Impact of Internal Control Components and Effectiveness of Internal Control System with the Moderating Effect of Corporate Governance of Peoples’ Bank in Sri Lanka

C.T. GamageLow\textsuperscript{1} & Lock Teng Keving\textsuperscript{2}

Abstract

Purpose of this study is to examine the impact of internal control components and effectiveness of internal control system with the moderating effect of corporate governance of Peoples’ Bank in Sri Lanka. There are five independent variables namely Control environment, Risk assessment, Control activities, Information & communication system and Monitoring taken in to account, Corporate governance taken as moderating variable and dependent variable of this study is Effectiveness of internal control system. Data was gathered using the questionnaire which was administrated to bank branch managers occupied in Peoples Bank. 173 middle level bank branch managers’ participated in the study. The collected data analyzed by descriptive statistics and inferential statistics. The results presented that there are significant and positive relationship between the internal control components (such as control environment, risk assessment, control activities, information and communication system and monitoring) and effectiveness of internal control system and mean time corporate governance moderates the relationship between internal control mechanisms and usefulness of internal control system. It can be concluded that Peoples Bank management has recognized and practiced the sound internal control system and existing corporate governance for strengthen the system too.

Keywords: Control environment, Risk assessment, Control activities, Information & communication system, Monitoring, Effectiveness of internal control system, Corporate Governance.

1. Background

Having the solid internal control systems in the banks is an essential requirement because they play vital role in the economy, provide various kinds of services to the customers and handle enormous volume of resources every day. Therefore, strong internal control systems confirm the achievement of goals and objectives within bank. This kind of system also help to certify that the bank aligns with laws and regulations and decline the risk of unpredicted damages for bank’s goodwill. Interim it helps to prevent likelihoods of occurring faults and frauds and assists in finding them in timely manner when it occurs. This type of controlling system also may find faults affected by individual disruption, negligence and vague instructions.

Millichamp. (1987, 1996), Basu (2015), present that “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”.

The financial system in Sri Lanka aligns under the Central Bank of Sri Lanka (CBSL) and it comprises 26 Licensed Commercial Banks (LCBs) and other financial institutes. (Central Bank Annual Report, 2017)

\textsuperscript{1} Doctoral Student, Management & Science University, Malaysia, Email: ctgbinga@yahoo.com, Tel. +94718426284
\textsuperscript{2} UTAR University, Email: niveklow@gmail.com
Two state commercial banks operate in Sri Lankan financial system namely Peoples’ Bank (PB) and Bank of Ceylon (BOC) and present study focused only on Peoples’ Bank (PB) which was initiated in 1961. According to bank’s annual report in 2017 Peoples Bank earned Rs.25.9 mn as profit before taxation, Rs.18.2mn as profit after taxation and Rs. 13.0 mn retained profits are with the bank. 737 branches locate all over the country and 8454 employees as well as 18.6 mn customers are breathing with them.

2. Problem Statement

Scholars are pointing out that the vital reason for the most of accounting scandals in last era due to the internal control problems. Internal control is much significant in prevention and detection of frauds and errors in banking sector too. In Sri Lanka, there is better banking structure and in addition more than two thousand different bank branches function around the country. But sometimes, in addition to other sectors there are some indications relate to the deceptions, mishandling and exploitations in this banking sector as well. The evidences can be taken from following Table 1.1.

<table>
<thead>
<tr>
<th>Year</th>
<th>External Frauds</th>
<th>Internal Frauds</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Number</td>
<td>Value</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(Rs. mn)</td>
</tr>
<tr>
<td>2014</td>
<td>3570</td>
<td>684.51</td>
</tr>
<tr>
<td>2015</td>
<td>312</td>
<td>631.43</td>
</tr>
<tr>
<td>2016</td>
<td>236</td>
<td>522.96</td>
</tr>
<tr>
<td>2017</td>
<td>244</td>
<td>36.4</td>
</tr>
</tbody>
</table>

(Source: Peoples’ Bank annual reports 2015, 2016, 2017)

Basel report (1998) reveals that inadequate internal controls move to significant damages for banks. They categorize those drawbacks into five as follows:

- Lack of satisfactory management and administration oversight and failure to progress a strong governing culture inside the bank.
- Insufficient appreciation and valuation of the risk of particular banking actions
- In absence, failure of main governing structures and actions, namely separation of responsibilities, sanctions, verifications, settlements and analyses of operational performance.
- Insufficient mechanisms in conveying messages and information among management inside the bank, particularly issues and problems in upward communication.
- Insufficient or unsuccessful audit programs and monitoring activities.

In this status, Basel framework introduces the 13 principles to evaluate the effective internal control systems including of the components as control environment, risk assessment, control activities, information and communication system and monitoring.

Based on incidences with frauds in Peoples bank, it should be needed to study about practise of proper internal control system. If this situation continuously follows, it will damage the bank’s image, customers’ satisfaction and employees’ welfare, loss of investors, will lead to bankruptcy and lastly the government would be in a great difficulty.

In Sri Lanka, local studies on appraising the internal control systems are limited. Hence, doing a study on discovering smooth running of internal control systems in Peoples bank is vital since the said bank plays major role in Sri Lankan economy and it is reputed state commercial banks in the country. Consequently, it is essential to examine that “Does the Peoples’ bank is practiced internal control system effectively and how corporate governance relates with the system?”

3. Objectives Of The Study

The study focuses to investigate the impact of internal control components on the effectiveness of system of internal control with moderating effect of corporate governance of Peoples’ Bank in Sri Lanka. Specific objectives are identified as follows:
1. To investigate the relationship between control environment and effectiveness of internal control system of Peoples’ Bank in Sri Lanka;
2. To examine the relationship between risk assessment and effectiveness of internal control system of Peoples’ Bank in Sri Lanka;
3. To study the relationship between control activities and effectiveness of internal control system of Peoples’ Bank in Sri Lanka;
4. To find the relationship between information and communication system and effectiveness of internal control system of Peoples’ Bank in Sri Lanka;
5. To find the relationship between monitoring and effectiveness of internal control system of Peoples’ Bank in Sri Lanka;
6. To examine the moderating effect of corporate governance on the relationship between internal control components and effectiveness of internal control system of Peoples’ Bank in Sri Lanka.

4. Literature Reviews

Different scholars are exposed different theories in relation with the internal control system. Gothani (2014) present that Control Theory, Agency Theory and Stakeholders Theory which is more describes with the internal control system. Njeri (2014) expressed that Theory of the firm and Agency Theory is related with internal control system. Ayagre (2014) also discussed the System theory as the most relevant theory for the internal control system. Simply it can present that internal control includes all internal plans, methods and procedures to achieve the organizational objectives and prevent and detect frauds and errors within the firm. Amudo & Inanga (2009), Sultana & Hague (2011), Ofori (2011), Dougles (2011), Frimpong (2012), Gothami (2014), Njeri (2014), Shokoohi1, Saeidi and Malekmahoudi (2015), Kumuthinidevi (2016). Some of empirical studies are illustrates in Table 1.2 as follows:

**Table 1.2 Details of Empirical Studies**

<table>
<thead>
<tr>
<th>Author(s) / Year</th>
<th>Title</th>
<th>Findings</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mawanda (2008)</td>
<td>Identify the effect of Internal Control on Financial Performances in education sector</td>
<td>Internal control and financial performance has a positive relationship.</td>
</tr>
<tr>
<td>Amundo &amp; Inanga (2009)</td>
<td>Evaluate the Internal Control System in public sector projects financed by ADB in Uganda</td>
<td>The absence of some control mechanisms of effective internal control systems. Current control structure is inefficient.</td>
</tr>
<tr>
<td>Sultana &amp; Hague (2011)</td>
<td>Evaluate the effectiveness of the developed Internal Control System of banks in Bangladesh</td>
<td>Some banks in the sample are lacking some control components.</td>
</tr>
<tr>
<td>Fazil, Haron &amp; Jantan (ND)</td>
<td>Evaluate the Internal Auditing Practices and Internal Control System of listed companies in Malaysia</td>
<td>Internal Auditing Practices significantly affect to the value of internal control system</td>
</tr>
<tr>
<td>Douglas (2011)</td>
<td>Effectiveness of internal control system in Greek banks</td>
<td>Recommended to establish internal audit unit in each branch</td>
</tr>
<tr>
<td>William &amp; Kwasi (2013)</td>
<td>Evaluate the Significance of Internal Control System in rural banking sector</td>
<td>The study revealed that strong internal controls exist in banks in Ghana</td>
</tr>
<tr>
<td>Achchuthan, and Kajananthan, (2013)</td>
<td>Corporate Governance practices and Firm Performance: Evidence from Sri Lanka, listed companies</td>
<td>No more significant mean different between the firm performance among corporate governance applies as board committees, board leadership structure, board meetings and proportion of non-executive directors.</td>
</tr>
<tr>
<td>Zhao Xin-gang (2013)</td>
<td>Study on moderating effects of corporate governance between R&amp;D investment and performance</td>
<td>The significant effect with moderating the corporate governance on performance of corporate R&amp;D investment.</td>
</tr>
<tr>
<td>Ayagre, Applian-Gyamerah and Nartey (2014)</td>
<td>Evaluate the Effectiveness of Internal Control System in Ghana banks</td>
<td>The study revealed that solid internal controls exist in banks in Ghana</td>
</tr>
<tr>
<td>Chi-Feng W. (2014)</td>
<td>International diversification and firm performance: the moderating effects of corporate governance</td>
<td>Firms exercise greater achievements in global modification having higher levels of managerial compensation, independent board members and independence of CEO.</td>
</tr>
<tr>
<td>Bayk and Ramezanahtmadi (2016)</td>
<td>The study is to investigate the impact of corporate governance mechanisms on the relation between conservatism and earning management in Tehran Stock Exchange.</td>
<td>Corporate governance variables according to their supervisory role, increase conservatism and reduce the firm’s earnings manipulation</td>
</tr>
</tbody>
</table>
5. Methodology


5.1 Conceptual Framework

5.2 Hypotheses

Five hypotheses are developed to achieve the research objectives of the study.

H1: Control environment (CE) significantly effects on effectiveness of internal control system (EICS) of Peoples’ Bank in Sri Lanka.

H2: Risk assessment (RA) significantly effects on effectiveness of internal control system (EICS) of Peoples’ Bank in Sri Lanka

H3: Control activities (CA) significantly effects on effectiveness of internal control system (EICS) of Peoples’ Bank in Sri Lanka.

H4: Information & communication system (ICS) significantly effects on effectiveness of internal control system (EICS) of Peoples’ Bank in Sri Lanka.

H5: Monitoring (M) significantly effects on effectiveness of internal control system (EICS) of Peoples’ Bank in Sri Lanka.

H6: Corporate governance (CG) moderates the relationship between internal control components (ICC) and effectiveness of internal control system (EICS) of Peoples’ Bank in Sri Lanka

H6a: Corporate governance (CG) moderates the relationship between control environment (CE) and effectiveness of internal control system (EICS) of Peoples’ Bank in Sri Lanka
H$_6$: Corporate governance (CG) moderates the relationship between risk assessment (RA) and effectiveness of internal control system (EICS) of Peoples’ Bank in Sri Lanka

H$_7$: Corporate governance (CG) moderates the relationship between control activities (CA) and effectiveness of internal control system (EICS) of Peoples’ Bank in Sri Lanka

H$_8$: Corporate governance (CG) moderates the relationship between information & communication system (ICS) and effectiveness of internal control system (EICS) of Peoples’ Bank in Sri Lanka

H$_9$: Corporate governance (CG) moderates the relationship between monitoring (M) and effectiveness of internal control system (EICS) of Peoples’ Bank in Sri Lanka

5.3 Population & Sample

Study population is 173 middle level Peoples bank branches spread over seven provinces in Sri Lanka. Study is excluded two provinces which were 30 years under sever war and still in developing stage. Managers are selected as respondents because they have more knowledge about the practice of internal control system in the respective branch.

Questionnaires were distributed among 173 middle level branches of the Peoples Bank (PB), only 168 duly completed questionnaires were returned. Thus, response rate is 97% and acceptable for the present study.

5.4 Data Collection & Analysis

Main instrument of data collection is questionnaire survey. The questionnaire was administered to respective managers of each bank branches and covered 73 questions.

Data analysis is done using Statistical Package of Social Science (SPSS) 21 software. The relevant statistical techniques used are descriptive and inferential statistics techniques.

6. Results And Discussions

6.1 Demographic Factor Analysis

Based on the results 71% of respondents represent more than ten years work experience. And sample indicated that 49% of the respondents are male and 51% are represented by female respondents. Out of 168 respondents, majority of respondents have degrees (60%).

6.2 Descriptive Statistics

Based on descriptive statistics, Mean value for all independent variables, moderating variable and dependent variable is more than 4, this mean score belong to Mean > 3, thus this finding is suggested that respondents most agree that they are having effective internal control system and good corporate governance in Peoples’ Bank.

6.3 Correlation Analysis

The correlation results for all the independent variables are significant with the dependent variable. There is a significant and positive relationship between CE, RA, CA, ICS, M, CG and EICS (r = 0.613, 0.749, 0.734, 0.648, 0.714, 0.545 respectively.) with the p value < .05 for all variables. Six variables point to a statistically significant relationship with dependent variable, Effectiveness of Internal Control System (EICS) as their sig values are lesser than 0.05.

All variables are significant according to analysis. This results support the first five hypotheses such as H$_1$: Control environment (CE) significantly affects on effectiveness of internal control system (EICS) of Peoples’ Bank in Sri Lanka, H$_2$: Risk assessment (RA) significantly affects on effectiveness of internal control system (EICS) of Peoples’ Bank in Sri Lanka, H$_3$: Control activities (CA) significantly affects on effectiveness of internal control system (EICS) of Peoples’ Bank in Sri Lanka, H$_4$: Information & communication system (ICS) significantly affects on effectiveness of internal control system (EICS) of Peoples Bank in Sri Lanka, H$_5$: Monitoring (M) significantly affects on effectiveness of internal control system (EICS) of Peoples Bank in Sri Lanka. Accordingly, the first five specified objectives are achieved.

6.4 Regression Analysis

6.4.1 The impact of the Internal Control Components on the Effectiveness of Internal Control System.

The impact of the independent variables on the dependent variable tested using multiple regression analysis.
According to the regression results the $R^2$ value is 0.704. It means 70.4% variation of EICS can be explained by the predictors of control environment, risk assessment, information & communication system, control activity, and monitoring. ANOVA results shows that the significance value is 0.000 which is less than 0.05 this indicates that overall regression model is indicated that all independent variables are explaining that there is a significant relationship with dependent variable. Hence this model is considered as a fit model. Beta values for CE, RA, CA, ICS and M are 0.152, 0.286, 0.191, 0.159, 0.215 respectively with p <0.05. This result supported first five hypotheses. Multiple regression analysis was used to test moderating effect of internal control components with effectiveness of internal control system of Peoples bank in Sri Lanka.

6.4.2 The moderating effect of Corporate Governance on the relationship between Internal Control Components and Effectiveness of Internal Control System.

In this section it is separately tested the moderating effect of Corporate Governance on the relationship between internal control components and effectiveness of internal control system which is related with the five Hypotheses of $H_6$.

6.4.2.1 The moderating effect of Corporate Governance on the relationship between Control Environment and Effectiveness of Internal Control System

To test whether the corporate governance moderates the relationship between control environment and effectiveness of internal control system, a hierarchical multiple regression analysis was performed. In the first step, all predictor variables (CE, RA, ICS, CA, M) and moderator variable (CG) were regressed for EICS. The result shows that these variables have ability to explain for a significant amount of variance in EICS (Adj. $R^2 = .703$, $F (6, 161) = 66.98$, p < .001). Moreover, the results reveal that all the coefficients of predictor variables and moderator are significant at 0.05.

In the second step, the interaction term between control environment and corporate governance (CExCG) were added to the model. The result indicates that the model has ability to describe a significant amount of the variance in effectiveness of internal control system ($\Delta R^2 = .011$, $\Delta F (1, 1606) = 10.37$, p<0.05). In this model, all the individual coefficients are significant except the coefficients for control environment ($\beta=0.376$, p>0.05) and cooperate governance ($\beta= 0.344$, p>0.05). This signifies that corporate governance moderates the relationship between control environment and effectiveness of internal control system. The coefficient of interaction term ($\beta=0.155$, p<0.05) shows an enhancing effect that corporate governance has strengthened the relationship between control environment and effectiveness of internal control system.

6.4.2.2 The moderating effect of Corporate Governance on the relationship between Risk Assessment, Control Activities, Information and Communication System, Monitoring and Effectiveness of Internal Control System

As mentioned previously the same method is followed to examine, other four Hypotheses ($H_6b$). The moderating effect of Corporate Governance on the relationship between Risk Assessment and Effectiveness of Internal Control System and the result shows that these variables have ability to explain for a significant amount of variance in EICS (Adj. $R^2 = .703$, $F (6, 161) = 66.98$, p < .001). Moreover, the results reveal that all the coefficients of predictor variables and moderator are significant at 0.05.

Same as in the second step, the result indicates that the model has ability to describe a significant amount of the variance in effectiveness of internal control system ($\Delta R^2 = .019$, $\Delta F =11.28$, p<0.05). In this model, all the individual coefficients are significant except the coefficients for risk assessment ($\beta= -0.070$, p>0.05) and cooperate governance ($\beta = -0.118$, p>0.05). This signifies that corporate governance moderates the relationship between risk assessment and effectiveness of internal control system. The coefficient of interaction term ($\beta =0.080$, p<0.05) shows an enhancing effect that corporate governance has strengthen the association between risk assessment and effectiveness of internal control system.

($H_6c$) The moderating effect of Corporate Governance on the relationship between Control Activities and Effectiveness of Internal Control System and the result shows that these variables have ability to explain for a significant amount of variance in EICS (Adj. $R^2 = .703$, $F (6, 161) = 66.98$, p < .001). Moreover, the results revealed that all the coefficients of predictor variables and moderator are significant at 0.05.
In the second step, the result indicates that the model has ability to describe a significant amount of the variance in effectiveness of internal control system (ΔR² = .022, ΔF = 13.161, p<0.05). In this model, all the individual coefficients are significant except the coefficients for control activity (β =-0.150, p>0.05) and cooperate governance (β = -0.141, p>0.05). This signifies that corporate governance moderates the relationship between control activities and effectiveness of internal control system. The coefficient of interaction term (β =0.085, p<0.05) shows an enhancing effect that corporate governance has strengthen the connection between control activities and effectiveness of internal control system.

(H6c) The moderating effect of Corporate Governance on the relationship between Information and Communication System and Effectiveness of Internal Control Systemand the result shows that these variables have ability to explain for a significant amount of variance in EICS (Adj. R² = .703, F (6, 161) = 66.98, p < .001). Moreover, the results revealed that all the coefficients of predictor variables and moderator are significant at 0.05. In the second step, the result indicates that the model has ability to describe a significant amount of the variance in effectiveness of internal control system (ΔR² = .020, ΔF = 11.714, p<0.05). In this model, all the individual coefficients are significant except the coefficients for information and communication system (β =-0.243, p>0.05) and corporate governance (β = -0.123, p>0.05). This signifies that corporate governance moderates the relationship between information and communication system and effectiveness of internal control system. The coefficient of interaction term (β =0.084, p<0.05) shows an enhancing effect that corporate governance has strengthen the connection between information and communication system and effectiveness of internal control system.

(H6d) The moderating effect of Corporate Governance on the relationship between monitoring and effectiveness of internal control systemand the result shows that these variables have ability to explain for a significant amount of variance in EICS (Adj. R² = .703, F (6, 161) = 66.98, p < .001). Moreover, the results revealed that all the coefficients of predictor variables and moderator are significant at 0.05. In the second step, the result indicates that the model has ability to describe a significant amount of the variance in effectiveness of internal control system (ΔR² = .023, ΔF = 14.194, p<0.05). In this model, all the individual coefficients are significant except the coefficients for monitoring (β = -0.125, p>0.05) and cooperate governance (β = -0.144, p>0.05). This signifies that corporate governance moderates the relationship between monitoring and effectiveness of internal control system. The coefficient of interaction term (β =0.090, p<0.05) shows an enhancing effect that corporate governance has strengthen the connection between monitoring and effectiveness of internal control system.

7. Conclusion

Under the data analysis part of the research, data which were collected from 168 respondents by using questionnaires and analyzed by using SPSS 21. The reliability for all variables basedon Cronbach’s Alpha Value is more than 0.7. Descriptive statistics are used to identify the basic nature of the research variables. According to that Mean is deviated from 3-4. It means all respondents are agreed that five independents variables need to exit to achieve the effectiveness of internal control system. Then, it is conducted the correlation analysis to measure the relationship between two variables. When consider the results of correlation analysis it is revealed that there is a significant and positive correlation for all independent variables with dependent variable. Finally, multiple regression analysis used to test the six hypotheses, it is discovered that all independent variables have significant impact for dependent variable and corporate governance moderate the relationship between internal control components and effective internal control system. Based on results obtained, it can conclude that Peoples’ Bank management has established strong internal control system and they are practiced it effectively and bank’s cooperate governance plays major role to its success. Due to the heavy day to day work load and the reliance on subordinates and inherent limitations as collusion, human mistake may be reasons for present frauds in the bank.

Acknowledgment

I would like to take this opportunity to acknowledge those who contributed to this study immensely. Firstly like to express my heartfelt thanks to my supervisor Prof. L.T. Kevin Low, Uttar University, Malaysia. I would like to remind all academic and supportive staff in Management and Science University, Malaysia as well as Colombo Center, Sri Lanka for their valuable support and corporation given. Then my appreciation goes to industry people for their support given in questionnaire development and data collecting process. Special thanks to all my staff, family and friendswho I cannot mention one by one for their encouragement, support and helpful comments. I sincerely thank you all.
References


Douglas, N. O.,(2014), Internal Control and Its Contributions to Organizational Efficiency and Effectiveness: A Case Study of Eco bank Ghana limited, Master research.


Millichamp, A.H., (2002), Auditing, McGraw Hill Company, USA


Sri Lanka Auditing Standards, (2015), Institute of Chartered Accountant of Sri Lanka


