MEASURING THE REGULATORY PERFORMANCE IN MALAYSIA BANKING INDUSTRY: COMPLIANCE AS A LENS TO DETERMINE THE REGULATORY EFFECTIVENESS AND PROFITABILITY OF A FINANCIAL INSTITUTION

BY

THONG YOW FONG

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ABSTRAK

Pembangunan dalam pasaran kewangan mempunyai penelitian yang besar mengenai keberkesanan peraturan dan keuntungan dalam industri perbankan sepanjng dekad yang lalu. Kajian ini meneroka bagaimana elemen pematuhan berfungsi sebagai alat untuk menentukan keberkesanan pengawalseliaan berdasarkan institusi kewangan Malaysia. Selain itu, bagaimana lima penentu utama yang diberikan, iaitu kesedaran pematuhan dan latihan, audit dalaman (CA), peraturan yang jelas (UR), kebudayaan pematuhan (CC), sistem yang mantap dan proses (RS) dan kos langgar pematuhan (NCC) dan besar kewangan penalti dalam merumuskan keberkesanan pengawalseliaan. Dan bagaimana yang diberikan lima penentu utama seperti kesedaran pematuhan dan latihan; audit dalaman (CA), peraturan yang jelas (UR); kebudayaan pematuhan (CC), dan kos langgar pematuhan (NCC) serta kewangan penalti yang dapat merumus perkara keberkesanan pengawalseliaan. Kajian ini menyasarkan penyelidikan dalam hubungan antara tahap pematuhan dengan amalan terbaik mengenai operasi antarabangsa serta prestasi tadbir urus. Dalam model kajian saya, pulangan atas ekuiti (ROE), pulangan atas aset (ROA) dan margin faedah bersih (NIM) adalah ditakrifkan sebagai proksi keuntungan, manakala kecukupan modal ditakrifkan sebagai proksi keberkesanan pengawalseliaan. Kajian ini mengumpul data daripada pekerja terpilih dalam sector kerajaan dan sektor swasta serta dirumuskan kepada lima hipotesis yang berkaitan dengan persoalan kajian. Satu siri ujian statistik telah dilakukan untuk menguji sama ada hubungan yang wujud, manakala ujian statistik yang lain adalah untuk mengkaji sama ada hubungan adalah stabil atau tidak. Kajian ini melakukan analisis regresi ordinal data dari tahun 2008 hingga 2014. Hasil kajian menunjuk bahawa lima penentu utama mempunyai kesan positif yang ketara kepada keberkesanan pengawalseliaan. Ujian yang lanjut menunjukkan penunjuk keteguhan kewangan seperti pulangan atas ekuiti (ROE) dan pulangan atas aset (ROA) yang ketara berkaitan dengan nisbah kecukupan modal (CAR). Tetapi, berbeza dengan teori, bukti laporan saya menunjukkan hubungan yang negatif antara prestasi kawal selia dan margin faedah bersih (NIM) dalam institusi kewangan. Hasil umumnya disokong dengan fakta hipotesis bahawa pematuhan sebagai pemangkin kepada kecemerlangan operasi dan tadbir urus yang lemah. Kajian ini mencadangkan bahawa pihak berkuasa dalaman dan luaran terlibat dalam pemantauan pemeriksaan dan tadbir urus di luar amalan pematuhan secrara tersurat dan tersirat.

Kata Kunci : Pematuhan, Keberkesanan kawal selia, keuntungan

ABSTRACT

Development in the region financial market over the past decade have placed great scrutiny on the effectiveness of regulatory and profitability of Malaysia banking industry. This study will explore on how compliance elements work as a lens in determining the regulatory effectiveness of Malaysia based financial institution. And how the given five key determinants such as the compliance awareness and training; internal audit (CA) , Unambiguous regulation; (UR) Compliance Culture(CC), Robust system and process (RS); and Non compliance cost and hefty monetary of penalties (NCC) in formulating the regulatory effectiveness. This study is targeted at in examining the relationships between the extent of compliance with international best practices concerning of operating as well as governance performance. In my research model, return on equity, return on asset, and net interest margin are defined as proxies of profitability, and while capital adequacy are defined as the proxies of regulatory effectiveness. The research collects data from the selected employees both in government and private sector and formulated five hypotheses which are related to the research question. A series of statistical test are performed in order to test if the relationship exists, while other statistical test is to investigate the relationship stable or not. The study performs an ordinal regression analysis of the data from 2008 to 2014. The findings reveal that all the five key determinants have positive significant effect on the regulatory effectiveness. Further test indicate that the financial soundness indicator, such as return on equity (ROE) and return on asset (ROA) are significantly associated with the capital adequacy ratio (CAR).However, in contrast to theory, my reports evidence of a negative relationship between regulatory performance and net interest margin (NIM) of a financial institution. The result generally supported the hypothesized fact that compliance as the catalyst for operational excellence and poor governance malaise. The study recommend that the regulatory authorities both internal and external be involve in the screening and governance monitoring beyond the current compliance practice in both letter and spirit.

Key words: Compliance; Regulatory effectiveness; Profitability

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LIST OF ABBREVIATIONS

ROE – Return on Equity

ROA-   Return on Assets

NIM – Net Interest Margin

CAR - Capital Adequacy Ratio

CA – Compliance Awareness and Training & Internal Audit

UR – Unambiguous Regulation

RS – Robust system and process

NCC- Noncompliance Cost and Hefty Monetary Fines

CODB- Cost of Doing Business

RE- Regulatory Effectiveness

IV- Independent Variable

DV- Dependent variable

MV- Moderating Variable

IMF – International Monetary Fund

CHAPTER ONE: INTRODUCTION

This chapter discusses the intention and objectives of this study. They are divided into few sections as below:

1.1 Background of Study

There is no specific definition of the term of compliance (Faure and Lefevere, 2012).There are various type of explanation on this terminology, some scholar believed that the form of compliance in this decade can be relate to the level of prescriptive system that guide and constraint the organization. With the advent legal requirement, security concerns, moral hazard behavior, and hefty monetary fine, the elements of compliance seems became the fundamental goal for the banking institution to adhere with, which is not only relevant for practitioner, but also academic(MacLean and Behnam,2010).Banks today are not longer depended solely on the profitability and capital adequacy of the financial institutions (Tabari, Ahmadi , and Emami, 2013).However, they have shifted their focus towards the financial condition. Recent banking theories have emphasized their focus in financial system, especially on the matters of cost reduction, fair dealing, and liquidity. Although there are ample evidences shown that the financial industry in a country was crucial for economic growth but this goal may fail if without appropriate legal and regulatory structure or framework. According to Halling and Hayden(2006), they believed that the most essential requirement to measure the financial stability is to assess the banks financial position and the regulatory performance in the marketplace. Bank Negara Malaysia (BNM) has published its financial sector blue print on 21 December 2011, and the main focus for the blueprint is to transform Malaysia financial system to become a significant sustainable growth and high income economy the country. In line with the blueprint, on 30 June 2013, there are two forms of new legislations are brought into force to regulate both conventional as well as Islamic financial industries, such as the Islamic Financial Services Act 2013 and Financial Services Act 2013.

Pursuant to discharge its supervisory function, BNM has adopted a risk based supervision approach, which all the financial institutions can assessed and monitored based on risk profiling and adequate risk of management. In order to complement with this reliance approach, BNM has taken different types of measurement to strengthen the caliber of the board and senior management of financial institution. In virtue of BNM is empowered to act as the regulator of the banking institution, thereby BNM not only play an active role as the advisor in the macroeconomic policies, but also delegated to manage the public debt across the country. Not surprisingly that financial institution nowadays has spent big on compliance. For instance, financial institutions in this era have spent more and more in recruitment, training, and control. And all these arrangement are to enhance the understanding in the compliance practice and behavior. Words are nothing without action. Therefore, actions are required to make a change. When talked about compliance, it would automatically link us to the terminology of "control". No matter what industry that we stepped in, new state or ongoing mandate change in compliance elements need to be remaining stayed. Over the past decade, Malaysia based financial institutions have grown significantly abroad, thus the expansion abroad has been part of a diversification strategy given for the local institutions to be penetrated in other country. However, this action seems like exposed Malaysia banking sectors to another high level of risk, as all these approach might result the unforeseen scenario that all of us might not know in advance, therefore the level of uncertainty always became the main concern for the entire banking system.

1.2. Problem Statement

Empirical studies cited that there are relationship between the factors that affecting the competitive environment, such as regulation and structure, and bank performance. (Barth, Caprio and Levine,2001).However according to La Porta, Lopez-De- Silanes, and Schleifer(2002), they believed that the aspect government ownership has play an active role in the regulatory performance, and it has been pervasive in economic consequences. And according to Barth, Caudill, Hall, and Yago (2000), they believed that the stricter of the bank regulation, the highest the probability of the crisis in the banking industry. Dermirguc- Kunt, and Huizinga(2001) show a cross country study that foreign bank entry makes domestic banking system more efficient, therefore choosing the right component of the bank regulations is relatively important. Nevertheless, their studies have regards the compliance elements, and its impact towards the regulatory and bank performance. This study recognized the correlation between the compliance elements (CA, UR, CC, RS, NCC), as well as the regulatory effectiveness. Apart from that, the remaining measures also included the profitability indicators such as return on assets, return on equity, and net interest margin, and its impact to the regulatory performances.

In fact, regulatory performance is always tied with the concern of bank soundness, bank safety, and knowledge. Knowledge changes behaviour and perception, while the level of regulatory effectiveness always relied upon the level of understanding and perception towards compliance. Some scholar believed that the number one priority for making regulatory effectiveness works is to know your compliance. Know your compliance not only promote and ensure a deep understanding and adherence to each standard, but also provide an ongoing of compliance practice. For instance, as a top management, if he or she does not know the company weaknesses, either in term of compliance culture or ambiguous of rules and regulation and it is impossible for them to put the best practice into the action. If he or she knows what is the best practice shall be applied on the rightful scenario, which the simplified process for regulatory compliance might took place. And with all the timely actions, it may help to save the time and energy in performed the necessary requirement based on the stipulated guideline. To summarize, this research paper indicated that there are correlation between the five key determinants of compliance elements and the regulatory effectiveness and profitability.

1.3 Significance of Study

This research provides empirical evidence on the key determinants of compliance elements in formulating the high level of regulatory effectiveness. The findings of this study can assist the regulators in their strategic financial planning. Furthermore, the findings in relation of the relationship to the effect of compliance can also provide insights towards the regulatory performance as well as the profitability of a financial institution. This study not only assisted Malaysian banking management to make correct decision but also help the financial institutions and regulators in formation of the policy to deal with the unpredictable changes in economic environment, or any others form of change on the compliance elements that affect the bank profitability and regulatory effectiveness in our country thus far. The findings of this study can help regulators in creating more conducive policies and to improve current regulations in the future in which it will help to stimulate the Malaysian economy through chain reaction. On top of that, this study adds to the pool of knowledge for academicians and researchers, as this not only help them in understanding the relationship of the compliance elements in regulatory performance but also the profitability of the banking sector.

1.4 Scope of Study and limitation

This study provided the empirical evidence on the compliance variables and the macroeconomic determinants of Malaysia bank profitability. This dissertation focused on the impact of the compliance elements on Malaysian bank profitability and regulatory performance. There are 25 commercial bank (constituted from 16 foreign banks and 9 local banks), 17 Islamic Banks (constituted from 11 local and 6 foreign owned-banks) in total in Malaysia. And the present study is to find out the correlation between the compliance elements, and regulatory effectiveness as well as the profitability of Malaysia based financial institution. In order to ascertain the level of regulatory effectiveness, the following questions have been answered. Is compliance an important element to establish a highly effective banking industry? With the heavy fine and strict enforcement, did the level of regulatory effectiveness increased in current banking industry? Did the non-compliance cost influence the level of profitability or compliance performance of the banks? The responses to this question would be able to reflect the level of compliance knowledge and awareness of employees or citizens.

On top of that, to answer the profitability part of the research, the data of financial soundness indicator for the period of 1998 to 2014 are employed. In fact there is an almost similar study was conducted by PwC (2012) that examined the compliance effectiveness in Malaysia based banking institution.In order to address bank compliance issues and enhanced the sound practice in Malaysia banking industry.

PwC Malaysia has collaborated with Institute of Banker Malaysia (IBBM) to conduct a First Malaysia based banking institution online survey on the effectiveness of Banking Institution's compliance functions in Malaysia. This survey is used to identify the issues and experience encountered by the head of compliance and the relevant senior management in achieving and sustaining its compliance culture within the organization. As part of its ongoing basis, compliance always start at the top, and it's everyone responsibilities to ensure the high level of regulatory effectiveness within the organization.

According to PwC survey, there is a need to re-scope the compliance function within the financial institution, as there seems to be confusion over the role of compliance function in the first and second line of defense. According to Tay Kay Luan , the CEO of IBBM, (Nov 2012),an approximately 85% of the survey respondents said that compliance should be everyone responsibility, the same number (85%)said that compliance function is not well understood, hence, these data clearly indicate a larger gap between what is the ideal and what actually practice on the ground. In addition, lacking of efficient organizational structure, inadequate technological structure, poor communication within the internal and external stake holder, and lack of awareness of the compliance function within the organization always become the essential concerns that cause the lapses in regulatory effectiveness in the banking industry. There are several limitations in this study. For instance, there is relatively little study by Malaysia scholars on the regulatory and profitability performance of banking industry in Malaysia. Hence, it has restricted a comprehensive review of the literature. Second, the ongoing acquisition and merger exercise among the bank in the whole world cause extraction of data extremely difficult. Finally, the findings of the study are derived from the data that covered a seven-year period only. The longer –period data of, say twenty years, are not available at international monetary fund (IMF) website. And data collection has proven to be time consuming.

1.5 Research Objectives

The principal objective of the study is to analyse how the elements of compliance in building up the high level of regulatory effectiveness, and the impact of the compliance of towards profitability elements. Knowledge about regulatory law is assumed to be important for preference, and attitude. Thus, the present study is to find out the relationship between the compliance elements, such as compliance awareness and internal audit (CA), unambiguous regulation (UR), compliance culture (CC), robust system(RS), and non compliance cost and the hefty monetary fines(NCC) and the regulatory effectiveness(RE), in which all of these five key determinants in compliance element need to be defined as predictor variables to measure the regulatory effectiveness of the financial institution. Apart from that, the following concerns have been highlighted as the sub-objectives for the study.

a) To determine the effectiveness and efficiency of Malaysia regulatory framework
b) To obtain comprehensive overview of the compliance knowledge of either individual or group
c) To examine the relationship between the key determinants and regulatory effectiveness.
d) To investigate and analyse the employees compliance behaviour in the organization.

CHAPTER TWO: LITERATURE REVIEW

This chapter reviewed the literature in order to develop hypotheses for this research. They are divided into few sections as below:

2.1 Theoretical Review

2.2 Empirical Review

2.3 Hypotheses Development

2.1 Theoretical Review

In general, compliance is just a term that used by the socio-legal scholars, particularly to understand the dimension of regulatory effectiveness and attribute to the fluidity of regulatory process. According to Concise Oxford English Dictionary (1990), the definition of compliance conjures notions of conformity. Or in other words, it is referred to “the act of complying or the obedience to a request or command”. Many researchers have made the tacit presumption that compliance is equalize to comply with legal rules and regulation and no more. Demand for compliance has become paramount in our business world; evidence suggests that adhering to the pre-defined procedure and law could reduce the cost that associated with the compliance management activities.(Bace et al.2006). Multiple and complexity policies within the financial institution may became the pivotal issue that surround the regulatory compliance.

Regulatory Compliance

According to Wikipedia, regulatory compliance describes the aim that an organization aspires to achieve in their effort or action to go along with the relevant procedure and guideline to ensure that they are aware of the need for the operational transparency. Owing to the increasingly number of regulations, the use of consolidated and harmonized set of compliance monitoring is necessary for an organization. This method is served to ensure that the entire mandatory governance requirement can be fulfilled without any redundant effort and activity.The burden of compliance with the stringent regulatory standard is becoming increasingly onerous, in which the regulators have tried all out to refine and improve their compliance framework to enable the management to meet the rigid regulatory standard. Regulatory compliance has received increased attention from the academic world over the past decade.(Syed Abdullah et. Al.2009), where all these warning show that bank compliance function have failed to keep pace with the ever-changing of compliance environment. According to him, compliance accountability always lies on the three line of defense, in which covered the areas of line of business, risk management, and the internal or external audit within the organization.

Malaysia is a growing regional financial centre which has a well established anti-money laundering framework. According to Margaret Rouse (2015), compliance is the state of being in alignment with the established guideline, regulations, and legislation. She cited that in order to improve the effectiveness of the regulatory, the “commitment and accountability” play a primary roles in contrive a strong form of compliance practices. There are six pillars to formulate a high level of compliance such as adhere to the policies, and procedure, control and supervision, regulatory oversight, monitoring, training and awareness and reporting. In relation to her study she discovered that the hardest change throughout the organization is to be the keeper of the ethical culture. It is because compliance encompasses the effort to ensure that organizations are abided with the regulation mandate or legislation both in industry as well as government. For instance, the violation of the regulatory compliance laws may result in legal punishment, including federal fines. And the example of the regulatory compliance law, included Companies Commission of Malaysia Act 2001 (Act 614)Islamic Financial Services Act 2013, Financial Services Act 2013, and so on.

As the number of regulations rules are increased, regulatory compliance becoming more prominent in an organization. The trends has even led to the creation of corporate regulatory compliance officer position insure the organization conforms to the stringent, complex legal mandates.According to Wall Street Journal 2014, Citibank had nearly 30,000 employees who are working in regulatory and compliance issue, in which an increase of 33 percent compare with the year 2011, same goes to JP Morgan chase have expanded its risk control staff by 30 percent compare with year 2011.In order to promote high level of regulatory effectiveness, business world today have to reshape the way on its business conduct, especially the financial services sector. Banking industry is one of the sectors that felt the greatest impact on new- and increasingly complex- regulation, where the relevant authorities need to change their business model and structure to fulfill with the ever-changing regulatory requirement.

In fact, it is a challenging task for the services provider to forge ahead with the new regulatory framework. For instance, the service provider needs to redesign and implement difference governance and risk management structure to support the still-evolving regulatory landscape.

Compliance as "mode of enforcement"

Grabosky and Braithwaite (1986, 1993) have outlined that compliance as mode of enforcement, in which consist of tight enforcement action to respond with the diverse objective of the regulated firms. For instance, if he or she insists refused to respond to the regulatory demand, regulated firm can escalate difference forms of intervention into their daily business activities. Different types of regulatory intervention that can created difference mode of enforcement. Effective mode of enforcement is to accomplish and kick in the promise of one or more core objectives of financial service regulations. And the five (5) key core objectives of financial services regulation are as per the following: - .

a) The protection of investors /consumers.
b) Ensuring that the markets are fair, efficient, and transparent.
c) The reduction of systemic risk
d) The reduction of financial crime.
e) The maintenance of consumer confidence in the financial system.

An effective regulation can ensure that an open market can be participated by wide range of relevant participants without unwanted barriers to enter and exit. Besides, effective rules and regulations can even elicit same level of regulatory burden to all the participants to meet the minimum requirement. Supervision from regulatory body not only helps to reduce corruption in bank lending and the market failure yet it also improved the function of bank as the intermediaries. (Beck et al., 2006). According to Fernandez and Gonzalez (2005), they believed that countries with low accounting and auditing requirement have higher authority on official supervisory authorities and it also reduced the risk taking behavior from top management. If regulators are willing to put the onus of compliance on the product owner, banks may have a real chance of the regulatory success. In view of excessive revolving of legislation and scrutiny regulation from both regulators and consumers, thereby in depth clarification about compliance are needed.

According to Franzoni(1999), a strong enforcement emphasized a strong supervisory capacity and regulatory function, in which it can limit the possibility of wrong doing. In fact, the regulators is given limited resources, and unable to inspect the bank regularly. Therefore, it always relies upon the self reporting by the bank who undertook the random audit check. As stated by Pasiouras et.al in 2009, the costs efficient of bank are not necessarily in generating the profitability. The cost and profit efficiencies were significantly affected by the regulatory restriction and banking supervision. The greater the freedom on taking risks by an institution the greater possibility to increase the bank portfolio.

Malaysia regulatory framework have imposed a high standard of corporate governance for the banking industries in which the element of compliance seems becoming an integral component that giving a huge impact to the bank operation in one way or another. Due to complexity of the regulatory framework and different span of governance and content, it also provides different type of information and commentary to corporate executives. Compliance is seems far more important than what we think about in our daily life, as it is predominantly viewed by the financial institution as a burden. In fact, to adhere with the standard procedure is no longer an option, but it is a mandatory field for the entire service provider in banking field to heed, as the breaches of compliance may result in serious sometime disastrous.

Five Key Determinants that determine the "Regulatory Effectiveness"

a. Compliance awareness and training and internal audit

Extensive training and education throughout the bank become a critical element to live up the compliance accountability, in which the components of awareness, training and communication become the key facet in this circumstance. The depth and breadth of training that an employee receive always relied upon the level of commitment and dedication from an employee towards the bank.(Joseph M. Kelly, 2006). In actual fact, education, training and awareness are the informal intervention measures that able to enhance the regulatory effectiveness of a financial institution. Training not only able to improve the capability of an individual, but it can also enhance the skills, knowledge, and commitment of an individual towards their work. Training program can also help to address the non-compliance issues that created by the new hirers, and the existing sales personnel. For instance, the annual refresher courses will be norm to be done by all the employee of an organization. Besides, an up to date training material shall be tailored to all the new hirer as well as existing personnel, in which the training could be segregate in many types. For instance, it could be conducted via internet, through external course or seminar. To ensure that every single individual are well verse with the compliance practice, training should be compulsory for everyone, and attendance should be recorded. The best practice is to have a comprehensive of exam paper, and this formal training need to be reinforced within the financial institution. Individual who cannot demonstrate competency should left for the position as failing in which to comply with the stipulate regulation can put the bank at risk.

Dobler (1996), define that profession as "a calling to acquire specialized knowledge, in which intense preparation including instruction and skill and methods are needed. This definition also repeated by Millerson (1964), who highlighted the following essential characteristic, which Millerson believed that skills able to develop based on theoretical knowledge, as it is crucial for the new hirers and existing employees to equip with skill, training, education, assessments. Not only that the maintenance of integrity also need to be nurture. Thereby, adherence of code of conduct as well as fair dealing become the mandatory field that need to be take into consideration. Sauber.et.al, (2008) cited that it is a requirement to educate and equipped the professionals with new and higher level of skill and knowledge.

According to Bologna(1994), an inadequate of operational, and periodic review; lack of segregation of job task , and ambiguity of job roles and responsibilities always become the signs that showing the poor internal control of an organization. An appropriate of compliance awareness will not only helping the banker in developing the job related skill, but also maximize the performance potential of a banker. For example, sound compliance knowledge and understanding of banking practice can enhanced the level of regulatory effectiveness of a financial institution. (Barnes, 1995).The best way of prevent the noncompliance issues occur is to understand the root cause of it, as fraudster nowadays not only able to identify the loopholes in the control procedure, but they also know the practice of an institutions towards the risk management control. Therefore, a regular control is considered as one of the most effective approach to ensure high level of compliance. Regular check may reduce the non compliance issues that happened in a financial institution. Prevention normally started with the identification of the weaknesses, and then improved those practices or has a better control.

In relation to the Thomson Reuters GRC surveyed, a compliance officer has spent 15 percent of time on the tracking and analysis and about 7 percent of time in revision of policies and procedure in a week respectively. And these figures were remarkably same as last year, which sound a caution note. The volume of regulatory change continuous increased, however it seems that compliance officer has no more time to be squeeze in. But just imagine, if the business unit leader or branch leader can spent about 15 percent of time in tracking, 7 percent of time in a week to advice the employee to amend and correct their own defects and analyze their employee work, it can really make a huge difference in achieved the zero defects, and ensure the regulatory breaches can reach to the regulators in a timely manner. Effective tracking and reporting is really a key to precise risk management. But sadly to say it is really a challenge to maintain an effective compliance management, as in actual fact it is not easy to develop and executed an appropriate monitoring and testing program in our business world.

There are several proactive approaches, and one of it called monitoring, which the financial institution could use this method to identify the procedural or training weaknesses. It is because monitoring also could be defined as the real-time compliance checking by either the compliance department, or the superior. Monitoring generally took multiple forms such as self-assessment transaction review, and the purpose. Monitoring is one of the instruments to detect the non-compliance matter before internal or external audit test for the compliance. (Carol.M. Beaumier, 2003). For the past decades, compliance audit generally focus at the transaction testing, as this process could ensure the bank is complied with the consumer protection law and regulation as well as the internal policies, and procedure.

Haugen and Selin (1999) cited that internal audit have four (4) main objective, including to ensure the accuracy and reliability of the information, to safeguard the assets from the firm, to promote efficiency in firm operation , and to measure the compliance with the predetermine of guideline and procedure. On top of that, integrity always becomes the critical focus for a financial institution. For instance, if an employee, he or she might struggle with his or her personal problem, therefore the tendency for the employee to commit to fraud is high. Business world today are getting more and more competitive, there are many reason for an employee to fraud, the most common one the cyber crime, the ready computer technology could led the employee who under pressure of financial to commit in the crime, and the chances to commit fraud become reality.

Audit quality viewed as the important factor that affected the credibility of the financial statements. An appropriate of report may not be produced if without a quality of work is performed (Arrunada, 2004).Internal audit is one of the dimensions to measure the regulatory effectiveness of a financial institution. Knowledge by a firm of the enforcement hierarchy would gradually enhance the regulatory effectiveness. For instance, banking regulators have the right to suspend or even withdraw the banking license, in which indirectly results that financial institution losing the implicit or explicit assurance of the central bank. The reason behind is withdrawal of a license involuntarily in bank could most likely forced the bank to cease the banking operation in which may giving a possible ripple impact to the rest of the financial system. (Ayres and Braithwaite,1992). Thus, it is importance for banking sector to have an appropriate of compliance training, and awareness, and implement the adequate of internal control. To achieve this aim, all the business entities need to approach compliance holistically and come up with an effective ways of compliance practice in determine the effectiveness of the compliance effort and creating the compliance governance framework in their future corporate planning. (Bace J., Rozwell C.,FeimanJ.&Kirwin B. 2006).

b. **Unambiguous regulation**

A regulatory model can be defined as a set of measures that constituted the difference legislation and government policies, which evolved prudential and protective measures and check. Difference countries may developed difference forms of regulation over time. Unambiguous and transparent regulation are designed as a preventive measure to control the risk of a financial institution, and offer protection to bank customer and as a benchmark to measure the level of regulatory effectiveness. Indeed the regulations are changed radically for the past few years, where the issues of the banking institution are always at the centre of the international debate.

According to Bart et al (2001), with the respect to the compliance roles and modalities in which the supervisory function are exercised. Barth believed that the most effective supervisory policies in ensuring the performance and stability of the bank are based on self-regulation. If the supervisory actions were in place, self regulations not only able to reduce the regulatory cost but it enabled us to promote and encouraged the adoption of internal control system for bank. (Elliehausen, 1998:Goodhart et al., 1998). By having an unambiguous of self regulation, which constitutes the broadest base of the compliance pyramid, enforced self regulation and command regulation with discretionary punishment, it can enhanced the regulatory performance of a country. The top layer of the self regulation is the command regulation of the discretionary punishment, such as imposition of code of conduct, prudential ratio across the entire banking industry. (Ayres and Braithwaite,1992).Bank regulation is a form of government laws that subjected the bank to certain requirement, restriction and guidelines.

According to Dewatripont and Tirole (1994), by having clear and unambiguous regulation, it can served as a buffer against the failure and losses of the bank, this is because a prudent regulation may enable to identify and undertook the key problem of financial intermediaries, and providing the right incentives to management in banks. In order to maintain high level of regulatory effectiveness, external intervention of claimholder need to be rolled out, as the impact of managerial incentives would generally reduce the non compliance issues. For instance, by implement compliance balance scorecard could generally increase the regulatory performance; it is because the payout of the bonus was strongly depended on the sales personnel balance scorecard.

A well established of regulatory structure could relatively create the transparency between banking institution and the individual or corporate sector that they conduct business with. And it is important for the regulators to maintain the control over the standardized practice for all the financial intermediaries in Malaysia, in which government financial assistance could only cater for those cripples banks, it is because the "cripple banks" might not only bankrupt, but it could also creating the rippling effects to the entire econothe that leads to the systems failure. In this scenario, solvency will became the main concern of the regulation of financial intermediary. Dewatripont and Tirole (1994) also illustrate the summary of the saving and loans crisis in year 1980, which resulted from the regulatory failure. To cope with these problems, both of them were successfully developed a new capital structure model. By looking at this example, it makes us have a clearer overview on how the optimal regulation can be achieved via the external intervention and capital adequacy requirement. Unambiguous regulation play an vital role in our financial sector, as it has minimized the risk of accounting manipulation and protected the bank manager from the macroeconomic events, which beyond their control. In fact, it is not easy to develop a high level of regulatory effectiveness and value added of commercial banks. There are five types of regulations that seek to enhance the regulatory performance, such as the entry regulations, safety and soundness regulations, credit allocation regulations, consumer protection regulations, and monetary policy regulations. (Cornett M and Tehranian.H, 2004).

For the past century, many emerging Asian economies have been liberalised their financial sectors by including opened up their banking system to foreign competition. One of the immediate motivations for the local regulator to undertake this policy was the much needed fund that foreign investor can brought in to help to recapitalize the banking econothe in respective country. Hence, it's importance for the regulators to implement stringent, prudent, and unambiguous regulation. It is because the regulatory performance and market value of the firm might affect by the entry cost. And the barriers to entry and regulation pertaining to the scope of permitted activities under a given charter may exist in the banking system. For instance, in order to restrict them to invest in our country, regulators might impose the high direct costs such as capital contribution as well as the high indirect costs to the new entrants.

The study of commercial bank performance, regulations, and market value are, of course, not unique to Malaysian based financial institution. Nevertheless, the entry regulation, safety and soundness regulations are play an important roles for the financial institution to improve the soundness of the financial system through strengthening pre-emptive and prudential regulation. Until the onset of the Asian crisis, Malaysia's banks are regarded as having the well developed supervisory and regulatory framework. Regulators have formulated difference layer of protective mechanism to mitigate the insolvency risk and maintain the creditworthiness and confidence of the bank in the eyes of its investors. For instance, regulator might urge the financial institution to diversify their asset as well as not to make loans exceeding 10 percent of their own equity capital funds to any one company or borrower.

Other than that, regulator also need to ensure that all the intermediaries are met their minimum requirements of capital or equity funds that the owners of a commercial bank need to contribute to the funding of its operations. High proportion of capitals contribution from the financial institutions might build up a high level of protection against insolvency risk to the depositors or claimholders. In pursuance to protect the depositors against the liquidity risk, Malaysia Deposit Insurance Corporation (MDIC) plays an active role in the protective mechanism. MDIC is a government agency in 2005 under PIDM Act, where its role is to administer the deposit insurance, takaful and insurance benefit protection systems. PIDM is mandated to provide incentives for sound risk management in the financial system as well as boosted the stability of the financial system. For instance, if a commercial bank collapsed and owners' equity or net worth is wiped out, then the statutory bodies could promptly reimburse the certain of money to the insured deposits without imposed any additional charge for the insurance protection.

By virtue of Malaysian banking sector has play a leading roles in indirect financing, a strong monetary expansion could be the concern of Malaysia based institution especially during the financial disaster, in which the inflationary pressure need to be executed. It is because credit allocation could sometimes contributed to further price rose, fuelling concern about asset inflation and its potential destabilized effects on the economy. By having an unambiguous and transparent regulation, it was not only supported the commercial bank's lending to socially important sectors such as housing, farming, but also the small medium business. For instance, the financial intermediaries would required to hold a minimum amount of assets in one particular sector of the econothe , or alternatively, to set maximum interest rates, prices, or fees to certain areas based on the stipulated procedure and guideline.

On 15 Nov 2013, the personal data protection act also came into force in Malaysia with the main concern of protecting the personal data of an individual with respect to commercial dealing. The penalty of non-compliance was between RM100K to RM500K and/ or between 1 to 3 years imprisonment. Consumer protection regulations are intended to prevent discrimination and other unfair dealing in the business conduct. Consumer protection regulations not only fostered the industry responsiveness to consumers' requirements with the objective to increase the confidence in quality of service and product but also the affordability and widespread access of services to Malaysians. Because of this reason, the Personal Data Protection Act 2010(PDPA) was come into force effective on 15 November 2013, in Malaysia with objective of protecting the personal data of individual with regards to any forms of commercial transaction.

A final motivation for regulation concerns was the transmission of monetary policy from the Federal Reserve (the central bank of Malaysia) to the rest of the econothe. The Central Bank of Malaysia has two main monetary goals: low inflation and stable exchange rate. Hence, it's important for Malaysia to have unique and unambiguous monetary regulations. Especially, during the peak of economic overheating, monetary regulations normally have to be tightened by withdrawing fund from the banking system and rising of the interest rate. The higher the interest rates could encourage people to save rather than spent, as it was most likely to make it more expensive for people to borrow money.

On top of that, countries with greater regulation restriction have less developed, inefficient in banking system and high probability of bank failure compared with the countries that have less regulation restriction. And same goes to country with greater government ownership has less developed, less efficient and unstable of banking system. The Malaysian regulator, BNM was looking to liberalise both the life and general insurance market in the near future, therefore there were more requirements are being imposed by the regulator ahead of the anticipated liberalisation, where the insurers may need to transform the way they operate. The challenges of formulating a high level of regulatory effectiveness are increased because supervisor themselves are not understand their own role and more and more pressure from the top management to urge them to increase their intensity and intrusiveness of their approach. And it is crucial for the top management to understand the need to form an effective risk management and hand in hand in deliver a cultural sea change, where an appropriate of " risk –awareness" within the demonstrably of governance framework are arose.

In Malaysia, Anti Money Laundering Act 2001 has defined money laundering as " form of account conduct behavior of a person who engaged, directly or indirectly in any unlawful activity". Or in other words it also classified as an act of a person who acquired, received, possessed, transferred, converted, exchanged, and disposed from brought in any unlawful of proceeds into Malaysia. According to Quirk (1997), AMLA is an act that ensures that financial institution not to conceal or impeded the establishment of the true nature, origin movement, disposition the ownership or proceeds of any unlawful activity. Money laundering and terrorism financing has a stand out effect on the Malaysia banking sector, as it not only a global problems that threatened security but also one of the element that jeopardized the economies stability, transparency, and efficiency of governance system. Money laundering is not a phenomenon that newly founded; it is actually as old as criminal incidents. Fraudster may unwittingly use the financial services provider as the middle man for transmitted the illegal fund into form of deposits and investment. Launders not only used the financial institutions as the pawn to conceal the illegal fund, but they also tend to transform their illegal money via fictive companies, such as casinos, jewelry shop, car dealer and any other job position that related to import and export operation. The motives behind is to conceal the source of fund as well as the ownership of the beneficiary.

According to McDowell and Novis(2001), the emerging market has attracted the money launder and terrorism financer because it has relatively loose regulations compared with the other business segment. Money laundering and terrorism financing activities is a diverse and complicated process indeed, as it involved the following three stages, for instance, placement, layering, as well as integration. Launders may dispose the illegal proceeds into both financial and non-financial intermediaries, and then separated these illicit funds from their source via layering. And the most common ways to do the layering stage is through overdraft, or credit facilities. Once the illegal fund are place as capital repayment or advance repayment, the illegal money can transformed become the legitimate fund and flow into our economy. And all these incidents are expected to occur in the developing countries. It is because the developing countries will have a relatively small, fragile, and weak financial system.

The Financial Action task Force (FATF) has established an international standard against money laundering activities. This framework was served as an international benchmark for national government to implement their respective national jurisdiction for detection, prevention and suppression of money laundering and financing terrorism. A group of studies have taken initiatives to examine the magnitude and scope of money laundering and terrorism financing problem and how the money is being laundered (Unger 2009). FATCA is the act that compelled local financial institutions to comply with the US federal law. With effect in July 2014, any financial institution that doesn't comply with FATCA could be subjected to 30% witholding tax by US on any of their US-sourced income, as this law intended to detect and deter the evasion of the US tax by US person who hide money outside the US.

Banking secrecy is also become one of the cardinal principles of banking law that ensures the safety and soundness of the banking system. For instance, disclosure of personal information to third party might weakened the public confidence in bank.(Jawahitha,2002). According to Edward (1998), it could also protect the bank from the market pressure. For instances, from a customer point of view, banking secrecy viewed as a privilege that safe guard the financial institution from being invaded by other parties.(Ping, 2004).In fact, it is importance for the bank to preserve the duty of secrecy because bank could have a very detailed knowledge of it customer financial affairs (Thani, 2001).

All the reporting institution and individual are subjected to "Know your customer" (KYC) rules under the Anti Money Laundering. In order to ensure the bank products and services are not associated with the launder money; it is the responsibility for all the employees to comply with the applicable law and regulation, especially for the front-liner of the bank. Each financial institution need to maintain the customer record for at least 6 years, where he or she need to record every transaction regardless of its volume or size, and report any suspicious transaction to the central bank of Malaysia.

Apart from that, all the reporting individual and institution are also protected by statute with respect to its law enforcement, but all these provisions can be waived in the case of money laundering investigation.

c. Compliance Culture

Pedowitz, Lawrence, John, Levine, Theodore, Racz, and Gregory(2004) cited that compliance program have never been critical for an organization, as it is not easy to designed a truly effective program and creating a culture of compliance takes time. They believed that there are seven ways of practices that can make a difference in the quality and regulatory effectiveness of a financial institution, not only that it can also foster a strong compliance culture. For instance, an appropriate of supervisory and compliance culture; effective communication within the three line of defense; creating a sophisticated inventory of regulatory and reputational risk ;established an "early warning" system to identify the risk ;conduct specialized training to supervisor, to ensure the information pertaining to regulatory were promptly surfaced to senior management; and use internal discipline effectively.

According to Joseph M. Kelly (2006), creating, cultivating, and sustaining a good compliance culture and behavior is no longer a new concept, but it becoming a responsibility for everyone to adhere. In order to meet with today regulatory obligation, spreading compliance responsibility become a serious commitment from the top of the corporate hierarchy to employee at all level. Without the top-down buy-in, making compliance as the top priority could be the difficult practice for every single individual. Compliance also play an active role in security education nowadays, as she claimed that enterprise –wide compliance risk management have assisted the banking sector to enhance its security effort on line of business, facilities and employees .

Compliance has become the yardstick in banking sector. For example, financial institutions today have to gauge information for the security preparedness with respect to security incidents, online banking transactions threats such as phishing attacks, viruses, identity theft and etc. Perhaps, a truly strong of compliance culture could only be created when there is a sense of partnership between the compliance officers and business unit manager or supervisor. Consequently, bank should aimed at integrating the compliance with their overall risk management function by having the regular meet between the compliance officers with the business unit manager or supervisor to ensure that all the compliance issues and practice are handle tactfully and in placed. According to Pedowitz, Lawrence, John, Levine, Theodore, Racz, and Gregory(2004), it's vital for the senior management to conveyed a clear message to the grounds, in which the management must make it clear that compliance and legal are available to assist the business unit with the implementation of system. Apart from that, it 's important for the top management to craft a clear line of reporting ,as it is easier for the business unit to slip through the organization chart, and performed review on periodical basis. In fact, there is no magic bullet in creating a perfect compliance framework, but by designed an appropriate compliance framework could really help to reduce "capture" of non-compliance issues.The key element to make this work is to imbue the truly compliance culture into the organization. To accomplish this goal, it's critical for the bank to have the effective compliance training and awareness within the organization. And banks that lack of such culture could be rigid for them in adapted with the scrutiny of regulation. Thus, it is not easy for us to creating a harmonious working atmosphere in our workplace. To establish a truly strong form of compliance culture, institutions not only need to permeate a culture of unity, but also the courage, creativity, innovation, and teamwork within the organization.

Gertz (1973) asserted that the social phenomena and organizational processes and behavior as the symbols of the typical culture of system that able to analyze the different cultures through the vocabularies. If an organization able to swiftly modified the compliance practice together with the rapid change in regulatory framework, which means this organization are extremely well developed, and it's ready to adapt with any typical change. According to H. Rodgin Cohen (2015), the prominent corporate lawyer in USA, and he claimed that the environment between banks and regulators is one of the most tension –filled times in his career, in which he believed that the real culprit for the year 2008 financial crisis was not the industry as a whole, but the subcultures within it were allowed to flourish.

According to Brynjolfsson (2008), he believed that a fruitful compliance culture able to enhance the communication, teamwork, cooperation within the organization and across the organization's border. Because if an organization could swiftly modify it compliance practices together with the existing compliance environment, for sure it might enhance the regulatory effectiveness within the organization. Consumer compliance possessed a thorny problem for large financial institution. For instance, a big bank has spent millions of dollar each year on compliance, but sadly to say the risk assessment and testing processes are often redundant. The main issue is that the product development, sales, servicing are frequently divorced from compliance ownership. If everyone have a same sense of belonging to all the compliance related matters, it was not difficult for a financial institution to survive in this competitive business environment. But sorry to say that the non-compliance issue is seems as the paramount concern of today banking industry. The reason behind was majority of the front-liners have historically avoided such regulatory matter, and they always leave such issue for the compliance officer or expert. In fact, regulatory effectiveness will not succeed unless the front liner and business leader or branch leaders have took their ownership to spearhead the pursuit of the regulatory excellence.

The major problems of today institution in reshaped a high level of regulatory effectiveness are that bank culture have traditionally devalued compliance effort. For instances, the rewards and compensation for business leader is not linked to the compliance performance of the respective business units. So in order to enhance the regulatory effectiveness, the rewards of the business leader must link with the quality and consumer outcomes, not mainly based on sales revenue, where the compliance culture should came from the top management. Unless the top management communicated the importance of the regulatory effectiveness if not the compliance effort may continued to be diminished in the eye of most banks in Malaysia. Every employees of the financial institution has to take precedent in promoting consumer fairness and transparency.

In twenty-first century businesses, compliance could not be the catalyst to creating another high of regulatory effectiveness, unless all of the authorities, such as internal auditors, enterprise risk management specialist, compliance offices, and fraud investigator were working hand in hand in addressed all these non-compliance issue. Compliance is like a key to the operation and reputation of the financial services sectors, thus it is important for the financial institution to embed all of it fundamentals to the business activity. Compliance is not only a means to strengthen the quality of a business, but also an element that encouraged the right behavior and policing. As a result, it's everyone responsibility to ensure that the entire regulatory objectives are achieved.

d. Robust System and process

Robust system has fundamentally reorganized the risk management in banking industry. With the impact of the robust system, banks able to use the information technology to support and enhanced the business relationship with their customer through innovative services and making the business process more flexible and more regulatory centric. Apart from that, it also enhanced the ability of banks to process and transmits the quantifiable data. Securitization is a good example to increase the marketability. Robust system enabled a bank to identify, measure, and mitigate the compliance risk. Fahmida Rashid (2001) claimed that multilayer approach to security might assist the banking industry in enhancing the regulatory effectiveness. Instead of relied on a single point of failure; organization need to implement several mechanisms to make it harder for cyber attack to steal sensitive information.

For institutions that truly prioritized compliance, they have expanded their use of technology and applied it with the adequate of internal control. In order to have better analyse on the compliance behaviour and process that typically driven by constrained IT schedules, hence careful arrangement to fit it into existing company planning cycles are required. Although these cycles ever mapped the timeline that set by the regulators, but the ability to change the touch point content through a composition development cycle always be the main concern that financial institution to look at. The logic behind is it always fraught with delayed, risk, and general lacked of control. Research indicated that roughly 30 percent of organizations have spent their money in information system and technology (Hagerty and Kraus 2009). Indeed, information system research in compliance management worked as the domain is on the increase, but the development of solution without the input from industry expert might serve to increase the compliance management spending. Without delivered on the promise, this tools may not considered as the mean that alleviate the problem.(Syed Abdullah et. al.2009). As when it come to any breach event, the non-compliance cost sometime can be significant higher. According to Taylor (2012), cyber securities have been occurred more often throughout the past couple of years. In 2011, these data breaches have affected the huge companies such as Citigroup, Lockheed Martin, and so on.

Siddiqi et al. (2008) emphasized that there are three interrelated perspective must be included in the compliance elements, for example corrective, detective and preventive approach. He believed that these three measurements may help him to formulate a holistic and effective compliance regime. According to Kharbili et.al. (2008), a high level view of compliance can be created through a policy- based framework , as it has integrated the regulatory compliance task and business process management. It is everyone responsibility to ensure that all the employee within an organization are follow strictly with the company policies. In addition, robust system also able to provide an automation regression of risky event, allow for centralized risk for the entire bank; provide support to mitigate the risk, and automation reporting to the regulator. Robust system seems to be more desirable from the public policy perspective than transaction banking activities, as it will promote prudent risk taking, and innovation rather than contracting with high quality of employee.

Robust system not only able to strengthen the institutional and regulatory environment but also able to shift towards a more developed financial system and higher growth.(Levine,R.2005). By having robust system, it will help to revolutionize the business process, in which the quantitative data are well exploited, more transmitted, and more core decision needs to be made. For instance, in back office, robust system able to spur the decision making, as it has provides access to integrated data across the entire bank, in which the IT software can combined and linked it to bank product and services, customer, bank office and department. Robust system not only caters additional flexibility but also agility to transform the business processes and product. According to Ilyina and Samaniego, (2011),they believed that technological characteristic in the robust system are one of the beneficiary of financial development, in which it can increased the level of patenting, contributing to more a pronounced economic growth.

e. Cost of non-compliance & and hefty monetary penalties

According to the regulatory statements, noncompliance cost is associated with the legal or regulatory sanction, which has give a tremendously impact to the financial losses and reputation of the bank. As if the reputation of the financial institution are tarnished in the marketplace, which resulting from the failure to comply with laws and regulation, rules, self-regulatory standard and code of conduct, it could generally jeopardized the level of confidence of the depositors or investors. According to Barth et al (2004) study, it examined the issue in respect with the banking activities, barrier to entry, and power of the supervisory authority, and examined on how all these elements impacted the compliance cost of the organization.

There is another similar research conducted by Demirguc-Kunt *et al.* (2004) , where an in depth analysis on the impact of banking regulation and intermediation cost across the country is conducted. And they found that stricter barrier to entry can triggered an impact to the regulatory effectiveness and profitability of banks. According to them, strict regulatory requirements would relatively increase the cost of doing business of a financial institution. For instance, if regulator imposed hefty monetary penalties towards noncompliance institutions, it could result a direct negative impact on the profitability of the respective financial institution.

According to Bhattacharya (1998), there are numerous of studies were conducted to examine the benefit and compliance cost. Financial regulations have introduced an unintended condition on market structure and behaviour beyond certain threshold.

According to Alfon and Andrews, (1999), all these scrutiny types of regulation sometime could lower the level of competition, as they believed that moral hazard could increase with the impact of greater entry barriers. Hail and Leuz, (2006) quoted that non-compliance demonstrated that surveillance regulation could increase the operating costs, but the impact of these cost could not be fixed. The rationale behind is the compliance costs are relatively affected the stock price of the financial institution.

CODB is the abbreviation for Cost of Doing Business and it's vital for us to know about the CODB each day. By knowing our CODB it could give us the power to control our business choice and planning. In line of the rapid change in regulatory environment, the non compliance cost and consequence of non-compliance are serious than ever before, and it seems like a big hole in banking pocket, as the cost for a firm of endeavoring to be compliance has been growing.

According to Neil Woodford (2014), the size of the any potential fine due to lawsuits is unquantifiable, therefore the opportunity cost dealing with the aftermath of non-compliance was much more subjective, and hard to quantify financially, thereby regulator has been consistently fostered a good conduct within the financial institutions. The regulator and policy makers have crackled down on the post financial crisis world and attempted many fines towards the wrongdoings in the industry, in which the volume of fines seems in increasing trend. For instance, in year 2012, HSBC has been compounded of $1.9 billion by the regulators when HSBC admitting that it had processed drug trafficking proceed through Mexico and allowed the fund to be transmitted from sanction countries. And another classic example, such as Standard Chartered was fine to paid $340 million from money laundering failing. In order to address this failing, the UK Prudential Regulation Authorities has published a statement of policy in June 2014, and highlighted on how the capital influence the liquidity and solvency in regulatory performance. The [1]culture of a firm could give a significant impact to the regulators, as the objective of regulator is to foster the safety and soundness of the financial institutions.Non compliance could be a cost to us not just the money. In fact, the worldwide compliance environment was getting more and more dynamic and complicated, but sad to say we have no option to escape; thereby what we need to do was just remain stayed in this game.

Let us to have a look on the following possible "cost" to an organization of being noncompliance.According to Taylor (2012), in order to keep up to date on a river of new regulation and legislation, the regulator willing to work long hour to advise its clients on ways of prevent such breaches. When breaches happened, not only the business could lose the money, but the brand and reputation of the firm maybe tarnished. A report by John Armour, Colin Mayer and Andrea Polo from Oxford University's faculty of law and the Saïd Business School, they found that "Regulatory

[1] M.Dewatripont and J. Tirole, "The prudential regulation of bank," Journal of Economics and Finance(1994). Mathias Dewatripont is professor at the universite libre de bruxelles, a research fellow at its European centre for advance research in economics and statistic(ECARES)and research director of the London-based centre of Economic policy research(CEPR).
Jean. Tirole, the 2014 Nobel Laureate in Economics , is scientific director of IDEI (Institute d'Economie INdustrielle), chairman of the board of TSE (Toulouse School of Economics), and Annual Visiting Professor of Economics at MIT.

Sanctions and Reputational Damage in Financial Markets" are very real: their stock price impact is on average 10 times larger than that of financial penalties imposed." Therefore, if corporate reputations tarnished, it could take a long time to be reinstated. As consequence, this adverse publicity may show the management of the company in bad light. It is because if a company failed to comply with rules and regulations especially when accompanied by penalties, it could erode the share values and giving an attendant effect to the company, as it may reduced the confidence among the investor. And the most obvious cost of wrong side are the time and energy that they need to be expended to identify what went wrong in the first place and need to in place. For instance, once the non compliance is identified within the organization, further adequate checks and monitoring need to be taken place to ensure that it never happened again. And this extreme situation may force an overhaul of strategic direction need to be enforced within the organizations.

According to Farlex Financial Dictionary (2012), contingent liabilities is another form of non compliance cost that may borne by a company if a certain future event occurred, such as consequence of a lawsuit. For let say, an institution might penalized by the regulator to pay significant huge amount of non compliance cost if it loses the lawsuit. Contingent liabilities could be recorded as the account payable, where it may gave an impact to the share price of the relate organization. The common examples of the contingent liabilities are the potential adverse judgement in litigation, contested tax liabilities, and audits. In order to evaluate the strength of a company, sometimes financial institution may need to request a list of contingent liabilities from the borrower. The value of the bank capital has fluctuated with the value of assets; if the company have more capital might in lower risk of insolvency. If the assets more than the liabilities, any losses that occurred in asset side of the balance sheet could result the loss in the bank capital. And if the losses more than the value of the capital, which means the firm is currently experienced insolvency. (Hendrickson &Joshua R , 2014).

At the first glance , contingent liabilities may not seems to have any impact to the share price movement, but the rumour of a substantial fine correspond to affect the company share price. For instance, excessive of penalties could hamper a financial institution to grow significantly. According to Thomson Reuters GRC surveyed, more than 800 compliance practitioners have canvassed their view on the compliance cost, as they agreed that hefty of fines is one of the greater challenge that encountered by banking industry around the world. Clearly it's not just money that stands to be lost if the regulatory compliance needs are not fulfilled – there's more at stake.

2.1 Theoretical Review

Capital Adequacy

There are several studies that examined the importance of capital factors in the financial institution in Malaysia. A similar study has been conducted by Bontis and friends to examine the impact of the capital in the financial sector. The study revealed that capital is the most significant elements that determined the business profitability of the banking industry. Capital become one of the scrutiny regulation that need to be comply by all the financial institution in Malaysia, for instance a huge amount of money need to be keep and absorbed by all the unexpected incidents.(Bontis et al,2000).As consequence, capital adequacy has defined as the proxy of regulatory effectiveness.

According to Goh (2005), capital has a positive and significant impact on the bank profitability, as he indicated that any changes in the form of capital could result a change in bank profitability. And he believed that the stronger the capital, the higher the net profit of the bank. Most of the banks in Malaysia were using the bank capitalization variable to determine the level of bank profitability in their respective financial institution. For instance, in Pellegrina study (2012), it has highlighted that there is a positive relationship between capital element and bank profitability. Capital adequacy is a conception that structure from the idea of rearranging the existing capital structure of the bank.Numerous of scholars have provided insight and theoretical as well as empirical into the capital adequacy.

According to Dewatripont and Tirole (1993), theoretical studies have emphasised the importance of capital adequacy requirement in bank laws and regulation. Capital served as the buffer against losses that can absorb the possibility of bank failure. And according to Ekundayo (1999), capital adequacy was designed to ensure the liquidity of the econothe which has helped the surplus unit to channel their resources to the deficit unit. The basis for this was due to the fresh injection of fund could aids in absorbed the sudden mishap, the highest the volume of capital that a bank can handled, the least risk of the bank operation.

Malaysia utilized two key capital ratios, risk weighted capital ratio and core capital ratio to determine the solvency of Malaysia banking institutions. There are two type of capital being measured: tier one capital as well as tier two capital, in which tier one capital is referred to the form of reserve that permanently and freely available to absorb losses to avoid a bank being required to cease trading. Tier one capital plays an important part in the economy because it safe guards the financial stability. While for tier two capitals, it referred to the form of reserve that absorbs the losses in the event of a winding-up or provides protection to depositors, in which the regulators could assist in tracking the capital adequacy ratio of the banks and determined how effectively it sustained a reasonable amount of loss during the financial disaster.

Besides, capital adequacy ratio also provides a better understanding on the level of risks that banks going to take as it has served as the benchmark to measure the bank's capacity and ability to absorb all the potential losses from the normal earnings. Tier two capital is sub-divided into upper and lower tier two capitals. In fact, there is no fixed maturity for the upper tier capital. However, there is a limited life span for lower tier two capitals, in which the lower tier two capitals is less effective in providing the buffer against losses. In Malaysia, Tier three capitals is not recognized in the regulatory capital base and no recognition of the available for sale revaluation reverse in tier two capitals. Perhaps, tier three capital is only held by bank to meet part of the market risk, commodities risk, and foreign currency risk. To qualify as tier 3 capital, assets must be limited to 250% of a bank tier 1 capital, which comprise of the subordinated debt, undisclosed reserves and general loss reserve.

Jeff (1990) has provided a general outline on the capital requirement, where he commended that capital adequacy has sized as a proxy of a well managed bank. And according to him, the return on assets ratio need to be taking into account as one of the specific key measurement in determined the profitability of the financial institution. Difference researcher might have difference point of view on the elements of capital adequacy. For instance, Bensaid et al (1995) considered the regulatory capital in adverse selection as well as moral hazard. The quality of the bank's assets was regards as the private information to the bank, which gave a difference impact on the financial market. The adverse selection could appeared not only upon the hidden action that chosen by the banker but also during the moral hazard.

Although capitalization has been demonstrated to be main focus for the regulators as well as institution in explained the performance of financial institutions but the impact on bank profitability is still ambiguous. For instance, lower capital ratios suggest a relatively risky position, as one might expect a negative coefficient on this variable (Berger, 1995). According to him, any increased in the capital might raise the expected earnings by reducing the expected costs of financial distress and possibility of bankruptcy. However, it could also be the case that higher levels of equity can decreased the cost of capital, which led to a positive impact on bank profitability.

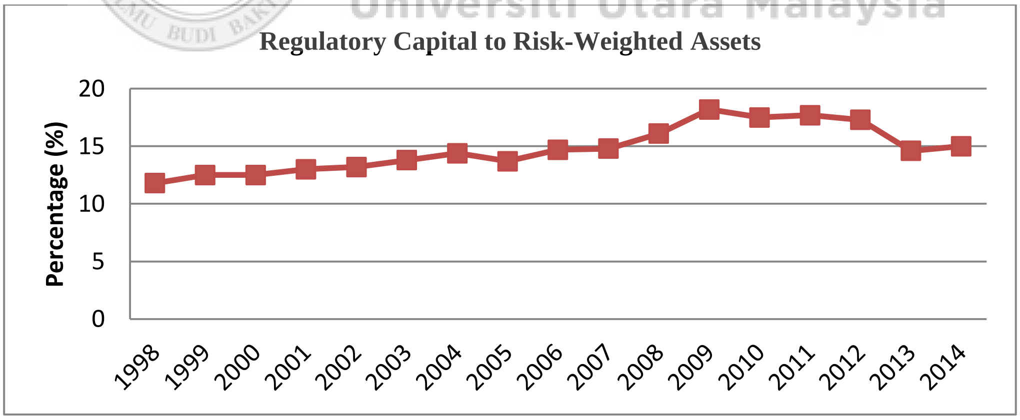
(Molyneux, 1993). Bank capital according to Graham (1988) is acting as protective cushion that against the unexpected of financial losses especially in the liquidation stage. Graham (1985), emphasized that capital could only grow alongside when there were large volume of depositor in the market place. Graham also affirmed that management could result an effect to the capital. And he is of the view that prudent guideline of capital adequacy system could increase the level of regulatory effectiveness. Capital adequacy ratio (CARs) measures the amount of a bank's core capital which expressed as a percentage of its risk-weighted asset.

Capital adequacy ratio is defined as:

$$\mathrm{CAR} = \frac{\text{Tier 1 capital} + \text{Tier 2 capital}}{\text{Risk weighted assets}}$$

$$\mathrm{CAR} = \frac{T_1 + T_2}{a} \geq 10\%.$$

Figure 2.1: Regulatory capital to risk weighted assets from year 1998 to 2014



Source: Malaysia: Financial Sector Stability Assessment by IMF, February15

The International Monetary Fund (IMF) has conducted an in-depth analysis of Malaysia Financial sector, where the three macroeconomic scenarios are used to test the impact of four different risks on the banking sector's health over a five-year period. These are the results of the said analysis:

a) Malaysia's banks are found to be resilient to a range of economic and market shocks, regardless of the three macroeconomic scenarios.
b) Malaysia has a well-capitalised banking system, where its' regulatory capital to risk-weighted assets is at 15% in year 2014 versus BNM's minimum requirement of 8%.
c) Malaysia's regulatory and supervisory regime for banks, insurance firms, securities and market infrastructure are well developed and exhibited a high degree of compliance with international standards.

The percent threshold of regulatory capital to risk weighted assets are varies in various countries as it was set by its respective national banking regulator. The mixed result of the impact of capital on bank profitability has triggered an interesting question, which was the possible effect of capital adequacy towards bank profitability in Malaysia. Bank in Malaysia basically have relatively small capital compared to other developed countries. In line of the aggressive competition for market share in international boundaries, capital adequacy ratio is defined as the indicator that harmonized the compliance across the country.

2.2. Empirical Review

Profitability

There are extensive studies that examined factors that influencing the bank profitability all around the world. And in fact ,financial performance ratio has been used as the dependent variables(capital adequacy, liquidity, profitability, loan preferences) that regressed with the structure variables (bank assets, net income , administrative expenses and time).And they found that profitability and loan preferences have increased its size, however the capital adequacy has decreased the size, or in other words, large banks could have smaller capital adequacy ratio and profit. .Some scholar annotated that bank size, liquidity, and profitability are the main determinants of the bank capital ratio in Taiwan.

According to Aggarwal and Jacques (2001), they found that in order to have strong form of regulatory performance, financial institution not only need to increase its capital ratio and with a condition that there is no increased in credit risk. In order to ensure there is no increased of the capital, a prompt corrective action needs to be executed. With the adjustment in capitalization, banks could give a significant impact on the capital ratio. Ahmad in year 2008 has reported a new outcome on the factors of bank capital ratios in Malaysia. According to him, he found that there is inconsistency between Malaysia financial market and others developed countries, where result show that bank capital ratio are tied closely with the risk taking behaviour but not the elements of profitability.

According to Mathuva (2009), he cited that there is a positive interdependence between profitability and core capital ratio as well as tier one risk based capital ratio. Return on assets (ROA) and return on equity (ROE) are regards as the critical proxies in measured the bank profitability. He commended that there should be a negative relationship between the equity capital ratio as well as equity. And couple of empirical studies were conducted to examine the extent of the ability for a bank to make profit from the amount invested, but contrasting of the outcome seems to be found.

Return on assets

According to Athanasoglou et al.(2008) and Wanzenried (2001), both of the studies are to test the bank specific and macroeconomics effects on bank profitability in Malaysia. In both of their dissertation, return on assets has been selected to measure the bank profitability. Return on assets not only primarily regards as a one of the efficiency financial soundness indicator but it has been well accepted as a basis in establishing internal ranking in worldwide. Therefore, return on assets and return on equity are used as the proxy for the profitability. In general banks actually mainly relied on the retained earnings, and see how the available resources increased the bank capital. In this scenario, profitability and capital adequacy ratio are mostly positively correlated, in order to get a higher return; a bank might increase its asset risk. (Gropp and Heider, 2007).This ratio is calculated by dividing net income (net profit after tax) on total assets, as follows:

Return on assets (ROA) = (Net income/ Total Assets) × 100.

Devinaga Rasiah (2010) claimed that changes in price level might not influence the elements of profitability. And the most appropriate ways of measured the bank profitability is to make use of time series analysis. There is a significant positive relationship between the profitability of banks and all types of efficiency. This is because the real value of profits cannot be affected by the varying inflation rates. And according to him, return on assets (ROA) and return on equity (ROE) are the most useful measurement to determine the profitability. For instance, ROA outlined that how effective and efficient for the management of banks to convert the assets into earnings. The higher the ratio indicated the higher performance of the banks. The internal determinants of banks profitability are normally included the factors that are within the control of commercial banks. For instance, the element of profitability could relatively affected the revenue and the cost of the banks, as the number of branches of the particular bank, location, and sizes of the bank could relate to the bank's balance sheet and income statement one another. (Sudin Haron, 2004).

Return on Equity

In this study, profitability is used as the proxy for return on equity. In general, banks have depended on the retain earning to increase the capital. According to Gropp and Haider (2007), they found that more and more profitable bank tends to reserve more capital relative to assets. ROE measures the management efficiency in utilizing the bank funds in achieving a profit. For example, by dividing net income (net profit after tax) on the owed capital, as follows:

Return on equity (ROE) = (Net income/ Capital) × 100.

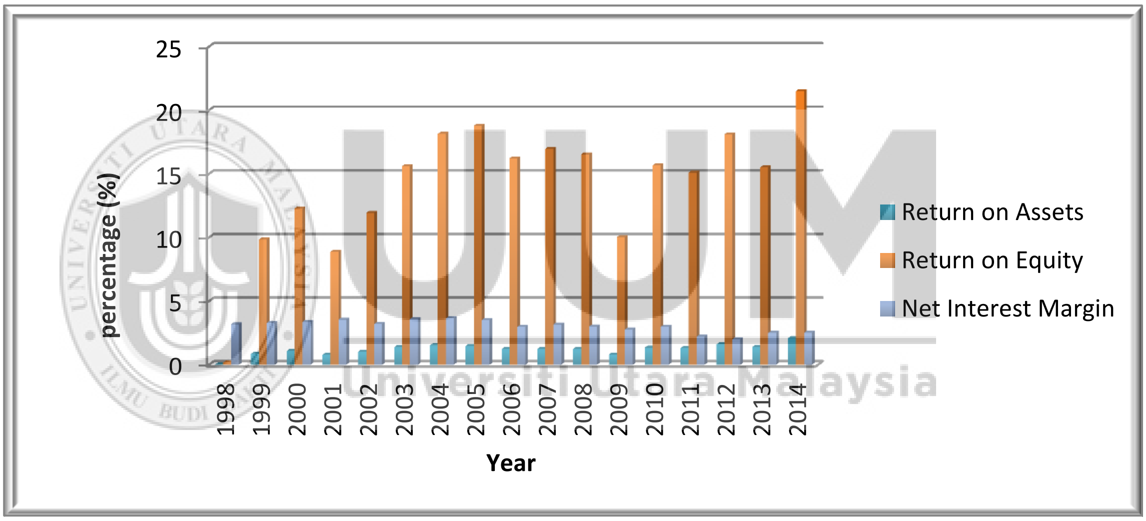
Despite the trend in the industry towards geographic diversification was great, but the use of financial engineering techniques to manage the risk even larger. According to Navapan and tripe (2003), there is a negative connection between the capital adequacy and profitability. However some scholars are also argued that there is a negative relationship between operating expense and profitability (Bourke, 1989). For instances, reduce in expense might improve the efficiency and raised the profitability of a financial institution.

Net interest margin

Net interest margin is another form of instrument to measure the cost and efficiency of financial intermediation, which might determine by the bank management variables as well as environmental variables that mostly outside management's boundary. According to Kolapo, Ayeni & Oke (2012), net interest margin that derived from the revenue accrued from loan seems play an active role on bank financial performance, and compliance risk within a financial institution.According to Angbazo (1997), adequate of net interest margin could generate adequate of income, as the components of liquidity of the net interest margin may giving us a rough idea on knowing the level of profitability of a financial institution.

While for Demirguc-Kunt and Huizinga (1999), they found that the loan, credit quality, size, proxies by total asset have a positive relationship with the bank profitability, where the net interest margin could creating a significant impact on the bank profitability both in developed and developing countries.Net interest margin is defined as the ratio of *net interest income to average earning assets*. It is a summary of bank net interest rate of return. The net interest margin has brought a significant effect to the bank profitability, however the effect of the market interest rate volatility and default risk on the margin are not well recognized. Apart to reflect the volume of asset and liabilities of a financial institution, net interest margin is used to cover the cost of intermediation of the bank.

Figure 2.2: Return on Assets, Return on Equity and Net Interest Margin



Source: Malaysia: Financial Soundness Indicator by IMF, February 15

2.3. Hypotheses Development

After identified the important variables and established the relationship among all the variables in the theoretical framework, this study was in position to test whether the relationships have been theorized. In order to obtain more reliable information on what kinds of relationship exist among the variables that operated in the problem statement, the multicollinearity, auto correlation, and heterodasticity tests have been conducted. And the results of those tests have offered some clues to the outcome of the dependent variable towards an independent variable.

The conceptual theory of a model that based on relational in nature has generally produced the hypothesis. The hypotheses could be expressed in the form of testable statement or defined as logically conjectured relationship between two or more variables somewhere along the lines. And the testable statement as stated below are called hypotheses development. By testing the hypotheses and confirming the conjectured relationship, it can gave us an overview on the level of regulatory effectiveness in Malaysia, and see how the compliance and profitability elements as the key determinants in influencing the level of regulatory performance.

To examine whether or not the conjectured relationship exist, the hypotheses have been set in the form of directional and non directional, where the terminology such as positive, negative, more than, less than, and like have been used. To postulate a relationship or difference between the variables, non- directional hypotheses is used. Non-directional hypotheses are formulated in this study because the relationship of the variables that used in this study has never been explored thus there is no basis to indicate the direction. To test the conjecture relationship between the compliance elements and profitability against the level of regulatory effectiveness, in which the following hypotheses have been structured.

H01: High level of compliance awareness & training and internal audit will increase the bank profitability and regulatory effectiveness.
H02: Bank with clear, simple and unambiguous regulation are positive correlated to the bank and regulatory performance.
H03: Bank with good compliance culture will result high level of regulatory effectiveness and bank profitability.
H04: Bank with robust system and process will enhance high level of regulatory effectiveness.
H05: There are negative relationship between the non-compliance cost &hefty monetary penalties and profitability of a financial institution.

Before concluding the discussion of this hypothesis, hypotheses generation has been reiterated through deduction, where five null hypotheses have been developed for the research model. However, due to insufficient data in the market and the time limitation, these five null hypotheses have been sorted into two key hypotheses.

Hypotheses One:
Null hypothesis: There are no correlation between the element of compliance elements (compliance awareness, unambiguous regulation, compliance culture, robust system and process, and non-compliance cost and hefty monetary fine) and the regulatory effectiveness of a bank.

Alternative hypothesis: There are correlation between the compliance elements (compliance awareness, unambiguous regulation, compliance culture, robust system and process, and non-compliance cost and hefty monetary fine) and regulatory effectiveness of a bank.

The relationship between the compliance and regulatory effectiveness can be modelled as follows:

$H_0: B_2 = B_3 = 0$
Hα: H_0 is not true

Hypotheses Two:
Null hypothesis: There are no correlation between the element of profitability elements (ROA, ROE, and NIM) and the regulatory effectiveness (CA) of a bank.

Alternative hypothesis: There are correlation between the profitability elements (ROA, ROE, and NIM) and the regulatory effectiveness (CAR) of a bank.

The relationship between the profitability and regulatory effectiveness can be modelled as follows:

$H_0: B_2 = B_3 = 0$
Hα: H_0 is not true

CHAPTER THREE: DATA &METHODOLOGY

3.1. Data Source, unit analysis, data sampling, response rate

The detailed plan on how the data sources and sampling of data obtained and being selected will be further discuss in this chapter. Data collection explained the sources and databases that are used to collect the data for dependent variable, mediating variables, as well as the independent variables. Subsequently, data sampling has discussed about the available data for the Malaysia based financial institution where the Malaysia bank samples are being employed to examine the profitability and regulatory effectiveness.

Data Sources

There are several type of data have been collected in this research.For instance, IMF e-library data, where the financial soundness indicators (ROA, ROE, NIM, and CAR) have been retrieved. And the key determinants of this study consist of compliance (CA, UR,CC,RS, NCC) and profitability elements (ROE, ROA,NIM) have derived and obtained from different sources. The data for compliance elements are collected from questionnaire. And for the element of profitability are collected from the IMF e-library database. And all these data sources are being used to examine the constructed hypotheses statements.

Unit Analysis

According to Hair, Babin, Black& Anderson (2010), the unit analysis could be individual, groups, industries, organizations or countries. The purpose of this study is to examine the compliance and profitability elements against the regulatory effectiveness of a financial institution, in which a group of people in various sectors have been selected to answer the questionnaire

Data Sampling

According to Moore (2009), sample is refer to a portion of the population from what we obtained and collected and used it to draw conclusion about the whole. The population of this study is from group of respondent who work in various sector. And the stratified cluster sampling has been used in this study. Stratified sampling is used to divide the population into group based on the demographic factor. And these groups also called strata. While cluster sampling is a sampling techniques that used when "natural" grouping are evident in a statistical population. And in these techniques, total population need to be divided into groups in which samples of group are selected. (Pennstate,2013). And the reason to combine both type of sampling was to reduce the cost and limit the weakness from both methods. Stratified cluster sampling has combined the elements of stratification and clustering. A total of 150 questionnaires are distributed to the targeted respondents, only 100 of respondents willing to answer the questionnaire.

Response rate

A total of 150 questionnaires have been distributed to a group who work in difference sectors. Out of 150 distributed questionnaires, 100 set of questionnaire are returned, and 1 page was missing from one of the questionnaire, therefore only 99 samples have been selected, and yielding a response rate of 66%.

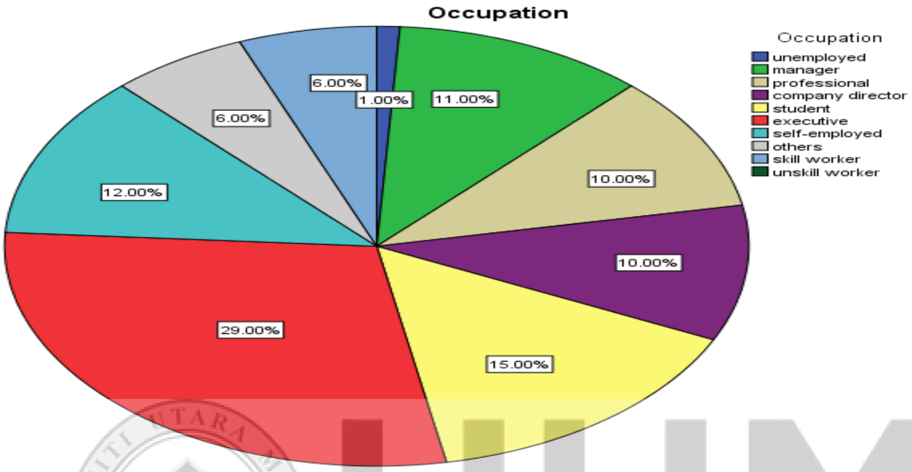


Figure 3.1: Respondent's occupation

Hair, et al. (2010) cited that a good sample size for statistical analysis is at least ten times more that the variables. For this study, there are five variables namely CA, UR, RS, CC, NCC (compliance elements) have been used to examine the relationship between the compliance elements and regulatory effectiveness of a financial institutions. And these five variable times ten is 50 respondents. Thus the numbers of response of 99 respondents were sufficiently large to make a generalization for the study. Besides, by select respondents that holding a difference occupation could provide an overview of the compliance level of Malaysia citizens, it is because difference individual that from difference background could perceive difference level of compliance knowledge or experience.

3.2 Research Methodology

A survey method was used, as it allows feedback from a larger subset of the community. And it is more feasible compared with other method. To measure the regulatory effectiveness level in Malaysia, knowledge will play a vital role, the rationale behind is that regulatory effectiveness cannot be form if people of the respective country does not have such knowledge. Therefore, in order to know the perceived level of an individual towards the compliance knowledge, some of the information that stated in the survey of the[2] "Bank Regulation and Supervision" has been used to customize the questionnaire.

This questionnaire has been separated in three sections. For the section one of the questionnaire, the questions have structured based on the demographic factor. Likert scale has been used to customise the questionnaire for section two. By using Likert scale approach, it enables us to see the distance between two points on the scale, and compute the means and the standard deviation between of the responses on the variables. In another words, the Likert scales is designed with statement of five-point scale with the following anchors, in which to examine how strongly that respondents agree or disagree with a subject.

[2] "Bank Regulation and Supervision" is a survey that covers about 630 banking regulatory and supervision items, and it has provides an unique and valuable set of information on a wide range of issues related to banking regulation and supervision. In line of the implementation of the new Basel rules, a half of the questions in this survey have included the macro-prudential regulation and consumer protection. And about 58 percent of the survey consists of binary questions that could be answered "Yes" or "No". About five percent are categorical questions, wherein respondents are required to choose one or more options from a set of alternatives. The remaining 37 percent are quantitative questions, which include various questions about ratios, currency amounts, and other numerical indicators about the jurisdictions.

Strongly Disagree	Disagree	Neither Agree Nor Disagree	AgreE	Strongly Agree
1	2	3	4	5

The responses over a number of items enable us to tap a concept. For instances, using the five-point scale with the above anchors, it can measured the level of understanding towards the compliance related matters. In view of the questionnaire were structured in the form of likert scale (Section One) and dichotomous scale (Section Two), therefore ordinal logistic regression has been used in this study. By adopt the ordinal regression; it enables us to see the interaction between independent variables (all the compliance elements) and dependent variable.(Regulatory Effectiveness).It is because ordinal regression would able to help the researcher to predict an ordinal dependent variable given one or more independent variables. Moreover, ordinal regressions are also considered as generalisation of multiple linear as well as binomial logistic regressions. By carried out the ordinal regression, it enables to determine which independent variables actually (in compliance elements) have a statistically effect on the dependent variables (regulatory effectiveness).

Besides, to elicit the Yes and No answer for the section two, the dichotomous scale has been used. And the response that received from section 3 has been used as a benchmark to compare the response of section 1 and 2. Due to time limitation;

information in the survey of [3]"Compliance Matters" has been be included in this research paper. Compliance matters survey is a descriptive study which are undertook by the PwC and IBBM to identify and described the characteristics of variables of interest in a situation, and analyse the variable based on qualitative and quantitative data both from primary and secondary sources. By looking at these descriptive studies, it could enable us to understand the characteristic of an organization that follow certain common compliance practice. For instance, difference compliance perception could result different level of regulatory effectiveness.

Apart from that, in order to find out the relationship between the regulatory effectiveness and the profitability elements, the secondary sources of data from IMF have been retrieved. For instances, the regulatory capital to risk weighted assets has been used as the dependent variable or benchmark to measure the regulatory effectiveness of the Malaysia banking institution. On top of that, net interest margins (NIM), return on assets (ROA) and return on equity (ROE) that comprise in the financial soundness indicator have been examined. By synthesis of the two sources of data have allowed us to have a clearer picture of current compliance management practice that perceived by the individual in its organization, and how compliance element giving an impact to the profitability of the financial institution. To answer the study of the research question, hypotheses testing have been developed and engaged

[3] Compliance matters is the first Malaysia based banking institution online survey. This survey report attempts to draw the insight on the issues and experience encountered by the head of compliance and the relevant senior management in achieving and sustaining its compliance culture within the organization.Compliance Matters is a judgement sampling survey which provides us "specialized informed input" on the topic area that we investigate. For example, in that semi-structure questionnaire, it comprises the precious feedback from a group of heads of compliance and relevant senior management.

in this study. Through this approach, it enables us to understand the conjecture relationship between the independent variables (compliance elements), moderating variable (profitability elements), and dependent variable (regulatory effectiveness). Hypotheses testing not only offered an enhance understanding to all the variables, however it enable to see the cause-and effect relationship. In view of the variables are ordinal, thus it is important for us to rank the value, as to see the real distance between categories is really unknown in actual fact. The response could be graded on scales from strongly disagree to strongly agree. And all these ordinal categories variables are used as the predictors for the study.

SPSS ordinal regression procedure was pretty much different between the ordinal regression and normal regression. And in view the questionnaire were created to see the relationship between the regulatory effectiveness and the compliance elements, therefore the first step to prepare the data is to conduct the data coding. The reason behind to perform the data coding is to transcribe the data that have obtained from the questionnaire, in the scale form and then keyed in as the data. To see the relation between the demographic factor and the predictor variable, pie charts (Appendices) have been used and presented to explain the background of each respondent.

To explain the perceived level of each respondent in section one and section two towards the compliance elements, data coding has been performed. For instance, ranges of 1 to 5 have been used as a benchmark to compare the perceived level of each individual. And the coding based on 1 and 2 have been used for section two, in which the dichotomous scale has been used in this section. When the response from section one, two and three have been coded, all these data need to be entered into SPSS .Once the data are keyed in, the next step is to edit the data as there might be blank response. The outcome from the SPSS could enable us to models the probability of achieving each level of variables, where three difference types of variables need to be input in the research model. And these three identified variables are stated below:

a) The dependent variable (Regulatory effectiveness) also known as the criterion variable. The dependent variable is the variable of primary interest to most of the researcher. Through the analysis of the dependent variable, it enables us to find the answer or solution.

b) Independent variables (compliance elements) also known as the predictor variable. With each unit of increase in the independent variable, there is an increase or decrease in the dependent variable, either in positive or negative way. In other words, the variance of the dependent variable has been accounted by the variance of the independent variable.

c) Moderating variable (profitability elements) is the variables that have a strong contingent effect on the independent variable-dependent variable relationship. The presence of a third variable (moderating variable) modifies the original relationship between the independent variable and the dependent variable.

The SPSS ordinal regression procedure, PLUM (polytomous Universal Model) has been adopted in this study, as these models not only help us in specify the five link function but the scaling parameter. PLUM is an extension of the general linear model to ordinal categorical data. The procedure can be used to fit the heterocesdasticity probit and logit model. To ensure the stability of the research model, Pearson and Deviance goodness-of-fit are used as another tool of measurement for the study. Both of the goodness-of-fit statistics have been used for models that have reasonably large expected values in each cell. The more categorical predictor is formed in the model;

the small expected value could be generated. If the observed and expected cell counts are similar, which means a well fit model could formed. Besides, a well fit model could also be created when the value of each statistic is small, but the observed significance level must relatively large. And the null hypothesis would be rejected if the observed significance level for the goodness of-fit statistics was relatively small. The Basel Capital Accord is an international standard for the calculation of capital adequacy ratio. To affect the soundness and safety, this accord has incorporated with various variables to produce impactful framework.

These variables included the capital adequacy ratio, return on equity, return on assets, and net interest margin. In order to fit into the analysis as all these variable are interrelated with each other, the theoretical framework have been modified and expressed in the following manner.

Y_1= F (AA, UR, CC, RS, NCP) -- (1)
Y_2 = F (ROE, ROA, NIM) -- (2)

Where;
Y_1= Compliance elements

CA = Compliance awareness and internal audit
UR= Unambiguous regulation
CC= Compliance Culture
RS = Robust system
NCC = Non- compliance cost and hefty monetary fine

Y_2 = Profitability

ROE = Return on Equity
ROA = Return on Asset
NIM = Net Interest Margin

The theoretical expectation and behaviour of the parameter has regarded as the basis of the theoretical reasoning. In equation one (compliance elements), it explained on how the compliance elements (compliance awareness, and internal audit, unambiguous regulation, compliance culture, robust system, non-compliance cost and hefty monetary fine) resulted a significant impact to the regulatory performance. While for the equation two (Profitability), it explained that the return on equity, return on asset, and net profit margin should have a positive effect on the regulatory effectiveness of the financial institution. For equation one and two, compliance and profitability elements have been used as the benchmark to determine the regulatory performance, in which the component for NIM, ROA, ROE, CAR, CA,UR,CC,RS, and NCC are selected and used as the mediating and explanatory variables for the model. To determine the effect of the independent variables against the dependent variable, SPSS of multiple regressions has been adopted.

3.3. Theoretical Framework

After conducted the questionnaire, completed the literature review, and defined the problem statement, it is importance for us to develop a theoretical framework. By having the theoretical framework, it enables us to lay the foundation of the research, a good theoretical framework would enable to represent the belief on how certain phenomena (or variables or concept) are related to each other and explanation on why these variables are associated with each other. And the following research models have been structured in this study.(Figure 3.2)

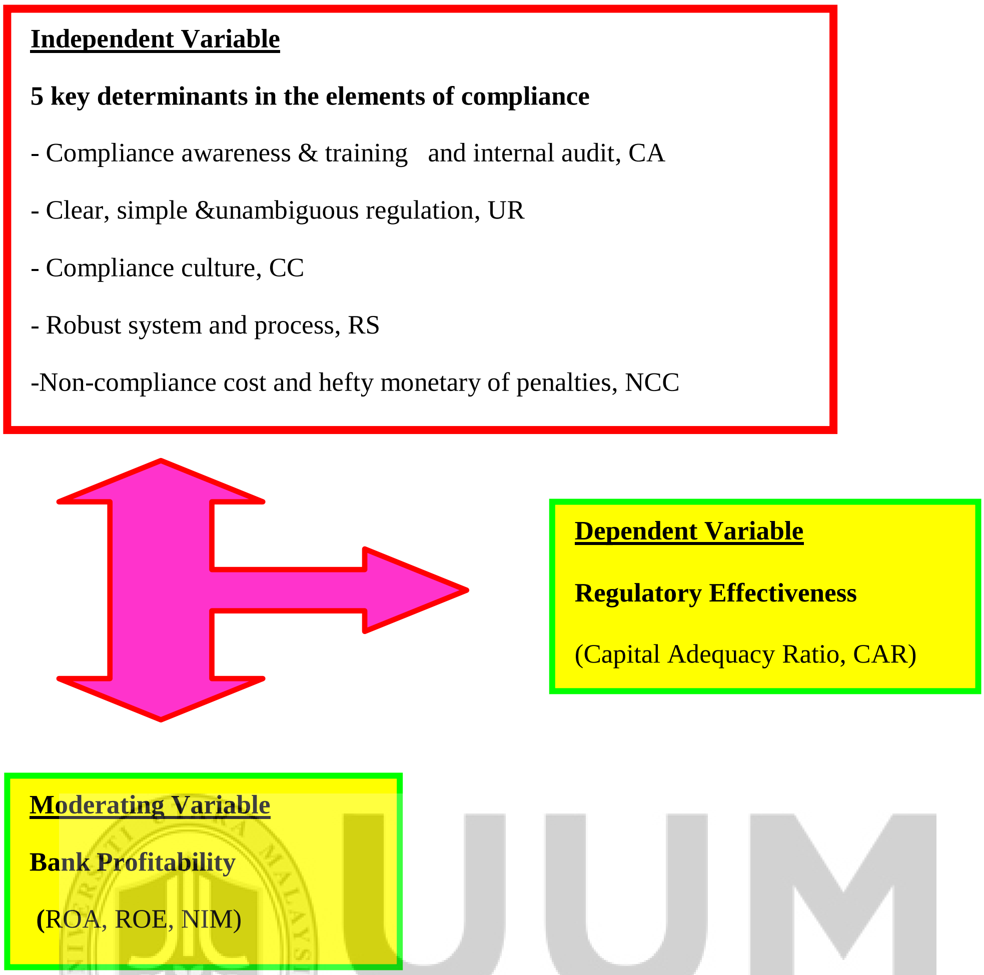


Figure 3.2: Research model

The foundations of this research are built and based on governance and performance driven, specifically compliance elements and profitability of the financial institution. The rationale behind is to see and disclose the relationship either in a statistical or objective method. Compliance can be disclosed from 5 perspectives: Compliance awareness, unambiguous regulation, compliance culture, robust system and process, non-compliance cost, and hefty monetary fine, which all these elements become the first level of cornerstone in this model.And profitability of financial institution can be represented into NIM, ROA, ROE, and CA. And all these information were useful for investor, regulator, bank employees, and managers. Or in other words, the entire research was strictly rests on the basis of the theoretical framework.

Measurement of Variables

i. Independent variables

The study measured the compliance elements as the independent variables, using the component of CA,UR,CC,RS, and NCC. According to Olaniyan and Lucas in the year 2008, they have conducted a research on the staff training and development, in which the study reveal that staff training and awareness have a positive relationship with the efficiency and effectiveness of a firm. In view of advancement in the modern world, training is not only necessary but in fact it is a requirement for an individual to have a systematic development of knowledge, skills, and attitude required by an employee to perform the assigned task. A greater equality, inclusion, and fairness in workplace could be created via diverse training. In addition, the need of the internal audit during litigation is relatively importance, as the audit procedure, the valid, and verifiable of audit report could reflect the true position affairs of an organization. In order to enhance the regulatory effectiveness of financial institutions, the element of internal audit is used as the tool to ascertain the adoption and adherence to the regulatory processes, policies, plans and guideline. (Fargason, 1993. There are two components for the effectiveness of market discipline: ability for the investor to assess the financial health of the bank based on disclosure (monitoring) and changes in managerial behaviour that influenced the regulatory performance and poor regulation and supervision may occurred.

In order to enhance the regulatory effectiveness and protect the creditors' interest as well as the health of the economy, BNM has imposed several regulation and proposed guideline to ensure that all the citizens are abided by the predetermined standard and procedure. In line with the directive, Santos(2000) cited that capital regulation is the most prominent regulation that associated with bank soundness, and risk taking incentives. Under the capital regulation, banks are required to increase the capital in relation to the increased of the risk exposed. Unambiguous regulation may relatively reduce the moral hazard; it is because the occurrence of moral hazard is mainly due to complexity, stringent and ambiguous of regulations. There are a lot of definition on moral hazard behaviour, and most of them are associated with the unethical behaviour, fraud ,and hidden action and all these problem may increased the risk taking and high failure rate in thrift institutions. (Kane , 1997).

According to Kane,(1997), she cited that improve in the robust system could enhance the regulatory performance. Information system is used to measure and report the regulatory effectiveness. Governor of the central bank of Malaysia, Dr. Zeti Akhtar Aziz (2006), believed that building a robust Islamic financial system could enhance the regulatory performance of a financial institution. For instance, a well developed and innovative of technology was particularly important to enhance the potential to manage the risk. According to Kurt (2015), choosing appropriate software able to improve the capability of the robust reporting. A sophisticate of robust system not only enable us to saves time and money, but it could also provide enough flexibility for us to accommodate new area of control in compliance.

Literature always classified non-compliance cost or regulatory cost into three types, known as direct external, direct internal and indirect regulatory costs. And scholar have defined direct external regulatory costs as the costs of running the regulatory or costs for a firm to sustain in the marketplace by complying with predefined regulations. Direct Internal regulatory costs are in fact the costs that covered the contagion effects which generally derived from either personnel or system. For instance, cost that incurred from the perverse effect, or cost that associated for the regulators to perform internal checks on compliance. Besides, it could also elucidate as the costs that reinvented in the hedging risk strategies or products and services in relation to comply with regulations.. Indirect regulatory cost type includes costs that incurred from the market inefficiency which has reduced competition or increased of moral hazard. Barth et al. (2004) cited that there are relationships between regulatory effectiveness and bank performance in which the disclosure of incentives for market control might have a greater impact on bank stability and profitability.

Hypotheses 1:

Null hypothesis: There are no correlation between the element of compliance elements (compliance awareness, unambiguous regulation, compliance culture, robust system and process, and non-compliance cost and hefty monetary fine) and the regulatory effectiveness of a bank.

Alternative hypothesis: There are correlation between the compliance elements (compliance awareness, unambiguous regulation, compliance culture, robust system and process, and non-compliance cost and hefty monetary fine) and regulatory effectiveness of a bank.

The relationship between the compliance and regulatory effectiveness can be model as follows:

$H_0: B_2 = B_3 = 0$

$H\alpha$: H_0 is not true

ii. Moderating Variables

The components of ROA, ROE, and NIM are used as the proxies for profitability. Profitability expected to have the positive relationship with the capital adequacy ratio because a bank might need to increase the asset risk in order to get higher return in most of the case. Barth et al. (2003) explored that the influence of regulation performance by using the financial soundness indicators. These are three indicators that used in the research, such as return on assets, return on equity, net interest margin. Moderating variable (Profitability) is a variable that modifies the original relationship between an independent variables (Compliance) and dependent variable (regulatory effectiveness). Previous researchers have been inclusive in the relationship between the profitability and regulatory effectiveness. Studies show that bank performance are largely used the ROA, ROE, NIM as the common measure (Ezra, 2013).By looking at the component of return on assets, it enabled us to see the ability for a bank to generate the profit from bank asset, as this probably is the most single ratio in compared the efficiency and operating performance of a bank. (Tan et al. 2012).

However, ROE is not the best measure of profitability.Return on equity is the return to shareholder on the equity, or in other words ROE is used to reflect the capability of a bank in utilizing it equity to generate profit. (Tan et al.2012). Among the three financial indicators, Thomas (1997) believed that ROA is the best benchmark to measure the profitability elements, as ROA was regards as one of the financial indicator that could not be distorted by high equity multiplier. In order to obtain the value of net interest margins, firstly is to see the difference of the interest income less the interest expense divided by the total loan and advances. Okoth et al.(2013) cited that NIM is the cost of bank intermediation services and the efficiency of the bank. The higher the net interest margins, the higher the profit earned by the bank, then more stable the financial institution. According to the empirical result, capital is the most important element to explain the financial position and the credit risk of a bank. Capital has a positive and significant impact on profitability of a bank.

Hypothesis 2:
Null hypothesis: There are no correlation between the element of profitability elements (ROA, ROE, and NIM) and the regulatory effectiveness (CAR) of a bank.

Alternative hypothesis: There are correlation between the profitability elements (ROA, ROE, and NIM) and the regulatory effectiveness (CAR) of a bank.

The relationship between the compliance and regulatory effectiveness was modelled as follows:
$H_o: B_2 = B_3 = 0$
$H\alpha$: H_o is not true

iii. Dependent Variable

According to Wikipedia, regulatory capital or capital adequacy ratio is referred to the amount of capital of a bank has to hold by the regulator. Or in other words, it has regarded as a form of capital that must held as the percentage of risk weighted assets, in which by looking at this elements it could ensure that financial institution not to take on excess leverage or ended up with insolvent. And the key part of bank regulation is to ensure the financial institutions are prudently managed, and to make sure the continuation of a sound and efficient financial market. As consequence, capital adequacy is used as the proxies for the regulatory effectiveness. To see the relationship between the regulatory effectiveness and profitability elements, the historical data of financial soundness indicators, such as CAR, ROE, ROA and NIM for Malaysia from the year 1998 to 2014 have been retrieved.

Table 3.1: Summary of the three types of variable and it's expected sign.

No	Variables	Definition	Expected sign
1	Regulatory Effectiveness (DV)	Regulatory Capital to Risk-Weighted Assets	+
2	Profitability (MV)	Return on assets Return on equity Net interest margin	+ + -
3	Compliance elements (IV)	compliance awareness & internal audit unambiguous regulation compliance culture robust system & process Non- compliance cost and hefty monetary fine	+ + + + -

3.5. Model Testing

Heteroscedasticity is used to examine whether there is any difference between the residual variance of the observation period and another period of observation(studenmund,2011,p.98). There are many diagnostic method of heteroscedasticity model, such as graphic method, Goldfield-Quandt method, Glejser method and so on. Heteroscedasticity doesn't diagonal the estimate coefficient but it could bias against the ordinary least square estimate. To summarize the shortcut of the diagnosis, and correction of the heteroscedasticity model, the Glejser test has been performed for the research model. By running a regression with the squared residuals as the dependent variable, it enables us to detect of existence of heteroscedasticity.

Apart from that, Chi squared test and other appropriate statistical test have also being conducted. If the R squared is larger than the critical Chi square value, it is most likely to face the problem of heteroscedasticity. Heteroscedsticity concerned if the variance of the residual are homogenus or not. The Graphic detection is used and presented in Figure 3.3. If result shown that if the chi square value is larger than the critical value, which means null hypotheses need to be rejected. In other words, the problem of heteroscedasticity is occurred in the model, in which the further remedies need to be conduct. In view of the non-constant variation between Y (capital adequacy) over the value of X (NIM, ROA,ROE), the scatter plot reveals a statistical condition referred to as heteroscedasticity. Figure 3.3 indicate a discernible pattern which reflect on how the regulatory effectiveness (DV), and the profitability elements

(IV) are closely related. By referred to the below scatter plot, it clearly indicate that the element of heterocesdasticity was exist in the research model, or in other words, null hypothesis need to be rejected in this study.

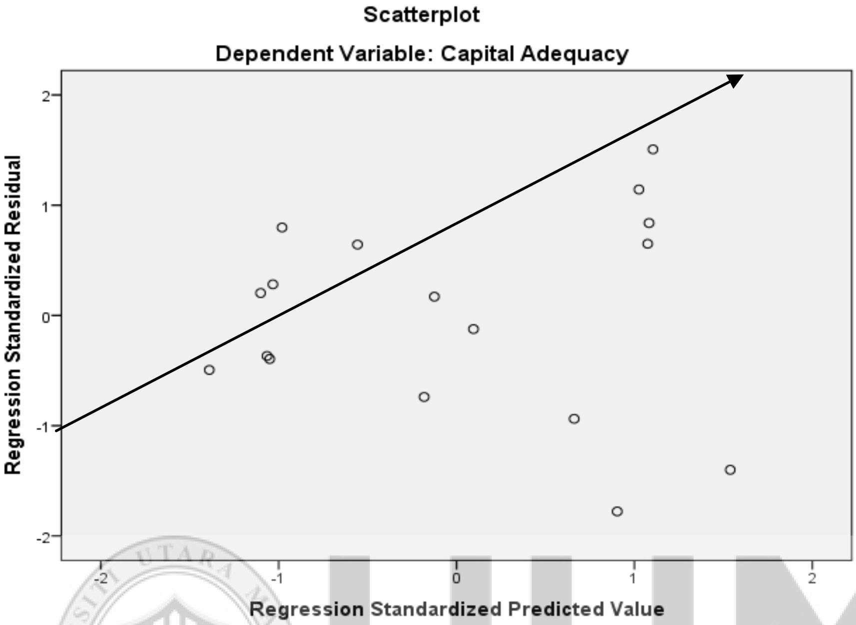


Figure 3.3: Scatter diagram with discernible pattern

Multicollinearity

Before presenting the regression analysis, the concept of multicollinearity test has been adopted. The Multicollinearity with SPSS of multiple regressions is used to examine and determine the effect of the independent variables towards the dependent variables. In view of this research model have more than one independent variable in the multiple regressions, therefore multicollinearity is used as the simplest and most obvious way to detect multicollinearity is to check the correlation matrix for the independent variables. In fact, Multicollinearity is referred to the high correlation among two or more independent variables. By looking at the variance inflation factor, it could enable us to trace whether the data suffers with the problem of multicollinearity. Normally, correlation value always fall within the range of -1 and +1, however it might fall outside the range. The value of covariance is strongly depended on the unit of one variable to another variable. Not only that, by looking at the value of covariance could enable us to see how close or far of two variables are being interrelated to each other. On top of that, correlation also use as one of tools to compare the similarities of the multiple assets that used difference unit scale.

According to Hair et al, 2010, if the value of tolerance less than 0.10, and the VIF value more than 10 in collinearity coefficient .Therefore, it can assumed that there is no serious multicollinearity problem between the regulatory effectiveness (DV) and the profitability elements (MV).Table 3.2 exhibit the tolerance value versus multicollinearty. In view of the tolerance value for the ROA (0.031) and ROE (0.036) are less than 0.1, which means the multicollinearity are exist in the model. Whilst for the component of NIM, the value is more than 0.10; it clearly shown that the element of multicollinearity is not exist in the model. Thus, by looking at the outcome in table 3.2, it clearly shown that there are correlation between the elements of ROE, ROA against CAR. Or in another saying, there are significant relationship between the profitability elements and regulatory effectiveness in Malaysia banking sector, where the null hypothesis has been rejected.

Table 3.2: Tolerance value Vs Multicollinearity

Independent Variable	Tolerance	Result
ROA	0.031	Multicollinearity exist
ROE	0.036	Multicollinearity exist
NIM	0.467	Multicollinearity not exist

Table 3.3 exhibit the variance inflation factor, in which the multicollinearity issues has been tested and implied in the model According to Gujarati and Porter (2009), they believed that the rule of thumb to detect the co-linearity issue especially when the VIF value is more than 10.0. Statistical result highlighted that ROA and ROE are taken place of serial collinearity problem with VIF value of 32.331and 27.429, which means the multicollinearity is exists in the model. Based on the VIF approach, among these three profitability elements only ROA and ROE have showing a significant relationship, in which the null hypotheses would be rejected.

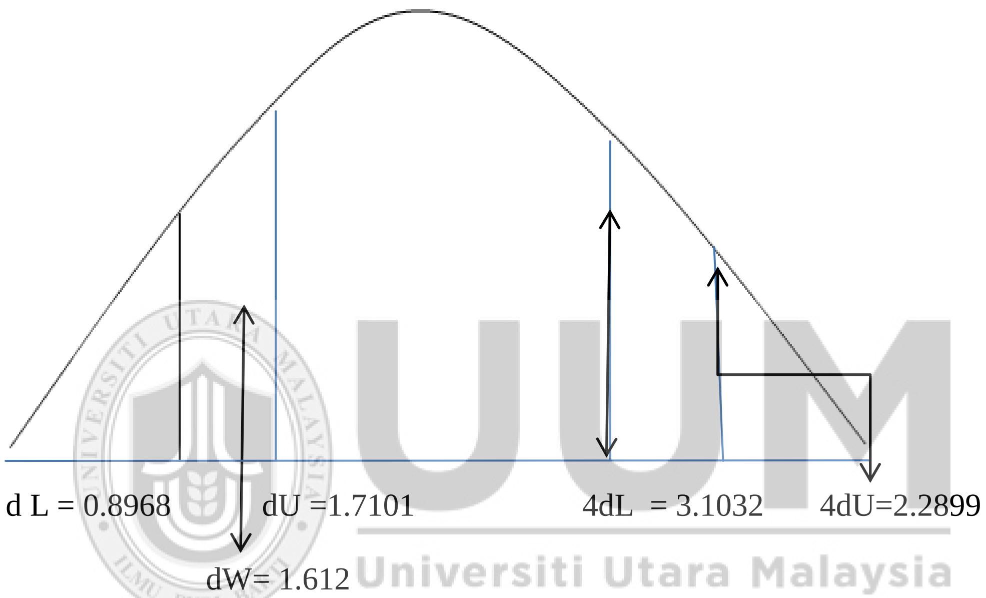
Although multicollinearity issue is not exist in the research model, however, the null hypothesis for the said elements still being rejected due to the following reasons. For instances, changes in net interest margin may caused the business to entail the maturity transformation, in which the financial institution need to cater long interest rate of assets to match against the short term liabilities, as the long term assets could yielding a higher return than the intermediation cost. Besides, changes in interest margin could also either weaken or strengthen the economic growth, as high interest rate will cause the financial institution have a relative low level of forbearance, as the level of risk may influenced by the credit standing on the economy.

Table 3.3: VIF Vs Multicollinearity

Independent Variable	VIF	Result
ROA	32.331	Multicollinearity exist
ROE	27.429	Multicollinearity exist
NIM	2.142	Multicollinearity not exist

AUTO CORRELATION

Assume 0.05%
K=3 (ROE, ROA, NIM)
N=17 (For the period of 1998 to 2014)
DW=1.612
dL=0.8968
dU=1.7101
0 < d < dL = Ho would be rejected, as there is no autocorrelation
dL ≤ d ≤ du = The test is inconclusive
du ≤ d ≤ (4-du) = Ho would be accepted, as there is positive correlation



Autocorrelation is also called as lagged correlation, in which the correlation of a time series generally derives from its own past and future value. The Durbin –Watson statistic is used to test the serial correlation among the residual of the model. The value of Durbin-Watson is range from 0 to 4. If the Durbin Watson value is approximately 2, which means the residual are uncorrelated. However, if the value is close to 0, it means there is a strong positive correlation; while for the value of 4, it is indicate that there is a strong negative correlation.

To examine the existence of auto correlation, Durbin Watson is used for the study. Based on above graph dL = 0.8968, dU = 1.7101, 4-dL = 3.1032 dan 4-dU = 2.2899 dan DW = 1.612 are indicate in the output of SPSS. In view of the DW is in the middle position of dL dan du (dL<DW<du), therefore the test is inconclusive. And the reason that causes the test is generally inconclusive as due to smaller sample sizes are used. As whole, sample sizes of at least 50 are preferred to be use in order to get the reliability result. As such null hypotheses 2 has been reject as the Durbin –Watson value is equal to 1.612. As consequence, the alternative hypotheses have been accepted, as there are correlation between the profitability elements (ROA, ROE, and NIM) and the regulatory effectiveness (CA) of a bank.

CHAPTER FOUR: EMPIRICAL RESULT AND DISCUSSION

4.1 Sample Description

In order to provide better understanding for the data, an in depth analysis of learning the descriptive statistic is used for the research. For instance, first to discuss the insignificant results of the regression and followed by the significant result. By then, based on the result obtained, hypotheses regarding to the stability of relationship was drawn.In order to measure of central tendency and provides great deals of basic information about the data; first is to transform all the demographic factors in the form of pie charts. (Appendices).

Analyses of the data indicated of the 99 respondents, about 64% are women, and 36% are men. Most of them are over 30 years of age, and worked in market for more than 10 years either in financial institution, or non financial institutions. And majority of them are held in diploma or degree and above. Respondents were feedback their personal point of view on compliance related matters, and their understanding about compliance in their respective workplace, and examined whether the hypotheses and theory are valid or not. The hypotheses thereafter has been tested through appropriate statistical analyse such as multicollinearity, auto correlation and heteroscedasticity test.

Hypotheses 1: There are correlation between the element of compliance elements and the regulatory effectiveness of a bank.

Hypotheses 2: There are correlation between the element of profitability elements and the regulatory effectiveness of a bank.

4.2. Ordinal logistic Regression

There are several tables which thrilling of numeric output that give forth to the study. For instances, by looking at the case processing summary, it would enable us to see the relationship between the independent variable, dependent variable, and mediating variable. In order to see the effects of each explanatory variable, and determine in what extend the model can improved the ability to predict the outcome, and comparison between variables were conducted. On top of that, in order to see whether it has significantly improved the fit of the data, comparison between the final model against the baseline was executed too .For instance, the -2 log-likelihood values for the baseline and final model would initiate via SPSS, which chi- square test has been performed to test the difference between the 2- log likelihood for the two models.

a) Model – represent the parameters of the model
b) Intercept Only – an importance element to assure the model would not affect any of the predictor variable.
c) Final - include the predictor variables in the research model (upon the iterative process), to maximize the log likelihood of the outcome. For instance, by including the predictor variable and maximizing the log likelihood of the outcome of the data set, the "Final" model need to improve on the "Intercept only" model. Thus, two differences value could generate in the model.
d) -2 Log Likelihood –used this element to test the predictor regression coefficient, and ensure the values of the model are simultaneously zero, in which the -2 log likelihood of the null model (102.935, 104.557) and fitted "Final" model(64.761, 67.909) are formed.
e) Chi – square – used the likelihood ratio (LR) to tests the research model. And to ascertain at least one of the predictor's regression coefficients, is not equal to zero. The Likelihood Ratio (LR) could be calculated by -2 log likelihood (null model) minus -2 log likelihood (fitted/ Final) model. (38.174, 36.648).
f) Degree of Freedom (Df) –used to test the LR Chi- square
g) Sig – in order to getting an as extreme as LR statistic under the null hypothesis, by assumed that there is no effect of the predictor variable. Null Hypothesis of the chi-square statistic test is (38.174, 36.648).
h) N –number of observations that adapted the in the first column. For instance, all the independent variables (compliance awareness, unambiguous regulation, compliance culture, robust system, non-compliance cost and hefty monetary penalties.)
i) Marginal percentage -represent the proportional of the valid observations

j) Valid – number of observations in the data set. (99 samples, as one sample set of questionnaire were missing).
k) Total - This indicates the total number of the observation

According to model fit in ordinal regression analysis, if the significant chi-square statistic ($p < 0.0005$), it would indicates that the Final model catered a significant improvement over the baseline intercept –only model. By reason of both of the chi-square statistic(for Questionnaire Section One and section two) shown that the significant value were 0.033 & 0.009, which means both of the final model did not gave a significant value and prediction to the marginal probabilities for the outcome categories. The table in the output is the goodness- of – fit table, as this output has been generated from Pearson and Deviance's chi-square statistic.Goodness of fit is a typical measurement that summarize the discrepancy between observed values and the values expected under a model.These statistic are intended to investigate the consistency between the observe data against the fitted model, as this data able to describe how well it fits a set of observation. In view of more independent variables have been constructed in the research model; thus a relatively small expected value are obtained. Let assume, if the research model fits well with the independent variables, and the observed and expected cell counts are similar, it would provide a relatively large p-value, even though the value of each statistic could be relatively small. The results of the "Goodness of Fits" have a relatively large p-value, P=0.236 & P=0.612 (For section 1 and section 2) and (0.600, 0.808) via Pearson and deviance approach. Thus, it is not dogmatic to conclude that this model is one of the best. The reason behind is different sample size might generate difference perspective of significant value. If the sample size is large, for instance, with a total sample of 15,000, then in such circumstance, it's not advisable for the researcher to use the Chi-square, yet if the sample size is small, roughly 100 samples, it advisable for them to use chi square as a tool of measurement. In fact, chi-square is designed to test the model with small number of categorical explanatory variable, as it sensitive to empty cells. Thereby, it is not advisable for anyone of us to use the Chi-square to examine the model with large number of categorical variable. In such scenario, pseudo R-square is used to examine the relationship between the independent variables as well as dependent variable, and see how the independent variables influence by the moderating variable.

The research models in this study have a relatively large of expected value; therefore both Pearson and Deviance are used as the tool of measurement. There are variety of approach to calculate R^2 for logistic regression, in fact there is no consensus on which is the best. According to Mittlbock and Schemper (1996), there are 12 different measurement in total , however there are only two methods that often reported in statistical software, one proposed by McFadden (1974), and another one is usually associated to Cox and Snell(1989) with the refined version. SPSS reports that Cox-snell measure has been used for binary logistic regression whereas multinomial and ordered logit was also adopted by McFadden’s. R-squared (the co-efficient of determination) summarized the dimension of variance in the outcome that could attribute by the explanatory variable in linear regression. With larger R^2 value, it indicated that the variation in the outcome could be explained up to a maximum of 1. It is impossible for the logistic and ordinal regression model to compute with the same R-square statistic in a linear regression, thus three approximations are computed. The nature of the outcome as well as the explanatory variable would strongly gives an impact to the result of “Good” R^2 value. Statistical test indicated the pseudo R^2 value of the model are Nagelkerke = 48.3% and 46.7%. With that result, it strongly prove that the dependent variable (Regulatory effectiveness) that used have a relatively large proportion of the variation between the dependent variable as well as independent variables (compliance elements).And the low R^2 indicate the model containing only poor predictor of the outcome.

The parameter estimate tables (Appendices) are the foundation of the output, which explained the specifically relationship between the explanatory variable and outcome. The thresholds coefficient would not elucidate individually. The model test contains the estimated coefficient for this model. The estimates labelled threshold is the intercept for the model. The estimates labelled Location is referred to the field that wish to test for the research model. And the entire coefficient would be the predictor variables for the model. The coefficient for the independent variables are coded 1= Yes, Coded 2 = No respectively. If the categorical variable with intercept displayed in one, less than the number of categories of variable, the coefficient is for the value of 1. Category 2 is the reference category and has a coefficient of 0. If the coefficient for the dependent variable (Regulatory Effectiveness) or independent variables (Compliance elements) were positive, as depicts as what actually expected from the data analysis. That means it's have a relatively strong relationship between the dependent variable and the independent variable, and vice versa.

The Wald statistic is the square ratio of the coefficient to its standard error. Based on the small observed significance level, the null hypothesis has been rejected as the value of the said test is zero, which clearly show that should there be any relationship between the level of regulatory effectiveness (DV) and compliance elements (IV).For any rating level that lower than zero, which means there are no direct or indirect relationship against the independent (compliance element) and dependent variable (Regulatory Effectiveness). But by referred to the outcome from all the analysis; the study have proved that there appear to be relationship between compliance elements and regulatory effectiveness, but just the matter strong, or poor relationship between two variables. For instance, the Wald value of the study is relatively more than one, therefore, should there be any relationship between the regulatory effectiveness elements, and compliance element.

By looking at the model fitting information for both section one and section two (Appendices), the row labelled null hypothesis contains –2 log-likelihood (Section one -104.567, 67.909, Section two -102.935, 64.761) are mainly used for the constrained model where the line in this model need to be assume similar. And the row that labelled general is actually used to test the model with separate lines. General model developed a sizeable betterment in fit from the null hypothesis model. The entry labelled Chi-Square is the difference between the two –2 log-likelihood values (Section 1- 36.648, Section 2 -38.174). If the lines are parallel, the observed significance level for the change should be large. The rationale behind is the general model doesn't reformed the fit very much. So, by looking at the outcome of the analysis, the null hypothesis has been rejected as the observed significant level for the change is relatively small.

Before proceeding to examine the coefficients, and by looking at the overall null hypothesis, which the location coefficients for all of the variables would be assumed as 0. For the variables that added to a model that contains only the intercept, it's most likely would triggered a change in 2 log-likelihood. And the change in this likelihood function would have a chi-square distribution even with small observed and predicted counts. The difference between the two log-likelihoods—the chi square—has an observed significance level of greater than 0.0005, which means the null hypothesis would be accepted in the model, and classified as a good predictor. From the observed significance levels in the model, would enable us to see that all the independent variables are related to ratings. By looking at the parameter estimates table (for both section 1 and section 2), the null hypothesis has been rejected , as all the variables in the model seems like closely correlated with each other, but it just the matter either positive or negative correlated.

1. Threshold – it's represents the response variable in the ordered logistic regression (regulatory effectiveness). The threshold are generally derived from the predictors (compliance awareness, unambiguous regulation, compliance culture, robust system, non- compliance cost and hefty monetary penalties)
2. Estimate - it's actually referred to the "logit" regression coefficient. And the typical translation for the ordered logit coefficient is that any changes in the predictors (five key determinants), would generally affect the response variable level, which every increase or decrease in the predictors (other variables held constant) would expected a change in the regression coefficients. The ordered logit estimates would not depend solely on the ancillary parameters, as ancillary parameter was used to differentiate the contiguous level of the response variable.
3. Standard Error - These are the standard error of the individual regression coefficient, which use in Wald test statistic, confidence interval and significant.
4. Wald - This is the Wald Chi- square that examines the null hypothesis that the estimate equal to zero, and divide the square of predictor's estimate by the standard error, and the test would be defined by the P- value of the model.
5. Degree of Freedom - to test whether the individual regression coefficient is equal to zero against the given variables.
6. Sig – these are the P-value of the coefficient or probability that within the model. For instance, let assume the dependent variable of the null hypothesis is zero against the given predictors variable.

7. 95% Confidence Interval - it would use for an individual of regression coefficient in the model. 95% of confidence interval would show us the "True" population of regression coefficient lies between the lower and upper limit of an interval. In addition, confidence interval is also equivalent to the z- test statistic. If the CI is equal to zero, which means I would fail to reject the null hypothesis. An Advantage of the CI was illustrative, which lies on the" True" parameter.

4.3. Multiple Regression Analysis

The regression result of ROA, ROE and NIM are shown as below:

Variable	Beta Coefficients	Std. Error	T statistic	Sig.
ROA	-7.527	3.136	-2.400	0.032
ROE	0.712	0.260	2.737	0.017
NIM	0.072	0.013	5.419	0.000***
R^2 = 0.799 Adjusted R^2 = 0.753 F statistic = 17.217 Durbin Watson = 1.612				

Table 3.4: Capital Adequacy VS ROA, ROE &NIM

Notes: * 10% of significance level

** 5% of significance level

*** 1% of significance level

The F-statistic of this research model is relatively significant; in which it indicated a relationship between the set of dependent variable (regulatory effectiveness) and independent variables (NIM, ROE, ROA).The adjusted R^2 value , implied that the regression model which consist of ROA, ROE, and NIM explained 75.3 percent (0.753) variation in regulatory effectiveness. Further, Table 3.4 shows that NIM, ROE, and ROA (MV) were significant to regulatory effectiveness (DV). Beta coefficient is referred to how many standard deviation a dependent variable (CA) would change for each increased of the predictor variables. Among the three variable, ROA has the highest beta coefficient value (-7.527), which indicated the strongest contribution in explaining the dependent variable. However, ROA has a negative relationship with the regulatory effectiveness, while ROE and NIM have a positive relationship.

The P- value for each variable is used to test the null hypothesis whether the coefficient was equal to zero. And it's advisable for us to reject the null hypothesis if the p- value of the research model was relatively low (P <0.05).In other words, if a predictor has a relatively low P-value, it is likely meaningful, because changes in the predictor's value are related to the changes in the response variable. Model shown the significant values of these three variables are lower than 0.05%, which the null hypothesis has been rejected. For instance, the variable of net interest margin has shown the most significant effect on the capital adequacy (regulatory effectiveness). Every 1% increase in net interest margin has elicited 0.072% increase in capital adequacy, in which the p- value is 0.000. However, the p- value for ROE (0.017) in the model is greater than the common alpha level of 0.005, which indicate not statistically significant. In this context, for every 1%increase in return on equity will increased 0.712%in capital adequacy. There are still positive relationships between the element of capital adequacy and return on equity. For instance, for every 1% increase in return on equity will increased 7.527% in capital adequacy.

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.894[a]	.799	.753	.98718

Model Summary is used to explain the ability of the regression line to account for the total variation in the dependent variable (regulatory effectiveness), and see how the observed value were highly dispersed around the regression line. This regression model able to explain a limited proportion of the dependent variable's total variation. The dependent variable's total variation could be measured by its variance. By divided this explained variance to the total variance of the dependent variable, the proportion of the total variance is arrived. This proportion may varies between 0 and 1 and symbolised by R^2 (R Square).

R was the correlation coefficient between the predictor variables (NIM, ROE, and ROA) and the dependent variable (regulatory effectiveness), in which R (0.894[a)] was the square root of R^2. R –squared was a statistical measure of how close the data were fitted with the regression line and see how the dependent variable (CA) affected the independent variable (ROE, ROA, NIM).R-squared was always between 0 and 100%. Zero percent of R-squared indicated there is none of the variability of the response data around the mean, and vice versa. But the value of the R^2 is 0.799, in which would provides the R and R^2 values. The R value has represented the simple correlation and is 0.894 (the "R" Column), which had indicates a high degree of correlation. The R^2 value (the "R Square" column) indicates how much of the total variation in the dependent variable, capital adequacy (regulatory effectiveness), could be explained by the independent variable, ROA, ROE and NIM.

Furthermore, if the R-squared value is low and which means it has statistically significant predictors, and it would help us to draw an important conclusion about how changes in the predictor values were associated with changes in the response value. Regardless of the R-squared, the significant coefficients still represented the mean changed in the response for one unit of changed in the predictor while holding the other predictors in the model constant. Obviously, this type of information could be extremely valuable. The probability value (p-value) of a statistical hypothesis test was the probability of getting a value of the test statistic as extreme as that observed by chance alone, if the null hypothesis Ho, is true. The p-value is used to compare the desired significance level of the test and, if the value was relatively small, the result was significant. When the p-value > 0.10 which means that the observed value was not significant and vice versa. Small p-values suggested that the null hypothesis was unlikely to be true. The smaller it was, the more convincing the evidence was that null hypothesis was false. P-value also indicated the strength of evidence for say, rejecting the null hypotheses or accepting the null hypotheses.

ANOVA Analysis

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	50.334	3	16.778	17.217	.000[b]
	Residual	12.669	13	.975		
	Total	63.002	16			

a. Dependent Variable: Capital Adequacy
b. Predictors: (Constant), Net interest Margin, Return on Equity, Return on Assets

F-statistic is essentially regards as a ratio of the explained variability to the unexplained variability, in which the degree of freedom could be taking into consideration. F-statistic was a standard statistical test that used in ANOVA and regression analysis. In practical, F-statistic number would not be used as a measurement to determine the significant level between the predictor variables. Larger F-statistic indicates that more of the total variability is accounted for by the model. In view of the value of the F-statistic is 17.217, and all the predictor variables are non- zero, therefore, the model was statistically useful.

However, this does not mean that the model is the best, as the other coefficients may be pathetic. The result of ANOVA show that whether or not the capital adequacy was significantly difference from NIM, ROA, and ROE, as indicated by the F- statistic. The Coefficients table provided me with the necessary information to predict CAR from ROA, ROE, and NIM, as well as determined the profitability elements are contributed statistically significantly to the research model (E.g.by looking at the "Sig." column).

Regression equation as:

CAR (RE) = 12.019 – 7.527(ROA) + 0.712(ROE) + 0.072(NIM)

Standardized coefficients or beta coefficients are the estimates resulting from a multiple regression analysis performed from the selected variable. It was a process whereby the variables were transformed into variable with the mean of 0 and a standard deviation of 1, in which the researcher would normally examined the relative effects of the independent variable on the dependent variable. Among the three variables, NIM has a strongest relationship between the remaining variable with the element of regulatory effectiveness.

Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	12.019	.769		15.627	.000
	Return on Assets	-7.527	3.136	-1.698	-2.400	.032
	Return on *Equity*	.712	.260	1.783	2.737	.017
	Net interest Margin	.072	.013	.986	5.419	.000
a. Dependent Variable: Capital Adequacy						

Based on the above result , the stepwise regression equation was as follow:

RE= 12.01 9 -7.527(ROA)+0.712(ROE)+0.072(NIM)

Standardization coefficient was usually used to answer the degree of impact or effect between the independent variables (ROA, ROE, and NIM) against the dependent variable (CA), especially in the multiple regression analysis. For instance, every decreased in dependent variable will increased the value of return on asset, which means that there was a negative relationship between capital adequacy (assume as the measurement of regulatory effectiveness) and the return on asset. According to the above analysis, there was a positive relationship between the ROA&ROE with regulatory effectiveness. *The finding showed that the ROA was the most important factor in regulatory effectiveness, and followed by the NIM, and ROA. Finding of the study suggested that ROA (B = -7.527), ROE (B=0.712), NIM (B=0*.072) were found to be statistically significant. The result also suggested that one unit increase of ROA will decrease7.527 unit in regulatory effectiveness and with each increase of ROE will increase 0.712 unit in regulatory effectiveness .And for each increase in NIM will caused an increase of 0.072 in regulatory effectiveness. The value of R squared 0.799 indicate that these three mediating variable included in the regression equation explained 79.9% of the variation in regulatory effectiveness, where the null hypotheses has been rejected in the model.

CHAPTER FIVE: CONCLUSION AND RECOMMENDATION

Before come to conclusion, there are the elements that need to emphasize again. To test the stability of the research model, few statistical analyses need to be conduct to examine the validity, reliability, credibility of the model. There were two aspects need to be discuss in the elements of credibility such as reliability and validity. Reliability is referred to the aspect of consistency of a model or concept, in which being measure over time.(Bryman &Bell,2011).For instance, the purpose of this study is to analyse how the elements of compliance in shaping the high level of regulatory effectiveness, and it's influence to the profitability of a financial institution. This was conducted by collecting data from the public that work in both financial institution and non financial institution via questionnaire, obtained the financial soundness indicator via IMF website in difference time horizon. Validity is referred to the elements that intended to be measure or tested (Carmines and Zeller, 1979). For instance, should there be any correlation between the elements of compliance, profitability as well as regulatory effectiveness.

In order to investigate the connection between these few theory, few variable were selected and input in the data analysis, in which ROE, ROA NIM have been selected as the proxies for profitability (moderating variables), while capital adequacy ratio was choose as the proxies for regulatory effectiveness (dependent variable). To examine the association between the compliance elements and regulatory effectiveness, a group of predictor variable have take into the account (which constituted from compliance awareness, unambiguous regulation, compliance culture, robust system and process, non compliance cost and hefty monetary fine. Once the data obtained, a statistical test has been conducted to test the stability of the model. To ensure the stability of the model, two hypotheses and two regression tests were adopted. in which all the analysis was conducted based on the data received from the questionnaire, 17 years of financial soundness indicator(constituted from the NIM, CAR, ROE,and ROA), as well as from the database of IMF.

To test the stability of the model, there were 3 difference approach were performed, such as heteroscedasiticity, multicollinearity, and autocorrelation. And all these approach were to test the reliability, validity and consistency of the model. With the ground of belief that obtained in the statistical test, it enable us to conclude that three variable, either independent variable, moderating variable or dependent variable are actually interdependence of each other, in which the regulatory effectiveness is actually correlate with the compliance as well as the profitability elements but is just the matter either positively nor negative correlated. Distinction between the theory and prediction, or owing to lack of notable relationship between variables might be the major issues that affect the imperfection of the model refinement.

By looking at the outcome of the analysis, the research objectives have been accomplished. Findings reveal that there are a positive relationship between the regulatory effectiveness (CA) and ROA as well as ROE. The higher the level of regulatory effectiveness, the higher value of ROA and ROE, in which also jive with theory that arose by the researcher as per say in the literature review. For instance, ROE was regards as the benchmark to measure the efficiency of future profit of the bank, and there is a positive relationship between the efficiency of bank performance and the profitability of the financial institution. (Kuan ,2008). Not only that, by looking at one of the findings was also similar with the theory that highlighted by some other researcher. For examples, according to Claeys and Vander Vennet in year 2004, they believed that higher net interest margin would signalling low level of regulatory effectiveness. And the rationale for these sayings was lower regulatory performance would generally cause the negative impact on the growth of the financial market. And they also cited that inappropriate of compliance culture in the workplace may created a significant information asymmetry, in which increased of the risk premium within the financial institutions.

On the other hand, Schweiger and Liebeg (2009) cited that lower net interest margins usually would encourage investment activities and support economic growth, but the benefits of lower cost of financial intermediation would only able to achieve if banks price risks in a prudent manner. From the financial institutions point of view, the net interest margin is the key determinant of the bank profitability. But for the real economy, country risk, macroeconomic variables, client risk, competition would used as the measurement to determine the economy growth. Brock and Suarez (2000) also believed that increase in net interest margin, would increase the uncertainty and deterioration in macroeconomic conditions. With that, it clearly shows that how the compliance elements (compliance culture) and profitability elements (NIM) have affected the level of regulatory effectiveness in our financial market, in which the null hypotheses of the model has been rejected.

Suggestions for Further Research

One of the suggestions is to add more indicators for the further research model. The model has a quite high R^2 based on data from questionnaire section 1 and 2 which shows that the model have a satisfied overall fit .For instance, the variables of compliance awareness, unambiguous regulation, compliance culture, robust system, and non compliance cost and hefty monetary fine and profitability elements (NIM, ROA, ROE) have been used to represent as profitability and compliance indicators. Maybe next researcher could input the variable that we may not really aware and used it to reshape regulatory performance. For instance, the next researcher could use the indicator that apart from the variable that been used in the model to conduct the next research. Another suggestion to improve the accuracy of the research model is to input more countries in the model. Rationale for setting this recommendation is by having more samples in the model, it would help us to form a more accurate and more convincing result. In view of time limitation, assistance was granted from 100 people in the friend's network to conduct the questionnaire. If the samples size is too limit, in fact it would relatively hard for us to come out with a good analysis. It is because the outcome of the analysis would not only based on the respective market segment thus it was difficult for us to imply it as a whole. If we are in the efficient market, which all the information would be available in the market, but sadly to say we are not.

Therefore, sometime it would be the problem in retrieved the addition data, or get connection with the respective authorities, or financial institutions. In relation of this, it was pretty much difficult for us to extend the research to other area.

In addition, future research suggestion could be shift the core of compliance to other factors, such as the banking development, or product and services. Not only that, researcher could also link it to the compliance risk, liquidity risk, market risk, operational risk or reputational risk. In addition, profitability is one of aspect of banks' financial performance, therefore exploring to other aspects would be an interesting expansion for the research. For instance, the further research could also examine the liquidity risk towards the compliance elements, and it is most likely to link with the insolvency or liquidity risk. Liquidity risk not only affect the bank performance, but also the reputation. Therefore, it is importance for a financial institution to keep a sound and liquidity arrangement, as failing of which may resulted the bank impeded with the unexpected losses.

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