

EFFECT OF INTERNAL CONTROL SYSTEMS ON BUSINESS OPERATIONAL EFFICIENCY OF COMMERCIAL BANKS IN GHANA

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ABSTRACT

The study investigates the impact of internal control systems on the operational efficiency in the banking sector of Ghana. The study adopted the quantitative approach using the survey design to obtain data. The study used primary data which were obtained from the field with structure research questionnaire. Both descriptive analytical techniques and inferential technique of regression were used to analyze data with the aid of SPSS version 24. A number of descriptive statistical tests and in a combination of Exploration Factor Analysis (EFA) and Confirmation Factor Analysis (CFA) were used. The statistical tools used include mean, standard deviation, frequency and Ordinary Least squares (OLS) regression. The study found that all the internal control system indicators such as environment control, risk assessment, control activities, information communication technology and monitoring activities exert significant influence on business operational efficiency in the banking sector. Generally, the study discovered that an efficient internal control systems impact positively on the operational efficiency in the banking sector, thus reducing malfeasance and misuse of stockholders funds.

Keywords: Internal control, Operational efficiency, Commercial Banks, Ghana.

INTRODUCTION

For effective and efficient monitoring and evaluation of business performances, internal control systems play critical roles and 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). Study has shown that internal controls are indispensable piece of any organisation's financial and business approaches and systems (Ngari, 2017), thus, an effective and efficient internal controls improves organisational performance and benefits firm's managers and investors (Taiwo, 2016). Studies have revealed that internal control process is designed to provide reasonable assurance regarding the achievement of goals and objectives in the following areas: effectiveness and efficiency of operations, taking into consideration, reliability of financial reporting and compliance with applicable laws and regulations (Eniola & Akinselure, 2016, Shariman, Nawawi, & Salin, 2017).

It has been found that a system of internal control (IC) that is effective and efficient is a critical component of bank management and a foundation for the safe and sound operation of banking organisations (Kinyua, Gakure, Gekara & Orwa, 2015). Developing efficient internal controls is considered as one of critical issues regarding the sustainable development of enterprises. Many scholars (e.g., Ngari, 2017, Tan, 2016, Asiligwa, 2017) opined that the establishment of system of internal control in an organisation is the responsibility of directors and managers; however, it has been observed that it is a difficult task for corporate executives to design and operate the internal

control systems with management policies which is scientifically designed, operated in a consistent and efficient manner. Thus, this study becomes imperative in assessing the effect of internal control systems (ICS) in the business operational efficiency in the banking sector of Ghana.

PROBLEM STATEMENT

The issue of effectiveness and efficiency in the public interest organisations have received well-recognition among the scholars and investors (Johnston & Zhang, 2018). Effective and efficient internal control systems in place gives an assurance of public purse and investors' funds being protected and utilized in accordance with a laid down procedures. In Sub-Sahara Africa including Ghana, several studies have been carried out to examine the adoption, effectiveness and implication of internal auditing, internal control among others (Ama, 2012; Ayagre & Osei 2015; Asiligwa, 2017) on operational efficiency; however, the key components of internal controls were not aligned to the efficiency level in the operational space of the universal banks.

Looking at the critical functions of internal controls, it becomes necessary to delve into the effectiveness of ICS at the various operational space 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 main purpose of this study was to investigate the impact of internal control systems on business operational efficiency in the banking sector of Ghana.

LITERATURE REVIEW

Various elements/concepts of ICS and empirical studies from scholars across the globe were examined as a review process. Conceptually, different schools of thought have advanced different definitions to the term internal controls. One of these schools of thought is Aguilera, Judge, and Terjesen (2018) who have provided one of the simplest but deeper definitions of the concept. According to these scholars, ICS basically referred to as a critical corporate governance function for effective management of an organization. The authors indicate that internal control is the collective mechanism of control structures established by management to guarantee that the operational activities of the entity are carried out in an effective and efficient manner, and that, the financial statements are reliable, and there is a full compliance to applicable laws and regulations. In ensuring the compliance of rules and regulations, certain factors which were generally accepted globally as a constituents of ICS should be in place. These constituents are the main yardstick for measuring the effectiveness and efficiency of business operations. The major constituents of ICS includes the control environment, risk assessment, control activities, information and communication and finally the monitoring activities. According to scholars, ICS is effective if these components are in place and working accordingly (Gao & Zhang, 2019). Apart from these constituents, many writers opined that all types of control mechanism should be put in place by management to ensure effective and efficient operation of ICS (Asiligwa, 2017, Ngari, 2017).

Researchers and scholars have found that ICS operate at different levels of effectiveness, and that a system of control is effective when it fulfils all the elements of COSO as published in 1992 and 2013 edition. According to COSO (2013), the five elements of internal control (IC) must be present, functioning to provide a "reasonable assurance" that relevant objectives are met. The meaning of the operational words are as follows: "present and functioning" refer to the determination that components and relevant principles exist in the design and implementation of

the system of internal control to achieve specified objective and also the determination that components and relevant principle continue to exist in the conduct of the system of IC to achieve specified objectives respectively (COSO, 2013, Law, 2014). Further, “present” is all about effective design of a system and its implementation, whereas, “functioning” is about effective operation (COSO, 2013, Law, 2014, Ngari, 2017).

Various writers have noted that an internal control framework can be judged to be viable and effective on the level that it addresses and conform to the components of COSO framework (Hasnas, 2013, Agyare, et al, 2014); and that the evaluators of the ICS must comprehend the individual workings of the five control elements, the working philosophies of the control elements, and in addition, the application of the components throughout the organisations (Bett & Memba, 2017). It has been established (e.g., Asiligwa, 2017, Chen, 2016) that the essence of IC is to prevent, correct and detect errors and possibly frauds in the business.

A decade ago, Udoayang and Ewa 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 (Udoayang & Ewa, 2012). 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.

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. 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 ICS 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.

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 using COSO as a reference point. The result showed that internal control had positive significant relationship with good governance. COSO (2013) advanced the most detailed Internal Control Framework (ICF) which is widely accepted by scholars in the field of Auditing and Risk

management and which must be present to ensure efficient and effective operations of business establishment. Five components were identified as outlined briefly below:

Control Environment

The control environment of ICF refers to the very top level of 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). This involves broad range of series factors which direct the performance of duties (financial and nonfinancial) within the entity and may include the working style of management, the state of mind and moral integrity of management. Scholars for example, Ngudu (2013), Kaplan (2013) and Keune and keune (2018) opined 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.

Risk Assessment

According to De Simone, Ege, and Stomberg (2015), 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. Scholars and author have observed that for organisations to be effective, risk management and attitude is paramount (Ngari, 2017, Asiligwa, 2017), and that, the organisations' attitude to risk that pave way of its manageability and one of the key mechanisms or criteria for ensuring proper risk management is strict adherence to ICSs put in place.

Control Activities

The control activities guide the entire organisation on what to do, how to do it and provide reasonable guidance for the comprehensive implementation process. 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). The control activities of ICS are made up of the basic function and practices which an entity implements in it day to day activities. They are actions taken by management to establish policies, structures, and procedures to ensure that the risks identified are mitigated if not entirely eliminated. These, according to scholars 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).

Information and Communication

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). As one of the important elements of the intent of the Sarbanes-Oxley (SOX) Act of 2002, IT was a tools to deter business fraud and corruption in both large and small organisations. 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.

Monitoring Activities

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. Monitoring is thus, a component of the COSO integrated framework that includes evaluating the functioning of the framework for corrective measures (Feng, Li, McVay, & Skaife, 2015).

RESEARCH DESIGN

The study adopted the quantitative approach by using the survey strategy in collecting data, and it is explanatory in nature. 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 is 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, Singleton & Straits, 2018). After the scale has been administered, each response option was assigned number for scoring purposes ranging from 1-5. Microsoft Excel Packages and Statistical Product for Service Solutions (SPSS) version 24 was used for the data entry and its analysis. Data obtained on the variables were analysed by means of both descriptive and inferential statistics.

Also, considering the nature of the objective and what it seeks to achieve, the ordinary least square regression technique was used to analyse the effect of internal control system on business operational performance of the banking sector in Ghana. 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.

The regression model employed for the determination of the relationship between the variables is as follows:

$$BOE = \alpha + \beta_1 CE + \beta_2 RA + \beta_3 CA + \beta_4 ICT + \beta_5 MA + \mu$$

Where:

BOE = Business operational efficiency

CE = Control environment

RA = Risk assessment

CA = Control activities

ICT = Information and communication technology

MA = Monitoring activities

α = slope of the regression/ constant term.

μ = Error term

$\beta_1, \beta_2, \beta_3, \beta_4,$ and β_5 = the regression coefficients

Table 1 t test Result on ICS Factors or Constituents

	T	df	Sig. (2-tailed)	Test Value = 120		
				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

Source: Field work 2021

Table 1 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 in Ghana. This result also depicts low level of MA within the operational lines of the various banks.

Table 2 Eigenvalues and Factors Loadings

Construct	Items	Factor Loading	Cronbach's alpha	Eigenvalues	Variance (%)
ICS	CE	.723	.871	3.314	66.281
	RA	.837		.924	
	CA	.916		.455	
	ICT	.776		.236	
	MA	.806		.071	

Source: Field data (2021)

Table 2 shows the result from the factor analysis. The result shows a confirmation of the unidimensionality of ICS constructs, on the basis of the identified factor (single or only one factor) on the eigenvalue criterion (eigenvalue > 1); the factor also explains 66.28% of the variance. The factor loadings are shown in the table. Further, on the basis of the Cronbach's alpha, the internal consistency (reliability) for all ICS indicators or constructs was .871. Comparatively, the ascertained value is above the recommended value of 0.7, which shows greater level of acceptability and higher level of satisfaction. Additionally, the factor-based values were consequently estimated as the mean score of the variables included in the factor.

Table 3 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)

The descriptive statistics result in relation to ICS factors or Constituents is presented in Table 3. The result from the table 3 shows the overall mean score as [M = 4.13]. The overall mean value indicates the mid-point or indifference underscoring how conclusion should be drawn. In view of this, the study utilized a Likert scale ranging from 1 through to 5 thus from strongly disagree to strongly agree. Any mean score [= or > 4.13] is an acceptable statement and those less than the overall mean score is a disagreed item or statement.

FINDINGS

The study objective was to investigate the effects of Internal Control System (ICS) on business operations of banking sector in Ghana. The study found critical factors driving ICS within the

sector. This includes environment control, risk assessment, control activities, information communication technology and monitoring activities. This implies that the sector most often shows significant level of commitment to integrity and ethical values, consider interest of majority of the stakeholders, identification of risk to achievement of overall study objectives, risk of fraud potential in risk assessment, employment of risk mitigation strategies, periodic review of procedures and processes etc. These clearly indicate the importance of these indicators in propelling the effective operations of sector. The study also found that the most dominant constituents of ICS is ICT, followed by RA, next is CE and the least represented is MA.

The study found that all the ICS indicators such as environment control, risk assessment, control activities, information communication technology and monitoring activities exert significant effect on business operational efficiency. Generally, the study discovered that overall ICS within the sector exerts significant positive impact on business operational efficiency. The findings suggest that Monitoring Activities, Control Environment, Information Communication Technology, Risk Assessment, and Control Activities are very important in influencing the business operational efficiency within the sector. This also shows the importance and contribution of ICS within the industry.

The study discovered that some of the ways required to improve ICS include consistent revision of policies and procedures, provision of adequate training of staff, development of written policies and procedures, revision and process approval, performance of reconciliations, review of staff training procedures, effective communication of internal control process, provision of necessary tools to enable staff work effectively and frequent education on internal controls. The finding implies that these indicators are critical in enhancing the overall operations. This is because these provisions have the propensity of uplifting the procedures, processes and revisions of required laws. It will also ensure the adherence to banking regulations and required laws underscoring their operations.

IMPLICATIONS AND RECOMMENDATIONS

The above findings, if not manage properly will negatively affect the efficient operations activities of the commercial banks, hence, it is recommended that the managers of these banks take adequate steps to ensure 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 within the sector.

It is further 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.

The final recommendation is that management should ensure the involvement of 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.

CONCLUSION

From the analysis and the findings obtained, it is apparent that the internal control system is collectively made up of several factors, and it is found that ICT, Risk Assessment, and Control Environment are very dominant factors in the internal control system. It is therefore concluded that ICT, Risk Assessment, and Control environment should be critically examined and constantly reviewed. However, 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 in the banks.

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