistication in *Maqāṣid* PMs implementation increases performance of Islamic banks. This provides support for H7.

TABLE 9
Path coefficients and decomposition of effects

	Direct path coefficient	Direct effect	Indirect path Coefficient (PX10X9=0.669)	Indirect effect	Unanalyzed effects
X1					
X9	PX9X1	0.146	N/A	N/A	0.090
X10	N/A	N/A	PX10X9 PX9X1	0.098	0.088
X2					
X9	PX9X2	0.125	N/A	N/A	-0.018
X10	N/A	N/A	PX10X9 PX9X2	0.084	0.040
X3					
X9	PX9X3	0.200	N/A	N/A	0.229
X10	N/A	N/A	PX10X9 PX9X3	0.134	0.198
X4					
X9	PX9X4	0.289	N/A	N/A	0.016
X10	N/A	N/A	PX10X9 PX9X4	0.193	0.097
X5					
X9	PX9X5	-0.334	N/A	N/A	0.481
X10	N/A	N/A	PX10X9 PX9X5	-0.223	0.352
X6					
X9	PX9X6	0.229	N/A	N/A	-0.063
X10	N/A	N/A	PX10X9 PX9X6	0.153	0.070
X7					
X9	PX9X7	-0.030	N/A	N/A	0.055
X10	N/A	N/A	PX10X9 PX9X7	-0.02	0.051
X8					
X9	PX9X8	0.049	N/A	N/A	-0.125
X10	N/A	N/A	PX10X9 PX9X8	0.033	-0.128

Subsequently, H8 proposed that the relationships between determinants of performance measurement practices and organizational performance are indirect through *Maqāṣid* PMs. Adopting traditional path analysis techniques, each determinant was evaluated in order to examine its indirect effects on banks' performance. Many previous studies have used such a method of analysis (e.g., Bouwens and Abernethy, 2000; Hoque 2004; Lau and Sholihin, 2005; Sharma, 2002). Figure 2 shows the path diagram while the results of the analysis are shown in Table 9.

According to Sharma (2002), a path coefficient of 0.06 or higher indicates that a significant indirect effect exists between the variables. The results presented in Table 9 show that DS, INNO, CIT, CT, and REG have a significant positive indirect effect on organizational performance through *Maqāṣid* PMs. However, the results for competition (PBC and NBC) indicate that the indirect effect is insignificant, and for SM, it shows significant negative indirect effect on financial performance of the banks. Thus, H8 is partially accepted.

5. DISCUSSION AND CONCLUSION

Recognizing that Islamic bank success in achieving both economic and social performance depends on effective implementation of *Maqāṣid* PMs, the aim of the study is to investigate the practice of *Maqāṣid* PMs, determinants of its successful implementation and their impact on bank performance. The literature highlights business strategy, innovation, technological advancement, stakeholder management, regulatory compliance and intensity of competition as determinants of *Maqāṣid* PMs.

From the findings, Islamic banks in Malaysia provide equal emphases on all aspects of performance dimensions, including social performance measures, to form a coherent *Maqāṣid al-Sharī'ah*-based performance measurement system. Although a slight weakness was found for education-based measures, with the response mean of 4.81, measures for public interest and fairness share comparable response means to financial, internal business, learning and growth, employee and customer based perspectives. The empirical findings provide evidence that Islamic banks are in fact promoting the universal objectives of *al-Sharī'ah* in their activities. This contradicts the notion that Islamic banks focus on profit maximization at the expense of their contribution to society. The results of this study complement findings by Mohammed et al. (2008) that Islamic banks are practicing *Maqāṣid*

PMs at different levels of sophistication. Furthermore, the findings show that *Maqāṣid* PMs improve organizational performance. These results support the findings of Anand et al. (2005), Davis and Albright (2004), Ittner et al. (2003) and Mohamad et al. (2013), who found that using more diverse performance measures will enhance organizational performance.

The findings show that regulatory compliance has a significant and positive relationship with the *Maqāṣid al-Sharī'ah*-based performance measures in Islamic banks in Malaysia. These findings support Alam (2013) and Barth et al. (2013), who found that regulation affects the banking industry performance efficiency. Regulatory compliance has a significant effect because the banking industry is highly regulated and supervised by the central bank, Bank Negara Malaysia. Moreover, Islamic banking activities and operations must be in line with *Sharī'ah* (Grassa, 2013). Highlighting the important role of the central bank, the relevant regulatory framework including *Sharī'ah* supervisory committee is significant in facilitating Islamic banks' move towards the ideals of an Islamic financial system, focusing on balanced development in both economic and social dimensions. Development is only possible if the banks are equipped with the correct set of PMS (in this case, *Maqāṣid* PMs). Interestingly, with strong regulatory compliance, competition is found to be insignificant in implementing comprehensive performance metrics. This further highlights the distinctiveness of the banking industry, because in other sectors competition is one of the contingent factors in the adoption of contemporary PMS, as highlighted by Mohd Amir et al. (2010) and Abdul Rasid (2009). The study's results also contradict those of Mia and Clarke (1999), who showed that intensity of market competition leads to managers using more accounting information for measuring organizational performance.

Communication technology is found to directly support implementation of *Maqāṣid* PMs. These findings confirm those of Abdul Rasid (2009). Chenhall (2003) also claims that technological advancement contributes to PMS implementation because technology quickly provides information for an organization. Baines and Langfield-Smith (2003) also found that changes in advanced manufacturing technology have led to greater reliance on non-financial accounting information. However, stakeholder management is found to be negatively significant to the practice of *Maqāṣid* PMs and bank performance. This tends to suggest that although Islamic banks are involved in managing multiple interests of stakeholders, this involvement was based not on concern over stakeholder welfare and

was more about improving financial performance. This finding is consistent with the literature that supports stakeholder engagement as the means for organizational growth (e.g., Behery and Eldomiaty, 2010; Galbreath, 2006; Rais and Goedegebuure, 2009; Lahouel et al., 2014).

Also, the study highlights that the *Maqāsid* PMs are so important for Islamic bank development because they are catalysts for the PMS determinant effectiveness in improving the banks' performance. Differentiation strategy, innovation, communication technology and regulatory compliance are all significant to improving bank performance through the use of *Maqāsid* PMs. These findings are consistent with prior studies by Mohd Amir et al. (2010) who found that focusing on a differentiation strategy when implementing a PMS enhances organizational performance, and Baines and Langfield-Smith (2003), who found that technology advances improve organizational performance through greater reliance on non-financial accounting information. With regard to competition, however, the results of this study contrast with those of Mia and Clarke (1999) and Mohd Amir et al. (2010), who found that there is a relationship between market competition and organizational performance through the use of accounting information as well as PMS.

Although the findings of this study are subject to limitations inherent in the questionnaire survey method and limited variables identified based on the pertinent factors emerging from the current literature, they provide a useful platform for future studies. As this study focuses on Islamic banks in general, no distinction is made between fully fledged Islamic banks and Islamic banks with conventional banks as parent companies; hence future research should examine the commitment of different categories of Islamic banks in promoting the Islamic financial system objectives. Also, case studies on specific Islamic banks should be undertaken to provide deeper insight to support strong evidence that Islamic banks do implement PMS to uphold the *Maqāsid al-Shari'ah*. Case studies may be able to elaborate further specific variables affecting the practice of *Maqāsid* PMs.

In conclusion, this study provides strong evidence that, contrary to the contemporary scepticism, Islamic banks in Malaysia are indeed promoting and committed to achieving *Maqāsid al-Sharī'ah* with the relevant performance measures in place. With communication technology and regulatory compliance, use of *Maqāsid al-Sharī'ah* based performance measures as banks'

performance drivers becomes more potent. This guarantees effective mobilization of innovation, technology and the right strategy to improve Islamic bank performance.

REFERENCES

- Abernethy, M.A., and A. Lillis. "The Impact of Manufacturing Flexibility on Management Control System Design." *Accounting, Organization and Society* 20, no. 4 (1995): 241-58.
- Abdul Majid, M., and M.K. Hassan. "The Impact of Foreign-Owned Islamic Banks and Islamic Bank Subsidiaries on The Efficiency and Productivity Change of Malaysian Banks." *Islamic Econ.* 24, no. 2 (2011): 147-74.
- Abdul Rahman, A.R. *An Introduction to Islamic Accounting Theory and Practice*. Kuala Lumpur: CERT Publication, 2010.
- _____. "Ethics in Accounting Education: Contribution of Islamic Principle of Maşlahah." *IIUM Journal of Economics and Management* 11, no.1 (2003): 31-49.
- Abdul Rasid, S.Z. "Management Accounting System in Financial Institutions: Influencing Factors, Organizational Performance and Risk Management." PhD dissertation, International Islamic University Malaysia, 2009.
- _____, and A.R. Abdul Rahman. "Management Accounting Systems in Islamic and Conventional Financial Institutions in Malaysia." *Journal of Islamic Accounting and Business Research* 2, no. 2 (2011): 153-76.
- Abdul Razak, D., and Y. Ismail. "Diminishing Partnership: Bankers Strategic Response to Shariah Compliant Home Financing." *International Journal of Economics, Management and Accounting, Supplementary Issue* 19 (2011): 177-96.
- Abu Bakar, M., and A. Abd Ghani. "Towards Achieving the Quality of Life in the Management of Zakat Distribution to the Rightful Recipients (the Poor and Needy)." *International Journal of Business and Social Science* 2 (2011): 237-45.
- Ahmad, S., and A.R. Abdul Rahman. "The Efficiency of Islamic and Conventional Commercial Banks in Malaysia." *International Journal of Islamic and Middle Eastern Finance and Management* 5, no. 3 (2012): 241-53.
- Al-Najjar, S.M. and K.H. Kalaf. "Designing a Balanced Scorecard to Measure a Bank's Performance: A Case Study." *International Journal of Business Administration* 3, no. 4 (2012): 44-53.

- Alam, N. "Impact of Banking Regulation on Risk and Efficiency in Islamic Banking." *Journal of Financial Reporting and Accounting* 11, no. 1 (2013): 29-50.
- Anand, M., B.S. Sahay and S. Saha. "Balance Scorecard in Indian Companies." *Vikalpa* 30, no. 2 (2005): 11-25.
- Baines, A., and K. Langfield-Smith. "Antecedents to Management Accounting Change: A Structural Equation Approach." *Accounting, Organizations and Society* 28 (2003): 675-98.
- Bank Negara Malaysia. "Sharī'ah Governance Framework, 2010". http://www.bnm.gov.my/guidelines/05_shariah/02_Shariah_Governance_Framework_20101026.pdf.
- _____. 2014. <http://www.bnm.gov.my>.
- Barth, J.R., C. Lin, Y. Ma, J. Seade, and F.M. Song. "Do Bank Regulation, Supervision and Monitoring Enhance or Impede Bank Efficiency?" *Journal of Banking and Finance* 37 (2013): 2879-92.
- _____, G. Caprio, and R. Levine. "Bank Regulation and Supervision: What Works Best?" *Journal of Financial Intermediation* 13 (2004): 205-48.
- Bastian, E., and M. Muchlish. "Perceived Environment Uncertainty, Business Strategy, Performance Measurement Systems and Organizational Performance." *Social and Behavioral Sciences* 65 (2012): 787-92.
- Beck, T., A. Demirgüç-Kunt, and O. Merrouche. "Islamic vs. Conventional Banking: Business Model, Efficiency and Stability." *Journal of Banking & Finance* 37 (2013): 433-47.
- Behery, M.H., and T.I. Eldomiaty. "Stakeholder-Oriented Banks and Bank Performance: Perspectives from International Business Management." *International Journal of Commerce and Management* 20, no. 2 (2010): 120-50.
- Bledsoe, N.L., and R.W. Ingram. "Customer Satisfaction Through Performance Evaluation." *Journal of Cost Management*, (Winter, 1997): 43-5.
- Bouwens, J., and M.A. Abernethy. "The Consequences of Customization on Management Accounting System Design." *Accounting, Organizations and Society* 25 (2000): 221-41.
- Brignall, S., and J. Ballantine. "Performance Measurement in Service Businesses Revisited." *International Journal of Service Industry Management* 7, no. 1 (1996): 6-31.
- Chenhall, R.H. "Management Control Systems Design within its Organizational Context: Findings from Contingency-Based

- Research and Directions for the Future.” *Accounting, Organizations and Society* 28, no. 2-3 (2003): 127-68.
- _____, and D. Morris. “The Impact of Structure, Environment, and Interdependence on the Perceived Usefulness of Management Accounting Systems.” *The Accounting Review* 61, no. 1 (1986): 16-35.
- _____, and K. Langfield-Smith. “Factors Influencing the Role of Management Accounting in the Development of Performance Measures within Organizational Change Program.” *Management Accounting Research* 9, no. 4 (1998): 361-86.
- _____. “Multiple Perspectives of Performance Measures.” *European Management Journal* 25, no. 4 (2007): 266-82.
- Chong, V.K., I.R.C. Eggleton, and M.K.C. Leong “The Impacts of Market Competition and Budgetary Participation on Job Performance and Job Satisfaction: A Research Note.” *The British Accounting Review* 37(2005): 115-33.
- Cumby, J., and J. Conrod. “Non-Financial Performance Measures in the Canadian Biotechnology Industry.” *Journal of Intellectual Capital* 2, no. 3 (2001): 261-72.
- Damanpour, F. “Organizational Innovation: A Meta-Analysis of Effects of Determinants and Moderators.” *Academy of Management Journal* 34, no. 3 (1991): 555-90.
- Dangolani, S.K. “The Impact of Information Technology in Banking System: A Case Study in Bank Keshavarzi, Iran.” *Procedia-Social and Behavioral Sciences* 30 (2011): 13-6.
- Das, S.R., and M.P. Joshi. “Process Innovativeness in Technology Services Organization: Roles of Differentiation Strategy, Operational Economy and Risk Taking Propensity.” *Journal of Operation Management* 25, no. 3 (2007): 643-60.
- Davis, S., and T. Albright. “An Investigation of the Effect of Balanced Scorecard Implementation on Financial Performance.” *Management Accounting Research* 15 (2004): 135-53.
- Deng, Q., W.P. Wong, H.P. Wooi, and C.M. Xiong. “An Engineering Method to Measure the Bank Productivity Effect in Malaysia During 2001-2008.” *System Engineering Procedia* 2 (2011): 1-11.
- Dusuki, A.W., and N.I. Abdullah. “Why Do Malaysian Customers Patronize Islamic Banks.” *International Journal of Bank Marketing* 25, no. 3 (2007): 142-60.
- Eljelly, A.M.A., and A.A. Eloheed. “Performance Indicators of Banks in a Total Islamic Banking System: The Case of Sudan.”

- International Journal of Islamic and Middle Eastern Finance and Management* 6, no. 2 (2013): 142-55.
- Farook, S., M.K. Hassan, and R. Lanis. "Determinants of Corporate Social Responsibility Disclosure: The Case of Islamic Banks." *Journal of Islamic Accounting and Business Research* 2, no. 2 (2011): 114-41.
- Fleming, D.M., C.W. Chan, and G. Chen. "Strategy, Performance-Measurement Systems, and Performance: A Study of Chinese Firms." *The International Journal of Accounting* 44 (2009): 256-78.
- Franceschini, F., M. Galetto, and E. Turina. "Techniques for Impact Evaluation of Performance Measurement Systems." *International Journal of Quality & Reliability Management* 30, no. 2 (2013): 197-220.
- Galbreath, J. "Does Primary Stakeholder Management Positively Affect the Bottom Line? Some Evidence from Australia." *Management Decision* 44, no. 8 (2006): 1106-21.
- Govindarajan, V., and A.K. Gupta. "Linking Control Systems to Business Unit Strategy: Impact on Performance." *Accounting, Organizations and Society* 10, no. 1 (1985): 51-66.
- Grassa, R. "Shariah Supervisory System in Islamic Financial Institutions. New Issues and Challenges: A Comparative Analysis between Southeast Asia Models and GCC Models." *Humanomics* 29, no. 4 (2013): 333-48.
- Hall, M. "The Effect of Comprehensive Performance Measurement Systems on Role Clarity, Psychological Empowerment and Managerial Performance." *Accounting, Organizations and Society* 33, no. 2 (2008): 141-63.
- Hasan, Z. "In Search of the Perceptions of the *Sharī'ah* Scholars on the *Sharī'ah* Governance System." *International Journal of Islamic and Middle Eastern Finance and Management* 7, no. 1 (2014): 22-36.
- Henri, J.F. "Organizational Culture and Performance Measurement Systems." *Accounting, Organizations and Society* 31, no. 1 (2006): 77-103.
- Hillman, A.J., and G.D. Keim. "Shareholder Value, Stakeholder Management, and Social Issues: What's the Bottom Line?" *Strategic Management Journal* 22 (2001): 125-39.
- Hoque, Z. "A Contingency Theory Model of the Association Between Strategy, Environmental Uncertainty and Performance Measurement: Impact on Organization Performance." *International Business Review* 13 (2004): 485-502.

- Ibrahim, B.D.A. "The "Missing Links" between Islamic Development Objectives and the Current Practice of Islamic Banking - the Experience of the Sudanese Islamic Banks (SIBs)." *Humanomics* 22, no. 2 (2006): 55-66.
- Indjejikian, R.J., and M. Matejka. "Organizational Slack in Decentralized Firms: The Role of Business Unit Controllers." *The Accounting Review* 81, no. 4 (2006): 849-72.
- Iqbal, Z., and A. Mirakhor. *Introduction to Islamic Finance: Theory and Practice*. Singapore: John Wiley and Sons (Asia), 2007.
- Ittner, C.D., D.F. Larcker, and T. Randall. "Performance Implications of Strategic Performance Measurement in Financial Services Firms." *Accounting, Organisations and Society* 28 (2003): 715-41.
- Johansson, P. "Implementing Stakeholder Management: A Case Study at a Micro-Enterprise." *Measuring Business Excellence* 12, no. 3 (2008): 33-43.
- Kaplan, R.S., and D.P. Norton. "Using the Balance Scorecard as a Strategic Management System." *Business Harvard Review* (Jan-Feb, 1996): 75-85.
- Khan, M.S., and A. Mirakhor. "The Financial System and Monetary Policy in an Islamic Economy." *Journal of King Abdulaziz University: Islamic Economics* 1 (1989): 39-57.
- Khandwalla, P.N. "The Effect of Different Types of Competition on the Use of Management Controls." *Journal of Accounting Research* (Autumn, 1972): 275-85.
- Lahouel, B.B., J. Peretti, and D. Autissier. "Stakeholder Power and Corporate Social Performance: The Ownership Effect." *Corporate Governance* 14, no. 3 (2014): 368-81.
- Langfield-Smith, K. "Management Accounting Control Systems and Strategy: A Critical Review." *Accounting, Organizations and Society* 2, no. 2 (1997): 207-32.
- Lau, C.M., and E. Berry. "Nonfinancial Performance Measures: How Do They Affect Fairness of Performance Evaluation Procedures?" In *Performance Measurement and Management Control: Innovative Concepts and Practices*, edited by Marc J. Epstein, Jean-François Manzoni, and Antonio Davila, 285-307. Bingley, UK: Emerald Group Publishing Limited, 2010.
- _____, and M. Sholihin. "Financial and Nonfinancial Performance Measures: How Do They Affect Job Satisfaction?" *The British Accounting Review* 37 (2005): 389-413.
- Law of Malaysia, *Islamic Financial Service Act*, 2013.

- Lewis, M.K. "Islam and Accounting." *Accounting Forum* 25, no. 2 (2001): 104-27.
- Lo, Y.H. "Stakeholder Management in the Chinese Hotel Industry: The Antecedents and Impacts." *International Journal of Contemporary Hospitality Management* 25, no. 4 (2013): 470-90.
- Markus, R.M. "Driving Force: Key to Strategy." *Strategy & Leadership* 9, no. 6 (1981): 24-7.
- Mia, L., and B. Clarke. "Market Competition, Management Accounting Systems and Business Unit Performance." *Management Accounting Research* 10 (1999): 137-58.
- Mohamad, M.H.S., F. Ali, and A. Mohd Amir. "Role of Organisational Culture on Performance Measurement Practice: The Case of Malaysian Manufacturing Firms." *Afro-Asian Journal Finance and Accounting* 3, no. 4 (2013): 297-318.
- Mohamed, E.K.A. "Multidimensional Performance Measurement in Islamic Banking." *Global Journal of Business Research* 4, no. 3 (2010): 47-60.
- Mohammad, O.M., and S. Shahwan. "The Objective of Islamic Economic and Islamic Banking in Light of *Maqāṣid Al-Sharī'ah*: A Critical Review." *Middle-East Journal of Scientific Research* 13 (2013): 75-84.
- Mohammed, M.O., D. Abdul Razak, and F. Md. Taib "The Performance Measures of Islamic Banking Based on the *Maqāṣid* Framework." Paper presented at the *International Accounting Conferences IV*, Putrajaya, 25 June 2008.
- Mohd Amir, A. "The Indirect Effects of PMS Design on Malaysian Service Firms' Characteristics and Performance." *Asian Review of Accounting* 19, no. 1 (2011): 31-49.
- _____, N.N. Nik Ahmad, and M.H.S. Mohamad. "An Investigation on PMS Attributes in Service Organizations in Malaysia." *International Journal of Productivity and Performance Management* 59, no. 8 (2010): 734-56.
- Moneva, J.M., J.M. Rivera-Lirio, and M.J. Munoz-Torres. "The Corporate Stakeholder Commitment and Social and Financial Performance." *Industrial Management and Data Systems* 107, no. 1 (2007): 84-102.
- Munir, R., K. Baird, and S. Parera. "Performance Measurement System Change in an Emerging Economy Bank." *Accounting, Auditing and Accountability Journal* 26, no. 2 (2013): 196-233.

- Rais, S., and R.V. Goedegebuure. "Stakeholder Orientation and Financial Performance: Evidence from Indonesia." *Problems and Perspectives in Management* 7, no. 3 (2009): 62-75.
- Russell, R.D., and C.J. Russell. "An Examination of Effects of Organizational Norms, Organizational Structure and Environmental Uncertainty on Entrepreneurial Strategy." *Journal of Management* 18 (1992): 639-6.
- Ruzita, J., and A.P. John. "Competitive Strategy and Performance Measurement in the Malaysian Context: An Exploratory Study." *Management Decision* 46, no. 1 (2008): 5-31.
- Sekaran, U. *Research Method for Business: A Skill-Building Approach*. New York: John Wiley & Sons Inc., 2006.
- Sharma, D.S. "The Differential Effects of Environmental Dimensionality, Size and Structure on Budget System Characteristics in Hotel." *Management Accounting Research* 13 (2002): 101-30.
- Siddiqi, M.N. "Islamic Banking and Finance in Theory and Practice: A Survey of State of the Art." *Islamic Economic Studies* 13, no. 2 (2006): 1-48.
- Simmons, J. "Employee Significance within Stakeholder-Accountable Performance Management." *The TQM Journal* 20, no. 5 (2008): 463-75.
- Tillema, S. "Towards an Integrated Contingency Framework for MAS Sophistication: Case Studies on the Scope of Accounting Instruments in Dutch Power and Gas Companies." *Management Accounting Research* 16 (2005): 101-29.
- Tung, A., K. Baird, and H.P. Schoch. "Factors Influencing the Effectiveness of Performance Measurement Systems." *International Journal of Operations & Production Management* 31, no. 12 (2011): 1287-310.
- Wu, H.Y. "Constructing a Strategy Map for Banking Institutions with Key Performance Indicators of the Balanced Scorecard." *Evaluation and Program Planning* 35 (2012): 303-20.
- Yang, J., G.Q. Shen, M. Ho, D.S. Drew, and A.P.C. Chan. "Exploring Critical Success Factors for Stakeholder Management in Construction Projects," *Journal of Civil Engineering and Management* 15, no. 4 (2009): 337-48.
- Zhang, Y., and L. Li. "Study on Balanced Scorecard of Commercial Banks in Performance Management System." *Proceedings of the 2009 International Symposium on Web Information Systems and Applications*. Nanchang, China (2009): 206-9.

Zhu, K., K.L. Kraemer, S. Xu, and J. Dedrick. "Information Technology Pay-Off in E-Business Environments: An International Perspective on Value Creation of E-Business in the Financial Services Industry." *Journal of Information Systems* 21, no. 1 (2004): 17-54.

APPENDIX 1
Factor analysis of determinants for PM practices

Items	Factor loading	Items	Factor loading
<i>Differentiation Strategy (DS)</i>		Extensible Business	0.896
Broader service range	0.815	Reporting Language (EBRL) standard for exchanging business information over internet	
Uniqueness of the products	0.800	Enterprise Resource Planning System (EPRS) (e.g., SAP, JD Edward, Oracle Applications, Sun, etc.)	0.839
Effective after sales services	0.758	Electronic data interchange (EDI)	0.549
Improve facility utilization	0.712	<i>Comm. Technology (CT)</i>	
High quality	0.688	Website accessible by public	0.880
Rapid changes in providing services	0.589	Call centre	0.839
<i>Innovation (INNO)</i>		Email	0.758
Rate of modification of existing products and services	0.824	Internet banking	0.647
Rate of developing new methods and procedures to provide products and services	0.810	<i>Stakeholder Management (SM)</i>	
Percentage of sales from recently launched products or services	0.780	To formulate appropriate strategies to manage stakeholders	0.796
Rate of major innovations in the processes used in delivering services	0.766	To keep and promote a good relationship	0.791
Tendency of firms to pioneer in product or service innovation	0.763	To understand stakeholders' behaviors, interests, needs and reactions	0.785
Rate of introduction of new products or services	0.741	To communicate with and engage stakeholders properly and frequently	0.720
Amount of R&D spent on developing new processes and technologies	0.673	To analyze and compromise conflict and coalitions among stakeholders	0.625
<i>Comm. Infrastructure Tech. (CIT)</i>		To manage stakeholders with social responsibilities	0.583
Extranet	0.614		
Intranet	0.580		
Wireless/mobile banking (using SMS etc.)	0.587		

Items	Factor loading	Items	Factor loading
<i>Regulatory Compliance (REG)</i>		<i>Competition due to high service quality</i>	
Regulation issued by central bank (IFSA, IBA etc.).	0.947		0.768
Internal regulations and procedures	0.943	<i>Non-product-based Competition (NBC)</i>	
Other regulations endorsed by parent company	0.856	Competition due to frequent changes in government regulation or policy	0.657
Supervision by Sharī'ah committee of the board	0.800	Competition due to technological change in the industry	0.841
<i>Product-based Competition (PBC)</i>		Competition due to access to extensive marketing distribution network	0.867
Competition due to wide product range	0.830	Competition due to high level of advertising and promotion	0.825
Competition due to frequent new product introductions	0.865		
Competition due to low price	0.678		

APPENDIX 2

Factor analysis of *Maqāṣid al-Sharī'ah*-based performance measures

Items	Factor loading	Items	Factor loading
<i>Financial</i>		<i>Training in instilling new knowledge for staff</i>	
Sales growth	0.853		0.401
Operating Income	0.847	<i>Employees</i>	
Return-on-equity (ROE)	0.894	Turnover per employee	0.873
Current ratio	0.668	Absenteeism rate	0.721
Earnings before interest and tax (EBIT)	0.737	Ratio of skilled employees to total employees	0.776
Net cash flow	0.844	Employee suggestions/complaints	0.494
<i>Internal Business</i>		Employee satisfaction	0.567
Quality of products and services	0.918	<i>Customers</i>	
Assessment of new products	0.886	On-time delivery	0.930
Number of completion task	0.820	Customer response time	0.913
Service process time	0.747	Responsiveness of after sales services	0.908
<i>Learning and Development</i>		Customer satisfaction	0.887
Product innovation	0.935	Number of customer complaints	0.884
Number of new products launched	0.866	<i>Shareholders</i>	
Growth rate in knowledge assets	0.836	Cash value added (CVA)	0.928
Vendor development	0.719	Market value added (MVA)	0.928

Items	Factor loading	Items	Factor loading
Real assets value enhancer (RAVE)	0.924	Promoting research on Islamic banking inside organization	0.702
Economic value added (EVA)	0.886	<i>Fairness and Justice Measures</i>	
Dividend per share	0.843	Fair returns to organization/reasonable profit ratio	0.835
Return on investment (ROI)	0.748	Affordable prices for customers	0.835
<i>Education</i>		<i>Public Interest</i>	
Promoting research on Islamic banking to public	0.878	Rate of non-compliant income	0.791
Education grants to public	0.672	Compliance audit rating	0.756
Education grants to employees	0.774	Growth in investment in compliance activities	0.746
Publicity to create awareness of Islamic banking	0.734		