Internal Control System and Hazard Identification of Operational Risk in Malaysian Conventional Banking

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Abstract— The variety of bank services and products with money involve in the activities alongside the effort and endeavor to maintain competitiveness in the market, has assumed the necessity of risk management as the main pillar of modern banking in the institutes of monetary intermediation. Banks relied almost exclusively upon internal control system within business lines, supplemented by the audit function, to manage operational risk. Operational Risk Management encompasses the mechanisms, tools, policies, procedures and processes, including management oversight, to identify, assess, monitor, report, and control operational risk. The first step in the operational risk management process is to identify the hazard that is associated with risk to which the bank is exposed. Consequently, this article examines the relationship between internal control system and the hazard identification of operational risk in Malaysian conventional banks. Survey questionnaires were emailed to branch managers and assistant managers of 650 local commercial bank branches across Malaysia and 132 fully completed survey questionnaires were received. Besides, data was analyzed using multiple regressions. Importantly, the study found that Malaysian conventional banks have a good internal control system and hazard identification with a mean of 4.71 and 4.37 respectively. Moreover, there were mixed findings between the relationship of internal control system and hazard identification. Notably, the implementation of risk assessment, top management information and communication, branch information and communication and top management monitoring were found to have a significant result in the documentation of hazard identification and control decision, while implementation of risk assessment has a significant relationship with practice of hazard identification. It can be seen that top management monitoring is an important factor that influence documentation of hazard identification of operational risk in Malaysian local conventional banks.

Keywords— *Malaysian Conventional Banks, Internal Control System, Hazard Identification*

1. Introduction

The variety of bank services and products with money involve in the activities alongside the effort and endeavor to maintain competitiveness in the market, has assumed the necessity of risk management as the main pillar of modern banking in the institutes of monetary intermediation [37]. Furthermore, all the services provided are part of the banking operational activity. Therefore it cannot run away from inherent risk. All the front liners, especially tellers are prone to risk; errors in performing transactions over the counter such as wrong crediting to different accounts or wrong amount been credited into an account. This type of errors is common in banking operational issues but consequences can be fatal; losses to the bank profit and degrading of the bank reputation [55]. A certain level of failures can be anticipated and should be considered in the business plan. However unexpected failures which are not certain will happen or not will lead to risk. It is expected that these errors occur periodically, although the impact and frequency are uncertain. Impact or financial loss can be divided into forecasted impact, sudden severe impact and unexpected catastrophic impact. The organization should be prepared for losses resulting from expected component of these failures by allocating a portion of revenues in a sufficient amount to reserves. Organization must always allocate sufficient capital to cover unexpected severe component [22]

According to [37], risk in banking sector has a different nature from the other economic aspects, due to the following reasons; the number and variety of banking operations, different natures of banking operation, the capital position of banks and

International Journal of Supply Chain Management
IJSCM, ISSN: 2050-7399 (Online), 2051-3771 (Print)
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its limitation, protecting the interests of bank shareholders, status of depositors' resources and their frequency, maintaining depositors' interests and lastly variety in interests of banks and depositors. Banks are interested in operational risk because the exposure and effects can be fatal. Therefore, it has become one of the main risks of the financial sector [29]. According to Basel Committee operational risk can be defined as the risk of loss resulting from inadequate or failed internal processes, people, and systems, or from external events including legal risk but excluding strategic and reputational risk [10]. It can also be defined as the risk a bank encounter in production and services for its clients [18], [33]. Operational risk materializes in three dimensions, referred to as, cause, event and effect (or consequence/impact) as shown in the following Figure 1 [47].

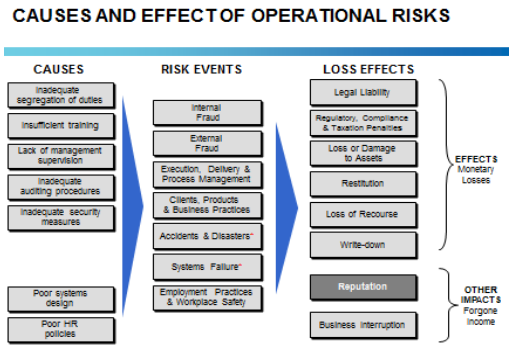

Figure 1. Causes and Effects of Operational Risk. Adapted from "Enterprise Risk Management: Modern Operational Risk Management," by Samad-Khan, A, 2008, *Emphasis, 2008/2*, p. 29.

From Figure 1, it can be seen that some of the causes of risk are due to the inefficiency of internal control system that includes; inadequate segregation of duties and inadequate security measured. Risk events include execution delivery and process management, internal fraud, and external fraud which lead to monetary losses and forgone incomes. According to Basel II [9] there are 7 loss event types due to operational risk that can be faced by the banks. It is summarized in the following Table 1.

Table 1: Loss Event Types

Loss Types	**Event**
Internal fraud	Unauthorized activity such as fraud or theft. It involves a criminal act aimed at benefiting the perpetrator and aimed at causing a loss. At least one perpetrator is an employee. Example includes, falsifying personal details for personal gain, theft of bank assets and unauthorized use of computer systems for fraudulent activities.
External fraud	Losses due to acts that intended to defraud, and misappropriate property by a third party. It includes hacking by third party, theft of information and forgery or impersonation.
Employment practices and workplace safety	Losses arising from acts inconsistent with employment, health or safety laws or agreement, or from payment of personal injury claims or from diversity and discrimination events. For example failure to adhere to equal opportunity policies such as religion, sex, age and race.
Client products and business practices	Losses arising from an unintentional or negligent failure to meet a professional obligation to specific client, improper market practice and product flaws. It includes regulatory fines, customer complaints and breach of Anti Money Laundering Act.
Accidents and disasters	Losses arising from loss or damage to physical assets from natural disaster or accidents.
System failures	Losses arising from disruption of business or system failures such as hardware fault, telecommunication failure, and utility outage that can cause business disruption.
Execution delivery and process management	Losses from failed transaction processing or process management and involving no act aimed at benefiting or causing a loss for any party. It includes, data entry error, system errors in transaction process, ineffective documentation of processes, failure to provide accurate external reporting, failure to ensure effective contract documents, inaccurate customer records, incomplete mandatory reporting and poor management decisions or oversight.

Adapted from, "Operational Risk Transfer Across Financial Sectors", by Basel Committee, on Banking Supervision the Joint Forum, 2003, p. 31.

Banks relied almost exclusively upon internal control system within business lines, supplemented

by the audit function, to manage operational risk. Thus, in order to enhance the effectiveness of operational risk management in banking institutions, internal auditors being part of the risk management team must provide input to the assessment of operational risks [2]. Robust internal control system, policies and procedures, and experienced staffs are the most important criteria in developing a good operational risk management in banks. Operational risk management is a framework that can detect the most critical operational risks to the organization in a timely manner and report effectively to all required individuals at different levels of management with adequate information for taking necessary actions [6]. If there is no proper operational risk management, it will lead to disaster and eventually leads to the collapse of a bank [53].

In Malaysia, banking operation unit are responsible for identifying, managing and reporting risk or any errors occur in the department [55]. Central Bank of Malaysia (BNM) plays an important role as a supervisor in monitoring the implementation of banking institution risk management that includes identify, measure, monitor and control risk. Furthermore, BNM provides incentives for banking institution to implement a robust risk management system [59].

2. Operational Risk Management

Operational Risk Management encompasses the mechanisms, tools, policies, procedures and processes, including management oversight, to identify, assess, monitor, report, and control operational risk. Taking into consideration the losses suffered in the last years, the financial institutions changed the operational risk management. So they established as main objectives: a higher capital profitability, a better capital allocation, the avoidance of the unanticipated losses, the avoidance of a big number of losses of small value, the improvement of the operational efficiency; a higher attention for the operational risk during the banking management process; the increase of the services quality for the clients; an efficient information and human resources management [41].

The paradigm or model of risk management is a set of tasks which are like a subsequence of chained activities throughout the lifecycle of a mission [37]. Activities include:

- Activity 1: Hazard Identification.

Searching and identifying risks, before it turn to serious problems.

- Activity 2: Analysis

The conversion of risk data into useful decision-making information. Evaluation of the impact levels, the likelihood and time limit of risk, classifying, and prioritizing them.

- Activity 3: Planning

Compiling the risk data to decisions of current and future activities and applying them.

- Activity 4: Tracking

Scrutiny of risk indices and reducing activities.

- Activity 5: Control

Reform of deviations toward reducing-risk programs.

- Activity 6: Communications

Information and feedback from external and internal risk activities provides existed and arisen risks.

2.1 Hazard Identification

The first step in the operational risk management process is to identify the hazard that is associated with risk to which the bank is exposed. Hazard is defined as any real or potential condition that can cause degradation, injury, illness, death or damage to or loss of equipment or property. Experience, common sense, and specific analytical tools help identify risks [40]. The identified risk will form the basis for determining viable systems for monitoring and controlling operational risk [15], [35]. Hazard identification is important and should be considered in a wider perspective. Managers or officer in charge should not only concentrated on what can be insured or mitigated, but should answer the following questions [54]:

- How can the organizational resources be threatened?
- What adverse effect can prevent the organization from achieving its goals?
- What possibility can be revealed?

Having the information related to the organization internal and the external environment is important to managers. It helps them to visualize all the risks that can dampened the organization endeavor in reaching their goals [54]. The internal environment encompasses the tone of an organization, and sets the basis for how risk is viewed and addressed by

an entity's people, including risk management philosophy and risk appetite, integrity and ethical values, and the environment in which they operate. It is necessary to obtain a comprehensive understanding of the organization, focusing on overall strategy, vision, mission, objective setting, risk appetite, risk tolerances, and the interrelationships therein [49].

A way of abstracting from major incidents could involve a bank-internal reporting of minor incidents and observations, which would lead to a better understanding of the underlying risk structures and thus improve the existing definitions of operational risk. Clearly, such a categorization will have to change as banks learn more details about its particular exposures to operational risk through new incidents. The accuracy of risk measurement methods crucially depends on the soundness of risk model and the availability of data. Proper risk modeling requires a thorough understanding of recurrent patterns that underlie the risk under consideration. The appropriateness of those risk models is inherently linked to data availability and thus the occurrence of events. Not only do incidents help in better understanding of the underlying risk structures but they also provide the ground for statistical testing of risk models. Furthermore, the accuracy of risk models depends on the measurability of outcomes and thus goes hand in hand with a sound definition and understanding of effects [38].

3. Internal Control System

According to International Federation of Accountants [25], internal control system has been created to help organizations in accomplishing their mission statement. There are only three internal control frameworks recognized worldwide by management, external auditors and internal audit professionals namely (i) Committee of Sponsoring Organizations of the Treadway Commission (COSO) (USA), (ii) Turnbull (UK), and (iii) Criteria of Control Board Guidance on Control (COCO) (Canada). Internal control comprises of process-dependent controls and process independent controls. Process-dependent control takes place either throughout a process, or directly before or after tasks are performed and are usually executed by process-owners or line managers [24], [45]. The process independent control is executed mainly through the independent internal audit [24], [46], and [13]. For the purpose of this study, COSO model of internal control system will be used as it is widely applied by previous studies of internal control system namely [19], [12], [21] and [5].

The COSO framework encompasses of five components that play an important role in the achievement of an organization internal control objectives. These components act as fundamental principles and an aid to planning, evaluating and updating controls [32]. The five components includes:

i) Control Environment

A good control environment provide guidelines related to: ethic and integrity values that should be owned by the member of entity; commitment to competence; participation or the board of director and audit committee; philosophy and management style; job description of each personnel; and lastly policy and procedure of human resources [58] and [23]. Bank top management set the tone of overall control environment while bank branch managers set the tone of for their respective branches. Therefore, banks must provide the necessary guidelines for branches in implementing a good internal control system. Ethical and integrity values must be embedded in all bank branches daily activity.

ii) Risk Assessment

Risk assessment component of control is evaluated based upon process-level objectives [28]. It is important for banks to undertake risk assessment in their control system. It is because banks cannot avoid risk in daily operations. Risk must always be identified and analysed relating to the achievement of each bank branches objectives. Management must always ensure that branch understood and manage risk appropriately.

iii) Control Activities

Control activity can be defined as policy and procedure to ensure that every activity taken based on the consideration to minimize the risk faced by the entity [58], [23] and [36]. This control activities ensure that all necessary actions should be taken with the aim to address risks so that organizational objectives are achieves. In banks, example of control activities include; segregation of duties, daily deposit of cash receipts, bank reconciliations and limiting access to check stock [7] and [1].

iv) Information and Communication

The adequacy of information for management is considered the key to identify, assess, manage and control risks in every banking institution. An efficient managerial reporting system should possess the following three characteristics: relevance, credibility and opportunity of information [43].

v) Monitoring

Monitoring provides assurance that the findings of audits and other reviews are promptly determined [28], also monitoring of bank

operations is implemented to ensures the effective functioning of internal controls system [5]. Therefore, monitoring determines whether or not policies and procedures designed and implemented by management are being carried out effectively by employees [7].

4.0 Internal Control System and Hazard Identification

The COSO framework proposes that effective internal control system provides assurance that banks conduct its operations efficiently and in accordance with its mission statement; its management data and financial reporting are reliable; and that it promotes compliance with applicable laws, and regulations. Bank relied on internal control systems to identify and manage risks. Bank internal control systems capable of providing assurances that risks are managed in an effective way [32]. A strong system of internal audit, both in its design and compliance, is a good for an organization in risk management through early detection and prevention of errors and frauds [57]. A study of 11 big North-American companies concluded that most internal audit directors use sophisticated risk models to identify potential problem areas [14] and [39]. There are three major concepts of operational risk measurement that has been practice by some banks [27], which includes;

(i) The volume-based approach, which assumes that operational risk exposure is a function of the type and complexity of business activity, especially in cases with low margins (such as in transaction processing and payments-system related activities) have the potential to heighten the effect of operational risk losses.

(ii) The comprehensive qualitative self-assessment of operational risk with a view to evaluate the likelihood and severity of financial losses based on subjective judgment rather than previous incidents;

(iii) Quantitative techniques, which have been developed by banks mainly for the purpose of assigning economic capital to operational risk exposures in accordance with regulatory capital requirements.

Based on the relationship between internal control system and hazard identification, the study hypothesizes as follow:

H1: Good internal control system will lead to better hazard identification.

H1a: Good control environment will lead to better hazard identification.
H1b: Good control activities will lead to better hazard identification.
H1c: Good risk assessment will lead to better hazard identification
H1d: Good information and communication will lead to better hazard identification
H1e: Good monitoring will lead to better hazard identification.

5.0 THEORETICAL FRAMEWORK

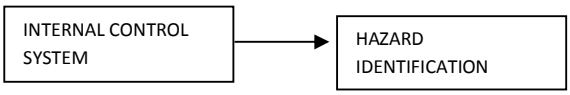

Figure 2: Theoretical Framework

6.0 RESEARCH METHODOLOGY

This study employed a cross-sectional quantitative approach. Questionnaires was used to collect data. This study was done on local commercial banks in Malaysia. The population of this study is 1845 local conventional bank branches across Malaysia. The local banks are the eight anchor banks in Malaysia. In this research, the unit of analysis is the conventional bank branches in Malaysia. The appropriate sample size for this study is 130, and the questionnaires sent were 650**.** However the researcher has collected details from 132 respondents, which fulfills the sample size requirement and the rule of thumbs. The sample units are selected using purposive sampling. This sampling method was adopted because there are a lot of practical difficulties in obtaining proportionate sample for each state. Further, getting the information from bank branches is a challenging task, hence this arbitrary methods of sampling was used. The purposive sampling method is the considered choice of an informant due to the qualities the informant possesses. It is a non-random technique that does not need underlying theories or a set number of informants. The researcher decides what needs to be known and sets out to find people who can and are willing to provide the information by virtue of knowledge or experience [56], [11], and [34]. This sampling design, is the most efficient when differentiated information is needed regarding various strata within the population which are known to differ in their parameters [50].

7. RESULTS

7.1 Factor Analysis

Confirmatory factor analysis (CFA) has to be used to determine whether all the items in each

dimension falls into the dimension. CFA is a statistical technique used to verify the factor structure of a set of observed variables. This factor analysis tool allows the researcher to test the hypothesis that a relationship between observed variables and their underlying latent constructs exists. The researcher uses knowledge of the theory, empirical research, or both, postulates the relationship pattern a priori and then tests the hypothesis statistically [52]. The following Table 2 and Table 3 summarize the items remained and deleted for internal control system and hazard identification after factor analysis.

Table 2: Summary of items remained and deleted for Internal Control System

Dimension	Number of Item (Before factor analysis)	Number of Item (After factor analysis)		Item Deleted
Control Environtment	9	Remain		None
Control Activities	11	5		6
	Risk Assessment 2 dimensions			
Risk Assessment	7	Identification of Risk Assessment = 4 items	Implementation of Risk Assessment = 3 items	None
	Information & Communication 2 dimensions			
Information & Communication	10	Top Management Information and Communication = 4 items	Branch Information and Communication = 2 items	4
	Monitoring 2 dimensions			
Monitoring	7	Top management monitoring = 3 items	Branch Monitoring = 3 items	1

Table 3: Summary of items remained and deleted for Perceived Operational Risk Management

Dimension	Number of Item (Before factor analysis)	Number of Item (After factor analysis)		Item Deleted
		Hazard Identification 2 Dimensions		
Hazard Identification	9	Documentation of Hazard Identification = 5 items	Practice of Hazard Identification = 4 items	None

7.1.1 Restatement of Hypotheses

The consequences of factor analysis lead to the restatement of hypotheses of the study. The hypotheses are as follow:

H1: Good internal control system will lead to better documentation of hazard identification.

H1a: Good control environment will lead to better documentation of hazard identification.
H1b: Good control activities will lead to better documentation of hazard identification.
H1c: Good identification of risk assessment will lead to better documentation of hazard identification.
H1d: Good implementation of risk assessment will lead to better documentation of hazard identification.
H1e: Good top management information and communication will lead to better documentation of hazard identification.
H1f: Good branch management information and communication will lead to better documentation of hazard identification.
H1g: Good top management monitoring will lead to better documentation of hazard identification.
H1h: Good branch monitoring will lead to better documentation of hazard identification.

H2: Good internal control system will lead to better practice of hazard identification.

H2a: Good control environment will lead to better practice of hazard identification.
H2b: Good control activities will lead to better practice of hazard identification.
H2c: Good identification of risk assessment will lead to better practice of hazard identification.
H2d: Good implementation of risk assessment will lead to better practice of hazard identification..
H2e: Good top management information and communication will lead to better practice of hazard identification.
H2f: Good branch management information and communication will lead to better practice of hazard identification.
H2g: Good top management monitoring will lead to better practice of hazard identification.
H2h: Good branch monitoring will lead to better practice of hazard identification.

7.2 Descriptive Results

Table 4: Ranking of Descriptive Results for Dimensions of Internal Control System

Items	Mean	Rank
Branch Monitoring	4.88	1
Branch Information and Communication	4.81	2
Control Activities	4.80	3
Identification of Risk Assessment	4.75	4
Control Environment	4.69	5
Top Management Monitoring	4.69	5
Implementation of Risk Assessment	4.64	6
Top Management Information and Communication	4.39	7
Internal Control System		**4.71**

From Table 4, the total mean of internal control system is 4.71. Hence, all of the respondents in the study indicated that their branches have implemented internal control system. The mean for the dimension of branch monitoring is a highly rated item with a mean of 4.88 while the lowly rated item is top management information and communication with a mean of 4.39. In a previous study done by [16] on the implementation of internal control system in obstetric wards of Malaysian public hospitals, the total mean for internal control system is 4.13. Besides, in a study done by [8] for the implementation of internal control system in Jordanian banks, the total mean for internal control system is 4.21. Therefore the total mean of internal control system in this present research is higher. 94% of the respondents confirmed that they had implemented internal control system. Thus, it can be concluded that the implementation of internal control system in Malaysian local conventional bank branches is very important.

Table 5: Descriptive Results for Hazard Identification

Items	**Mean**	**Rank**
Documentation of Hazard Identification	4.63	1
Practice of Hazard Identification	4.11	2
Hazard Identification	**4.37**	

From Table 5, the total mean for hazard identification is 4.37. This means that the respondents consider all the items identified as existing in their implementation of hazard identification in the branch. This can be seen that the documentation of hazard identification dimensions is a highly rated item with a mean of 4.63. The lowly rated item is practice of hazard identification with a mean of 4.11. The total mean for hazards identification in operational risk management in this study is higher as compared to a study done by [3] with the total mean of 3.56. Therefore, this study concluded that bank branches recognized that hazard identification is very important.

7.3 Regression Analysis and Hypotheses Testing

The following hypotheses were tested using multiple regression analysis. Before proceeding with multiple regression analysis, data was checked for the assumptions. From the result, it was reasonable to conclude that there is no outliers and violation of normality and homoscedasticity assumptions. The data meets all the assumptions of multiple regressions and thus multiple regressions are performed.

H1: Good internal control system will lead to better documentation of hazard identification.

Table 6: Regression Relationship between Internal Control System variables and Documentation of Hazard Identification

Variables	**Standardized Coefficients**	**Sig.**
	Beta	
(Constant)		.061
Control Environment	.033	.677
Control Activities	.070	.452
Identification of Risk Assessment	-.013	.883
Implementation of Risk Assessment	**.152**	**.053***
Top Management Information & Communication	**.398**	**.000*****
Branch Information & Communication	**.171**	**.015****
Top Management Monitoring	**.256**	**.001*****
Branch Monitoring	-.091	.161
R squared		0.599
Adjusted R square		0.572
F-test		22.59
Significant		0.000***
N		132

*p <0.10 **p < 0.05 ***p < 0.01

In this regression analysis, the perceived documentation of hazard identification is the dependent variable. From the above table, the results conclude that a model exists and a positive and significant relationship exists between internal control system and the perceived documentation of hazard identification. The F-test indicates that the direct model is of good fit with the data obtained. The model is statistically significant and explained 59.9% of the variation in the perceived documentation of hazard identification. Therefore, the regression analysis performed supports hypothesis H1.

The above table 6 indicates that there are four hypotheses that can be accepted. The hypotheses include:

i) H1a: Good implementation of risk assessment will lead to better documentation of hazard identification.
ii) H1e: Good top management information and communication will lead to better documentation of hazard identification.
iii) H1f: Good branch information and communication will lead to better documentation of hazard identification.
iv) H1g: Good top management monitoring will lead to better documentation of hazard identification.

H2: Good internal control system will lead to better practice of hazard identification

Table 7: Regression Relationship between Internal Control System variables and Practice of Hazard Identification

Model	**Standardized Coefficients**	**Sig.**
	Beta	
(Constant)		.000
Control Environment	-.144	.214
Control Activities	-.023	.866
Identification of Risk Assessment	-.003	.981
Implementation of Risk Assessment	**.231**	**.045****
Top Management Information & Communication	-.019	.862
Branch Information & Communication	.154	.133
Top Management Monitoring	.100	.375
Branch Monitoring	-.225	.020
R squared		0.113
Adjusted R square		0.056
F-test		1.968
Significant		0.056*
N		132

*p <0.10 **p < 0.05 ***p < 0.01

In this regression analysis, the perceived practice of hazard identification is the dependent variable. From the above table, the results conclude that a model exists and a positive and significant relationship exists between internal control system and the perceived practice of hazard identification. The F-test indicates that the direct model is of good fit with the data obtained. The model is statistically significant and explained 11.3% of the variation in the perceived practice of hazard identification. Therefore, the regression analysis performed supports hypothesis H1b.
The above table 4.29 indicates that there is one hypothesis that can be accepted. The hypothesis includes:

i) H2d: Good implementation of risk assessment will lead to better practice of hazard identification.

8.0 Findings and Discussion

In the relationship between internal control system and documentation of hazard identification, it can be concluded that a positive and significant relationship exists. Four dimensions of internal control system have significant relationship with documentation of hazard identification which includes; implementation of risk assessment; top management information and communication; branch information and communication; and top management monitoring.

The implementation of risk assessment is related to the activities by the management to assist branches in identifying and mitigating risk while documentation of hazard identification is about documenting all the identified risk particularly operational risk. It is important for banks to undertake risk assessment in their control system. It is because banks cannot avoid risk in daily operations. Risk must always be identified and analyzed relating to the achievement of each bank branches objectives. Management must always ensure that branch understood and manage risk appropriately. Documentation of hazard identification is also important because it is related to incident reporting procedures that are established to facilitate identification of risk trends together with risk escalation procedures. The descriptive results of this research confirmed that implementation of risk assessment and documentation of hazard identification is highly rated and has been implemented in bank branches. This is in line with the study by [20], [48], [42] and [57].

Another interesting finding from this study is top management information and communication and branch information and communication are

strongly related to documentation of hazard identification. This results shows that it is the responsibility of the top management to gather and provide communication to the branches in matter related to internal control system and operational risk management. The adequacy of information for management is considered the key to identify, assess, manage and control risks in every banking institution. An efficient managerial reporting system should possess the following three characteristics: relevance, credibility and opportunity of information [43]. Effective communication is very important for bank branches. Information on audit reports or new standard operating procedures must be communicated to all department and bank branches. Therefore, effective communications of information within the various sections of the organization should be enforced [28]. This is in line with results from the study of [26], [58], [23], [43], [28], [5] and [7].

Top management monitoring in internal control system is also strongly related to documentation of hazard identification. The results from the study proved that bank top management through internal audit emphasize on monitoring all the branches internal control system and operational risk management. Internal audit through internal control system is responsible in providing independent, objective assurance and consulting activities designed to add value and improve bank's overall operations. They help banks to accomplish its objectives by bringing a systematic, disciplined approach to evaluate and improve the effectiveness of risk management, control and governance processes [31]. This result is in line with the finding by [44], which stated that board members and senior administrators of US, stressed on the importance of monitoring activities to determine the effectiveness of institutional risk management activities.

However, control environment, control activities, identification of risk assessments and branch monitoring do not have a significant relationship with the documentation of hazard identification. Base on the descriptive results of the internal control system and hazard identification, all the dimensions are highly rated with small differences in standard deviation. It means that all bank branches implemented internal control system and hazard identification.

Control environment act as the foundation for the other components of internal control and providing structure, while control activities in bank branches are related to segregation of duties, daily deposit of cash receipts, bank reconciliations and limiting access to check stock [7] and [1]. Identification of risk assessment is related to management activity in identifying all the possible risk branches might face while branch monitoring is related to branch managers monitoring of branch internal control system. Documentation of hazard identification is about recording all possible risk that branch might encounter or has previously encountered. Hence, branch managers and assistant managers view internal control system and operational risk management as separate activities. The insignificant relationship between control environment, control activities, and branch monitoring with documentation of hazard identification are in accordance with [4]. Their study stated that control environment and control activities are not significant with audit program that deal with risk management. Besides, they regard monitoring as not important in their study. The insignificant relationship between identification of risk assessment and documentation of hazard identification is in accordance with [30] which stated that risk assessment in internal control system and risk management do not have any relationship in managing risk.

In a relationship between internal control system and practice of hazard identification, the results conclude that there is a positive and significant relationship exists. In this relationship, it was found that implementation of risk assessment has a significant relationship with practice of hazard identification. It is important for all bank branches to have proper risk assessment tools in order to analyze any possible internal or external threat in that can jeopardize the sustainability of the branch. In the case of Malaysian local conventional bank, examples of internal and external hazard or threat include falsifying personal details for personal gain, theft of bank assets and unauthorized use of computer systems for fraudulent activities done by the branch employee, fraudulent activities by third party and identity theft. This is in line with the study done by [8] which stated that implementation branch risk assessment is important in evaluating risk identification in the branch. In a study done by [51] stated that internal control system is very important in mitigating internal fraud in the religious organization. Furthermore, [57] in their studies also confirmed that, a strong system of internal audit, both in its design and compliance is a good for an organization in risk management through early detection and prevention of errors and frauds.

However, in this relationship, control environment; control activities; identification of risk assessment; top management information and communication; branch information and communication; top management monitoring and branch monitoring does not have significant relationship with practice of hazard identification. Again, as mentioned previously, control environment is the foundation for the other components of internal control system which also provides discipline and structure. It

includes the ethical values and competence quality of personnel, direction provided by the board and effectiveness of management [48]. These findings clearly stated that branches still do not see the interaction between internal control system and hazard identification. Even though all the dimensions are implemented, however lack of understanding and lack of commitment contribute to the insignificant of the relationship. This insignificant relationship is in accordance with [4], [30] and [25].

8.0 Findings and Discussion

In the relationship between internal control system and documentation of hazard identification, it can be concluded that a positive and significant relationship exists. Four dimensions of internal control system have significant relationship with documentation of hazard identification which includes; implementation of risk assessment; top management information and communication; branch information and communication; and top management monitoring.

The implementation of risk assessment is related to the activities by the management to assist branches in identifying and mitigating risk while documentation of hazard identification is about documenting all the identified risk particularly operational risk. It is important for banks to undertake risk assessment in their control system. It is because banks cannot avoid risk in daily operations. Risk must always be identified and analyzed relating to the achievement of each bank branches objectives. Management must always ensure that branch understood and manage risk appropriately. Documentation of hazard identification is also important because it is related to incident reporting procedures that are established to facilitate identification of risk trends together with risk escalation procedures. The descriptive results of this research confirmed that implementation of risk assessment and documentation of hazard identification is highly rated and has been implemented in bank branches. This is in line with the study by [20], [48], [42] and [57].

Another interesting finding from this study is top management information and communication and branch information and communication are strongly related to documentation of hazard identification. This results shows that it is the responsibility of the top management to gather and provide communication to the branches in matter related to internal control system and operational risk management. The adequacy of information for management is considered the key to identify, assess, manage and control risks in every banking institution. An efficient managerial reporting system should possess the following three characteristics: relevance, credibility and opportunity of information [43]. Effective communication is very important for bank branches. Information on audit reports or new standard operating procedures must be communicated to all department and bank branches. Therefore, effective communications of information within the various sections of the organization should be enforced [28]. This is in line with results from the study of [26], [58], [23], [43], [28], [5] and [7].

Top management monitoring in internal control system is also strongly related to documentation of hazard identification. The results from the study proved that bank top management through internal audit emphasize on monitoring all the branches internal control system and operational risk management. Internal audit through internal control system is responsible in providing independent, objective assurance and consulting activities designed to add value and improve bank's overall operations. They help banks to accomplish its objectives by bringing a systematic, disciplined approach to evaluate and improve the effectiveness of risk management, control and governance processes [31]. This result is in line with the finding by [44], which stated that board members and senior administrators of US, stressed on the importance of monitoring activities to determine the effectiveness of institutional risk management activities.

However, control environment, control activities, identification of risk assessments and branch monitoring do not have a significant relationship with the documentation of hazard identification. Base on the descriptive results of the internal control system and hazard identification, all the dimensions are highly rated with small differences in standard deviation. It means that all bank branches implemented internal control system and hazard identification.

Control environment act as the foundation for the other components of internal control and providing structure, while control activities in bank branches are related to segregation of duties, daily deposit of cash receipts, bank reconciliations and limiting access to check stock [7] and [1]. Identification of risk assessment is related to management activity in identifying all the possible risk branches might face while branch monitoring is related to branch managers monitoring of branch internal control system. Documentation of hazard identification is about recording all possible risk that branch might encounter or has previously encountered. Hence, branch managers and assistant managers view internal control system and operational risk management as separate activities. The insignificant relationship between control environment, control activities, and branch

monitoring with documentation of hazard identification are in accordance with [4]. Their study stated that control environment and control activities are not significant with audit program that deal with risk management. Besides, they regard monitoring as not important in their study. The insignificant relationship between identification of risk assessment and documentation of hazard identification is in accordance with [30] which stated that risk assessment in internal control system and risk management do not have any relationship in managing risk.

In a relationship between internal control system and practice of hazard identification, the results conclude that there is a positive and significant relationship exists. In this relationship, it was found that implementation of risk assessment has a significant relationship with practice of hazard identification. It is important for all bank branches to have proper risk assessment tools in order to analyze any possible internal or external threat in that can jeopardize the sustainability of the branch. In the case of Malaysian local conventional bank, examples of internal and external hazard or threat include falsifying personal details for personal gain, theft of bank assets and unauthorized use of computer systems for fraudulent activities done by the branch employee, fraudulent activities by third party and identity theft. This is in line with the study done by [8] which stated that implementation branch risk assessment is important in evaluating risk identification in the branch. In a study done by [51] stated that internal control system is very important in mitigating internal fraud in the religious organization. Furthermore, [57] in their studies also confirmed that, a strong system of internal audit, both in its design and compliance is a good for an organization in risk management through early detection and prevention of errors and frauds.

However, in this relationship, control environment; control activities; identification of risk assessment; top management information and communication; branch information and communication; top management monitoring and branch monitoring does not have significant relationship with practice of hazard identification. Again, as mentioned previously, control environment is the foundation for the other components of internal control system which also provides discipline and structure. It includes the ethical values and competence quality of personnel, direction provided by the board and effectiveness of management [48]. These findings clearly stated that branches still do not see the interaction between internal control system and hazard identification. Even though all the dimensions are implemented, however lack of understanding and lack of commitment contribute to the insignificant of the relationship. This insignificant relationship is in accordance with [4], [30] and [25].

Acknowledgments

The authors would like to thank to Professor Dato Dr. Hasnah Haron and Dr. Siti Rohaida Mohammad Zainol for their supervision and sharing of knowledge in conducting this study.

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