

Factors Influencing the Effectiveness of Internal Control Systems: A Case Study of Commercial Banks in Ghana

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ABSTRACT: *This study examines the factors influencing the effectiveness of internal control systems in the banking industry in Ghana. The study adopted the quantitative approach using the survey design to obtain data from 130 participants from selected Commercial banks in Ghana. For data analysis, Statistical Package for the Social Sciences (SPSS version 24) was utilized. A number of descriptive statistical tests and in a combination of Exploration Factor Analysis (EFA) and Confirmation Factor Analysis (CFA) was used. The statistical tools used include mean, standard deviation, frequency and Ordinary Least squares (OLS) regression. The study found critical factors driving Internal Control system (ICS) within the banking sector in Ghana to include the environment control, risk assessment, control activities, information communication technology (ICT), and monitoring activities. The study discovered that some of the ways required to improve ICS include consistent revision of policies and procedures as well as provision of adequate training and communication on ICS to staff. It is also recommended that employees should be involved in the development of control mechanisms to make them own the system which will promote its enforcement to influence operational efficiency.*

KEYWORDS: internal control system, commercial banks, Ghana, effectiveness

INTRODUCTION

The practice of internal control system in organizations have become an integral and very common element in organizations unlike in the past decades when simplest legal systems property ownership was widespread (Alexander, 2019). For effective and efficient monitoring and evaluation of business performances, internal control systems play critical roles. Internal control systems therefore cannot be underestimated as it serves as one of the lifeblood of most organisations especially ensuring effective and efficient use of both non-current and current assets (Crosman, 2018). Internal control systems (ICS) are defined as a properly structured and coordinated means established by the entities to ensure the existence of adequate control measures that enable financial and operational activities of the entity to be pursued with a high level of integrity (Asiligwa, 2017).

Research has shown that effective and efficient internal controls improves organisational performance and benefits firm's managers and investors (Taiwo, 2016). Again, it has been found that a sound of internal control systems can help the organisations to prevent frauds, errors and mitigate or minimise wastage (Nyakundi, 2014). The study objective was to examine various factors influencing ICS in the banking industry in Ghana. Specifically, the study aimed to determine the factors or constituents of internal control system (ICS) of the universal banks in Ghana and its impact on operational efficiency.

Problem Statement

In recent times, the issues of effectiveness and efficiency in the operations of public sector institutions has taken a center-stage in the public discourse (Shariman, Nawawi, and Salin, 2017). The directors and managers of these institutions are expected to be accountable for the public resources entrusted unto their care (Ibrahim, 2017). However, the regularity of fraud and constant misappropriation of funds by both internal staff and some customers is creating fear, anxiety, and a loss of confidence in the minds of the public generally. Earlier, Ayagre and Osei (2015) opined that a well-established internal control system leads to increase in the confidence level of the stakeholders and it is required by directors and management to establish effective internal control system that complement the mission and the vision of the organisation. In the developed countries for example, there have been extensive studies conducted on the adoption, effectiveness and implication of internal controls (Karim, Nawawi, & Salin, 2018; Johnston & Zhang, 2018).

In Sub-Sahara Africa including Ghana, several studies have also been carried out to examine the adoption of ICS, its effectiveness and implication of internal auditing, internal control among others (Ama, 2012; Ayagre & Osei 2015; Asiligwa, 2017). However, the problem of frauds and other malpractices among staff and customers still exit in many of the banks in Ghana. Looking at the critical functions of the banking industry in the socio-economic development and in particular, the financial sector, it becomes necessary to delve into the factors influencing the effectiveness of ICS on the business operations at the commercial banks in Ghana using the Committee on Sponsoring Organization (COSO) of the Treadway Commission's five components framework which has been approved as a standard framework for measuring the effectiveness of ICS in organisations. The purpose of the study was to assess the effectiveness of internal control system on business operational efficiency in the banking sector of Ghana.

This study is justified and significant because in the corporate environment, it is necessary for management of organisations to maintain an enhanced controlled environment, and the banking sector is not exception to this. This could be done through the concerted effort of both management and non-management employee to devise a mechanism and culture that supports the right attitude to internal controls. Again, this study would also be beneficial not only to the industry players but the academia as well as other institutions since the issue of internal controls cut across every aspect

of organisations. To prevent anticipated fraudulent activities that might occur in any organisation, understanding of various internal control mechanism is important.

LITERATURE REVIEW

Controls have long been a central element of managerial activity in organizational settings, even in the informal business setting with limited structures, controls do exist. Nonetheless, the nature and make-up of the control activity has metamorphosed continually over time (Keune and Keune, 2018). The closeness of the union between science and business makes it very practicable to ensure mechanisms are developed, monitor institutions to promote the achievement of better outcome. (Atu, Adeghe, and Atu, 2014). With regards to internal control system, one dominant and widely adopted model is the COSO framework.

It has been found that the collapse of Enron, WorldCom and a series of financial scandals led to the public outcry for better corporate governance and more effective IC. In response, various IC guidelines have been developed and recommended for practice in many of the developed countries, such as the Enterprise Risk Management-Integrated Framework by COSO (2011) in the United States (US); the review of Turnbull Guidance and Combined Code (2005) in the United Kingdom (UK); and the Discussion Paper on Risk Management and Internal Control by the Federation des experts Comptables Europeans (FFE), (2005) in Europe.

Studies have shown that quite a number of different perspectives on the factors of internal control system abound. Kenneman (2014) posits that the constituent elements of the ICS include monitoring activities, control environment, as well as accounting system. The new auditing standard, SAS 55 provides that the constituents of ICS involves the control environment, accounting information system, and monitoring procedures. Aside the factors provided by different authors above, COSO (2013) advanced the most detailed ICS factors although they are not technically different from the ones given above but it builds up on the earlier ones. The ICS factors provided by the COSO (2013) are five which include control environment, risk management, control activities, information and communication as well as monitoring activities. These factors are examined below:

Control Environment (CE)

This aspect IC element refers to the very top level the organization and the extent of control consciousness within the organization which is usually influenced by the top hierarchy of the organization (Gao and Zhang, 2019). The control environment usually involves the systems and strategies, as well as the ethical standards established and applied by top management to affect other level of the organizations Gao and Zhang, 2019). It has been found that the control

environment serves as the bedrock of ICS and found at the top level based on which the quality of the organization control activity and its degree of application at all levels is formed.

It has also been noted that the control environment is being influenced by the culture of organisation and it significantly affect how organizational activities are structured (Ngudu, 2013). The reason is that an entity's objectives can only be achieved if top management establish and practice good ethical values which has the highest level of integrity (Kaplan, 2013). A study has shown that the control environment has various dimensions, however, there are unending debates about these dimensions. For example, Gyasi (2013) has limited his operationalization of the control environment to three areas; that is philosophy and operating style of the directors and management; the organisational structure of the entity and method of assigning authority and responsibility, and finally, director's methods of imposing control including internal audit function.

Risk Assessment (RA)

Risk assessment relates to mechanism adopted by an entity's management to ascertain existence or presence of risk and its degree of severity, as well as strategies to monitor and resolve the risk (De Simone, Ege, and Stomberg, 2015). For instance, risk assessment may involve series of different activities within the organization such as an assessment of possible impact of failure in supply chain activities due to undue delays on operational activities, the potential risk exposure which may arise due to changes in prices, and potential risk the entity may face due to errors in financial records or non-existence of financial records (Isaac, 2014).

Studies have shown that for organisations to be effective, risk management and attitude is paramount (Ngari, 2017, Asiligwa, 2017). It is the organisations' attitude to risk that pave way of its manageability and that, one of the key mechanisms or criteria for ensuring proper risk management is strict adherence to ICSs put in place. It has been found that corporate objectives and the environment in which institutions operate are constantly evolving in the modern world (Taiwo, Agwu, Edwin, 2016). As a result, the risk facing organisations are continually changing and thus, a successful system of IC must therefore be responsive to such changes. Effective risk management and IC therefore reliant on a regular evaluation of the nature and extent of risk (Asiligwa, 2017).

Control Activities (CA)

Essentially, the control activities of ICS are made up of the basic function and practices which an entity implements in it day to day activities. These functions and practices involve both tangible and intangible operational activities, some of which are production, sales, security, accounting, and customer service (Ali, 2013, Fourie, & Ackermann, 2013). Thus, actions taken by management to establish policies, structures, and procedures to ensure that the risks identified are mitigated if

not entirely eliminated are part of the control activities. The description of an employee's task and separation of duties are an integral element of control activities.

It has been noted that the control activities must permeate every level of the organisation from top to the lowest level of the organisation to ensure all activities and procedures are captured (COSO, 2013, Arham, 2014). To achieve these, Arham states that the organisation must select and develop control activities that contribute to the mitigation of risk to a level acceptable by the organisation. Additionally, the organisation must select and develop control activities over technology to support the achievement of objectives and finally, the organisation must implement control activities with regards to what is expected (Arham, 2014).

Information and Communication (IC)

Information and communication is another component of COSO model (Treadway, 2014). The information technology (IT) component of COSO includes the business applications of IT as necessary business tools (COSO, 2013, Taiwo, Agwu, Edwin, 2016). Studies have shown that the information and communication process involve the design of information system that generates operational, financial and compliance-related information to ensure smoothly control of activities (COSO, 2013, Eniola, Akinselure, 2016).

Information must relate internally to operations and external influences that are likely to impact the organisation. This requires relaying information in every clear and systematic manner to ensure that employees at all levels of the organisation understand their responsibilities with regards to internal control (Taiwo, Agwu, Edwin, 2016). That is, information about daily activities must flow across the organisation from employees who develop the information to those who need the information; and as problems occurs and identified at the lower levels of the organisations, it expected that the information is allow to flow back to those who are responsible for making the necessary corrections for managers to receive the needed information on time (COSO, 2011, COSO, 2013).

Monitoring Activities (MA)

Studies have shown that monitoring is another component of the COSO integrated framework that includes evaluating the functioning of the framework for corrective measures (Feng, Li, McVay, & Skaife, 2015). The existence of control systems is not sufficient to guarantee that the objectives of an organisation would be achieved. According to COSO (2013), internal control is a means to an end. To ensure efficient performance of the control systems, there must be a continuous evaluation to ensure that it is functioning as planned. These monitoring activities can be done separately or in combination with other activities.

REVIEW OF EMPIRICAL STUDIES

As noted recently by some scholars and writers (e.g., Asiligwa, 2017, Crosman, 2018), ICS is a topical issue following global fraudulent financial reporting and business failures in developed under developed countries. A study conducted in Korea by Yu and kang (2015) for which they examined the relationship between weaker ICS and opportunistic managerial earnings for mutual savings banks. The findings revealed that firms with a weaker ICS are linked with higher discretionary loan loss allowance and these firms are more likely to report false financial statements. Study investigated the role of ICS in the financial performance of not for profit making organisation in Uganda (see, Etengu & Amony, 2016). The result has shown a significant relationship between control environment, control activities, monitoring, and financial performance. In view of this, they recommended that control elements should be enhanced in order to further improve the financial performance of International Union for Conservative of Nature.

Another study aimed to establish the influence of ICS on the financial performance of KFA LTD, the result indicate that staff have not been trained well to implement accounting and financial management systems; and that the security systems do not identify and safeguard the organisational assets. They have also found that there is a positive relationship between ICS and financial performance of KFA Ltd (Magu & Kibati, 2016).

To determine the effects of ICS on the financial performance of companies listed in kenya, Kinyua analysed control environment, internal audit, risk management, IC activities and role of corporate governance controls on the financial performance. The study concluded that there is a significant association between internal control environment (ICE) and financial performance. They recommended that ICE should be enhanced to further improve the financial performance of these companies listed in the Nairobi Securities Exchange (Kinyua, 2016).

In 2012 for example, Udoayang and Ewa (2012) examined the impact of IC design on bank's ability to investigate staff fraud and life style and fraud detection in Nigeria. After using four point Likert scale to collect data from thirteen banks, it was found that IC design influences staff attitude towards fraud, and was recommended that a strong IC mechanism should be put in place to curb the situation. Another study by Atu (2011) also evaluated the effectiveness of ICS in five (5) Nigerian banks and data obtained were subjected to vigorous analysis. It was found that the presence of ICS in the banks has provided reasonable assurance regarding the effectiveness and efficiency of operations of the banks in Nigeria. The study also found the reliability of financial and management reporting and guarantees compliance with applicable laws and regulations.

Also, a study conducted by Tunji (2013) where he examined the "Effective Internal Control system as Antidote for Distress in the Banking Industry in Nigeria" in which a survey research was used

to collect data. Fifty-six workers of commercial banks were sampled using questionnaire. After testing four research hypothesis using T-square statistic at a significant level of 5%, it was found that the existence of effective ICS has a positive impact on accuracy and reliability of records of the banks. Also, Eko and Hariyanto (2011) conducted a study on the relationship between ICS, Internal audit (IA) and organizational commitment with good governance in Indonesia local government of central Java province. Questionnaires were administered in 35 districts of the Java province. The result showed that internal control had positive significant relationship with good governance.

In 2011 for instance, Saha and Arifuzzaman examined management disclosure on IC in Annual Reports using the Bangladesh banking sector as a reference point. It has been found that there are some inherent limitations of ICs and these limitations and or challenges are also recognized in the respective annual reports. The reports further indicated that Twenty-Nine (29%) of the respondents said that the system's designs provided only "reasonable assurance" of meeting stated objectives. They contended that ICs cost should therefore not exceed anticipated benefits (Saha & Arifuzzaman, 2011). Another study conducted to identified the major challenges that hinder the effective implementation of the ICS of Agricultural Development Bank in Ghana using the Brong Ahafo region as a case study, the result shows that the desire of management to accomplish certain reporting results, confusion over who is in charge of IC, indefinite segregation of duties among others are challenges inherent in the implementation of effective ICS of the banks (Ntim-Sarpong, 2012).

As noted by Aduam (2015), the importance of ICS in an organization cannot be underrated. Aduam findings revealed that the effectiveness of an ICS in an organisation is a pre-requisite for the achievement of the goals and the objectives of an organization. This view was accepted by Ama (2012). Ayagree and Osei (2015) however also noted that the role of an ICS in an organization is that, the breakdown of an ICS has a high probability of causing its failure. According to Ofori (2011), the existence and effectiveness of IC is a pre-requisite and key for efficient and effective administration of an organization. All these emphases on the importance and challenges of ICS empirically justified the need to delve into it to ascertain its effectiveness on business operations.

METHODOLOGY

The study adopted the quantitative approach by using the survey strategy in collecting data, and it is explanatory in nature. Studies have shown that quantitative research approach using survey method provides precise and accurate data, test and validates existing theories, its findings are relatively independent from the researcher, and the research findings are easily replicated (Singleton & Straits, 2018).

Population of the Study and Data collection Techniques

The population of the study was staff of universal banks in Ghana. 120 of the staff of these banks were sampled by the use of convenience sampling technique. Close-ended questionnaire was used in this study by employing the use of technique known as a Likert Scale (five-point Likert Scale), and questions consisted of various statement relating to constituents of internal control system based on the COSO framework and business operational efficiency which the respondents were made to answer whether they agreed or disagreed with a particular statement for which the responses ranges from ‘strongly agree’ to ‘strongly disagree. (Jensen & Laurie 2016, Creswell, 2013). After the scale has been administered, each response option was assigned number for scoring purposes ranging from 1-5.

Data Analysis and Interpretation

The researcher used Microsoft Excel Packages and Statistical Product for Service Solutions (SPSS) version 24 for the data entry and its analysis. Data obtained on the variables were analysed by means of both descriptive and inferential statistics. Specifically, given the nature of the objectives, descriptive analytical techniques via frequency, mean and standard deviation were used. The β values, coefficient of determination (R square), and the corresponding significant levels (p-values) were used to analyse and interpret the result of the regression analysis.

Table 1. Descriptive Statistics Result of ICS Factors or Constituents

Descriptive Statistics	N	Mean	SD
Control Environment (CE)			
10. The department demonstrates commitment to integrity and ethical value	120	4.33*	.47
11. The department’s decision always are in the interest of the wider stakeholders including “The Bank”	120	4.44*	.49
12. The department’s management establishes, with top management oversight, structures and reporting lines	120	4.10	.31
13. Management have appropriate authorities and responsibilities in the pursuit of the department’s objective	120	4.10	.56
14. The department holds individuals accountable for their internal control responsibilities in pursuit of objective	120	3.56	.95
Risk Assessment (RA)			
15. The department specifies objectives with sufficient clarity	120	4.22*	.41
16. The clarity of objectives enables the identification and assessment of risks	120	4.21*	.41
17. The department identifies risk to the achievement of its objectives	120	4.21*	.41
18. The department considers the potential for fraud in the assessment of risks to the attainment of objective	120	4.22*	.41
19. The department identifies and assesses changes that could significantly impact the system of internal control	120	4.22*	.41
Control Activities (CA)			
20. The department selects and develops control activities	120	4.10	.57
21. For mitigation of risks, the control activities contribute to that	120	4.33*	.47
22. The department deploys control activities as manifested in policies that establish what is expected	120	4.55*	.49
23. There is a periodic review of the control activities by the external reviewers	120	4.45*	.68
Information Communication Technology (ICT)			

24. The department obtains and guarantees information on internal processes	120	3.78	.41
25. The department uses relevant and quality information to support the functioning of other components internal control	120	3.89	.56
26. The department frequently communicates information including objectives and responsibilities for internal control purposes	120	4.00	.82
27. The communications are necessary in supporting the functioning of other components of internal control	120	4.22*	.62
28. There is emergency contingency plan that would guide the department on how to continue operations	120	4.44*	.49
29. Access to computer system is limited to authorized individuals	120	4.24*	1.22
Monitoring Activities (MA)			
30. The department evaluates internal control deficiencies in a timely manner	120	3.99	.47
31. The department communicates internal control deficiencies to staff in a timely manner	120	3.88	.73
32. The department undertakes corrective actions in response to deficiency	120	4.00	.94
33. The corrective actions processes in communicating internal control deficiencies deeply involve senior management of the department	120	3.78	.77
<i>Overall Mean</i>		<i>4.13</i>	

Source: Field data (2021)

Table 2 KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.575
Approx. Chi-Square		438.406
Bartlett's Test of Sphericity	df	10
	Sig.	.000

Source: Field data (2021)

The Kaiser-Meyer-Olkin (KMO) and the Bartlett's Test are presented in Table 2. The result shows that the KMO measure of sampling adequacy was .575, which is greater than the recommended threshold of 0.5; and the Bartlett's Test of Sphericity was significant ($p < 0.000$) for the 24 items (representing five ICS variables or constructs), showing the appropriateness of the factor analysis.

Table 3 t test Result on ICS Factors or Constituents

	Test Value = 120					
	T	df	Sig. (2-tailed)	Mean Difference	95% Confidence Interval of the Difference	
					Lower	Upper
Control Environment (CE)	-698.296	119	.000	-99.44167	-99.7236	-99.1597
Risk Assessment (RA)	-844.984	119	.000	-98.89167	-99.1234	-98.6599
Control Activities (CA)	-685.375	119	.000	-102.55000	-102.8463	-102.2537
Information Communication Technology (ICT)	-355.422	119	.000	-95.40833	-95.9399	-94.8768

Monitoring Activities (MA)	-587.135	119	.000	-104.34167	-104.6936	-103.9898
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Source: Field data (2021).

Table 3 above shows the t test result on each ICS indicator or factor, it was found that all the items were significant at $[p < 0.05]$. This is shown as $[CE = df = 119, t = -698.296, p < 0.05]$; $[RA = df = 119, t = -844.984, p < 0.05]$; $[CA = df = 119, t = -685.375, p < 0.05]$; $[ICT = df = 119, t = -355.422, p < 0.05]$; and $[MA = df = 119, t = -587.135, p < 0.05]$.

In light of this, the mean difference result shows that the most dominant ICS indicator is ICT, followed by RA, next is CE and the least represented is MA. This shows that ICT and RA are critical in ensuring effective ICS within the banking sector of Ghana. This result also depicts low level of MA within the operational lines of banking sector of Ghana.

FINDINGS

The importance of ICS within the banking sector of Ghana cannot be downplayed in relation to its effectiveness and efficiency. Any Internal Control System (ICS) that is effective and efficient aid in fraud detection, monitoring of work and maintained of staffs within the required level of organizational growth and development.

The study found critical factors driving ICS within the banking Sector in Ghana. This includes environment control, risk assessment, control activities, information communication technology and monitoring activities. This implies that the banking sector in Ghana most often shows significant level of commitment to integrity and ethical values, consider interest of majority of the stakeholders, identification to risk to achievement of overall study objectives, risk fraud potential in risk assessment, employment of risk mitigation strategies, periodic review of procedures and processes etc.

The study also found that all the five principal internal control factors are very important influencing the business operational efficiency of the banking sector in Ghana. It is thus, concluded that internal control must be effectively managed in this sector to enhance its operational efficiency. It is also concluded that management of these banks at large must regularly review its internal control policies, as well as providing adequate training and communication of internal control system to staff.

RECOMMENDATIONS:

For Management Action

It is recommended that the Management of the universal banks take adequate steps to ensure that the internal control architecture is regularly reviewed in an appropriate timely interval since the constituents of the control system is highly influential in achieving an overall business operational efficiency.

It is also recommended that management of these banks are re-strategize and adopt mechanisms to ensure that the overall internal control framework is well communicated to the employees. Further, the employees must be adequately trained and resourced on modalities to effectuate the control measures.

It is also recommended that management involve employees in the development of systems to improve the existing internal control mechanisms. In doing so, the employees will feel involved and own the process which will trigger their interest to promote its enforcement to affect the operational efficiency of the bank.

For Future Research

it is recommended that future studies focus attention on investigating the effect of internal control system on the operational efficiency of the commercial banks in Ghana to ascertain if there are any similarities with the outcome of this study or otherwise.

It is also recommended that future studies consider investigating into the effect of internal control system on the security of assets of the commercial banks in Ghana's financial sector.

CONCLUSION

Per the outcome of the study, it is evident that the internal control system is collectively made up of several factors. However, it is found that ICT, Risk Assessment, and Control Environment as very dominant factors in the internal control system. It is therefore concluded that ICT, Risk Assessment, and Control environment should not be downplayed in the internal control system. However, the other issues of internal control in respect of Control and Monitoring Activities should not be neglected but be improved to avert the risk of affecting the entire internal control architecture.

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