THE DETERMINANT FACTORS FOR A SUCCESSFUL RISK CULTURE IN BANKING SECTOR: MALAYSIAN CASE

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By

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ROZILA BINTI HAMZAH

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ABSTRACT

Risk culture has become a significant aspect of the organization, especially in financial institutions. It has become one of the critical factors of a successful risk management practice. A strong risk culture needs to be developed at all levels of the organization. However, there is still a lack of evidence of risk culture, especially in the banking sector. Thus, the aim of this study is to examine the determinant factors of risk culture in Malaysia banking sector. The study used survey as the research methodology. The questionnaire was distributed to all levels of bank staffs. The stepwise multiple regression was used to test the relationship between determinant factors and risk culture. Risk culture was found to be influenced by the length of services among bank staffs, employee roles and policy and guidelines. While the top management roles were insignificant towards risk culture. The result indicated that employee roles and policy and guidelines are important to develop a strong risk culture in the banking sector. It can create awareness among bank staff the importance of their roles towards risk culture. The results also provide useful inputs in guiding the bank regulators to evaluate existing policies and guidelines on creating an effective risk culture in the banking sector.

ABSTRAK

Budaya risiko telah menjadi satu aspek penting dalam organisasi, terutama di institusi kewangan. Ia telah menjadi salah satu faktor kritikal dalam amalan pengurusan risiko yang berjaya. Budaya risiko yang kukuh perlu dibangunkan di semua peringkat organisasi. Walau bagaimanapun, masih terdapat kekurangan bukti budaya risiko, terutamanya dalam sektor perbankan. Oleh itu, tujuan kajian ini adalah untuk mengkaji faktor-faktor penentu budaya risiko dalam sektor perbankan Malaysia. Kajian ini menggunakan kajian sebagai metodologi penyelidikan. Borang soal selidik diedarkan kepada semua peringkat kakitangan bank. Regresi berganda langkah demi langkah telah digunakan untuk menguji hubungan antara faktor-faktor penentu dan budaya risiko. Budaya Risiko telah didapati dipengaruhi oleh panjang perkhidmatan di kalangan kakitangan bank, peranan pekerja dan dasar dan garis panduan. Manakala peranan pengurusan atasan tidak ketara ke arah budaya risiko. Hasilnya menunjukkan bahawa peranan dan dasar dan garis panduan pekerja adalah penting untuk membangunkan budaya risiko yang kukuh dalam sektor perbankan. Ia boleh mewujudkan kesedaran di kalangan kakitangan bank kepentingan peranan mereka ke arah budaya risiko. Keputusan kajian ini juga dapat memberikan input berguna dalam membimbing penggubal dasar bank untuk menilai polisi dan garis panduan yang sedia ada kepada mewujudkan budaya risiko yang berkesan dalam sektor perbankan.

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USA	United State of America
NAB	National Australia Bank
IIF	The Institute of International Finance
MIA	The Malaysian Institute of Accountant
BNM	Bank Negara Malaysia
RBS	Royal Bank of Scotland
FSA	Financial Services Authority
CFO	Chief Financial Officer
IFCTF	International Conference on Financial Crime & Terrorism Financing
ERM	Enterprise Risk Management
UAE	United Arab Emirates
COSO	Committee of Sponsoring Organizations of the Treadway Commission
ICAAP	The Internal Capital Adequacy Assessment Process
SPSS	Statistical Package for Social Research
KMO	Kaiser-meyer-okin
MSA	Measure Of Sampling Adequacy

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CHAPTER 1

INTRODUCTION

1.1 Chapter Overview

This chapter begins with the background or the overview of the study. It discusses the risk management practice and the risk culture in the banking sector. The chapter also includes the problem statement, the objectives of the study, the research question, and the hypotheses of the research. The second last part of this chapter reveals the significance of the study, which consist of the practical as well as the theoretical contribution of the study. The last part of the chapter summarizes with the organization of this study.

1.2 Background

Risk management is not a new topic in this modern era. This issue has been discussed in numerous literatures (Ariffin & Kassim, 2011). Risk management is a crucial issue not only for the survival and profitability of a company, but also for the growth and development of the whole economy. The financial turmoil in 1997 and 2008 has awaken financial service organizations to the truth that when financial transactions enter into their operating environments, they prompt the risk exposures that can go well beyond insignificant transaction values, capital charges and other actions deemed appropriate for preventing unforeseen losses (Grody, Hughes & Toms, 2011).

Financial crisis and sudden collapse of major corporations and banks in the USA as well as around the globe have been closely linked to the weak risk management practices. For instance, Lehman Brothers Holdings, Inc. filed for bankruptcy in the USA in 2008 because of excessive risk-taking (Ng, Chong, & Ismail, 2013). Barings Bank also collapsed in 1995 after suffering losses of £827 million ($1.3 billion) resulting from poor speculative investments, primarily in futures contracts, conducted by an employee named Nick Leeson in its office in Singapore. Failure of risk management procedure on segregation of duties was the main cause for the collapse of Barings Bank (Edwards, 2004). As market environment is increasingly competitive, companies are likely to take more risk to compete with their rivals. Thus, several factors could be attributed to the financial crisis and corporate collapse, but a definite cause of excessive risk-taking could be said to be the main cause.

Consequently, effective risk management practice is essential to hedge risk-taking activities against corporate collapse. Risk management is an on going process that depends directly on changes in the internal and external surroundings of the organizations or the banks (Abu Hussain & Al-Ajmi, 2012). These changes in the surroundings need permanent concentration for risk identification and risk control. One study found a consensus among the academics, practitioners and regulators that effective risk management should be the primary concern of bank management (Abu Hussain & Al-Ajmi, 2012).

For financial institutions risk management practice is utmost important. Banks being the major sources of finance play the key role as the heart of a nation's economy. Thus, their wellbeing directly affects the economic well being of the economy. By sourcing their financing largely from deposit money received from the public banks' ability or inability to avoid bad loans can indirectly affect the economy. Banking sector in

Malaysia is the most highly regulated sectors. Banking is a risky business and several risk factors such as credit, liquidity, operational and market risks have been recognized as significant factors for banks to protect their interests (Ariffin & Kassim, 2011). Thus, it becomes clear that adopting an effective risk management practice in the banking sector will both mitigate the sector against various risks and the economy against financial crisis.

Countless studies have been conducted on the practice of risk management within the corporate and banking sector (Shafiq & Nasr, 2010). It is also found that risk management practice was one of the factors of returns on banks' stocks (Cooper, Speh, & Downey, 2011). However, the current increase in global trend on banks collapse and financial crises have raised questions as to the effectiveness of the risk management practices in the banking sector. In fact, one study found that risk management failure was one of the factors that have caused the global financial crisis (Abu Hussain & Al-Ajmi, 2012).

A worldwide study conducted by the Economist Intelligence Unit (2010) examines how the financial institutions worldwide intensified their risk management capacities in response to the global crisis. The results reported that the financial institution had conducted, or projected to conduct, a methodical overhaul of their risk management, including improvements to data quality and accessibility, strengthening risk governance, running towards a firm-wide approach to hazard management and deeper incorporation of risk within the lines of occupation. The survey also found that 40 percent of the financial institutions surveyed stated that the significance of risk management is widely read throughout their societies. This and the other studies discussed in the foregoing paragraph signify that a lot more needs to be done to embed a strong culture of risk management in the financial institutions (Abu Hussain & Al-Ajmi, 2012).

A study by Cooper *et al.* (2007) showed that the risk management policies set by National Australia Bank (NAB) were proved to be ineffective. Although the losses incurred by the NAB were the consequence of unauthorised trading activities, the study hypotheses that the traders' behaviour was influenced in part by the Bank's culture and the attitude of its senior management. The attitude of top tier management is considered the most important part in setting organisational morals, which in turn determines the culture that influences the employees' behavior (Ashby, Tommaso, & Power, 2012)

In setting up the risk management practices, a strong risk culture is considered to be the most essential criterion. It is broadly distinguished that problems with organizational culture played an important role in the financial crisis which crystallized in the late 2000s. 'Risk culture' chiefly has become a point of focus and debate by regulators and other bodies, yet there is no compromise on exactly what it is or how it may be managed (Ashby *et al*., 2012). McShane (2000) risk culture defined as the norms and customs of behaviour of individuals and of groups within an organization that resolve the way in which they identify, understand, discuss, and act on the risks the organization confronts and the risks it takes.

According to the IIF Steering Committe on Implementation of Risk Management Practices (2009), risk culture influences decisions at all levels in an organization. It is through such decisions that organizational values are formed and expressed. Risk culture is strongly linked with risk awareness and the willingness of the employees to engage and even challenge what appears to be winning strategies.

A necessary condition of influencing risk culture in a positive direction is "right leadership with right tone". In fact, various studies discovered that top management roles are considered to be the most essential attributes for building an effective risk culture in an organization. A study by Manab, Kassim & Hussain (2008) found that organizational risk culture is strongly influenced by its leadership. Armed with relevant theories and knowledge of organizational behavior, managers had been able to improve their management skills and had been more effective in influencing employees to attain the organization goals (McGinnis, 2006)

A good leadership has to come with better accountability and responsibility. According to a report by the Bernanke (2008), while senior managers and executive are eventually responsible for the management of risks, the directors and the staff must have the obligation to control the risks. The risk-management roles and responsibilities need to be plainly uttered to make the managers and the staff effectively accountable. The report also stressed that the responsibility for supervising specific policy, project and program should be assigned to the line managers across the government agencies. The responsibility for the performance of the agency's risk management framework, on the other hand, should be delegated to the risk managers or risk management team duly appointed to ensure successful management of risks.

Using a reward system as a strategy to build a risk culture is another role a top management can play. In 1996, a commentary in USA Today (Coyne, 2007) declared an insurrection in the rewards system that organizations were offering to their employees. Such declaration would obviously inhibit efforts to build a strong risk culture. As a corrective action, top management could introduce a "New Pay System" that linked rewards to accomplishment (of the organization's strategic objectives), instead of awarding bigger pay and bigger incentives based on seniority (Heneman & Coyne, 2007)

Good communication skills are another factor required of the top management for effective implementation of risk culture. A good communication is to ensure that the employees are fully understood what is expected of them. They also need to be clear about the benefits the organization will gain through their risk management efforts. A good communication becomes an effective communication when certain criteria are present. According to Janoske (2012), effective risk communication requires the arrangement of multifaceted factors, including trust between the communicator and the listeners(s), listener's connection, and emotional responses to risk.

In addition, top management must give their best commitment in order to develop and implement a good risk culture. According to The Association of Professional Engineers, 2006 on Guideline for Management of Risk in Professional Practice, it is the duty of the top management to ensure that employees are well trained in order to do their work. It was also suggested that the training focus on current policy and measures. Thus, effective implementation of risk culture requires that the top management to be committed in providing training to the employees on up-to-date policies, procedures and practices.

Besides the top management, employee also have important roles to play in developing a strong risk culture in an organization. The Malaysian Institute of Accountant (MIA) (2012) stressed that exposing employees the knowledge of risk management can influence their way of daily corporate life, activities, operations and the management of the organization, hence, making risk management as an attitude of individual employees of an organization which can imply that they are aware of, and live by, the knowledge the risks.

Acquiring good knowledge on risk management is another role the employees can play. Knowledge, such as best practice on risk management, can enhance the employees' risk awareness as well as their risk management skill. According to Massingham (2010), knowledge is required for the employees to understand and manage the risks. His study concluded that transferring risk management knowledge to the decision makers, improving the convenience of acquiring knowledge, embedding the knowledge in organizational controls and systems are ways of avoiding financial catastrophes caused by poor risk management.

A crucial factor for successful risk culture is getting the employees to fully involve and cooperate in the organizational risk management process. Employees must take part in any training, programme or campaign that form part of the risk management process. Without their participation and cooperation, a strong risk culture that the top management has planned may become a wasted. Perhaps, this is the kind of caution echoed by The Malaysian Institute of Accountant (MIA) (2012) that nothing is attainable if there is no real commitment and passion from a person.

Policies and guidelines on risk management from regulatory agencies also play a major role in developing a successful and strong risk culture (Power, Ashby, & Palermo, 2013). Bank Negara Malaysia, by their policies and guidelines, has been giving support for the financial sectors to install good governance and self-regulation for preventing the risks related to financial crime (BNM, 2013). One of the strategies has been a risk culture. This strategy, with its periodical audit on risk management functions,would eventually assist business organizations to evaluate and improve their risk culture.

In fact, existing rules and regulations such as Basel III and Economic Capital framework have indirectly develop strong risk culture in banking institutions. These frameworks which focus on risk mitigation were found to have improved risk management processes and practices in the financial institutions (Houngbedji, 2013). Houngbedji reasoned out that, while the economic capital framework could support the implementation of a strong risk culture by incorporating material risks into the decision-making procedure, Basel III could force changes in risk management for a desirable risk culture transformation (Houngbedji, 2013).

A central topic is whether the banking sector understands the degree of the regulatory footprint of their line of work. The tradeoff between their own approach to risk culture and that of the regulator is not even noticeable to many organizations. It also becomes apparent that there is a regulatory sub-culture in the sense of a network across parts of regulators, parts of financial institutions and parts of advisors who share general values (Power *et al.*, 2013). Nevertheless, more research into the distinctiveness of these issues is needed to shed light on the regulatory sub-culture.

1.3 Problem Statement

Risk culture have been found to be one of the critical success factor of a successful risk management practices (Houngbedji, 2013). Risk culture has become important in financial organizations since 2008 as being indicative of an inspiration to reconnect risk-taking and interrelated management as well as authority processes to a new moral narrative of organizational intention (Power *et al*., 2013).

There are many reported cases of bank failure caused by risk management failure (Thijs, 2011). The Royal Bank of Scotland (RBS) accounted £45.5 billion lost due to the risk management failure in 1995. Financial Services Authority (FSA) (2011) claims that one of the factors that contribute to RBS failure has been the underlying deficiencies in RBS management, governance and culture which made its management prone to making poor decisions.

Lehman Brothers, another major bank in the worldwith USD 639 billion in assets and USD 619 billion in debt, had filed bankruptcy also due principally to poor risk management. Their chief financial officer (CFO) has overlooked and made a wrong decision at times when the subprime market spreading into the housing market or hurting the U.S. economy. This shows that there was poor risk management in the bank that leads to poor decision making(Rayback, 2010).

In Malaysia, there are also cases of bank losses or failures brought about by poor risk management. Over the 2005-2006 periods, Bank Islam Malaysia Berhad had to write off RM2.3 billion in bad loans on its poor-quality assets (non-performing financing).It was found that, apart from the poor working culture and attitude among its employees, absence of robust risk management framework, risk infrastructure, resources and risk culture were responsible for the bank's also contribute to the loss (Jamalluddin, 2013).

Failure to develop a strong risk culture is often found to be a root of organizational scandals and collapses. Subsequent to the 1997 financial crisis, a report on corporate governance of UK banks commented that, "*The principal emphasis is in many* *areas on behavior and culture, and the aim has been to avoid proposals that risk attracting box-ticking conformity as a distraction from and an alternative to much more important (though often much more difficult) substantive behavioral change*" (Massingham, 2010).

In addition, in a recent KPMG International survey on almost 500 bank executives, approximately half (48 percent) of the respondents cited risk culture as a primary contributor to the failure of credit crisis. A company's risk culture is a critical element that can ensure that "doing the right thing" wins over "doing whatever it takes." Clearly, as a recent research discovered, those financial institutions that have a history of strong risk culture have been able to improve and made their risk management practices the best (Farrell & Hoon, 2012).

Regulation has undeniably been a major influence on the development of a strong risk culture in financial institutions. The importance of risk culture had been stressed by Encik Abu Hassan AlshariYahaya, the Assistant Governor of Bank Negara Malaysia. In his speech at the 5th International Conference on Financial Crime & Terrorism Financing (IFCTF 2013), he mentioned that:

> *"For an institution's risk governance to be effective, there must be a strong risk culture which is consistent with the institution's espoused values and risk appetite. A weak risk culture may lead to staff resorting to "check the box" compliance exercise whilst a strong risk culture will judge the wisdom and decision of looking beyond the profit number and be able to see the medium and long term sustainability. From the regulator's perspective, risk culture could be inferred and*

gauged based on the effective implementation and level of compliance by the risk takers and the frontline staff.

- (Bank Negara Malaysia, 2013)

Hence, risk culture is very important for the organizations especially the financial institutions. One of the factors of poor risk management in banking organization is weak risk culture both at the top management level as well as employee's level (Cooper *et al*. 2011). According to Manab *et al*. (2008) organizational risk culture is strongly influenced by leadership. Improper leadership skills will unconsciously allowing organization that is totally at odds and operating completely outside the organization objectives. In addition, Massingham (2010), stressed that an inappropriate actions taken by employees to react with risk affects the organizations. It also can influence certain individuals or teams to undertake these inappropriate actions and hence the rest of the organization will ignores condones or does not see the whole picture. It will lead to serious reputational and financial damage (Proviti, 2012). These inappropriate actions are because employees do not have the knowledge and experience to tackle with the risk issues (Barnabei, 2008).

In reflection, it appears that risk management has been or has to be a part and parcel of a management practice. In fact, most of the surveys, reports and discussion on risk culture initiated by the practitioners, and a few academic researches on risk culture proved that risk culture has become a significant managerial consideration in the banking institutions in Malaysia (Shafiq & Nasr, 2010). Thus, this study is intended to find out what are the factors that influence risk culture in the Malaysian banks.

1.4 Objectives of the Study

The aim of this study is to determine the factors that influence the risk culture in banking sector. Specifically the objectives of this study are:

(1) to identify the demographic factors that influence the risk culture in banking sector;

(2) to examine the determinant factors namely top management roles, employee roles and policies and guideline on risk culture in banking sector.

1.5 Research Question

The first objective is to identify the demographic factors that influence the risk culture. Thus, the first research question as follows:

1) What are the demographic factors that influence risk culture?

The related research questions for the second objective are as follows:

2) Does the top management role affect the risk culture?
3) Does the employee role affect the risk culture?
4) Does the policies and guidelines affect the risk culture?

1.6 Research Hypotheses

To answer the first question, the following hypotheses are proposed:

Hypothesis 1: There is a relationship between educational level and risk culture.

Hypothesis 2: There is a relationship between number of years service and risk culture.

To answer the second question, the following hypotheses are presented:

Hypothesis 3: There is a relationship between top management roles and risk culture.

Hypothesis 4: There is a relationship between employee roles and risk culture.

Hypothesis 5: There is a relationship between policies and guidelines and risk culture.

1.7 Significant of the study

1.7.1 Practical contributions

This study is expected to provide empirical evidence on key factors that influence the risk culture in banking sector. The findings of this research are also expected to create awareness regarding the roles of top management and employees in creating a strong culture that directly impact on the profitability and, hence, the value of the banks.

In addition, the findings are also expected to provide useful inputs in guiding the bank's regulators to evaluate existing policies and guidelines on creating risk culture in banking sector. It is hoped that the findings of this study would assist the regulators to install a strong and effective risk culture that will transform the Malaysian banks into formidable players on global market.

1.7.2 Theoretical contributions

Besides practical contributions, this research is also expected to enrich the existing research literatures on risk culture in banking industry. To date, numerous academic studies were done on issues relating to risk culture. However, very few of the focus on issues relating to risk culture in banking industry. Hence, this research is expected to add value from the academic perspective. It is also expected to generate interest for further scholarly research on risk culture, an area which is extremely essential for the continued survival and success of our banking industry. It will also draw on and contribute to scholarly literatures of the strong risk culture that essential for the successful risk management as well as that of the success of the banking sectors itself.

1.8 Organization of the study

This thesis consists of five chapters:

a) The first chapter of this thesis consists of the background study, problem statement, research objectives, research questions, research hypotheses and the significant of the study.

b) Chapter 2 reviews the relevant literatures and perspectives on the risk management practices and risk culture.

c) Chapter 3 highlights the research design and methodology used in this study. It also stresses on the sample techniques and the data collection process.

d) Chapter 4 provides the data analysis of this study and the results of the study.

e) Chapter 5 ends the study with discussion, conclusion and recommendations.

CHAPTER 2

LITERATURE REVIEW

2.1 Chapter Overview

This chapter provides the relevant literature review and also emphasis on the identified research issues within the literature. This current chapter is divided into seven sections. The first section discussed on risk management practices. The second section discussed the concept of Enterprise Risk Management (ERM). The third section discussed on risk culture. Fourth section discussed on the factors of risk culture. Subsequently, the fifth and sixth sections present the research framework and definition of variables. Finally, a conclusion of the chapter is presented.

2.2 Risk Management Practices

The global financial crises of 2007-2008 were without a doubt has given shock not only for the economist but the nation's overall. Excessive risk taking is believed to incur great financial losses to the shareholders that threatened the whole financial system and lead to economic crashed (Ng *et al*. 2013). Every organization is subject to numerous types of risks and the focal point is different across organizations (Ng *et al*. 2013).

Risk management practices are the process of risk identification, analysis, response planning, and monitoring, controlling and reporting (Barnabei, 2008). Risk management is important for the organization to handle risk. By applying risk management practices, organization is able to take an accurate process of managing risk for every aspect of the organization performance and how they interrelate. (Convery, 2003).

A study by Kimbrough & Componation, (2009) had identified the risks of bank failures. It is argued that with the aim of assessing the default risk of a bank, it is essential bearing in mind its financing decisions as an endogenous dynamic process (Shafiq & Nasr, 2010). It is vital for an sufficient approach to deal with bank risk management, the Basel Committee on Banking Supervision adopted the Basel I Accords, later adopted by the Basel II Accords and recently by the Basel III, to deal with the issue (Abu Hussain & Al-Ajmi, 2012).

In relation of risk management practices and performance, some studies have reported pessimistic effects of bigger capital requirements on bank performance (Ariffin & Kassim, 2011). A survey by Selma, Abdelghani & Rajhi, (2013) found that Tunisian bankers are alert of the use of effectual risk management in cutting expenditure and improving bank performance.

Taking risk management does not intend to minimize risk; instead its function is to optimize the risk- reward exchange and to evade likely collapse in the hereafter. Risk management as a procedural control has become a customary area of business practice in late years. For financial stability and economic development, solid risk management practices in the banking sector are vital (Selma *et al*. 2013).

According to Abu Hussain & Al-Ajmi (2012) risk management is a constant process that depends directly on changes in the inside and outside atmosphere of banks. These changes in the atmosphere require constant consideration for classification of risk and risk control. The implementation of risk management revolves around value defined as the efficacy or the significance of the entity to the stakeholders, in an unsure environment (Gupta, 2011). The improbability can be both apparent as risk or opportunity since it can either improve or reduce the value.

McAuley, Duberley, & Johnson (2007) studied on the risk management practice by commercial banks in Ghana. The study found that banks were moderately capable in managing risk, and risk monitoring and control was the most influencing variable in risk management practices. The study showed an important diversity among commercial banks in the practice of risk identification, understanding risk and in risk monitoring and control, risk assessment and analysis. This finding was further affirmed by Al-Tamimi (2007) who compared the efficiency of risk management practice by United Arab Emirates (UAE) national and foreign banks. The survey found that UAE banks were fairly effective in managing risk, and that risk classification and risk measurement and analysis were the most influencing variables in risk management exercises.

In addition, there are also studies regarding risk management practices in the Islamic banking. Abu Hussain & Al-Ajmi (2012) found that Islamic banks faced significantly higher levels of risk than those of the conventional banks. Likewise, country, liquidity, and operational, residual, and settlement risks were considered to be bigger in Islamic banks than they were in conventional banks. It was also found that Islamic banks were considerably varied from their conventional counterparts in understanding risk and risk management. In Brunei, Islamic banks were fairly rationally competent in managing risk, and risk identification and risk assessment and analysis were the most influencing variables in risk management practices (Hassan, 2009).

The above finding matched the result of another study by Ilias (2012). The study that found Islamic banks have a better risk monitoring system followed by internal control and risk mitigation strategies as compared to risk setting processes and policies and risk measurement policies. It was the board of the director's duty to delineate the risk management practices.

In summary, the risk management practice is important for an organization, especially in banking sector, be it conventional or Islamic bank. Neverthelss, the traditional risk management practice has evolved into a more comprehensive, enterprise-wide concept called Enterprise Risk Management (ERM).

2.3 Enterprise Risk Management

Most recent topics regarding risk management are Enterprise Risk Management (ERM). ERM is a new way on risk management area and it is defined as the process of identifying and analyzing risk from an incorporated, company-wide perspective (Lai, Azizan & Samad, 2011). It is a planned and restricted approach in aligning strategy, processes, people, technology and cognition with an idea of evaluating and making out the uncertainties facing the enterprise as it creates value for firms and shareholders (Lai, Azizan & Samad, 2011).

ERM has evolved as an approach to ornamental the custom of managing specific types of risk within organizational silos, such as operational, finance, market, and information technology risks (Kimbrough & Componation, 2009). In general, ERM encourages processes throughout techniques such as performance metrics linked to risk management, combination with strategic planning, and risk policies defining risk appetite, establishing an oversight committee, and providing a risk philosophy.

The financial services sector has extended in size, density, and product offerings, the risks faced by industry players have expanded as well. Not simply “traditional” risk factors be monitored and managed, numerous other internal and external risk sources in the absence of government mandates, would not be a bank’s anxiety at all, must be identified and hedge to avoid agency enforcement actions, including potentially severe municipal and illegal penalties and the complementary reputational harm. This events are reflected in the rising importance of “enterprise risk management,” or “ERM,” which concentrates on the evolution of a top-down approach to risk management (Milligan, 2009).

Razali & Tahir (2011) highlighted that risk management (traditional risk management) could not be overseen individually. It need to be included in a holistic manner. These causes are among the principal grounds of the introduction of Enterprise Risk Management in the late 1990s. Organizations expose to risks and the risks depend on many indicators. For example, operational risk, strategic risk, political risk, technology risk, legal risk, financial risk, reputational risk and human capital risk.

Banks have acknowledged and began to adopt the Enterprise Risk Management Framework released by COSO (Committee of Sponsoring Organizations of the Treadway Commission) as a framework to make their initiatives in risk management ahead of Basel norms and regulatory compliances (Jayaprakash & Vaidyula, 2011). In summary, ERM helps an organization to get to where it wants to go and evade pitfalls and uncertainty along the way.

Nevertheless, Manab *et al*. (2008) found that in order to maintain and constantly grow, organizations must be forced to efficiently and successfully practice risk management. The acceptance and thriving completion of ERM are not only determined by corporate governance and fulfillment, but also by good business practices, value creation, and survival.

A study conducted by Lai, Azizan & Samad (2011) found that the diffusion of ERM practices among Malaysian listed companies was moderately encouraging. The survey also found that ERM implementation has encouraging associations with reducing price of financial downturn, reducing cost of outside funding, improving firm's credit rating, receiving rewards from the equity marketplace, decreasing informational asymmetries, and reducing agency problem.

In summary, ERM contributes to the overall value of an organization. This, in turn, exemplifies the significance of ERM to businesses and industries worldwide (Razali & Tahir, 2011). ERM is considered a critical management practice for companies to alleviate risks efficiently. ERM fundamentally integrates and coorperate all types of risk across the whole company. Therefore, to implement a successful ERM practices, an organization must have a strong risk culture.

2.4 Risk culture

Organizational culture has been discussed in the management theory for a decade's compared to risk culture. Most research mentioned about the employees' behavior patterns or the style of top management leadership. In any case, organizational culture can give big influence of any initiatives that needs to be done in the organization (Kimbrough & Componation, 2009).

Kimbrough & Componation (2009) also found that there was positive relationship between organizational culture and ERM implementation. The finding pertained to an organization's ERM leadership played an important role in the organizational culture, even though it gave negative relationship with ERM implementation. Many studies stressed that organizational culture plays vital role for the risk management implementation.

According to McShane (2000), organizational culture is the basic pattern of shared assumptions, values, and beliefs measured to be the correct way of thinking about and acting on problems and opportunities facing the organization. It defines what is important and unimportant in the company. From this definition, we can imply that organizational culture is important to create a strong risk culture.

Cooper (2011) stated that in spite of treating risk management as a different restraint, the risk culture elevates this purpose to a position that overarches personal business units, geographic locations and risk studies. Responsibility and accountability for risk management absorb to the whole system. Employees who produce the risks acknowledge that it is their obligation to distinguish the dangers they confront. As a matter of fact, everyone in the system is required to identify risks without panic of consequences. Importantly, everyone must know that the objective is not to remove risk, but to manage it (Cooper *et al*., 2011).

The Proviti (2012) define risk culture as a term describing the values, beliefs, knowledge and understanding about common risk by a group of people with a common purpose, especially the employees of an organisation or of teams or groups within an organisation. “Risk culture” filter the idea of organisational culture to focus mainly on the combined ability to manage risk, but the wider organisational culture itself is a vigorous backdrop determining, and itself influenced by, risk culture.

There are many guidelines set up mostly by practitioners on developing a good risk management culture. HM Treasury (2004) (United Kingdom Treasury Department) sets a guideline for managers to create risk management culture. Among them are by establishing top management commitment and a clear way for change; generate awareness of the need for change; change behaviour (embedding risk management in people’s jobs); take the opportunities for culture change; support and foster the new culture (light-touch central support for embedded risk management); determine how efficiently change is being delivered and continued; and connect others in bringing about change.

Apart from that, Deloitte (2012) highlighted risk culture encompasses the common awareness, attitudes, and behaviours of employees towards risk and how risk is managed. While ‘Risk Intelligent Culture’ exists within an organisation when its employee understand; and their attitudes toward risk, guide them to constantly make proper risk-based decisions. There are seven key charateristics on risk intelligent culture namely commonality of purpose the values and ethics, universal adoption and application, a learning organisation, timely, transparent and honest communications, understanding the value of effective risk management, responsibility of individual and collective and expectation of challenge (Deloitte, 2012).

Concern in the cultures of organizations and their effects of management practices went back many years and there are many studies and research on this topic. The argument is led by the world of practice, above all in the financial services segment. Power *et al*. (2013) found that risk culture in the financial organizations are weak compared to other sectors. This is because within financial services, the factors have currently swung in favor of greater centralization, and panels of financial entities want to be at ease by strong centralized group functions, in particular Chief Risk Office and Chief Executive Officer. However, this segment has shown how centralization involves an amalgamation of dissimilar things such as new structural relations, new oversight units and greater consolidation of hazard information, but centralization has been never perfect and stable (Power *et al*., 2013).

Effective risk management still means alleviation, compliance, and control. Yet, it gradually more depends on company culture for inspiration, promotion, and support starting at the top, but requiring cross-functional leadership duty from the business lines, risk, and human resources (PricewaterhouseCooper, 2011). Financial institutions need to expand a strong risk culture that is concentrate on optimizing well calculated and well understood risk return trade-offs within a well defined firm extensive risk strategy leading to a reliable value creation for shareholders (Houngbedji, 2013).

A well founded risk culture gives employees a pledge in risk management. Employees' basic principles, values, and attitudes as well as their understanding of how to deal with risk can shape a company's risk culture. An appropriate risk culture is necessary for corporate risk management procedures to work effectively (Bungartz, 2010).

Risk managers should increase a clear, enterprise-specific risk hierarchy to assist suitable decisions about risk controls, processes and tools to create a risk culture (Whitepaper, 2012). The Whitepaper's study provides a robust yet flexible approach to risk culture. The others approaches are to ensure that risks are identified, profiled, assessed, monitored and reviewed consistently across the organization, exam the force of risk treatment initiatives to ensure sufficient controls and solutions are being put in place to mitigate risks to a suitable level.

There are several factors needed to be studied to promote a strong risk culture among the organization. Next section discussed the factors for a successful risk culture.

2.5 Factors on Risk Culture

There are many studies focus on the risk management practices in the organizations and financial institutions, but there are few studies that focus on factors that influence the risk culture in the banking sector. Most of the studies on enterprise risk management practices found that organizations or banks are reasonably efficient in managing risks. Below are the factors that found to be significant for a successful risk culture.

2.5.1 Demographic Factors

Demographic factors are defined as socioeconomic characteristics of a population expressed statistically, such as age, gender, education level, income level, marital status, occupation, beliefs, average size of a family, average age at marriage (Mitroi, 2010). Also known as respondent profile, it is commonly used for the research to examine the respondent profile that's been selected. Demographics can be seen as the crucial information about the population of a region and the culture of the people that been chosen as respondent (Mitroi, 2010)

Demographic factors have significant influence in many studies across many fields (Mitroi, 2010). For instance, education levels seem to be influential factors in risk culture (Farrell & Hoon, 2012). Employees with high education background know what the corporation stands for, the limitations within which they can operate, and that they can discuss and argue openly which risks should be taken in order to accomplish the company's long-term strategic goals (Farrell & Hoon, 2012).

Working experience, on the other hand, becomes the influential factor of a successful risk management A study by Hall, Anette, & Yuval (2013), showed that working experience of the workers along with its dense network of interpersonal connections, led to a development of an interactive risk-control methodology. Whereby risk management expertise was embedded in proprietary tools with the workers themselves. Indeed, experience plays an important role for decision making regardless the employees experience or the managers experience (Hall *et al*, 2013).

In sum, this study hopes to figured out what are the demographic factors that influence risk culture for a successful risk management practices.

2.5.2 Top Management Roles

Chief executive or its directors play an important role to achieve ultimate duty of accountability and responsibility for an organization. This includes accountability for an organization on the whole management of risk. Even as senior managers and executive are eventually liable for risk management, it is the duty of all managers and staff to handle risk (Bernanke, 2008). The same thought cited by Beasley, Hancock & Branson (2009) where the boards are required to provide with extra information concerning key risk exposures affecting the organization's objectives, including emerging strategic risks. Since management is responsible to the board of directors, the board's focal point on effectual risk supervision is significant in setting the tone and culture towards effectual risk management via strategy setting, formulating high-level objectives, and approving broad-based resource divisions (Beasley *et al*. 2009)

Another important duty for top management is the communication strategy to deliver risk management awareness or practices towards the organization. Telling people about risks and how to avoid them is an essential part of risk management (Bertrand & Brown, 2006). A survey done by Wilson (2006) found that 75 per cent of respondent agree that it is the leadership responsibility to communicate risk management to the organization.

It is the duty of top management to educate the directors, officers, employees, and volunteers will help prevent mistakes caused by ignorance (Bertrand & Brown, 2006). A survey done by Wilson (2006) found that about 61 per cent agreed that training and development for all staff about risk management are important. 68 per cent agree that training and development for top managers are important. While 63 per cent agree recruitment is important for risk management education

According to Rajagopalan (2012), there are growing demand from organizations to make a Total Reward framework for risk management policies or current human capital issues and opportunities. He added that it is not about instituting "common practice" or "best practice" programs that exist in the company, instead it is about knowing what your organization needs and what your people value. It is essential to reward the employees for their commitment in implementing risk management. It can influence others to do so as well (Heneman & Coyne, 2007).

Those leadership factors that mentioned above can be concluded in one element that is organizational culture. It is often challenging to develop a culture that ensures risk management, which is vital to an organization strategic and working environment. An encouraging risk culture is one where accepting, managing and understands the proper risk is part of an organization every day decision-making process. This is in dissimilarity to a pessimistic risk culture where people are risk averse, unaware of risk or arrogant with risk taking (Bernanke, 2008).

However, to create a strong organizational culture, the top management must set the tone that fits their organizational goals as well as the employees needs (Homeland Security, 2010). There are interview done by the Homeland Security (2010) research where it was a main concern of their leaders to understand how risks affected their whole organization. The interviewees emphasized that risk management strategies could involve their business units unfairly, and that a fine decision for one business unit could be a bad decision for another.

In summation, in general, it is the duty of the leadership to communicate the strategic guidance regarding risk, such as those risks that leaders wanted to prioritize managing. Then, business units and project directors were accountable for applying this data to develop execution strategies. Nonetheless, leadership could not determine its priorities without understanding the risks that their business units and project managers face. As a consequence, it was indispensable that the business units and project managers pass on risks to leadership, principally when changing situations could merit varying risk management strategies (Homeland Security, 2010).

2.5.3 Employee Roles

Staff will more likely own and apply the risk management principles promoted by the agency and integrate them in their day to day functions if their consciousness and understanding of the risk management framework are good (Bradley, 2011). It is essentially the role of all staff and their management teams to insure that each agency receives robust internal organizational culture and operation that is capable of identifying and managing its risks (Bradley, 2011). As employees, they must be aware about the importance of risk management.

Some researchers contend that knowledge is required to understand and manage the risk. Massingham (2010) emphasized that the necessity for employee insight, the significance of achievement, the value of education learned, and end that risk management is cognition management. The same result found by Isaac (2013) that consider knowledge informs decision makers. Therefore, employees must have knowledge on risk management so that they can perform or take the appropriate action when they face risks.

McShane (2000) cited that employees are more interested in ethics-based change when their leaders not only talk about values, but exemplify them in practice. The study added that to be effective, risk education should appeal to the leadership noblest aspirations. However, it is equally important for employees to take part in the risk education process. Risk education should help promote a culture in which employees do not simply agree to outwardly forced by rules, but rather define themselves by values that inspire them to not just follow the law, but to respect it and to ensure that their colleagues do so as well.

It is also the duty of staff to take responsibility for gaining an understanding of the risks facing their area of accountability, report promptly perceived failures in existing control measures that could increase risk and take due care to understand and comply with the risk management processes and guidelines of top management (Isaac, 2013).

Despite awareness, knowledge and responsibilities, the employees must change their attitude in order for successful risk management implementation. The employees must take an appropriate risk attitude when facing risks. For example, over risk aversion can cause the organization to be pessimistic and concentrate on ambiguous suspicions with almost no probability of incidence while overly risk-seeking attitudes can cause organizations to become overconfident and set low possibility levels in project budgets and schedules which will limit the ability to respond to risks (Barnabei, 2008).

Last but not least, the employees must willingly take part or contribute in the risk management process. For example, employees must go for the training that the management provides for them. It is to ensure that employees are properly trained in order to do their job. Employee also have to practice what they have been trained for to ensure the risk management objectives can be accomplished (The Association of Professional Engineers, 2006).

2.5.4 Policies and Guidelines

"Culture of Compliance" emerged to cultivate ethical actions and decision-making are developed following the reaction of company and accounting scandals primary up to the Sarbanes-Oxley Act in 2002. Excellent policies and procedures, a devoted obedience staff, ample compliance resources or electronic exemption information go beyond the culture of compliance (Kluwer, 2011).

A study by Kluwer (2011) stated that the senior management team is responsible to determine the policies and guidelines that clearly eloquent the expectations for managing risk. These policies are mandate from the regulatory. Financial service organizations are expected to undertake those procedures provide by regulatory. The process must start from the top in changing the attitude of the Board of Directors and getting the support from management (Kluwer, 2011).

For example, Basel III can help inspire a strong risk culture in a financial institution because it addresses jointly capital, leverage, buffer, and liquidity. Whilst The Internal Capital Adequacy Assessment Process (ICAAP) in pillar 2 is a process to ensure that management to identify, measure, aggregate, and monitor adequately the bank's risks, hold adequate internal capital with respect to the bank's risk profile and use sound risk management systems and develop them further (Houngbedji, 2013). It is a key integrated risk management tool. These regulation are believed can build a strong risk culture.

A well defined policies and procedures facilitate employees to follow the policies set forth without any problems and doubts (PricewaterhouseCooper, 2011). Policies and guidelines help the employees to identify and incorporate steps to be taken if they are facing risk. Every employee should have training on risk management definitions, thresholds, policies and processes. Training should be reinforced by testing for accepting of and attachment to these risk policies and procedures (Kluwer, 2011).

According to the Basel Committee on Banking Supervision (2011), the fundamental principals of operational risk management include the board supposed to set up a code of conduct or principles that sets clear prospect for reliability and ethical values of the uppermost standard and identify adequate business practices and forbidden conflicts. Apparent outlook and accountabilities make sure that employees realize their roles and responsibilities for risk, as well as their potency to react. Solid and reliable senior management support for risk management and ethical behavior persuasively reinforces codes of conduct and moral philosophy, compensation strategies, and training.

2.6 Organizational Culture Theory

Organizational Culture Theory was used for this study. This theory is widely used consecutively to learn the best ways to run an organization or identify organizations that are managed in such a way that they are expected to be thriving (Boundless, 2011). Organizational culture theory is the sociological lessons of formal social organizations, such as businesses and bureaucracies, and their interrelationship with the environment of a cultural lens with a focus on values, attitudes and beliefs of members (Boundless, 2011).

Organization is the normal harmonization of the activities of a number of people for the accomplishment of some common precise reason or goal, through division of labor or function, and through a hierarchy of power and responsibility (McAuley *et al*.

2007). Culture refers to as an undefined immanent characteristic of any society, a contingency factor with a variation on the functions of organizations (Allaire & Firsirotu, 1984).

In summary, organizational culture theory studies organizations to identify patterns and structures for how the coordination solve problems, maximize efficiency and productivity, and meet the expectations of stakeholders with respect of leadership practices and members values and beliefs (Dauber, Fink, & Yolles, 2012). Organization culture theory improves organizational efficacy and efficiency in relation to achieve desired goals. Besides, organization culture theory contributes to enabling organizations to profitably achieve those goals (efficacy) with as little use of its assets as currently feasible (efficiency) (McAuley *et al*. 2007).

For the purpose of this study, organization culture theory was used for the research framework. According to the theory, to have a strong risk culture, there are some factors (variables) needed. The theory emphasizes that there vibrant interaction between organizational culture, approach, structure, and operations of an organization (internal environment) and maps connections with the external environment (task and legitimization environment) (Dauber *et al*., 2012). The internal environment include the members of the organizations that are top management and employees, while external environment such as client, competitor, policy makers (policy and guidelines) and others (Dauber *et al*., 2012). Therefore, the next section of this chapter explained the research framework.

2.7 Research Framework

A conceptual model was developed which consisted of the factors, namely demographic factors, top management roles, employee roles, and policies and guidelines as the independent variables. The risk culture in banking sector acts as the dependent variable. The model is summarized in Figure 1.

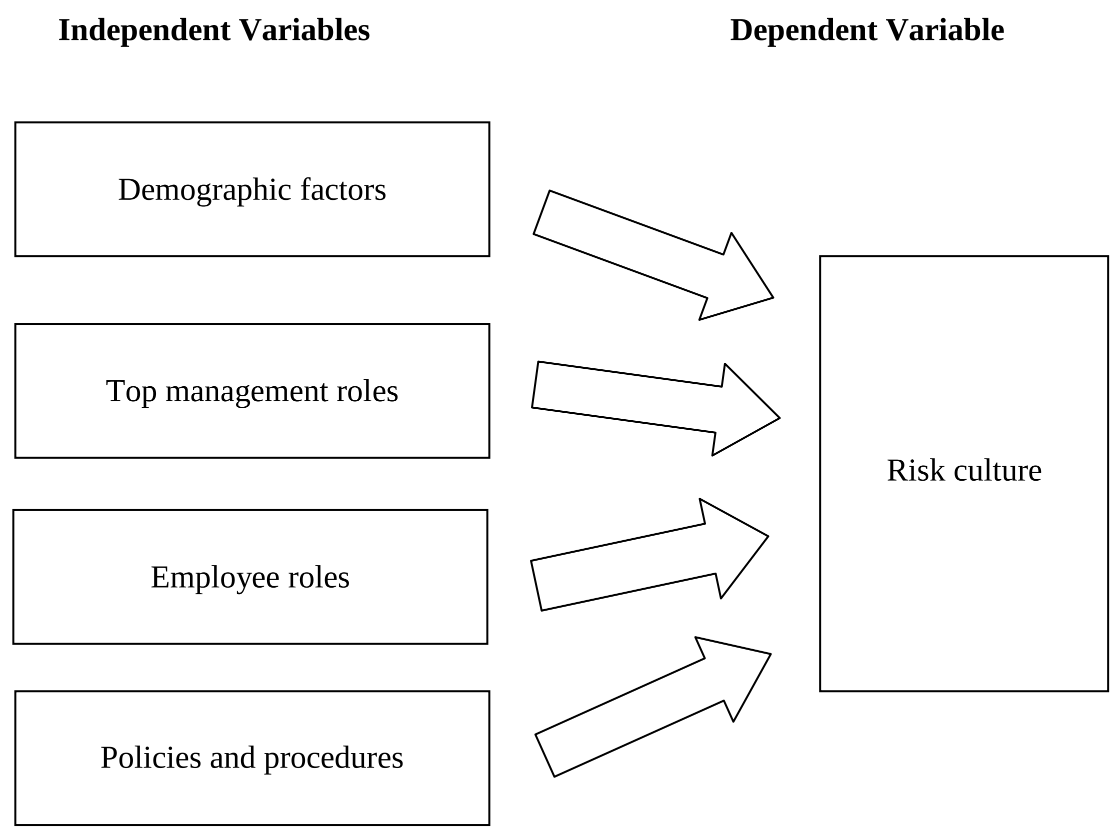

Figure 2.1: *Framework of variables*

2.8 Definition of Variables

As discussed in the literature review and research framework, the independent variables are made up of demographic factors, top management roles, employee roles, and policies and guidelines. The dependent variable is the risk culture in banking sector.

Demographic factors are defined as socioeconomic distinctiveness of a population expressed statistically, such as age, gender, education level, income level, marital status, job, religion beliefs, birth rate, death rate, average size of a family, and average age at marriage (Mitroi, 2010).

Top management roles are defined as "a process by which a person influences others to accomplish an objective and directs the organization in a way that makes it more cohesive and coherent" (Wilson, 2006). Leaders carry out this process by applying their leadership knowledge and skills. Employee roles focused on the employee's awareness, knowledge, education and attitudes towards enterprise risk management practices (Massingham, 2010). These include all level of staff in the bank sector.

Policies and guidelines defined as a set of policies are principles, rules, and guidelines formulated or adopted by an organization to reach its long-term goals (Houngbedji, 2013). Policies and guidelines are designed to influence and regulate all major decisions and activities, and all natural processes take place inside the bounds set by them. Together, policies and guidelines ensure that a point of opinion taken by the governing body of an organization is translated into steps that result in an result well-matched with that view (Kluwer, 2011).

Risk culture only focused on the bank staff related to the risk management practices based on the factors mentioned above in the present as well as in the future.

2.9 Summary of the Chapter

This chapter summarized several literatures that significantly involved in the risk culture. The gaps in the previous studies are highlighted and the strategies to reduce them are discussed. This chapter also explained on the theory used and the research framework. The next chapter provides the research design and methodology of this study.

CHAPTER 3

METHODOLOGY

3.1 Chapter Overview

This chapter describes the research design and methodology used in this study. The discussion is divided into four sections, namely, data collection, data analysis and the theoretical framework. At the end of this chapter, a summary is presented.

3.2 Research Design

The research design in this study uses primary data for which questionnaires were developed. Figure 2 presents the survey process that was carried out to collect the data for this study.

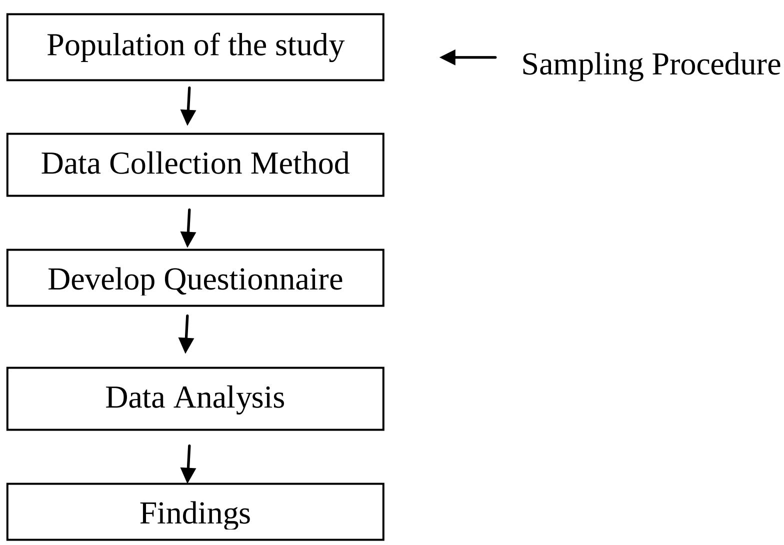

Figure 3.1: *Research Design*

The research design starts with identifying the population of the study and the appropriate sampling procedure. Then, after the population and sampling has been identified, data collection was carried out. Afterwards that, survey process being held out with developing the questionnaire. Subsequently, data analysis takes place. The details of data analysis were discussed in the rest of this chapter. Finally, findings of the survey were obtained.

3.3 Unit of Analysis

The unit analysis could be individuals, groups, industries, organizations or countries (Hair, Babin, Black, & Anderson, 2010). The purpose of this study is to examine the risk culture among bank staff in Malaysia. The managers, assistant manager, executive and clerk of various units of a bank were selected to answer the questionnaire. For this reason the individual was selected as the unit of analysis for this study.

3.4 Population and Sample

The population of this study is the bank staff that work in the local commercial and Islamic bank in Malaysia. In Malaysia, there are eight local commercial banks and two local full-fledge Islamic banks. The researcher used stratified cluster sampling. This technique was a combination between stratified sampling and cluster sampling. Stratified sampling was to divide the population into groups based on a factor that may influence the variable that is being measured. These groups are called strata. While a cluster sampling was a sampling technique used when "natural" groupings are evident in a statistical population. In this technique, the total population is divided into groups and a sample of the groups is selected (Pennstate, 2013)

The reason to combine these sampling techniques was to reduce the cost, and limit the weaknesses from both techniques (Pennstate, 2013). Stratified cluster sampling have combined elements of stratification and clustering. First, the researcher defines the clusters, and then groups the clusters into strata of clusters. After that, randomly pick one (or more) cluster from each of the strata of clusters. Finally, sample the subjects within the sampled clusters (Molenberghs, 2010).

A total of 120 questionnaires were distributed to the targeted respondents. Table 3.1 below shows lists of the banks and their respective total number of respondents surveyed and the actual number of responses received.

Table 3.1: *List of Banks*

Name of banks in Malaysia	Total of Respondents	Responses
Public Bank Berhad	12	10
Hong Leong Bank Berhad	12	10
CIMB Group Holdings Berhad	12	12
RHB Bank Berhad	12	12
Maybank Berhad	12	10
Ambank Berhad	12	10
Affin Bank Berhad	12	12
Alliance Bank Berhad	12	10
Bank Islam Malaysia Berhad	12	12
Bank Muamalat Malaysia Berhad	12	10
Total	120	108

3.5 Data Collection

3.5.1 Questionnaire

The research instrument was questionnaire. The questionnaires were reflected from research objectives and the variables of the study. The intention was to get feedback from the bank staff. The questionnaire was divided into five parts. The first part was the respondent profile. The aim of this part was to identify what are the demographic factors that influence risk culture. The second part focused on top management roles. In part three, questions were about the role of employees. In part four, the questions discussed on policies and guidelines. Lastly, part 5 was related to risk culture. The questionnaires were distributed by hand. The questionnaire design as follows:

Part 1: Respondent's profile

Part 2: Top management roles towards risk culture

Part 3: Employee roles towards risk culture

Part 4: Policies and guidelines towards risk culture

Part 5: Risk culture

3.5.2 Level of Measurement

The data were measured by using a five-point likert scale. The five part options start from a low negative response (strongly disagree) to a high positive response (strongly agree). The measure was on a scale 1 to 5.

3.6 Reliability and Validity of Questionnaire

3.6.1 Factor Analysis

After examining data, the next stage of data analysis was factor analysis. This analysis was important to examine the underlying patterns or relationships for a large number of variables, to determine whether the information could be condensed or summarized in a smaller set of factors or components and to determine the most parsimonious set of factors (Hair *et al*., 2010). Factor analysis was also utilized to assess to the construct validity of the variables under study (Hair *et al*., 2010). Construct validity refers to the extent to which a set of measured items actually reflects the theoretical latent construct those items are designed to measure (Hair *et al*., 2010).

3.6.2 Reliability Test

After presenting the results of factor analyses, the internal consistency of the factors was examined by computing the Cronbach's alpha values for the remaining items. The purpose of reliability analysis is to indicate how well the items measuring a concept hang together as a set (Sekaran, 2003). This approach was selected since Cronbach's alpha is an adequate test of internal consistency reliability in almost every case (Sekaran, 2003). The closer Cronbach's alpha value is to 1, the higher the internal consistency reliability (Sekaran, 2003).

Table 3.2 displays the results of factor analysis of the variable using the rotated component matrix. An oblique rotation were used in an attempt to achieve simple structure, allowing the factors to be correlated. The factor analysis had generated four factors. The factors are loading range, Kaiser-meyer-okin (KMO), measure of sampling adequacy (MSA), communalities and Cronbach's alpha of the factors to ensure adequacy, and specific items are then discussed.

Table 3.2
Results of Loading Range, KMO, MSA, Communalities and Cronbach Alpha(N=105)

Variables	Loading Range	KMO >0.50	MSA	Communalities	Cronbach Alpha
1. Top management roles	.828-.177	.708	.768-.616	.907-.413	.844
2. Employees roles	.902-.006	.747	.824-.683	.815-.539	.855
3. Policy and Guidelines	.837-.057	.698	.783-.632	.736-.590	.829
4. Risk culture	.892-.067	.637	.733-.596	.798-.466	.767

According to Hair *et al*. (2010) the required value of KMO tests were more than 0.50, and MSA were more than 0.50. The result showed all the variables met the required value. In addition, majority of the variable items communalities were more than 0.50. This indicates that the variables are appropriate for factor analysis (Hair *et al*., 2010). In addition, the Cronbach's alpha values for variables varied between 0.767 (risk culture) and 0.855 (employees roles). Three variables possessed Cronbach's alpha values above 0.80 (top management roles, employee roles and policy and guidelines), and one variable below than 0.80 (risk culture). Thus, none of the study variables demonstrated below the minimum reliability level of 0.60 (Hair *et al*., 2010). Hence, the internal consistency of the measures used in this study was considered acceptable (Sekaran, 2003). Apart from that, out of the 30 items measuring the study variables (top management roles, employee roles, policy and guidelines and risk culture) there are 13 items were deleted because of the low varimax results.

3.7 Response Rate

A total of 120 questionnaires had been distributed to bank staffs that located in Northern Malaysia area. Out of 120 distributed questionnaires, 108 were returned, yielding a response rate of 90%. Hair *et al*. (2010) suggested that 'a good sample size for statistical analysis is at least ten times more than variables'. For this study, there are five variables, namely demographic factors, top management roles, employee roles, policy and guidelines, and risk culture. Therefore, five variables times ten is 50 respondents. Thus, the number of responses of 108 was sufficiently large for the researcher to make a generalization of this study.

3.8 Data analysis

Descriptives and inferential statistic were used for data analysis. The Statistical Package for Social Research (SPSS) was used to analyse the data. Analysis such as frequencies, and correlation analysis were performed in the first part of analysis. Bivariate correlation was used to test the first and second research questions of the study. Whilst, multiple regression analysis was used in the second part of the analysis. A stepwise multiple regression was used to test the relationship between independent variables and dependent variable. As suggested by Hair *et al.* (2010), the aim was to select the best predictor of the dependent variable to the regression model.

After conducting the analyses, the data were examined through a diagnostic tests on the basic assumptions of the regression analysis (Hair *et al*.,2010). A diagnostic test was performed to test how good the model was.

3.8.1 Outliers Identification

Outliers are observations with unique combination of characteristics identifiable as distinctly different from the other observations (Hair *et al*., 2006). This study used multiple regression procedure to detect both univariate outliers on dependent variable and multivariate outliers on independent variables (Hair *et al*., 2010). Univariate outliers can be detected using studentized residuals. Studentized residuals are z-scores computed for a case based on the data for all other cases in the data set (Hair *et al*., 2010). Based on the multiple regression procedure, this research detected three multivariate outlier (respondent number 4,12 and 14) with a mahalanobis distance value of 105.05, 68.85 and 61.62 respectively (greater than 59.70 of critical chi-square value at an alpha level of .001) was detected. The outlying cases were deleted from the data set (Hair *et al*., 2010). Therefore, only 105 respondents were retained for further analyses.

3.8.2 Normality

The first multivariate assumption is normality. Data normality test is important to assess whether or not score for each variable is normally distributed or not (Hair *et al*., 2010). This study used statistics for skewness and kurtosis to assess data normality because they are appropriate for interval level data (Hair *et al*., 2010). Skewness and kurtosis refer to the shape of the distribution (Hair *et al*., 2010). Table 3.3 presents the results of the normality tests. The SPSS output is presented in Appendix ‘B’.

Table 3.3
Results of Normality Tests (N=105)

	Skewness		Kurtosis	
	Statistic	Standard Error	Statistic	Standard Error
1. Demographic factors	.962	.236	-.088	.467
2. Top management roles towards risk culture	-1.033	.236	.530	.467
3. Employee roles towards risk culture	-1.711	.236	4.041	.467
4. Policies and guidelines towards risk culture	-.877	.236	.192	.467
5. Risk Culture	-.934	.236	.189	.467

As shown in Table 3.3, the statistics for skewness and kurtosis of study variables were less than ± 2:58. The only exception was the employee roles towards risk culture which has the statistical value of less than ± 2:58. This meant that a transformation process was required in line with the suggestion made by Hair *et al.* (2010). The transformation was performed by using the logbook 10. The survey questionnaire used 5 point likert scale times 8 items of the employee roles variable. The transformation was as below:

Table 3.4
Results of Transformation of Normality Tests (N=105)

	Skewness		Kurtosis	
	Statistic	Standard Error	Statistic	Standard Error

1. Employee roles towards risk culture	.226	.236	-.176	.467

3.8.3 Linearity

The second test to meet the multivariate assumption is linearity. The purpose of linearity test is to assess whether the relationship between the independent and dependent variables of this study is linear or otherwise. Correlations of significant 2 tailed at level 0.01 were used for this research. Table 3.5 show the significant 2 tailed at level 0.01 in each independent variable of this research.

Table 3.5
Results of Linearity test (N=105)

		Top management roles	Employee roles	Policies and guidelines	Demographic factors
Top management roles	Pearson Correlation	1	-.492**	.345**	.002
	Sig. (2-tailed)		.000	.000	.980
Employees roles	Pearson Correlation	-.492**	1	-.409**	-.089
	Sig. (2-tailed)	.000		.000	.365
Policies and guidelines	Pearson Correlation	.345**	-.409**	1	.335**
	Sig. (2-tailed)	.000	.000		.000
Demographic factors	Pearson Correlation	.002	-.089	.335**	1
	Sig. (2-tailed)	.980	.365	.000	

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

The above results indicated that there were only two insignificant variables that were demographic factors with top management roles and demographic factors with employees roles that were .980 and .365 respectively. However, the majority of the variables have proven to be 2-tailed significant, which confirms the linearity assumption of this research (Hair et al., 2010)

3.8.4 Homoscedasticity

The next multivariate assumption is homoscedasticity. Homoscedasticity refers to the assumption that dependent variable(s) exhibit equal level of variance across the range of independent variables (Hair *et al*., 2010). For this purpose, Levene test was conducted for variance dispersion value of dependent variable is relatively came for each value of the independent variables of this study (Hair *et al*., 2010). Table 3.6 presents the results of the homoscedasticity tests. The SPSS output is presented in Appendix ‘C’.

Table 3.6
Results of Homoscedasticity Tests (N=105)

Metric Variables	Levene Statistic (F Value)	Significant Level ($p<0.001$)
1. Top management roles	7.640	.007
2. Employees roles	1.039	.310
3. Policies and guidelines	2.368	.127
4. Demographic factors	1.283	.260
5. Risk Culture	2.262	.136

As can be seen from Table 3.6, the results of the Levene tests were not significant ($p>0.001$). This indicates that dependent variable exhibits equal level of variance across the range of independent variables. Therefore, it can be said that the assumption of homoscedasticity was met in this research (Hair *et al*., 2010).

3.8.5 Multicollinearity

The last multivariate assumption is multicollinearity. Multicollinearity refers to high correlations among two or more independent variables (Hair *et al*., 2010). This study used Pearson product-moment correlation coefficient, tolerance and variation inflation factor (VIF) to trace if data suffers with the problem of multicollinearity. Table 3.7 presents the results of collinearity coefficient. The SPSS output is presented in Appendix ‘D’.

Table 3.7
Results of Collinearity Coefficient (N=105)

Model	Tolerance Value (< 0.10)	VIF (>10)
1. Top management roles	.723	1.383
2. Employees roles	.693	1.444
3. Policies and guidelines	.710	1.408
4. Demographic factors	.873	1.146

Dependent variable: Risk culture

As shown in Table 3.7, tolerance value was less than 0.10 and VIF values of independent variables were more than 10. Therefore, it can be assumed that there was no serious multicollinearity problem between independent variables based on the collinearity coefficient (Hair *et al*., 2010).

3.9 Multiple Regression Model

The multiple regression model for this study is adapted from Kimbrough (2007). The model is as follow:

$$RC = a0 + \beta_1 DF + \beta_2 TMR + \beta_3 ER + \beta_4 PG + \varepsilon$$

where,

RC = Dependent variable representing risk culture.

DF = Demographic factors as the independent variables and the measurement is ratio.

TMR = Top management roles as the independent variables and the measurement is ratio.

ER = Employee roles that are also independent variables that will be measure as ratio.

PG = Policies and guidelines that are also independent variables that will be measure as ratio.

3.10 Summary of the Chapter

This chapter consists of five sections. The first section of this chapter was discussed about the data collection. The instrument used in this study was a questionnaire. The third section was about the data analysis. The next section was the proposed model. This study used inferential statistic in the study.

CHAPTER 4

RESULT AND FINDING

4.1 Chapter Overview

This chapter presents the analyses of the research study. The presentation of the data analysis was based on the research objectives. The first part highlighted on the profile of respondents. The second part responds to the first research objective and tests the related hypotheses. Then, a stepwise multiple regression analysis was used to answer the second research objective and to test the research hypotheses. Finally, a summary of the discussion is presented.

4.2 Profile of Respondent

Six demographic characteristics were selected for testing, namely gender, level of education, current position, department, number of years of current position and number of years service in current bank.

4.2.1 Gender

The finding showed that more than half of the respondents (55.2%) were female and the rest were male (44.8%). The result indicated that the numbers of bank staff that was female was higher than that of male.

Table 4.1
Distribution of Respondents Based on Gender (N=105)

Gender	Frequency	Percentage
Male	47	44.8
Female	58	55.2
Total	105	100.0

4.2.2 Level of Education

Majority of the respondents possessed bachelor degree (48.6%) and followed by diploma (27.8%) and master (6.7%). Only 1 percent has professional qualification while 16.2 percent were categorized under other type of qualification. This result showed that most of the respondents were bachelor degree holders.

Table 4.2
Distribution of Respondents on Level of Education (N=105)

Education	Frequency	Percentage
Diploma	29	27.6
Bachelor Degree	51	48.6
Master	7	6.7
PHD/DBA	0	0
Professional qualification	1	1.0
Other	17	16.2
Total	105	100.0

4.2.3 Current Position

The current position of the respondents was mostly executive (36.2%), clerk were 9.5 percent, 24.8 percent respondents were assistant manager and only 8.6 percent respondents were managers. This finding indicated that majority of the respondents were executive and only few of them were manager.

Table 4.3
Distribution of Respondents on Currrent Position (N=105)

Position	Frequency	Percentage
Clerk	31	29.5
Assist. Manager	26	24.8
Manager	9	8.6
Executive	38	36.2
Other	1	1.0

Total	105	100.0

4.2.4 Department

The respondents were from various departments. Majority of them (55.2%) were from operational department followed by credit department (25.70%), documentation department (10.5%) and the remaining of 8.6 percent work at other department. Those who work in Operation Department and Credit Department can be expected to have frequent contact with the customers. Thus, this finding indicated that most of the respondents covered in this study belong to the category of staff who will be the implementers of risk culture, if any.

Table 4.4
Distribution of Respondents on Department (N=105)

Department	Frequency	Percentage
Operational Dept.	58	55.2
Documentation Dept.	11	10.5
Credit Dept.	27	25.7
Other	9	8.6
Total	105	100.0

4.2.5 Number of Years in Current Position

Table 4.5 below reveals some statistics about the working experience of the respondents covered in this study. It can be seen that 35.2 percent of the staff have five to eight years of experience, 34.3 percent between two to four years and 25.7 percent have more than 9 years experience. Only 4.8 percent have less than one year experience in current position. This indicated that most of the respondents have more than five years experience in their current position.

Table 4.5
Distribution of Respondents on Number of Years in Current Position (N=105)

Number of Years in Current Position	Frequency	Percentage
Less than 1 year	5	4.8
2 years – 4 years	36	34.3
5 years – 8 years	37	35.2
9 years and above	27	25.7
Total	105	100.0

4.2.6 Number of Years of Services in Current Bank

Majority of respondents have been in their respective current banks for three to five years (36.2%). There were also respondents who have been in their current bank for 10 years and above (29.5%). Whilst, there were respondent that stayed with their current bank for 6 years to 10 years, which was 26.7 percent and only 8 respondents that been in their current bank for less than 2 years (7.6%).

Table 4.6
Distribution of Respondents on Number of Years of Services in Current Bank (N=105)

Number of Years of Services in Current Bank	Frequency	Percentage
Less than 2 years	8	7.6
3 years – 5 years	38	36.2
6 years – 10 years	28	26.7
10 years and above	31	29.5
Total	105	100.0

4.3 Demographic factors

The purpose of using inferential statistics is to test the significance difference between demographic factors and risk culture. Correlation analysis was used to analyze demographic factors which were education level and years of services. Educational level and years of services were chose for the analysis because education level was the most influential factors in risk culture (Farrell & Hoon, 2012). Employees with high education background know what the corporation stands for, the limitations within which they can operate, and that they can discuss and argue openly which risks should be taken in order to accomplish the company's long-term strategic goals (Farrell & Hoon, 2012). Whilst working experience also becomes the influential factor of a successful risk culture. A study by Hall, Anette, & Yuval (2013), showed that working experience of the workers along with its knowledge and understanding of risk management, led to a development of an interactive risk culture environment.

4.3.1 Education Level

Correlation analysis was used to test education level and risk culture. It is used to determine if the two variables are linearly related to each other. In this study, Bivariate correlation were involved to examine the relationship between education level and risk culture. This analysis was also to test hypotheses 1: ‘there is a relationship between the education level and risk culture’. The finding are displays in the table below.

Table 4.7
Results of Correlation Analysis for Educational Level and Risk Culture (N=105)

		Education	Risk culture
Education	Pearson Correlation	1	.097
	Sig. (2-tailed)		.325
	N	105	105
Risk Culture	Pearson Correlation	.097	1
	Sig. (2-tailed)	.325	
	N	105	105

*p<0.01

The result showed that there was no significant between risk culture and educational level of respondents. This indicated that the educational level of respondents did not affect their risk culture. Thus, hypothesis 1 is not supported.

4.5.2 Year of Services

Correlation analysis was conducted to examine the relationship between number of year services and risk culture. It was also to test hypothesis 2: ‘there is a relationship between the number of years service (experience) and risk culture’. Table 4.8 displays the finding.

Table 4.8
Results of Correlation Analysis for Experience and Risk Culture (N=105)

		Experience	Risk culture
Experience	Pearson Correlation	1	.322**
	Sig. (2-tailed)		.001
	N	105	105
Risk Culture	Pearson Correlation	.322**	1
	Sig. (2-tailed)	.001	
	N	105	105

**p<0.01

The results showed that there was a significant relationship between experience and risk culture. The results showed that significant level of experience was .001. The study indicated that the more experience that the respondents have, the stronger their risk culture. It was concluded that the risk culture increases with the number of year’s service in the current bank. Thus, hypothesis 2 is supported.

4.6 Multiple Regression Analysis

A multiple regression analysis was used to test the third, four and five research objectives. In the analysis, top management roles, employee roles and policy and guidelines are the independent variables.

4.6.1 The Stepwise Multiple Regression Analysis

This section presents the analysis on the effect of top management roles, employee roles and policy and guideline on risk culture. The stepwise multiple regression was used to test hypothesis 3: there is a relationship between top management roles and risk culture, hypothesis 4 there is a relationship between employee roles and risk culture, and hypothesis 5: there is a relationship between policies and guidelines and risk. As shown in table 4.9, the regression model was as follows:

$$RC = a0 + \beta_3 \, ER + \beta_4 \, PG$$

Table 4.9

Results of Stepwise Regression Model

		Unstandardized Coefficients		Standardized Coefficients	t	*Sig.	R^2
Model		B	Std. Error	Beta			
1	(Constant)	10.300	1.169		8.812	.000	
	Employee roles	.386	0.71	.472	5.439	.000	.223
2	(Constant)	0.690	1.416		5.430	.000	
	Employee roles	.310	0.73	.380	4.276	.000	
	Policy and guidelines	.234	0.77	.270	3.033	.003	.287

Note: a. Predictors: (Constant), Employee Roles

b. Predictors: (Constant), Employee Roles, Policy and Guidelines

c. Dependent Variable = Risk Culture,

*p is significant at the 0.05 level

Based on the results, the stepwise regression equation was as follows:

Risk Culture = 0.690 + 0.310 Employee Roles + 0.234 Policy and Guidelines

The finding showed that employee roles were the most important factor in risk culture, and this is followed by policy and guidelines. Findings of the study suggested that employee roles ($B = 0.310$, $p < 0.05$) and policy and guidelines ($B = 0.234$, $p < 0.05$) were found to be statistical significant and positively related to the risk culture. The findings also suggested that one unit increase of employee roles, risk culture was increased by 0.310 units, and with the increase of policy and guidelines, risk culture was increased by 0.234 units. The value of $R^2 = 0.287$ indicated that these two independent variables included in the regression equation explained 28.7 percent of the variation of risk culture. The other independent variable that was top management roles was eliminated from the regression because insignificant value ($B = 0.157$, $p=0.100$ ($p>0.05$)). The table showed below is the excluded variables.

Table 4.10
Excluded Variables from Stepwise Regression Model

	Model	Beta In	t	Sig.	Partial Correlation	Collinearity Statistics Tolerance
1	Top Management Roles	.230	2.534	.013	.243	.868
	Policy and Guidelines	.270	3.033	.003	.288	.883
2	Top Management Roles	.157	1.660	.100	.163	.771

Note: a. Predictors in the Model: (Constant), Employee Roles
b. Predictors in the Model: (Constant), Employee Roles, Policy and Guidelines
c. Dependent Variable = Risk Culture,
*p is significant at the 0.05 level

The result indicated that the roles of staff and policy and guideline in banking contribute to risk culture. The roles of staff such as education, participation, awareness, knowledge and understanding influence their risk culture. Also, the finding showed that the bank with policy and guidelines increase their risk culture. Policy and guidelines that help the staff to assist on their work, give clear guidance for the staff and enhance their practices on risk management increase the risk culture in the bank. While, the results showed that top management roles are not influence with risk culture. the top management roles included in this study were commitment, responsibility, accountability and reward strategy not contribute to risk culture..

Hence, the results indicated that hypothesis 4 that and hypothesis 5 were supported. Whilst hypothesis 3 were not supported. Table below showed the summary of hypotheses testing.

Table 4.11: *Results of Hypotheses Testing*

Hypothesis		**Results**	**Analysis**
H1	There is a relationship between the education level and risk culture.	Not Accepted	Correlation Analysis
H2	There is a relationship between the number of years service and risk culture.	Accepted	Correlation Analysis
H3	There is a relationship between top management roles and risk culture.	Not Accepted	Stepwise Multiple Regression
H4	There is a relationship between employee roles and risk culture.	Accepted	Stepwise Multiple Regression
H5	There is a relationship between policies and guidelines and risk culture.	Accepted	Stepwise Multiple Regression

4.7 Summary of the Chapter

This chapter presents the results of data analyses. It highlights the data examination, factor analyses and internal consistency of the measures, the profile of respondents, descriptive statistics and stepwise multiple regression results. The next chapter will present conclusion of this study.

CHAPTER 5

DISSCUSSION, CONCLUSION & RECOMMENDATIONS

5.1 Chapter Overview

This chapter discusses the findings of this study based on the research questions as posited in Chapter 1. The discussions also include the related literature presented in Chapter 2. This chapter also includes the limitation and recommendation of the study.

5.2 Conclusion and Discussion

The discussions in this section will focus on the research questions posited in this research with respect from previous literature of this study. the main purpose of this study is to determine the factors that influence the risk culture in banking sector. Therefore, the study was organized to provide answer to the research questions. The research objectives and research questions are included in each section.

5.2.1 First objective: Identify the demographic factors that influence the risk culture.

5.2.1.1 What are the demographic factors that influence risk culture?

There are two demographic factors that were analysed for this objective. It were level of education and the number of years of services in bank (experience). Based on the analysis in chapter 4, it was found that experience was significant with risk culture. The results conclude that the risk culture increase with the experience of the staff. Thus, hypotheses 2 that stated there is a relationship between experience and risk culture is supported. This was agreed by Hall, Anette, & Yuval (2013) when the study also found that working experience is significant towards risk culture. It was then showed that the longer that experience of staff, more strong the risk culture they have.

On the other hand, another demographic factor that was the level of education was found to be not significant towards risk culture. This result is not supported the finding from the previous study by Farrell & Hoon (2012) that found education influence the employee risk culture. This results indicate that level of education are not influence risk culture because staff who have higher qualification such as master or bachelor degree have the same understanding with staff that only have diploma. Hence, level of education did not influence the risk culture.

5.2.2 Second objective: Examine the determinant factors that have an impact to risk culture.

5.2.2.1 Does the top management role affect the risk culture?

The results indicate that top management roles to be insignificant towards risk culture. This result showed that risk culture is not influenced by top management roles. Top management roles included in this study were commitment, responsibility, accountability, and reward strategy.

This result showed different result from previous study when Wilson (2006) found that top management roles such as commitment, accountability and responsibility were the most influential factors for a good risk culture. Beasley, Hancock & Branson (2009) also found that top management roles are important for effective risk management practice that lead to strong risk culture.

5.2.2.2 Does the employee role affect the risk culture?

The results of this study found that employee roles were the most influential factors risk culture within the bank staffs. The result showed that risk culture is influenced by employee roles. This result showed the similar results from previous research.

Bradley (2011) found that awareness and knowledge from employees (employee roles) are important to create a good risk culture in an organization. It is fundamentally the role of all staff to ensure that each agency has a robust internal organizational culture and process that is capable of identifying and managing its risks (Bradley, 2011). This was also agreed by Isaac (2013) when he stressed that it is the duty of staff to take responsibility for gaining an understanding of the risks facing their area of accountability, and take due care to understand and comply with the risk management processes and guidelines of top management.

5.2.2.3 Does the policies and guidelines affect the risk culture?

The results of this study found that policy and guidelines were influential factors risk culture within the bank staff. The result showed that risk culture is influenced by policy and guidelines. This result showed the similar results from previous research.

PricewaterhouseCooper (2011) found that policies and procedures facilitate employees to follow the policies set forth without any problems and doubts. Kluwer (2011) stated that financial service organizations are required to undertake the procedures provide by regulatory to change the attitude of the Board of Directors for the sake of good risk culture.

5.3 Limitations of the study

It is essential to note that the limitations encountered in this study. The limitations were this study only focus on the Northern Malaysia bank area. This may not reflect the overall opinion of the bank staff across the country. Hence, most of the answered cannot represent the real bank situation. Thirdly, the total samples of the respondents are quite small because this survey had been carried out during a limited time.

5.4 Recommendations

For future research, a study may be undertaken on bigger sample sizes that include all level of staff in the banking institutions. Such study can indicates the real situation on risk culture in the bank environment. In addition, future study may include different variables that may be the determinant factors for risk culture. Hence, it can give valuable suggestion on qualitative research. Finally, it is hoped that the findings of this study will be useful to many parties' namely bank industry and policy makers to improve the risk culture in the banking industry. Due lack of research undertaken on this area, it is hope that this study contributes to the literature, from the perspective of enhance the banking industry.

5.5 Overall Discussion

The objective of this study was to identify the demographic factors that influence the risk culture, and to examine whether the key factors have an impact to risk culture. From the findings, the proposed conceptual framework was substantially validated. The findings showed that demographic factor that was number of year service in current bank (experience), employee roles and policy and guidelines influence the risk culture. The significant hypotheses were demographic factor (number of years service in current bank), employee roles and policy and guidelines. The insignificant factor were demographic factors (level of education) and top management role. Overall, the significant factors were more than insignificant factor.

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APPENDIX A: Questionnaire

UNIVERSITI UTARA MALAYSIA

OTHMAN YEOP ABDULLAH GRADUATE SCHOOL OF BUSINESS

The Determinant Factors for a Successful Risk Culture in Banking Sector: Malaysian Case

I am currently conducting a research on the Determinant Factors for a Successful Risk Culture in Banking Sector: Malaysian Case The information will be of my interest in determining the factors that rise in the issues. Your response will be kept confidential and anonymous. Your cooperation is much appreciated.

Sincerely,

____

Rozila Binti Hamzah (812327)
(UUM Postgraduate)

Part 1: Respondent's profile

<u>Instruction: Please complete all the following questions by ticking [√] in these appropriate boxes or by supplying information required.</u>

1. Age:
   [ ] 20-30
   [ ] 31-40
   [ ] 41-50
   [ ] 51 and above

2. Sex:
   [ ] Male
   [ ] Female

3. Ethnic:
   [ ] Malay
   [ ] Indian
   [ ] Chinese
   [ ] Other_______________

4. Marital status:
   [ ] Single
   [ ] Divorced
   [ ] Married
   [ ] Other_______________

5. Highest education level:
   [ ] Diploma
   [ ] Bachelor degree
   [ ] Master
   [ ] PHD / DBA
   [ ] Professional qualification
   [ ] Other_______________

6. Position:
   [ ] Clerk
   [ ] Assist. Manager
   [ ] Manager
   [ ] Executive
   [ ] Other_______________

7. Department:
   [ ] Operational Dept.
   [ ] Documentation Dept.
   [ ] Credit Dept.
   [ ] Other_______________

8. Total monthly salary:
   [ ] Less than RM 2,000
   [ ] RM 2,001-RM 4,000
   [ ] RM 4,001- RM 6,000
   [ ] RM 6,001 and above

9. Number or years that you have been in your current position?
   [ ] Less than 1 year
   [ ] 2 year - 4 years
   [ ] 5 years - 8 years
   [ ] 9 years and above

10. Number of years that you have been with current bank?
    [ ] Less than 2 years
    [ ] 3 year - 5 years
    [ ] 6 years - 10 years
    [ ] 10 years and above

Part 2: The determinants of risk culture

Instruction: Please complete all the following questions by ticking [√] in these appropriate boxes.

A) These questions are pertaining to the roles of managers that have an impact to the risk organizational management culture.

	Strongly Disagree 1	Disagree 2	Not Sure 3	Agree 4	Strongly Agree 5
Managers provide continuous training on risk management to the staff	[ ]	[ ]	[ ]	[ ]	[ ]
Managers consistently approach work and staff on risk management.	[ ]	[ ]	[ ]	[ ]	[ ]
Managers encourage staff developments that relate to risk management education	[ ]	[ ]	[ ]	[ ]	[ ]
Managers are able to explain well about risk management to the staff	[ ]	[ ]	[ ]	[ ]	[ ]
Managers able to give answer about risk management to the staff when they were asked	[ ]	[ ]	[ ]	[ ]	[ ]
Managers provide recognition and other non-monetary benefit for staff	[ ]	[ ]	[ ]	[ ]	[ ]
Managers incorporated risk management into compensation program	[ ]	[ ]	[ ]	[ ]	[ ]
Managers monitor risk management practices among staff.	[ ]	[ ]	[ ]	[ ]	[ ]

B) These questions are pertaining to the roles of staffs that have an impact to the risk organizational management culture.

	Strongly Disagree 1	Disagree 2	Not Sure 3	Agree 4	Strongly Agree 5
Staff able to explain about the risk management well.	[ ]	[ ]	[ ]	[ ]	[ ]
Staff able to influence other colleague to learn about risk management.	[ ]	[ ]	[ ]	[ ]	[ ]
Staff can give idea on how to improve the risk management practices.	[ ]	[ ]	[ ]	[ ]	[ ]
Staff willing to learn more about risk management for the effectiveness of risk management practices.	[ ]	[ ]	[ ]	[ ]	[ ]
Staff actively participate on the effort such as training provided by top management on risk management.	[ ]	[ ]	[ ]	[ ]	[ ]
Staff completes tasks according to the risk management guidelines.	[ ]	[ ]	[ ]	[ ]	[ ]
Staffs are able to do the task that given to them.	[ ]	[ ]	[ ]	[ ]	[ ]
Staff takes appropriate action to handle risk.	[ ]	[ ]	[ ]	[ ]	[ ]

C) These questions are pertaining to the risk management policy and guidelines that have an impact to the risk organizational culture.

	Strongly Disagree 1	Disagree 2	Not Sure 3	Agree 4	Strongly Agree 5
The risk management policies and guidelines provide a clear direction and guidance for manager and all level of staff.	[ ]	[ ]	[ ]	[ ]	[ ]
The risk management policies and guidelines are incorporated with job descriptions.	[ ]	[ ]	[ ]	[ ]	[ ]
Risk management policies and guidelines assist to achieve target.	[ ]	[ ]	[ ]	[ ]	[ ]
Risk management policies and guidelines aid on work systematically.	[ ]	[ ]	[ ]	[ ]	[ ]
Risk management policies and guidelines assist to enhance risk response decisions.	[ ]	[ ]	[ ]	[ ]	[ ]
Risk management guidelines help to assist on daily operation.	[ ]	[ ]	[ ]	[ ]	[ ]
Risk management guidelines help on handling risk effectively.	[ ]	[ ]	[ ]	[ ]	[ ]

Part 2: Risk culture.

<u>Instruction: Please complete all the following questions by ticking [√] in these appropriate boxes.</u>

	Strongly Disagree 1	Disagree 2	Not Sure 3	Agree 4	Strongly Agree 5
Increasing awareness of risk management within an organization.	[ ]	[ ]	[ ]	[ ]	[ ]
Increasing sense of responsibility by providing information about risk to managers/top management.	[ ]	[ ]	[ ]	[ ]	[ ]
Increasing qualified and quality staff for managing risk.	[ ]	[ ]	[ ]	[ ]	[ ]
Increasing monitoring on risk management set by top management.	[ ]	[ ]	[ ]	[ ]	[ ]
Increasing understanding on risk management concept.	[ ]	[ ]	[ ]	[ ]	[ ]
Increasing corporation between departments.	[ ]	[ ]	[ ]	[ ]	[ ]
Encouraging staff to give their opinions and ideas regarding risk management.	[ ]	[ ]	[ ]	[ ]	[ ]

-THANK YOU FOR YOUR PARTICIPATION-

APPENDIX B: Normality Test

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation	Skewness		Kurtosis	
	Statistic	Statistic	Statistic	Statistic	Statistic	Statistic	Std. Error	Statistic	Std. Error
totaltmr	105	19.00	40.00	32.5524	4.41148	-1.033	.236	.530	.467
totalsr	105	16.00	38.00	33.3143	3.80868	-1.711	.236	4.041	.467
totalpg	105	18.00	35.00	28.9810	3.46127	-.877	.236	.192	.467
totalrc	105	20.00	34.00	29.2571	3.10096	-.934	.236	.189	.467
totaldemo	105	2.00	10.00	5.2476	2.37285	.962	.236	-.088	.467
Valid N (listwise)	105								

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation	Skewness		Kurtosis	
	Statistic	Statistic	Statistic	Statistic	Statistic	Statistic	Std. Error	Statistic	Std. Error
Logsr	105	.30	1.38	.7661	.22396	.226	.236	-.176	.467
Valid N (listwise)	105								

APPENDIX C: Homoscedasticity

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
									95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
logsr	Equal variances assumed	1.039	.310	3.255	103	.002	.13690	.04206	.05349	.22031
	Equal variances not assumed			3.224	94.427	.002	.13690	.04246	.05260	.22119
totaldemo	Equal variances assumed	1.283	.260	-1.637	103	.105	-.75642	.46198	-1.67264	.15980
	Equal variances not assumed			-1.658	102.054	.100	-.75642	.45636	-1.66160	.14876
totalrc	Equal variances assumed	2.262	.136	-2.538	103	.013	-1.50550	.59328	-2.68213	-.32888
	Equal variances not assumed			-2.496	90.942	.014	-1.50550	.60306	-2.70342	-.30758
totalpg	Equal variances assumed	2.368	.127	-2.140	103	.035	-1.42920	.66791	-2.75385	-.10455
	Equal variances not assumed			-2.081	84.638	.040	-1.42920	.68664	-2.79452	-.06388
totaltmr	Equal variances assumed	7.640	.007	-2.410	103	.018	-2.03999	.84645	-3.71872	-.36125
	Equal variances not assumed			-2.328	80.536	.022	-2.03999	.87635	-3.78380	-.29617

APPENDIX D: Multicollinearity

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	16.690	3.586		4.654	.000		
	totaltmr	.179	.067	.255	2.660	.009	.723	1.383
	totalpg	.252	.087	.281	2.907	.004	.710	1.408
	totaldemo	.189	.114	.145	1.661	.100	.873	1.146
	logsr	-2.020	1.355	-.146	-1.491	.139	.693	1.444

a. Dependent Variable: totalrc