RISK MANAGEMENT PRACTICES IN ISLAMIC BANKING INSTITUTIONS: A COMPARATIVE STUDY BETWEEN MALAYSIA AND INDONESIA

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Risk Management Practices in Islamic Banking Institutions: A Comparative Study between Malaysia and Indonesia

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ABSTRACT

This study examines the level of risk management practices among Islamic banks listed under Bank Negara Malaysia, and Islamic banks under the State Bank of Indonesia. This study is an avenue for contributing to the development of risk management practices for the Islamic banking system. The usable data for Malaysia is 136 questionnaires and for Indonesia 70, which gives a total sample of 206. The results show that there are significant differences between Malaysia and Indonesia in terms of the level of risk management practices (RMP), the level of understanding risk management (URM), risk identification and analysis (RAA), as well as risk control and monitoring (RCM). Based on the regression analysis, the result indicates that the Islamic banks in Malaysia need to give more attention to risk identification (RI) and RAA whereas their counterparts in Indonesia need to consider URM, RI and RAA to improve their risk management practices.

Keywords: Risk Management Practices, Islamic Banking Institutions, Malaysia, Indonesia

INTRODUCTION

Islamic banking refers to a system of banking that complies with Islamic Law. The underlying principles that govern Islamic banking are mutual risk and profit sharing between parties, the assurance of fairness for all and that transactions are based on an underlying business activity or asset (BNM, 2007). In general, banking business is exposed to an inherent number of risks, namely, credit risks, market risks, operational risks, and liquidity risks (Chan & Khan, 2000). However, since Islamic banks should only be involved with activities that comply with the religious and ethical underpinning, and due to the nature of their balance sheet (Khan & Ahmed, 2001) these exceptional requirements expose the institutions to special or unique risks, namely, *Shariah* non-compliance risk, rate of return risk, displaced commercial risk, *murabahah* price risk, and equity investment risk to name a few (Chan & Khan, 2000; Iqbal & Mirakhor, 2007; Khan & Ahmed, 2001; Sundarajan & Errico, 2002). The character of profit loss sharing (PLS) attached to *mudharabah* deposits and financing, and *musyarakah* financing will have to be treated differently from *murabahah* or *baibithamanajil* financing as these last two reflect the trading nature, and, hence, imply different types of risk and the means to mitigate them. The same also applies for *wadiah* deposits, which carry a safe custody character that leads to a different risk type. From this illustration, it is understood that the degree of complexity in terms of risk management in the Islamic banking system is higher than that applied in the conventional banking system.

Recently, the Islamic banking institutions of Malaysia and Indonesia suffered several challenges, such as misconceptions about Islamic banking, lack of uniformity between *Shariah* review, inadequate pool of *Shariah* scholars with the right combination in respect of Islamic law and modern finance, documentary complexity, heightened competition, and the aggressive launch of innovation, lack of risk-hedging instruments, and the sophisticated products of other financial institutions (Khan & Ahmed, 2001; Makiyan, 2008; El Tiby & Grais, 2014). Despite all the challenges, it can be seen that the Islamic banking institutions have grown tremendously. However, the rapid growth of these institutions, coupled with the economic uncertainties demand that sound risk management practices are executed by them. This is vital for the survival of the banks, to help them in achieving their operational, financial, compliance and strategic business objectives, and, subsequently, create value for their stakeholders. Additionally, it could help the Islamic banking institutions stay competitive with their counterparts.

Risk management is an important element, the application of which is noteworthy, especially in Islamic banks as a financial institution. In Indonesia, the preparation of the framework, structure and effective tool to monitor risks by using the approach of enterprise risk management (ERM) was initiated in 2007. During 2007, the work was completed to identify the risk event and plan the scenario forimproving the effectiveness of the banks' ability to respond to the occurrence of a potential risk event.

In general, the risks faced by Islamic banking are relatively similar to the risks faced by conventional banks. However, Islamic banks also face a unique risk arising from the fact that they must follow the principles of *Shariah*.The Islamic Financial Services Board (2005) and Bank Indonesia (Central Bank) refer to the rules of the Basel Accord II. Thus, the mature understanding of the risk management of conventional banks will greatly assist in the implementation of risk management in *Shariah* banks (Khan and Ahmed, 2008). According to

the Central Bank (Bank Indonesia Regulation Number 13/23/PBI/2011 on the Application of Risk Management for Islamic Banks and Islamic Business Units), Islamic banks and Islamic business units shall implement risk management, which includes ten risks, the credit risk, market risk, liquidity risk, operational risk, legal risk, reputation risk, strategic risk, compliance risk, risk yield (rate of return risk), and investment risk (equity investment risk). The application of risk yield (rate of return risk) and investment risk (equity investment risk) have not been taken into account in the assessment of risk (risk profile) in Islamic banks (IBs) and Islamic business units (IBUs). Islamic banks and IBUs are required to conduct an assessment of the risk and return on investment risk although neither type of risk assessment is taken into account in the assessment of risk (risk profile) for IBs and IBUs.

Accordingly, the different characteristics attached to the Islamic banking institutions have been the reason for much of the research to be conducted. This research is no exception, in the sense that investigating the risk aspect of Islamic banking would be a significant contribution to the development of knowledge. The research in this area would also be beneficial to the practices of risk management for Islamic banking institutions. Malaysia, as one of the hubs for the Islamic banking industry, and Indonesia as the most populated Moslem country, providesconsiderable empirical evidence that deserves to be explored. This paper is an avenue to contributing to the development of risk management practices for the Islamic banking system. Thus, the objective of the study is to assess the level of risk management practices among Islamic banks in Malaysia and Indonesia.

The remainder of this paper is organised as follows: The second section describes the recent environment of Islamic banking institutions in Malaysia and Indonesia. The third section summarises the theoretical and empirical evidence related to risk management practices. The fourth section describes the sample selection, data sources and the methodology used to collect relevant data.The fifth section presents and discusses the empirical evidence, and the final section draws conclusions from the study.

ISLAMIC BANKING INSTITUTIONS IN MALAYSIA AND INDONESIA

The practices of the Islamic banking system in Malaysia and Indonesia represent a quite different approach. Malaysia first implemented the system in 1983 with the establishment of Bank Islam Malaysia Berhad (BIMB), while Indonesia started adopting the system in 1992 when Bank Muamalat Indonesia was launched. The progress of the Islamic banking development has been quite fast. Malaysia has experienced more advanced progress compared to Indonesia. The variety of Islamic financial instruments might reflect the evidence. Malaysia is considered as one of the international hubs for Islamic banking and the finance industry, while Indonesia still has to catch up with the progress of the same industry.

Table 1 shows the slightly different combination of financing concepts implemented by the Islamic banking industry in Malaysia and Indonesia. In addition, the table also indicates the similarity in terms of the domination of non-PLS financing in both neighbouring countries. In Malaysia, *Bai BithamanAjil* (BBA) ranks first followed by *IjarahThuma Al Bay' (ITAB)* and *murabahah,*which accounted for about 72 percent, while Indonesia shows that the dominant share is for *murabahah*, which recorded 80 percent. As for PLS Financing, as reflected by *mudharabah* and *musyarakah*, both countries show a different measure of achievement. In

Malaysia PLS financing accounts for about 4.98 percent while Indonesia records 11.99 percent.

Table 1: Comparison of the Islamic Bank Financing Concepts Between Malaysia and Indonesia

Malaysia (as of November 2012)		Indonesia (as of October 2012)	
Financing Concepts	**Percentage**	**Financing Concepts**	**Percentage**
Bai BithamanAjil (BBA)	31.91	*Mudharabah*	2.74
Ijarah	1.87	*Musyarakah*	9.25
IjarahThuma Al		*Murabahah*	80.36
Bay'(ITAB)	23.57	*Salam*	0.01
Murabahah	17.10	*Istishna*	0.62
Musyarakah	4.92	*Ijarah*	0.28
Mudharabah	0.06	*Qardh*	2.31
Istisna'	0.49	Multi-Purpose Financing	4.42
Others	20.07		
Total	100.00	Total	100.00

Sources: Bank Negara Malaysia, *Monthly Report* November 2012.
Bank Indonesia, *Islamic Banking Statistics*, October 2012.

The tendency for non-PLS domination is not unique to the two as it applies to almost all countries adopting the Islamic banking system. One of the reasons is related to the risk profile of the PLS financing. For example, Dar & Presley (2001) point out that PLS financing has been identified as being very vulnerable to the agency problem and the severe competition from conventional banking that leads to Islamic banking implementing more non-PLS financing.

The implementation of the Islamic banking system across countries reveals different practices. For example, the concept of *bay al'inah* used in Malaysia is not being practiced in the Middle Eastern Countries. Instead, they use the concept of *tawarruq*. A comparison between Malaysia and Indonesia might expose different ways of treating the potential losses that should be borne by investment deposit holders as a consequence of the PLS method. Malaysia uses an instrument known as the profit equalization reserve (PER) to compensate for losses to the investment depositors, while Indonesia uses revenue sharing instead of profit loss sharing. Revenue sharing ensures that the rate of return will be positive, while PER might be questioned on the basis of which party actually bears the losses. Although both practices might be argued as 'not in line' with the concept of PLS, they might be understandable from the perspective of survival from the very severe competition with the conventional banking institutions.

RISK MANAGEMENT PRACTICES: LITERATURE REVIEW AND DEVELOPMENT OF HYPOTHESES

The Islamic banking system is considered to be more risky than conventional banking. Turen (1996) claims that the PLS mechanism tends to increase the risk exposure of an Islamic bank. This fact implies that the process of risk management might be more complicated for the Islamic banking system than that in the conventional banking system. In this respect, Price Waterhouse Coopers (2008) stresses that managing risk for Islamic banks cannot be done just by cutting and pasting risk management concepts and practices. Turen (1996) further describes that the total risk of Islamic banking is a function of three factors: (i) new classification of the deposit holders, treatment of investment deposit as equity might lower

debt-equity ratio, and, hence, lower the risk level for the bank; (ii) level of the coverage ratio (net operating income over interest charges), replacing interest with profit sharing means that the coverage ratio will be very high or meaningless, and, hence, the leverage ratio becomes lower and safer for the bank; (iii) new status of the loans given by Islamic banks, loans will be converted into capital participation, which exposes the bank to a higher degree of risk.

Since the research setting of this study is looking at the level of risk management practices (RMP) of Islamic banking institutions in Malaysia and Indonesia, only five risk management practice variables are examined. The intention is to capture several characteristics that can differentiate the level of RMP in both countries. The variables used in this study are as follows:

Risk Management Practices. Risk management is the process by which various risk exposures are recognized, identified, analysed, assessed, quantified, mitigated, prioritized, exploited, monitored and reviewed (CAS, 2003). Cumming &Hirtle (2001) define risk management as "*the overall process that a financial institution follows to define a business strategy, to identify the risks to which it is exposed, to quantify those risks, and to understand and control the nature of risks it faces*" (p. 3). Islamic legal treaties have reinforced the management's responsibilities towards managing risks. In the Quran, the risk management concept has been stated in Surah Yusuf, Verse 67 as the direction for a man to adopt precautionary measures against any risks. Subsequently, in a well-known Hadith, Prophet Muhammad (PBUH) also advised Moslems to take appropriate action in minimizing losses; the Prophet (PBUH) once asked a Bedouin to tie his camels before placing trust in Allah for their protection. Therefore, it is obligatory for the management team of Islamic banks to seriously recognise, control and manage their risks. Mohd Ariffin and Kassim (2012) assessed the current risk management practices of eight Islamic banks in Malaysia and found that all banks in the study practice good risk management. However, those banks need a few improvements in the area of the techniques or approaches used to mitigate risks. Huq etal. (n.d.) highlight that the risk management concepts and practices might be linked with the objectives of Shariah (*maqashidul-shariah*) to ensure that the wealth managed through Islamic financial institutions can be ensured to generate value added that leads to an enhancement of the wealth.

Understanding Risk Management and the Techniques used in Risk Management. To understand the background of risks associated with Islamic banks, suitable risk management practices and appropriate techniques are crucial as it helps stakeholders to determine the elements of risk and develop their risk framework (Khan & Ahmed, 2001). A suitable risk management technique is required to assist Islamic banks to mitigate, reduce or avoid their unique risks. Huq etal. (n.d.) stated that establishing standards, credit score, credit worthiness analysis, risk rating and collateral seems a popular risk measurement technique.

Risk Identification. Chapman (1998) opines that the risk identification stage has the largest impact on the accuracy of any risk management practices. With a comprehensive and systematic process of risk identification, a firm is able to further develop its own risk framework (Abdullah & Abdul Rahman, 2012). Since Islamic banks have a unique risk structure, this stage is crucial for the regulators, management team and the *Shariah* experts to accumulate all preliminary inputs before establishing comprehensive risk management practices and procedures; and, thereafter, help them to achieve their objectives (Eloff,

Labyschagne & Badenhorst, 1993; Khan & Ahmed, 2001). Huq etal. (n.d.) record in the research findingsof Al-Tamini (2002) that inspection by managers and financial analysis is the main risk identification method.

Risk Assessment and Analysis. Once the management team identifies the related risks, they will then assess each identified risk in several different ways – they can choose to reduce the likelihood and impact of risk by implementing effective internal controls, accept the likelihood and impact of the risks, share or transfer the risks, or they can also avoid the risks by not engaging in the activity that produces such risk (Romney &Steinbart, 2012, p. 213). On the other hand, risk analysis is normally the stage where the impact of specific risks and the consequent impact on the institutions are calculated (Eloff, Labyschagne&Badenhorst, 1993). Eloff et al. (1993, p. 598) further argue that risk analysis is a prerequisite for the step-by-step refinement of a policy, a mechanism for getting senior management involved in risk management activities, identify threats, and for adding the significant professional information needed for the execution of cost and benefit. Several risk measurement techniques could be used to address or mitigate specific risks, such as GAP analysis, Duration-GAP analysis, Value at Risk (VaR), and Risk Adjusted Rate of Return (RORAC) (Khan & Ahmed, 2001, Tafri, Abdul Rahman & Omar, 2011).

Risk Control and Monitoring. On going risk control and risk monitoring function should be considered of great importance nowadays to ensure that Islamic banks could cope with the current global economic challenges and uncertainties in the industry. It also helps provide reasonable assurance that any potential adverse occurrence could be avoided. With proper control and continuous monitoring, Islamic banks can deter problems before they arise, discover problems that are not prevented and also identify and correct the problems (Romney &Steinbart, 2012). Accordingly, the level of effectiveness, efficiency and appropriateness of the whole business processes would be superior (Eloff et al., 1993).

Since this study extends the current literature by examining the level of risk management practices (RMP) of Islamic banking institutions between the two countries, the relevant hypotheses that have been developed are as follows:

H1: There is a significant difference between the level of risk management practices of Islamic banks in Malaysia and Indonesia.

H2: There is a significant difference between the level of understanding and the techniques employed in assessing the risks of Islamic banks in Malaysia and Indonesia.

H3: There is a significant difference between the level of risk identification of Islamic banks in Malaysia and Indonesia

H4: There is a significant difference between the level of risk assessment and risk analysis of Islamic banks in Malaysia and Indonesia.

H5: There is a significant difference between the level of risk control and risk monitoring of Islamic banks in Malaysia and Indonesia.

H6. There is a significant positive relationship between risk management practices and understanding risk management, risk identification, risk assessment and analysis, and risk monitoring

RESEARCH METHODOLOGY

To suit the objective of the study, a survey questionnaire was developed following the methodology of Al-Tamimi and Al-Mazrooei (2007), Hassan (2009), and Abdul Rahman, Balqis and Dean (2013). The questionnaire was segregated into five main parts: the respondent's profile; the company's profile; the risk management process, namely: understanding risk management, risk identification, risk assessment and analysis, and risk monitoring; general risk management practices; and governance on risk management practices. Respondents were asked to indicate on a 7-point Likert scale (ranging from 1= "strongly disagree" to 7="strongly agree"), their perceptions on a total of 44 closed-ended questions relating to the risk management process (11 questions), boards involvement in risk management (5 questions) and risk management practices (29 questions). The way the questionnaires were distributed and collected varied, based on the preference of the bank; some were returned by post, others through email or by walk-in collection.

The sample in our study consists of Islamic banks listed under Bank Negara Malaysia, and Islamic banks under the State Bank of Indonesia. The target population of this survey included departments that deal with risk management in Islamic banks. As of 30 June 2014, there were 17 Islamic banks in Malaysia, while only 10 banks from the total of 35 Islamic banks in Indonesia participated in the survey. There were 15 questionnaires distributed to each of the banks. The usable data for Malaysia is 136 questionnaires and for Indonesia 70, which gives a total sample of 206.

RESEARCH FINDINGS

This section presents and discusses the findings of the research. This includes the reliability of the factors, statistical significance of each factor and regression analysis.

Table 2 shows the reliability of the variables used in the study. Interestingly, all the variables carry a value of more than 0.7. The minimum value is risk identification RI, which is 0.79 in Malaysia and 0.83 in Indonesia and the overall is 0.80 for understanding risk management. The highest value is 0.93 under risk control and monitoring in Indonesia. According to Norusis (2006),a Cronbach's alpha value of 0.7 is acceptable and 0.9 is considered as marvellous.

Table 2: Reliability Measurement of Risk Management Aspects

No.	Risk Management Aspects	Cronbach's Alpha		
		Malaysia	Indonesia	Overall (Both)
1	Risk management practices (RMP)	0.89	0.92	0.91
2	Understanding risk management (URM)	0.80	0.89	0.80
3	Risk identification (RI)	0.79	0.83	0.83
4	Risk assessment and analysis (RAA)	0.87	0.87	0.88
5	Risk control and monitoring (RCM)	0.88	0.93	0.91
6	Level of importance of BOD	0.90	0.88	0.89
7	Level of involvement of BOD	0.87	0.89	0.88

Note: BOD = Board of Directors

In Table 3, based on the independent t-test there is a significant difference between the levels of risk management practices between the two countries with a p-value of 0.008. Both countries obtained relatively high levels of risk management practices. However, Malaysia has a higher significant level of risk management practices with a mean of 5.74 compared to Indonesia, which only obtained 5.42. In addition, a number of statistical differences between the factors in the two countries were discovered. There is a significant difference between executive management practice to review the performance of the level of risk management in Malaysia (5.91) and Indonesia (5.63).

Table 3: Level of Risk Management Practices between Malaysia and Indonesia through t-test

No.	Risk management practices	Malaysia mean	Indonesia mean	Significant Difference
1	Executive management of your Islamic bank regularly reviews the bank's performance in managing its business risk	5.91	5.63	0.05
2	Your Islamic bank is highly effective in continuous review/feedback on risk management strategies and performance	5.65	5.44	.171
3	Your Islamic bank's risk management procedures and processes are documented and provide guidance to staff about managing risks	5.81	5.64	0.262
4	Your Islamic bank's policy encourages training programmesin the areas of risk management and Islamic ethics	5.68	5.34	0.038
5	Your Islamic bank emphasizes the recruitment of highly qualified people having Islamic knowledge in risk management	5.36	5.11	0.226
6	One of the objectives of your Islamic bank is 'effective risk management'	5.93	5.36	0.001
7	Your Islamic bank finds that it is too risky to invest funds in one specific sector of the economy	5.67	5.47	0.292
8	Your Islamic bank is successfully implementing the IFSB and Central Bank guidelines/principles in respect of risk management	5.64	5.40	0.158
9	Application of Basel II Accord will improve the efficiency and RMPs in Islamic banking in general	5.84	5.36	0.002
10	I consider the level of RMPs of my Islamic bank to be excellent	5.68	5.29	0.014
11	I consider my Islamic bank has shariah compliance risk management practices	5.96	5.56	0.011
	Overall	**5.74**	**5.42**	**0.008**

Similarly a significant difference was found for the risk management procedures of the Islamic banks between the two countries. The findings reveal that Malaysian Islamic banks have a higher policy concerning training programmes on risk management compared to those in Indonesia based on the mean value of 5.68 for Malaysia and 5.34 for Indonesia,withp-values of 0.038. In addition, Malaysian Islamic banks emphasize 'effective risk management' as one of their objectives,which was also found to be significantly in favour of Malaysia with a mean value of 5.93 compared to 5.36 for Indonesia. In terms of the level of RMPs and sharia compliance risk management, the results also show that there is a significant difference between the two countries with p-values 0.014 and 0.011, respectively. This again turns in favour of Malaysia. Overall, hypothesis (H1), that there is a significant difference between the

levels of risk management practices of Islamic banks in Malaysia and Indonesia, is accepted. This implies that although Indonesia needs to improve its level of risk management practices compared to Malaysia, Malaysia should also strengthen its practices of level of risk management to cope with the dynamic changes taking place in the banking and financial sector reforms.

Further, the results in Table 4 clearly show that hypothesis (H2) is accepted, as there is a significant difference between the two countries in understanding risk. Islamic banks in Malaysia have a higher level of understanding on risk management compared to their counterparts in Indonesia with a mean value of 6.02 and 5.42, respectively. There are also significance differences in all the items relating to the understanding of risk management between the two countries. This includes a clear statement of risk management and its understanding regarding responsibility, accountability, and understanding of sophistication techniques in risk management, as well as, among others, a review and evaluation of risk management overtime. Islamic banks in Malaysia obtained a higher level of understanding on risk management in all the items stated compared to those in Indonesia. Perhaps, this finding could be attributed to the developed level of the financial market in Malaysia compared to Indonesia.

Table 4: Level of Understanding Risk Management between Malaysia and Indonesia through t-test

No.	Understanding Risk management	Malaysia mean	Indonesia mean	Significant Difference
1	There is a common understanding of risk management across Islamic banks	5.98	5.17	0.000
2	Responsibility for risk management is clearly set out and understood throughout the bank	5.90	5.17	0.000
3	Accountability for risk management is clearly set out and understood throughout the bank	5.85	5.21	0.000
4	Managing risk is important to the performance and success of the bank	6.35	5.83	0.000
5	It is crucial to apply the most sophisticated techniques in risk management	5.90	5.27	0.000
6	The objective of Islamic banks is to expand the applications of the advanced risk management technique	5.82	5.39	0.008
7	It is important for your Islamic bank to emphasize the continuous review and evaluation of the techniques used in risk management	6.03	5.63	0.006
8	Application of risk management techniques reduce costs or expected losses	6.06	5.40	0.000
9	I understand that the risk management practices in Islamic banks must be according to Shariah	6.26	5.71	0.001
	Overall	**6.02**	**5.42**	**0.00**

The findings in Table 5 also reveal that there is a significant difference in the level of risk identification between the two countries. Islamic banks in Malaysia obtained a mean of 5.72 out of a maximum total score of 7 compared to Islamic banks in Indonesia, whichobtained a

mean of 5.28. Hence, hypothesis (H3), which indicates that there is a significant difference between the level of risk identification of Islamic banks in Malaysia and Indonesia is accepted. Except for two elements, there are significant differences between Islamic banks in Malaysia and Indonesia in terms of the risk identification components. This shows that there is a significant difference between the comprehensive and systematic identification of risk in the two countries.

Table 5: Level of Risk Identification between Malaysia and Indonesia through t-test

No.	Risk Identification	Malaysia mean	Indonesia mean	Significant Difference
1	The Islamic bank carries out a comprehensive and systematic identification of its risk relating to each of its declared aims and objectives	5.86	5.13	0.000
2	Changes in risk are recognized and identified with the Islamic bank's rules and responsibilities	5.73	5.27	0.005
3	The Islamic bank is aware of the strengths and weaknesses of the risk management systems of the other banks.	5.36	5.16	0.261
4	The Islamic bank has developed and applied procedures for the systematic identification of investment opportunities	5.66	5.40	0.082
5	In the process of identifying risk, your Islamic bank always takesshariah compliance issues into consideration	6.04	5.61	0.007
	Overall	5.72	5.28	0.00

The mean value in Table 5 indicates that Malaysia has more comprehensive risk identification relating to the objectives of the Islamic banks. Similarly, in terms ofrecognizing the changes in risks and identifying them with the rules and responsibilities of Islamic banks, the Islamic banks in Malaysia seem to have a better identification ability compared to those in Indonesia. In terms of the incorporation of shariah compliance issues, again Islamic banks in Malaysia lead the way with a mean value of 6.04 compared to 5.61 in Indonesia. However, in terms of the awareness of the strengths and weaknesses of the risk management systems, no significant differences were found between the two countries. In general, there is a significant difference in risk identification between Malaysia and Indonesia. This supports the previous finding concerning the level of understanding risk, however, it may also indicate that there is room for improvement in Indonesia's techniques of managing risk in the financial sector.

In terms of risk assessment and analysis, the results in Table 6 show that hypothesis (H4),which indicates that there is a significant difference between the level of risk assessment and risk analysis of Islamic banks in Malaysia and Indonesia, is accepted. The p-value in Table 6 is below 0.005 and the mean difference of Malaysia is 5.85, which is higher than the 5.44 for Indonesia. Similarly, there are significant differences between the two countries in all the components of risk assessment and analysis. For instance, Islamic banks in Malaysia assess the likelihood of occurring risk more compared to Indonesia. Second, the Islamic bank's risk in Malaysia is assessed by using more quantitative analysis methods compared to Indonesia. In addition, in terms of prioritizing risk with the objective of selecting those that need active management, the result favours Malaysia`s Islamic banks. This is indicated in the mean values of the result. It is interesting to note that this finding confirms the previous findings on the techniques used to mitigate risk between the two countries.

Table 6: Level of Risk Assessment and Analysis between Malaysia and Indonesia through t-test

No.	Risk Assessment and Analysis	Malaysia mean	Indonesia mean	Significant Difference
1	Islamic banks'assess the likelihood of occurring risk	5.79	5.26	0.000
2	Islamic bank's risk is assessed by using quantitative analysis methods	5.79	5.27	0.000
3	Islamic bank's risk is assessed by using qualitative analysis methods (e.g. high, moderate, and low)	5.85	5.50	0.035
4	Your Islamic bank analyses and evaluates the opportunities that it has to achieve objectives	5.83	5.53	0.030
5	Your Islamic bank's response to analysis of risk includes assessment of the costs and benefits of addressing risk	5.88	5.40	0.004
6	Your Islamic bank's response to analysis of risk includes prioritizing the risks and selecting those that need active management.	5.77	5.51	0.009
7	Your Islamic bank's response to analysis of risk includes prioritizing risk treatment where there are resource constraints on risk treatment implementation	5.96	5.49	0.041
8	Your Islamic bank has applied a shariah compliance risk assessment and analysis	6.01	5.61	0.045
	Overall	**5.85**	**5.44**	**0.00**

Table 7 reveals that there is a significant difference between Islamic banks in Malaysia and Indonesia in the level of risk control and monitoring, with the p-value below 0.05. The mean difference for Malaysia is 5.90, which is higher than 5.46 for Indonesia. Thus, we accept hypothesis 5, which indicates that there is a significant difference between the level of risk control and risk monitoring of Islamic banks in Malaysia and Indonesia. In addition, all the mean values for Malaysia were found to be very high compared to Indonesia. The highest mean value in Malaysia is 6.1 and the lowest 5.74. In Indonesia, the highest is 5.71 and the lowest 5.37. The p-values are all significant at the 5 per cent level of significance. The results indicate that Islamic banks in both Malaysia and Indonesia are serious about their risk control and monitoring.

Table 7: Level of Risk Control and Monitoring between Malaysia and Indonesia through t-test

No.	Risk Control and Monitoring	Malaysia mean	Indonesia mean	Significant Difference
1	Monitoring the effectiveness of risk management is an integral part of routine management reporting	6.08	5.37	0.000
2	The level of control by Islamic banks is appropriate for the risk that it faces	5.74	5.37	0.017
3	In your bank, reporting and communication processes support the effective management of risks	5.75	5.43	0.050
4	The Islamic bank's response to risk includes an evaluation of the effectiveness of the existing controls and risk management responses	5.87	5.49	0.011
5	The Islamic bank's response to risk includes action plans in implementing decisions about identified risk	5.89	5.44	0.004
6	The existing control and monitoring process in your Islamic bank always considersshariah compliance issues	6.10	5.71	0.007
	Overall	**5.90**	**5.46**	**0.001**

Table 8:Spearman Correlation Matrix between Independent Variables

	RMP	URM	RI	RAA	RCM	BODIM	BODINV
RMP	1.000						
URM	0.488**	1.000					
RI	0.539**	0.709**	1.000				
RAA	0.621**	0.636**	0.732**	1.000			
RCM	0.714**	0.407**	0.528**	0.521**	1.000		
BODIM	0.298**	0.347**	0.396**	0.363**	0.357**	1.000	
BODINV	0.190*	0-.048	0.070	0.041	0.258**	0.269**	1.000

Notes: ** Correlation is significant at the 0.01 level (2-tailed); * correlation is significant at the 0.05 level (2-tailed)

The Spearman correlation coefficient in Table 8 determines the strength of the linear relationship between the two variables. The closer to 1 the better; below 0.3 indicates weak correlation; above 0.3-0.7 moderate; and above 0.7 very good correlation (Cronk, 2008). From the results, it can be observed that almost all the correlation coefficients carry values between 0.3 to 0.7, which are considered moderate. Only BODINV and URM 0-.048, BODINV and RI (0.070), BODINV and RAA (0.041) are not significant. BODINV and RMP are also only significant at the 10 percent level while all the rest are significant at the 5 percent level.

Table 9
Regression Analysis Results

	Malaysia		Indonesia		Overall	
Variables	**Coefficient**	**Sig.**	**Coefficient**	**Sig.**	**Coefficient**	**Sig.**
Constant	0.026	0.954	-0.435	0.341	0.191	0.533
Understanding risk Management (URM)	0.159	0.147	0.471	**0.002**	0.174	**0.032**
Risk identification (RI)	0.290	**0.065**	0.310	**0.005**	0.321	**0.025**
Risk assessment and analysis (RAA)	0.400	**0.000**	0.368	**0.004**	0.359	**0.000**
Risk control and monitoring (RCM)	0.524	0.120	-0.153	0.241	0.336	0.340
Level of importance of board of directors (control variable)	0.008	0.909	0.042	0.753	-0.039	0.566
Level of involvement of Board of directors (control variable)	0.028	0.648	0.092	0.450	0.083	0.152
Adjusted R^2	0.628		0.734		0.646	
F-Statistic	39.06		32.76		63.41	
Sig. (F-Statistic)	0.000		0.000		0.000	
N	136		70		206	

From the regression results in Table 9, the adjusted R-squares are found to be good with a value of 0.628 in Malaysia, 0.734 in Indonesia and 0.646 overall. Using the t-statistic as well as F-statistic it is found that there is a significant difference between the two countries. As shown in the table, only risk identification (RI) and risk assessment analysis (RAA) are

positively significant with risk management practicesamong Islamic banks in Malaysia. In the case of Islamic banks in Indonesia, understanding risk management (URM), risk identification (RI) and risk assessment analysis (RAA) is found to be positively significant with risk management practices, thus confirming hypothesis H6.

However, risk control and monitoring is not significant with risk management practices in both countries. The results are similar to the study by Abdul Rahman, Syed Mohamad Noor and Dean (2013), and Hassan (2009) who found a significant relationship between RI and RAA with the RMP among Islamic banks in Malaysia and Brunei Darussalam, respectively. The results in the current study indicate that the Islamic banks in Malaysia need to give more attention to RI and RAA whereas their counterparts in Indonesia need to consider URM, RI and RAA to improve their risk management practices.

CONCLUSION

Risk management practices in Islamic banking between Malaysia and Indonesia have some differences, which are perhaps due to the historical facts and level of development of Islamic banking in the two countries. Malaysia started in the 1980s, while Indonesia only started in the 1990s. Thus, the level of experiences accumulated differsand the techniques developed to mitigate the risks also differ. The lack of a risk management system in a healthy and strong Islamic bank can prevent it from being able to address risk, and may reduce its potential contribution.

However, studies have shown that Indonesia has come to terms and has succeeded in transforming its practices of risk management in Islamic banking over the last two decades. The current findings show that there are significant differences between Malaysia and Indonesia in terms of the level of risk management practices;the level of understanding risk management, risk identification and analysis, as well as risk control and monitoring.

In addition, the regression results show that in Malaysia there are two significant predictors at the 5 percent level vis-à-vis risk identification (RI), and risk assessment and analysis (RAA). Additionally, two are significant at the 10 percent significance level. However, understanding risk management (URM) and identifying risk (RI) and level of risk management practices (RM) are not significant. In the case of Indonesia, risk identification (RI), risk assessment (RAA) and understanding risk management (URM) are all significant predictors at the 5 percent level of significance. The overall understanding risk management (URM), RI and RAA are all significant. The sample of Indonesia is small compared to that of Malaysia. Perhaps this finding shows the relative competition between Malaysia and Indonesia concerning risk management in Islamic banking. It also shows the need to strengthen the risk management practices in Islamic banking in Indonesia.

Adequate resources need to be devoted to the measurement and identification of risks and the development of risk management techniques, especially in Indonesia,which is still early in the development of sharia banks. There must be an understanding of integration with the established Sharia law knowledge of modern risk management techniques so that they can develop strong innovative risk management without breaking Islamic rules.

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