A PROPOSED RESEARCH FRAMEWORK:
EFFECTIVENESS OF INTERNAL CONTROL SYSTEM IN STATE COMMERCIAL BANKS IN SRI LANKA

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BACKGROUND

The internal control system is the major part in any organization. “Internal control is the process designed and affected by those charged with governance, management and other personnel to provide reasonable assurance about achievement of entity’s objectives with regard to reliability of financial reporting, effectiveness and efficiency of operations and compliance with applicable laws and regulations. It follows that internal control is designed and implemented to address identified business risks that threaten the achievement of any of these objectives.” (Sri Lanka Auditing Standard 315, ICASL)

According to Basu (2006), Millichamp, (1987, 1996), The Institute of Chartered Accountants of England and Wales (ICAEW), “internal Control system is the whole system of controls, financial or otherwise, established by the management in order to carry on the business of the enterprise in orderly and efficient manner, ensure adherence to management policies, safe guard assets and secure as far as possible the completeness and accuracy of records”. It comprises of following components (COSO 2002):

- The control environment
- The entity’s risk assessment process
- The information and communication system,
- Control activities
- Monitoring

Banking sector is unique sector in the economy. It provides different kind of services to the customers and handles massive volume of funds daily. All activities in the economy depend on the strength and stability of the banking sector. Due to these facts the necessity of internal control system in the banks cannot undermine. The basis of safe and sound banking system the effective internal controls are so important. A system of tough internal controls can support to ensure that the goals and objectives of banks will be met, that the bank will help to attain long-term profitability targets, and maintain reliable financial and managerial reporting. Such a system can also help to ensure that the bank will comply with laws and regulations as well as policies, plans, internal rules and procedures and decrease the risk of unexpected losses or damage to the bank’s reputation. This help bank’s Board of directors and management to safeguard the bank’s resources, produce reliable financial reports and comply with laws and regulations. Meantime it supports to reduce possibilities of substantial errors and irregularities and assists in their timely detection when they do occur. Also this control system may discover mistakes
caused by personal distraction, carelessness, error in judgment or unclear instructions in addition to frauds or deliberate noncompliance with policies.


Therefore the bank staff must have proper knowledge on its internal control and be consistently applied too. As emphasized by Tandon, Sudharsanam, Sundharabahu 2007, these controls include division of work, job rotation, authority levels, separation custody and recording and accounting controls. Bank’s size and the complexity of its operations and its risks profile will be affected for the formality of any control system.

In the past decade, internal control failures were the reason for the most explosive accounting scandals of the world.( Kratz, 2008 ) The Enron is the best example in the United States. Before Enron collapse in 2001, the company stated earnings of $200 million and according to the stock market was worth billions of dollars. Conversely, the stock price of Enron was driven up by fraudulent accounting practices and earnings management.( Kratz, 2008) End of the similar year, it declared that it had overstated its earnings over the last four years and owed about $6 billion to its lenders. Many of investors lost their money, employees lost their jobs and even employee’s pensions evaporated after the collapse because the company’s pension scheme had invested in its own shares. ( Kratz, 2008)

WorldCom, America’s previous telecommunications giant confirmed accounting fraud in 2002. Hiding bad debt, understating costs, and backdating contracts were only certain offences on its list of frauds. The communications service company, Global Crossing was also guilty with respect to earnings inflation. As the Enron circumstances, the Global Crossing fiasco finished up in big losses for investors and in missing retirement savings on the part of company employees.

Earthwit, 2010 highlights that top ten frauds of the world as Enron (America), WorldCom (America), Bank of Credit and Commerce International (United Kingdom), Suprime Mortgage (America), Barrie Madoff (America), American International Group (America), Barlow Clowes (United Kingdom), Fannie Mae & Freddie Mac (America), Daewoo Group (South Korea) and Satyam Computers (India) respectively. (http://toptaps.com/ top 10 frauds of corporate world, accessed on 19.07.2013)

Though, those companies encountered of the frauds indeed they might have, internal audit and external audit and other relevant controlling systems. Unfortunately, no one able to disclosure the real situation in those firms till their bankrupt. So there is a problem with existing controlling systems or using them in the organizations.

In Sri Lankan economy there is well established banking system and it includes more than thirty local and foreign banks. http://www.apbsrilanka.org/general/05_banks_in_sri_lanka.html. So over thousands bank branches function all over the country. But time to time there are some incidences relates to the frauds, mismanagement and corruptions in this banking sector too.

Daily mirror, E paper, on 6th February 2013 released that in connection with the foreign credit cards withdrawals Rs. 263 million frauds has found in a state bank in Sri Lanka and 14 suspects were charged. Also Peoples bank annual report 2011 highlights their operational losses for the year. Out of them, 10% are internal frauds and 90% are external frauds which have been beyond the bank’s control. The report further states that they able to reduce their internal frauds up to 10% because of their rigid internal control and monitoring system.

KPMG audit firm has conducted the fraud survey analysis in 2011/2012 in Sri Lanka and they have revealed that 89 percent of respondents representing public sector institutions encountered fraud while respondents from the private sector reported an incidence of 64 percent. Further they highlighted that overall five out of six incidents of frauds were perpetrated by internal parties and Rs. 122 mn fraud
committed in the financial services sector. They reported subdivisions of frauds in financial services sector as bribery and corruption, information technology related frauds, regulatory noncompliance, theft of funds and goods, and financial statement frauds and they provided those as 26 percent, 7 percent, 19 percent, 39 percent, and 9 percent respectively. (kpmg.com/lk accessed on 25.11.2012)

It is indubitable that without having proper internal control system and practicing the same, the organizations face numerous problems and risks. If the situation continues it will lead to disputes for company’s growth, image, employees and customers’ dissatisfaction and employees’ welfare, loss of investors, insolvency and finally it leads the problems to the government.

The studies on evaluating the effectiveness of internal control systems in Sri Lankan context are limited. Thus, doing a study is timely important for finding the smooth practice of the internal control system in the state commercial banks which play the major role in Sri Lankan economy with the purpose of avoiding the similar situation as mentioned earlier.

1. PROBLEM STATEMENT

In the context of above background, the presence of effective internal control system and their use is very vital to state commercial banks which engaged in broader financial, economic and social roles. No any argument that every bank must have the strong internal control system in practice. Accordingly, it is required to examine that “Whether or not the established internal control systems are effective and are they being effectively practiced in State Commercial Banks?”

2. RESEARCH OBJECTIVES

The main objective of this study is to evaluate the effectiveness of internal control system in Sri Lankan State Commercial Banks.

Therefore the study intends to:
1. To examine the nature and structure of internal control systems in the State Commercial Banks.
2. To determine the relationship between the internal control components and the effectiveness of internal control system in State Commercial Banks.
3. To investigate the types of frauds in the State Commercial Banks.
4. To identify the factors those contribute to the incidences of frauds in State Commercial Banks.
5. To identify the strategies can take to eliminate frauds in State Commercial Banks.

Therefore, the following research questions are intended to be raised;

1. What are the factors affecting to the internal control system in use in state commercial banks in Sri Lanka?
2. What is the relationship between the internal control components and the effectiveness of internal control system in state commercial banks?
3. What types of frauds occur in the State Commercial Banks?
4. Which factors contribute to the incidences of frauds in State Commercial Banks?
5. What kinds of strategies can take to eliminate frauds in State Commercial Banks?

3. SIGNIFICANCE OF THE STUDY

The motivation of the research work is to evaluate the effectiveness of the internal control systems. The outcomes of the study will support the state commercial banks to put in place activities for their day to
day management of safeguarding assets, prevention and detection of frauds, errors and irregularities. Also, it is hoped that findings from this study will confirm or refute the present perception about the effectiveness of internal control in state commercial banks. This will provide the company to redefine approaches that would facilitate the success of state commercial banks objectives. So the findings of the study will support identify gaps in the systems of internal control in the state commercial banks. The study will also enhance the existing knowledge bank concerning internal controls and its effectiveness.

Also research studies and textbooks on internal controls are not comprehensive. So this study will be a valuable reading material for students and researchers and also help as a manual to managers of banks as well as other business organizations.

4. SCOPE OF THE STUDY

This research will emphasize on the effectiveness internal control systems in state commercial banks. The two state commercial banks namely Bank of Ceylon and Peoples Bank are considered in the study and the research however focused on North Central Provinces and North Western Province particularly 64 branches due to the enormous size of the banking sector.

5. LITERATURE REVIEW

6.1 INTERNAL CONTROL COMPONENTS

Those internal control components can be described as follows:

5.1.1 Control Environment

Ofori (2011), Dougles (2011), Millichamp (2002), Amudo & Inanga (2009, http://www.newpaltz.edu/internalcontrols/ accessed on 10.12.2012, Whittington & Pany (2001), Messier (1997), Sri Lanka Auditing Standards (2013, 315) have mentioned that Control environment is the attitude toward internal control and control consciousness established and maintained by the management and the employees of an organization. It may be viewed as the foundation for other components of internal control providing discipline and structure. Millichamp (2002) describes control environment as the overall attitude, awareness and actions of directors and management regarding internal controls and their importance in the entity. Seven factors affecting the control environment include management's philosophy and operating style, integrity and ethical values, a commitment to the competence, board of directors or audit committee, organizational structure, assignment of authority and responsibility and human resource policies and practices respectively.

5.1.2 Risk Assessment

The second major component of internal control is risk assessment. Risks are the happenings that threaten the achievement of objectives. They finally affect an organization's ability to achieve its mission. Risk assessment is the process of detecting, assessing and determining how to succeed these things. There are both internal and external risks that could prevent the achievement of established objectives at the every level in an organization. Therefore, management should take necessary actions to prevent these risks. But, sometimes management cannot avoid the risk from occurring. In these situations, management should determine whether to accept the risk, reduce it up to the acceptable levels, or avoid. So management should ensure each risk is assessed and handled properly to achieve its objectives.
5.1.3 Information and Communication System
Information and Communication focuses on the nature and quality of information needed for effective control that the systems use to develop such information, and reports necessary to communicate it effectively. Information is needed at all levels of organization to assist management in meeting the organization’s objectives. The information is used by inside parties as well as outside parties. This information should be communicated from top to bottom level that needs it in a form and within a time frame that helps them to carry out their responsibilities. Communication also use by outside parties such as customers, suppliers and regulators. Information about an organization’s plans, control environment, risks, control activities, and performance must be communicated up, down, and across an organization. Reliable and relevant information from both internal and external sources must be identified, captured, processed, and communicated to the people who need it in a form and timeframe that are useful.

The literature highlighted those benefits of relevant, timely and effective internal and external communication.
- Improved communication about expectation, responsibilities and objectives of an organization.
- Enhanced decision making
- Reduced dependence on individual employees who assist in the prevention and detection of frauds.

5.1.4 Control Activities
Control activities are tools - both manual and automated - that help prevent or reduce the risks that can impede accomplishment of the organization's objectives and mission. Management should establish control activities to effectively and efficiently accomplish the organization's objectives and mission. Messier (1997) noted that control activities are the policies and procedures that help ensure that necessary actions are taken to address the risks involved in the achievement of the entity’s objectives. Accordingly the control activities that are relevant to the audit include:
- Performance review
- Information processing
- Physical control
- Segregation of duties.

Amudo & Inanga (2009) viewed that authorization, segregation of duties, verification before making the payments, control over access to resources, reconciliation, review operations and supervision as the control activities in any organization.
Management should establish control activities that are effective and efficient. According to Walker (1999) control activities occur at all levels and functions of the entity. He provided the following as example of control activities:

1. Top level reviews of actual performance,
2. Reviews by management at the functional or activity level,
3. Management of human capital,
4. Controls over information processing,
5. Physical control over vulnerable assets,
6. Establishment and review of performance measures and indicators,
7. Segregation of duties,
8. Proper execution of transaction and events,
9. Accurate and timely recording of transactions and events,
10. Access restrictions to and accountability for resources and records, and
11. Appropriate documentation of transactions


5.1.5 Monitoring

Internal control system and application of controls change overtime. This can be due to the arrival of new personnel, varying effectiveness of implementing the procedures or supervision, time and resource constraints or changes in the circumstances for which the internal control system originally was designed. Thus the management needs to determine and observe whether the internal control system continues to be relevant and effective in the entity as intended. The purpose of monitoring is to determine whether internal control is adequately designed, properly executed, and effective. Internal control is adequately designed and properly executed if all five internal control components (Control Environment, Risk Assessment, Control Activities, Information and Communication, and Monitoring) are present and functioning as designed.(Ofori 2011)

Monitoring, the last component of internal control, is a process that assess the quality of internal control over time. Also monitoring is the evaluation of an organization's events and transactions to gauge the quality of performance throughout the period and to decide whether controls are effective. Management should emphasis monitoring efforts on internal control and accomplishes the organization objectives. It is important to monitor internal control to determine whether it is operating as intended and whether any modifications are necessary. All employees need to understand the organization's mission, objectives, and responsibilities and risk tolerance levels for monitoring to be most effective. Simmons (1995) Monitoring can be done through on going activities or separate evaluations.
Ongoing monitoring activities include regularly performed supervisory and management activities such as continuous monitoring of customer complaints or reviewing the reasonableness of management reports. Separate evaluations are monitoring activities that are performed on non-routing basis such as periodic audits by internal auditors.

In evaluating the extent to which the effectiveness of internal control is monitored, the following criteria in ongoing monitoring activities, separate evaluations and reporting deficiencies should be considered. (COSO 1994)

- **Ongoing monitoring**
  - Extent to which personnel, in carrying out their regular activities, obtain evidence as to whether the system of internal control continues to function;
  - Corroboration of the communication from external parties with internally generated information;
  - Periodic comparison of amounts recorded by the accounting system with existing assets and liabilities;
  - Feedback to management whether controls operate effectively;
  - Effectiveness of internal audit activities

- **Separate evaluation**
  - Scope and frequency of separate evaluation of internal control
  - Appropriateness and logicality of evaluation process and methodology
  - Appropriateness of the level of documentation

- **Reporting deficiency**
  - Existing of the mechanism for capturing and reporting identified internal control deficiencies;
  - Appropriateness of reporting protocols and follow up actions

Monitoring includes management’s methods for following up and checking on performance to ensure that controls are complied with. With monitoring component the internal control has made a circle and monitoring activity help to improve control activities, information systems as well as overall control environment.


6. **Empirical Studies**

Angella Amudo & Eno L. Inanga has done a study on Evaluation of Internal Control Systems: A Case Study from Uganda in 2009, this study is based on the Regional Member Countries (RMCs) of the African Development Bank Group (AFDB) focusing on Uganda in East Africa and developed a conceptual model used in evaluating the internal control systems in Public Sector Projects in Uganda financed by the African Development Bank. The results found that some control components of effective internal control systems are lacking in these projects. These reason out that the current control structures ineffective. The study identified internal control components as independent variables, internal control as dependent variable, authority and working relationship as moderating variables. The independent variables determine the effectiveness of an internal control system. The presence and proper functioning of all the components of the independent variables ensures effectiveness of internal control system. The model shows as figure 1.
In 2011, the same model as mentioned above, used by Sultana and Haque for their research on Evaluation of Internal Control Structure: Evidence from Six Listed Banks in Bangladesh. They have evaluated effectiveness of the established internal control systems in listed banks in Bangladesh. But in this research they have omitted one independent component used by previous study, it is information technology. The result indicates that almost all the banks in the sample achieved most of components of internal control. But some of banks have lacking about some of the control components. This shows that more or less the current internal control structure is effective for all the sample banks used in the study. The model used by Sultana and Haque presents in figure 2.
Fadzil, Haron & Jantan (nd) has done a study to achieve two objectives to determine whether the internal audit department of the companies listed in the Bursa Malaysia complies with the Standards for the Professional Practice of Internal Auditors IIA (2000); and, to determine whether compliance to SPPIA will affect the quality of the internal control system of the company.

The study evaluated the Internal Auditing Practices as independent variables and Quality of Internal Control System as dependent variable. As the quality of internal control system they focused on control environment, risk assessment, information & communication system, control activities and monitoring. It was found that management of internal audit department, professional proficiency, objectivity and review significantly influence the monitoring aspect of the internal control system. Scope of work and performance of audit work significantly influences the information and communication aspect of the internal control system while performance of audit work, professional proficiency and objectivity significantly influence the control environment aspect of the internal control system. The study also shows that management of internal audit department, performance of audit work, audit program and audit reporting significantly influences the risk assessment aspect of the internal control system. Lastly, performance of audit work and audit reporting significantly influences the control activities aspect of the internal control system. This highlights in figure 3.

![Figure 3](image-url)

**Model 3**

**Internal Auditing Practices**
- Independence & Objectivity
- Professional proficiency
- Scope of the work
- Performance of audit work
- Management of Internal Audit dept.

**Quality of Internal Control System**
- Control Environment
- Risk Assessment
- Control Activities
- Information and communication system
- Monitoring

William & Kwasi in 2013 have done research on the significance of internal control in the rural banking sector, they wanted to examine whether effective internal control system is adopted by the bank in the Eastern Region of Ghana. The population for this study includes internal auditors, management, account personnel, and other staff in the bank. The employees at senior level, middle levels and lower levels were included in the study too. The study concluded that the internal control systems assist management and auditors in executing their duties. The internal controls are established by management by adopting policies and procedures with each system of control having specific functions to perform. The computers should be provided with passwords to provide security for the informations of the bank to prevent fraudulent acts, Auditors should employ professional judgment to asses and design audit risk procedures in other in other to minimize audit risks, Substantive test should be used by auditors to appraise the performance of internal accounting controls and identified weaknesses communicated. The figure 4 shows the model developed for the study.
Karagiogos, Drogalas, Dimou have studied the Effectiveness of Internal Control System in the Greek Bank Sector. The objective of the study is to highlight the interaction between components of internal control and effectiveness of internal auditing. They have considered control environment, risk assessment, information and communication system, control activities and monitoring as internal control components and independent variables. The effectiveness of internal auditing used as the dependent variable. The results indicated that all components of internal control is vital in the effectiveness of internal audit and consequently in the business survival and success. The figure 5 elaborates the link between internal control and internal audit.

In 2008 Mawanda examined the Effects of Internal control on financial performance in an institution of higher learning in Uganda. The objective was to establish the relationship between internal control system and financial performance in an institution of higher learning in Uganda. Internal controls
focused from the viewpoint of Control Environment, Internal Audit and Control Activities while Financial performance looked at Liquidity, Accountability and Reporting.

The study found that management of the higher learning institution is committed to the internal control systems, actively participates in monitoring and supervision. All the activities of the Institution are initiated by the top level management. However the internal audit department is not efficient, is understaffed, doesn’t conduct regular audit activities and doesn’t produce regular audit reports. The study also found that there is lack of information sharing and inadequate security measures to safeguard the assets of the University. The study established a significant relationship between internal control system and financial performance. The conceptual model developed can be presented in the figure 6.

The research is done by Olatunji in 2009, the objective of the study is to determine the impact of internal control on the overall management of Nigerian banks. Fifty branches of Wema bank PLC selected as sample of the study and descriptive and inferential statistical methods used to analyze the gathered data. Two hypotheses were tested to determine the correlation between frauds and internal control system and it concluded that the management of bank should establish and practice the sound internal control system to avoid the frauds. It also recommended to function adequate internal control system, effective internal audit department, proper attention for cash, attractive pay packagers, good management and formulation of good personnel and recruitment policies.

The study on evaluation of internal control system of banks in Nigeria is done by Charles, in 2011. The study expected to find out that whether the established internal control systems in the bank are sound enough to detect and prevent frauds. Five banks in Nigeria focused for the study. The study concluded that the banks have sound internal control systems as there is positive relation between the presence of internal control system and the effectiveness in the management, the efficiency in the operations, the reliability of the financial and management reporting system , the compliance by banks in Nigeria with applicable laws and regulations. But most of the internal control staff had complained of lack of promotion, poor welfare and training , function of good corporate governance by these banks is not yet at its best, they can still do better.

Onumah, Kuipo, Obeng, investigated the effectiveness of internal control of listed firms in Ghana. Due to the recent financial reporting scandals the regulations push to concern about the internal control
system to improve the quality of financial reporting. 33 listed companies considered as the sample. They also have considered the five components of internal control system. The found that control environment showed a higher level of effectiveness rather than other components.

Salehi, Shiri, 2013 done a study to examine the effectiveness of internal control in Iranian banking sector. The study found that the internal control is highly efficient in banking sector to prevent and detect incidents of frauds and errors.

The study done by Douglas, 2011 is to assess the extent of failures caused by humans to internal control system and effectiveness of internal control system in risk management in bank. The study considered the control environment, risk assessment, information and communication system, control activities and monitoring to evaluate the internal control effectiveness in the bank. The population was banks in the Ashanti Region. The research used Ecobank Ghana Limited Ashanti Region as the case study. The study found that there are internal control system in Eco bank in Ghana but there monitoring is less effective. So, recommended to establish internal audit unit in each branch.

The objective of this study done by Noorvee, 2006 is to make suggestions for Estonian companies for improving the effectiveness of their internal control over financial reporting. A questionnaire and interviews used to gather the data and control environment, risk assessment, information and communication system, control activities and monitoring considered as internal control components. The study found that though the companies follow internal control systems, a number of internal control criteria are missing. Therefore the management should consider improving those in near future.

Ofori in 2011 conducted a study to determine the effectiveness of the internal control systems in Ghana Post Company. It is case study type research. Staff of the Ghana Post Company was the population. He also considered control environment, risk assessment, information and communication system, control activities and monitoring considered as internal control components. Finally, it is concluded that all five components in internal control system are not very strong but rather satisfactory. Further, revealed that there was no internal audit unit to monitor the activities independently.

7. Conceptual Framework
The following figure 7 shows the conceptual framework which presenting the relationship between independent and dependent variables for the present study. The effectiveness of internal control system is the dependent variable. Control environment, risk assessment, information and communication system, control activities and monitoring as independent variables. The dependent variable is achieved by the presence and proper functioning of all the prescribed independent variables in relation to each category of the organization’s objectives.

The same dependent and independent variables used by Amudo & Inanga (2009) to examine the internal control practice in African Development Bank Group. Also Sultana and Haque (2011) have used same dependent variable and independent variables for their study on evaluating the internal control structure of six listed bank in Bangladesh. Meantime, though, both of above mentioned studies have used authority and working relationship as moderating variables, the study do not consider them as the study will become more complex.

Fadzil, Haron & Jantan (ND) have considered five components of internal control system such as control environment, risk assessment, information and communication system, control activities and
monitoring as dependent variables to evaluate the relationship between internal auditing practices and the quality of internal control system.

A study on effectiveness of internal control system in the Greek Bank sector done by Karagiogos, Drogalas, Dimou (ND), to assess the link between internal control and internal audit, they also have taken account internal control components; control environment, risk assessment, information and communication system, control activities and monitoring as independent variables and effectiveness of internal audit as dependent variable.

In 2008, Mawanda’s study considered control environment, control activities and internal audit as independent variables too.

Therefore, when evaluating the effectiveness of internal control system of the organization the five components must be present.

Based on the above literature, a conceptual framework for this study has developed to achieve the objectives that given in the chapter one as follow;

**Figure 7**
Conceptual framework

- Control environment: $H_1$
- Risk assessment: $H_2$
- Information & Communication: $H_3$
- Control activities: $H_4$
- Monitoring: $H_5$
- Effectiveness of Internal Control System: $H_6$

The study involves investigation of whether internal control systems are effective in the State banks in Sri Lanka. Two state commercial banks will fall under the population of the study.

8. **Hypotheses**
Six hypotheses derived as follows:

$H_1$ – The control environment enhances Effectiveness of internal control system in the State commercial banks

$H_2$ – The entity’s risk assessment process enhances Effectiveness of internal control system in the State commercial banks.

$H_3$ – The communication system enhances Effectiveness of internal control system in the State commercial banks.
H₄ – The control activities enhances Effectiveness of internal control system in the State commercial banks
H₅ - The monitoring controls enhances Effectiveness of internal control system in the State commercial banks
H₆ – There is positive relationship between internal control components and effectiveness of internal control system

9. Operationalization
The table 1 presents the details of variables, definitions and measurements.

<table>
<thead>
<tr>
<th>Variables</th>
<th>Working Definitions</th>
<th>Measurements</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>The Control Environment</strong></td>
<td>The control environment includes the attitudes, awareness, and actions of management and those charged with governance concerning the entity’s internal control and its importance in the entity.</td>
<td>Management philosophy &amp; operational style, Integrity &amp; ethical values, A commitment to competence, Participation of board of directors or audit committee, Organizational structure, Assignment of authority &amp; responsibilities, Human resource policies and practices.</td>
</tr>
<tr>
<td><strong>Independent variable</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>The entity’s risk assessment process</strong></td>
<td>An entity’s risk assessment process is its process for identifying and responding to business risks and the results thereof.</td>
<td>Changes in operating environment, New personnel, Rapid growth, New lines, product &amp; activities, Corporate restructuring, Foreign operation, Accounting pronouncements.</td>
</tr>
<tr>
<td><strong>Independent variable</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>The Information &amp; communication systems</strong></td>
<td>An information system consists of infrastructure (physical and hardware components), software, people, management communication, upstream communication,</td>
<td></td>
</tr>
<tr>
<td><strong>Independent variable</strong></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

- procedures, and data. Infrastructure and software will be absent, or have less significance, in systems that are exclusively or primarily manual. Many information systems make extensive use of information technology (IT).

**Control activities**

**Independent variable**


- Control activities are the policies and procedures that help ensure that management directives are carried out, for example, that necessary actions are taken to address risks that threaten the achievement of the entity’s objectives.

- Performance review, Information processing, Physical control, Segregation of duties, Authorization procedures, Independent check, Adequate documentation, Job rotation, compulsory leave.

**Monitoring**

**Independent variable**


- An important management responsibility is to establish and maintain internal control on an ongoing basis.

- On-going supervision, internal audit

**Effectiveness of Internal Control system**

**Dependent variable**


- Efficient and effective operations, reliability of financial reporting, compliance with rules and regulations
10. METHODOLOGY IN BRIEF

10.1 Population

According to Mason et al. (1997), the population of a study is the collection of all possible individuals, objects or measurements of interest. For this study, there are two state commercial banks namely Bank of Ceylon (BOC) and Peoples Bank (PB) which have established 303 and 343 branches respectively (total 646) throughout the country. Based on BOC bank’s circulars it has classified its branches into five categories according to the branches’ business volume. The below table 2 presents details of classification, number of branches and selection criteria.

**Table 2**
Details of BOC branches

<table>
<thead>
<tr>
<th>Classification</th>
<th>Number of branches</th>
<th>Business volume (RS. Millions)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Super Grade I</td>
<td>17</td>
<td>3000 above</td>
</tr>
<tr>
<td>Super Grade II</td>
<td>28</td>
<td>2000&lt;3000</td>
</tr>
<tr>
<td>Grade A</td>
<td>79</td>
<td>1500&lt;2000</td>
</tr>
<tr>
<td>Grade B</td>
<td>73</td>
<td>1000&lt;1500</td>
</tr>
<tr>
<td>Grade C</td>
<td>106</td>
<td>700&gt;</td>
</tr>
<tr>
<td>Total</td>
<td>303</td>
<td></td>
</tr>
</tbody>
</table>

(Source: Author compiled)

Whereas, PB has classified its branches based on the bank’s circular on deposits, loan and advances and profitability etc. The table 3 shows details of classification and number of branches. (Bank Circular 2013)

**Table 3**
Details PB branches

<table>
<thead>
<tr>
<th>Classification</th>
<th>Number of branches</th>
</tr>
</thead>
<tbody>
<tr>
<td>Grade A</td>
<td>49</td>
</tr>
<tr>
<td>Grade B</td>
<td>65</td>
</tr>
<tr>
<td>Grade C</td>
<td>154</td>
</tr>
<tr>
<td>Grade D</td>
<td>43</td>
</tr>
<tr>
<td>Grade E</td>
<td>22</td>
</tr>
<tr>
<td>Total</td>
<td>343</td>
</tr>
</tbody>
</table>

(Source: Author compiled)
But due to the time and other resource factors, the study will consider only North Central Province (NCP) and North Western Province (NWP). The number of the branches of BOC and PB banks located in NCP and NWP shows in table 4.

### Table 4
**Number of branches in NCP and NWP**

<table>
<thead>
<tr>
<th></th>
<th>BOC</th>
<th>PB</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>North Central Province (NCP)</td>
<td>29</td>
<td>27</td>
<td>56</td>
</tr>
<tr>
<td>North Western Province (NWP)</td>
<td>35</td>
<td>32</td>
<td>67</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>64</td>
<td>59</td>
<td>123</td>
</tr>
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</table>

Therefore, this study considers State commercial bank branches of BOC and PB located in NCP and NWP, 64 BOC branches and 59 PB branches as the population. Totaling 123 branches. (Source: PB-web branch net-work, BOC – Diary 2013)

#### 11.2 Sample

The study will select grade A & B branches of BOC and grade C & D branches of PB, because other categories of branches line up in either higher or lower extremes in relation to internal control mechanism. Therefore the selected branches can be identified as medium level functioning branches as well as the branches which have moderate operations of internal control system. Meantime, those branches are located more than 150km far away from the Head offices in Colombo and this can lead to pay less attention by head office for the branches’ internal control operations. So the study will consider the bank branches spread over NCP and NWP as well as grade A and B branches of BOC and grade C and D branches of PB. Then, the sample comprises 36 branches of BOC and 28 branches of PB totaling 64 branches. The sample comprises 52% of the population. (64/123*100=52%)

#### 11.3 Time frame of data:

The data will be obtained for the year 2015

#### 11.4 Data gathering

In this particular study both primary and secondary data will be used.

##### 11.4.1 Primary Data

The researcher will use several tools to collect the primary data. Basically they are questionnaire and structured interview. The survey mainly will conduct using questionnaire. The questionnaires will be administered on managers and secondary officer of the each bank branches. Approximately 128 (64x2=128) respondents will be included the study. Interview also will conduct in collecting some of the data.
11.4.2 Secondary Data
Review of the relevant literature includes newspapers, professional accounting and auditing journals, magazines, internet reports and relevant text books etc.

11.5 Reliability and Validity
Cronbach’s Alpha formula will be used to measure the reliability of the questionnaire.

11.6 Analysis of Data
Collected data will be analyzed through descriptive and inferential statistical techniques using Statistical Package for Social Sciences (SPSS) software package and interpretative explanations.

(a) Descriptive statistics: Mean, Median, Mode, Percentages etc.
(b) Inferential statistics: Correlation & Regression

12. Limitations of the study
Although there are a lot of bank branches in operation in Sri Lanka at present, it will be very hard to attempt cover all these bank branches. Time and financial limitations tended to narrow down the extent and depth of this study. Therefore, the study focused only two state commercial banks and 64 branches mainly locate in two provinces out of nine provinces in Sri Lanka. It is expected however, that the results on the sample will offer approximate conclusions on the State commercial banks in Sri Lanka and will therefore, apply and be generalized.

13. Organization of the study
The study is structured in to five chapters. Chapter one, introduction contains background of the study, the problem statement, research question, objectives of the research, the significant of the study, the profile of state commercial banks, scope, methodology in brief and the limitation of the study. Chapter two is the literature review which includes the definitions of internal control, internal controls objectives, types of internal controls, components of internal control, types of internal controls, internal control limitations and empirical studies relevant to the research. Chapter three dealt with the conceptual framework, variables, hypothesis, operationalization, research design, population under study, sampling techniques, sources of data, research instruments and method of data analysis. Chapter four focuses on data presentation and data analysis. Chapter five the last is about the summary of findings, conclusion and recommendations.
### 14. REFERENCES

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