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Abstract

Purpose – The purpose of this paper is to study the relationship between internal audit organisational status, competencies, activities and fraud management. As a corollary, this paper examines the contribution made by the internal audit organisational status, the internal audit competence and the internal audit activities on fraud management in financial services firms.

Design/methodology/approach – This study is cross-sectional and correlational, and it uses firm-level data that were collected by means of a questionnaire survey from a sample of 54 financial services firms in Kampala – Uganda.

Findings – Results suggest that the internal audit organisational status and the internal audit competence are significant predictors of fraud management. Contrary to previous thinking, internal audit activities do not significantly predict fraud management. Therefore, once internal auditors have appropriate status and are competent in an organisation, they are likely to perform activities that enhance fraud management.

Research limitations/implications – This study focuses on financial services firms in Uganda, and it is possible that these results are only applicable to the financial services sector. More research is therefore needed to further understand the contribution of the internal audit constructs on fraud management in other sectors such as the public sector.

Practical implications – The results are important for internal audit policy development, for example, in terms of prescribing the competences and reporting lines for the internal auditors to enhance fraud management in the financial services sector.

Originality/value – As far as the authors are aware, no research has hitherto been undertaken that investigates the individual contribution of internal audit organisation status, competence and its activities as internal audit constructs on fraud management.

Keywords Financial services, Internal audit, Fraud management

Paper type Research paper

1. Introduction

The aim of this paper is to study the relationship between internal audit organisational status, competencies, activities and fraud management. According to Association of Certified Fraud Examiners (ACFE) (2014), fraud management is the process of undertaking regular fraud assessment to identify, evaluate and respond to fraud faced by an organisation and develop and implement a fraud control plan to coordinate and focus on anti-fraud activity in the organisation. The increased need to safeguard shareholders' investment and protect the organisations' reputation from fraudsters (Mihret, 2014; Law, 2011) has elevated the need for fraud management. Fraud management is even more important for the financial services' firms because they are highly susceptible to prevalent frauds like asset

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misappropriation, cheque fraud, electronic funds transfer fraud, financial statements fraud, corruption/bribery and kickbacks, money laundering, insurance claims fraud, mortgage fraud and investments fraud (Association of Certified Fraud Examiners (ACFE), 2016; KPMG, 2015; Deloitte, 2013). Annual global revenue loss due to fraud approximates $3.7tn (Association of Certified Fraud Examiners (ACFE), 2014, 2016), resulting in the organisations undertaking significant efforts to establish effective fraud management measures to reduce its increasingly undesirable consequences (Global fraud report, 2014).

In Uganda, fraud is even more pronounced in the financial services sector. For example, insurance companies lose between 15 and 25 per cent of revenue to fraud annually and banks lose $1-10m annually to fraud (KPMG, 2015; Deloitte, 2013). But, these figures are likely to be significantly understated given that a majority of players in the financial services sector opt to not report incidences of fraud owing to the perception of their prevalence and impact in the sector [Consultative Group to Assist the Poor (CGAP, 2015)]. According to a survey by Deloitte (2013), more than half of the fraud cases in financial services sector are detected by internal audit reviews. However, internal audit status in most financial services firms in Uganda is inadequate owing to limited independence and objectivity of internal auditors and inadequate management support (Institute of Internal auditors (IIA) IIA Uganda Chapter, 2015). Similarly, several individuals are undertaking internal audit activities without professional competence; thus, internal audit services provided are not standardized assurance and advisory services conforming to the professional practice framework (IIA, 2014a, 2014b).

In this study we use the agency theoretic logic and focus on the contribution of internal audit (organisational status, competence and activities) to fraud management. Early researchers such as Adams (1994) suggested that agency theory may help explain not only the existence of internal audit in organizations but also some of the characteristics of the internal audit department, for example, its status (including size), its staff competences and the scope of its activities. But the magnitude and nature of the contribution likely to be made by each internal audit characteristic (construct) have remained an empirical question. Yet researchers such as Chambers and Odar (2015) have advocated the extended role of the internal auditor in managing fraud. We reason that if the contribution of internal audit organisational status, competencies and activities to the enhancement of fraud management remains a burgeoning concern, to internal auditors, this is likely to be an issue in view of their much-needed legitimacy because internal auditors can face significant familiarity and social pressure threats arising from their relationship with management (Stewart and Subramaniam, 2010). Similarly, the general public might consider the contribution to be important when the audit process pertains to public-interest organizations (Neu *et al.*, 2013) such as those in the financial services sector. Besides, whether those who perform the internal audit (internal auditors) and the auditees, such as finance officers, perceive the internal audit organisational status, competencies and activities the same way is scarcely known. Yet the question of whether studies on internal audit organisational status, competencies and activities provide internal auditors and auditees with applicable advice on fraud management is critical.

To our knowledge, previous studies have not specifically examined the individual contribution of internal audit organizational status, competence and activities on fraud management. Moreover, the majority of empirical studies examining the relationship between internal audit and fraud management have been based in countries outside Africa such as Hong Kong, Australia, Malaysia, the USA, the UK, The Netherlands (Law, 2011; Mihret, 2014; Coram *et al.*, 2008; Hillison *et al.*, 1999; Vanasco, 1998). As a result, further research needs to be carried out to establish whether available research results could be generalized to other countries like Uganda which is still developing. By enlisting the views of internal audit managers and chief finance officers, we find that there are no significant differences in the way these interest groups perceive internal audit organizational status, competence and activities. Using hierarchical regression analysis, we also find that although internal audit organizational status, competence and activities are significantly related to fraud management, internal audit organizational status and internal audit competence are the only significant predictors of fraud management.

The results in this paper are particularly important for a number of reasons. First, they contribute to existing literature by showing that when internal audit has an appropriate status in the organization, and with appropriate competence, internal auditors are likely to perform adequate activities to manage fraud. This is important for regulators like the Institute of Internal Auditors and governments (through their central banks) to require the status of internal audit in financial services firms to be elevated. Second, the results suggest to management of financial services firms and their internal audit on what to first focus on before determining which activities to undertake by internal audit. It means that what matters first are status and competence of internal audit (ors) and not what their activities should be because this is likely to be derived from their competence and organizational status. Finally, the results suggest observed factors for enhancement of fraud management in the financial services sector because of the continued occurrences in the sector.

The rest of the paper is organised as follows. Section 2 reviews literature and develops hypotheses. This is followed by a discussion of the research methodology in Section 3. Section 4 presents and discusses results. The final section is summary and conclusion.

2. Literature review and hypotheses development

2.1 Internal audit organisational status

Consistent with agency theory (Jensen and Meckling, 1976), if the internal audit is part of the governance structure, Farber's (2005) results suggest that this improves the quality of governance taken to be important in fraud firms. Indeed according to Perry and Bryan (1997) and Chambers and Odar (2015), the internal auditor's scope of activities includes prevention and detection of fraud within entities. Internal audit organizational status focuses on the internal auditor's independence, objectivity, management support and adequacy of talent and capable staff (Ebaid, 2011). James (2003) indicates that in-house internal audit functions that report directly to management are perceived by lenders as being less able of providing protection against fraud compared to in-house departments that report solely to the audit committee. Many (Rezaee and Lander, 1993) consider the internal auditor to be the first line of defence against fraud. The internal audit is considered to be one of the four pillars of the financial services firms, especially banking governance structure along with the audit committee, management committee and the external audit (Naheem, 2016). Like others (Khelil *et al.*, 2016), we believe that the internal auditor must inform the audit committee about any irregularities or fraudulent activities that come to light. For example, his/her status must enable him/her to immediately communicate the relevant details to the audit committee if the management is involved in fraud (Rezaee and Lander, 1993). Besides, Mihret and Yismaw (2007) suggest that internal audit effectiveness is strongly influenced by, among others, management support. Later Norman *et al.* (2010) substantiate this by suggesting that to increase internal audit risk assessment, risk assessment results and other information should be filtered through management before it is reported to the audit committee regardless of the reporting procedure, as personal threats from the audit committee and management are reduced. In this regard, Norman *et al.* (2010) found that internal auditors who must report to their managers feel threatened in the process; but they went on to discover that the internal auditors felt more threatened, as they reported directly to the audit committee because they tended to decrease their assessment of the risk of fraud when they must report to the audit committee rather than the executive. On the contrary, Khelil *et al.* (2016) found that the existence of private access to the audit committee has a positive effect on the moral courage of the chief audit executive. The above discourse suggests that the exact influence of the internal audit organisational status remains unknown. Nevertheless, internal auditors are in a special position to facilitate fraud management as employees of an organization and as internal assurance providers (Stewart and Subramaniam, 2010). Therefore, internal audit organizational status is vital in the enhancement of anti-fraud measures in the organization. We therefore hypothesize that:

H1. Internal audit organisational status is positively related with fraud management.

2.2 Internal audit competence

Competence means having the intelligence, education and training to be able to add value to the organization through performance (Chambers, 2014). The internal audit competence comes from long and intensive preparation, including instruction in the underlying knowledge, skills and methods, as well as scholarly principles, and the commitment to continued study (IIA, 2013a, 2013b). Gramling and Myers (1997) indicated that certification of internal auditors is perceived to be a signal of the significant level of competence and important for advancement within internal audit departments. The attributes that organizations should look for when hiring internal auditors pertain to education, experience and professional certification, in addition to computer and communication skills (Harrington, 2004). Seol and Sarkis (2005) suggests the fundamental skills that internal auditors should possess, and these include technical, analytical, appreciative, interpersonal and organizational skills. Thus, the level of experience and skills among internal auditors demonstrates the quality of their audits (Gramling and Hermanson, 2009; Zain *et al.*, 2006). Auditors in Jordan suggest that objectivity, competence and work performance of internal auditors are very important factors affecting their reliance decisions regarding fraud (Suwaidan and Qasim, 2010). However, internal auditors sometimes fail to comply with some important elements of fraud standards, as they only encounter corporate fraud incidentally (Hassink *et al.*, 2010). As a result, identification and prioritization of the internal auditor's core competencies are important in improving their essential capabilities to enhance fraud management in an organization (Chambers and Odar, 2015). Because modern internal audit has been constructed along three E's of effectiveness, efficiency and economy (Ridley, 2008), internal audit competence in fraud management can be understood in the context of effectiveness, which Chambers (1992, p. 22) views as "doing the right thing". As Roussy and Brivot (2016) suggest, we expect that quality work on fraud management can be obtained only if internal auditors' profiles meet defined criteria (e.g. technical competence). We therefore hypothesize that:

H2. Internal audit competence is positively related with fraud management.

2.3 Internal audit activities

Conventionally, the key internal audit activities are to assess the effectiveness of an organization's internal controls and reporting to management where and how internal controls could be strengthened (Moyes and Baker, 1995). Perry and Bryan (1997) indicate that internal audit plays a crucial role in the prevention and detection of fraud within an organization by ensuring that, the audit is well planned and that a proper internal audit programme exists. Correspondingly, Church *et al.* (2001) demonstrate that internal auditors can easily detect factors that may lead to fraud; thus, when they encounter such factors, internal auditors are likely to design tests to investigate fraud, which, in turn, can increase the likelihood of detection. Besides auditing financial transactions, internal audit activities may also cover non-financial items such as organisational unit processes and compliance with laws and regulations which help in managing fraud (Rae and Subramaniam, 2008). Asare *et al.* (2008) indicate that internal auditors who serve in a self-assessment role and or a due-diligence role are sensitive to variations in management performance incentives; this makes internal auditors enhance fraud risk assessments activities through changing their audit plans accordingly. However, Ebaid (2011) reported that, among the Egyptian listed firms internal audit function is still focused on financial audit and internal controls compliance and has not yet moved toward the expanded new role explained in Institute of Internal Auditor's new definition. Therefore, this compels internal audit to move firmly into the corporate governance space to audit corporate governance more effectively and to provide more dependable assurance to boards about the effectiveness of risk management and controls to improve the internal auditor's role in managing fraud (Chambers and Odar, 2015). We therefore hypothesize that:

H3. Internal audit activities are positively related to fraud management

2.4 Control variables

Bartov *et al.* (2000) suggests that failure to control for confounding variables could lead to falsely rejecting the hypothesis when in fact it should be accepted. As such, firm age, internal audit size and professional qualification of internal auditors in the firm are controlled in this study. A number of studies have found that firm age is related with fraud management (Nor *et al.*, 2010; Bierstaker *et al.*, 2006). However, other studies have indicated inconsistent results for the relationship between firm age and fraud management (Law, 2011). According to IIA Uganda Chapter (2015), firms with many transaction systems (Large firms) should have a corresponding higher number of internal auditors. A study by Kent and Stewart (2006) indicates that there is a marginally positive association between the number of audit committee meetings and the size of internal audit. In a study by Mihret and Yismaw (2007), it is suggested that although there is normally no specific qualification required for internal auditors, professional qualification of internal audit staff is desirable. Similarly, according to Dordevic and Dukic (2015), internal auditors are positioned to provide assurance services to their firms; thus, the level of their professional knowledge and skills has an enormous impact on the effectiveness of their procedures to prevent, detect and report fraud.

3. Methodology

3.1 Research setting

This study gathered data from financial services sector firms in Kampala, Uganda. Kampala is the capital and business city of Uganda in East Africa. Majority of the financial services sector firms in Uganda are located and headquartered in Kampala, and they primarily comprise financial institutions, insurance and investments subsectors. Ugandan financial services sector is relatively well developed, and it has been helpful not only in fostering investment and growth but also in mobilizing resources and enabling poor people to have some control over risks in their lives (PWC, 2015). Nevertheless, there are huge concerns of increasing incidences of fraud in the sector which have aroused concern among the public and the policymakers (Deloitte, 2013); this is also significantly affecting the achievement of the desired growth and strategic objectives of the financial Services sector (CGAP, 2015).

There are a number of security measures and regulations that have been put in place to manage fraud in the Ugandan financial services sector, such as, the financial institutions act of 2004; the Financial Institutions Regulations of 2005 and the Anti-money Laundering Act of 2013, nonetheless, a number of high-profile frauds, for example, electronic funds transfer (EFT) fraud, cash theft, asset misappropriation, credit card fraud and cheque fraud have continued to affect the financial services firms leading to high actual financial losses and reduced investor confidence (Deloitte, 2013). The high fraud prevalence in the financial services sector has similarly been attributed to inadequate internal audit in terms of limited status in their organisations and incompetence which leads to performance of insufficient tasks and activities to minimize and mitigate fraud (Deloitte, 2013; IIA Uganda Chapter, 2015). Given the above discussion, this study setting provides a rich basis to examine the contribution of internal audit on fraud management owing to its new role of focusing on creating added value to the organization, through evaluation of control effectiveness, risk management and assessment of governance processes, so as to prevent, detect and report fraud in financial services firms in Kampala, Uganda.

3.2 Design, population and sample

The research design for this study is cross-sectional and correlational. The population of interest is the financial services sector firms in Uganda. Specifically, the population includes 85 financial services firms obtained from the three main subsectors of the financial services sector, that is financial institutions, capital markets advisors and brokerage firms and insurance companies operating in Kampala, Uganda. In Uganda, most of the financial services firms are located and headquartered in Kampala (Bank of Uganda, 2015). We determine the sample size using Krejcie and Morgan (1970) and generate a sample size of 70 financial services firms proportionately (Table I). The unit of enquiry is two people involved in fraud management (the Chief Finance Officer and Internal Audit Manager) in each of the sample firms. The respondents are selected by virtue of their position and knowledge (McEvily and Marcus, 2005). Only 54 firms responded to our questionnaire with 108 completed questionnaires. The responses were aggregated using a firm as a breaking variable.

3.3 Questionnaire and variable measurement

A Likert scale questionnaire, designed to measure the opinion or attitude of a respondent is utilised to obtain self-reported information. The questionnaire design is based on our review

Sub-sector	Firms	Population	Sample size	Response
Financial institutions subsector	Commercial banks	25	21	18
	Credit institutions	4	3	2
	Micro-finance deposit-taking institutions	4	3	3
	Development banks	2	2	2
Capital markets subsector	Capital markets advisors/brokerage firms	27	22	13
Insurance sub sector	Insurance companies	23	19	16
Total number of firms		85	70	54

Source: Primary data

Table I. Distribution of firms in the sample and response rate of relevant literature regarding internal audit organisational status, internal audit competence, internal audit activities and fraud management (Appendix). Fraud management (fraud prevention, detection and response) which is the dependent variable was measured using the respondents' mean rank of eight items included in the questionnaire as adopted with modifications from Mihret (2014); Albrecht *et al.* (2012); Archer (2011); Hassink *et al.* (2010); Bierstaker *et al.* (2006); Cormier and Antunes (2006); Moyes and Anandarajan (2002); Albrecht and Romney (1986); Pincus (1989) and anchored on a six-point Likert scale.

Internal audit organizational status with its dimensions of internal audit independence, objectivity and management support (Mihret and Yismaw, 2007; Ebaid, 2011) and Endaya and Hanefah (2013) was measured using the respondents' mean rank of the seven items of information included in the questionnaire on a six-point Likert scale (1 = strongly disagree and 6 = strongly agree). Internal audit competence is measured using internal auditor's knowledge, skills and experience in auditing (Ebaid, 2011; IIA, 2013a, 2013b; Chambers and Odar, 2015). Thus, respondents are asked to indicate their perception of improving internal audit competence using ten items which are anchored on a six-point Likert scale with 1 = strongly disagree and 6 = strongly agree. Internal audit activities is measured by the internal auditor's evaluation of organizational governance, risk management and internal control reviews (Coram *et al.*, 2008; Marais *et al.*, 2009; Aksoy and Kahyaoglu, 2013). We generate ten items which are anchored on a six-point Likert scale with 1 = strongly disagree and 6 = strongly agree to collect the respondent perception on the type and adequacy of internal audit activities.

To control for non-response bias, each questionnaire was accompanied by a letter providing explanations and assurances that all individual responses would be treated confidentially. Aware that non-response manifests in two types, namely, item and unit non-response, where item non-response is when certain questions in a survey are not answered by a respondent and unit non-response is when a randomly sampled individual cannot be contacted or they refuse to participate in a survey, we kept a short survey length, ensured a clear and concise wording of the questions (also utilized the results of content validity analysis), practical and appealing, placed multiple follow-up calls or email reminders up to a maximum of three for those delaying to answer the questionnaire. In this case, the 54 entities in the sample had two units of enquiry responding (Table VIII).

To control for item non-response, we carried out simple frequency runs and found that item non-response (missing values) was less than 1 per cent of all the questions, and thus trivial to suppress the standard deviation (Field, 2006). However, even with this, the present study carried out a missing values analysis because missing data may reduce the precision of calculated statistics because there is less information than originally planned. Indeed, a common concern when faced with multivariate data with missing values is whether the missing data are missing completely at random (MCAR); that is whether the missing data depend on the variables in the data set (Little, 1988). Using the E-M (expectation–maximisation), the MCAR, was not significant (Little's MCAR test: chi-square = 412.303, df = 411, Significance = 0.473). This meant that data were missing completely at random. As the missing values were for cases on different variables, it was deemed necessary to not delete those cases (because a lot of data could be lost) but instead replaced them by using linear interpolation for its simplicity.

3.4 Tests of factorability, validity, reliability and assumptions of parametrical data

We used exploratory factor analysis (EFA) based on principal components and Cronbach's α (Table II, III, IV and V) to examine the validity and reliability of the scales as measures of

Table II.
Factor structure of internal audit organisational status

Item	Component Independence	Objectivity	Management support
Internal audit administratively reports to executive management	0.872		
Internal audit functionally reports directly to the audit committee	0.814		
Internal audit receives adequate feedback from management on audit findings		0.821	
Internal audit recommendations are implemented by management		0.687	
Management provides internal audit with adequate resources		0.593	
Management usually consults internal audit on fraud management			0.851
Management perceives internal audit as a value adding activity			0.757
Eigen values	2.206	1.499	1.289
Percentage of variance	31.51	21.411	18.421
Cumulative percentage	31.51	52.921	71.342
KMO measure of sampling adequacy			0.629
Bartlett's test of sphericity			164.951

Notes: Extraction method: principal component analysis; Rotation method: Varimax with Kaiser normalization
Source: Primary data

internal audit organisational status, internal audit competence, internal audit activities and fraud management in the financial services sector. EFA was also performed to identify patterns in data and to reduce data to a manageable level (Field, 2009). To establish convergent validity, the principal components for each variable are extracted by running principal component analysis using varimax rotation method, and factor loadings below 0.5 coefficients were suppressed to avoid extracting factors with weak loadings. Prior to performing the principal component analysis for scales, we assessed the suitability of the data for factor analysis based on sample size adequacy, the Kaiser–Meyer–Olkin (KMO) and Bartlett tests. The results show the KMO values: internal audit organisational status = 0.629, internal audit competence = 0.663, internal audit activities = 0.637 and fraud management = 0.639. Bartlett's test of sphericity in all scales reached statistical significance ($p < 0.05$) (significant value was 0.00 for each scale). Collectively, these results support the factorability of the correlation matrices because our correlation matrices are significantly different from the identity matrices in which the variables would not correlate with each other. The determinants for all the three matrices were greater than 0.01, implying that there were no multicollinearity or singularity between variables.

To obtain the content validity index (CVI), we dichotomised the rating scale through a duo split of the scores such that rating scores 1-3 = *measure not useable*, 4-6 = *measure useable*. The CVI was computed by obtaining the proportion of items assessed as *useable* divided by total number of items (Field, 2009). The CVI for each variable was above 0.7 (Internal audit organisational status = 0.917, internal audit competence = 0.877, internal

Table III. Factor structure of internal audit competence

Item	Knowledge	Component Skills	Experience
Internal auditors are always mentored on performance standards	0.828		
Internal auditors have the strength to say no to instances that lead to fraud	0.781		
Internal audit findings are always based on documents and reliable data	0.769		
Internal audit has full knowledge of the transaction systems of the entity	0.756		
Internal auditors are trained to acquire the necessary skills to perform their duties	0.613		
There is adequate continuing professional development for our internal auditors		0.768	
Internal audit is carried out in accordance with international standards for professional performance of internal audit		0.767	
Internal auditors are normally appraised basing on set targets		0.692	
The internal auditors secure outcomes through interpersonal interactions		0.612	
Internal auditors are rewarded by management basing on performance			0.928
Eigen values	3.891	1.457	1.024
Percentage of variance	38.91	14.566	10.236
Cumulative percentage	38.91	53.476	63.712
KMO measure of sampling adequacy			0.663
Bartlett's test of sphericity			296.199

Notes: Extraction method: principal component analysis; Rotation method: Varimax with Kaiser normalization
Source: Primary data

audit activities = 0.820 and fraud management = 0.917). Thus, the instrument attained content validity.

To determine the internal consistency (reliability) of our scales we computed Cronbach's α coefficients for the study variables. The standardised α coefficients for all the scales were found to be 0.70 and above (internal audit organisational status = 0.842, internal audit competence = 0.749, internal audit activities = 0.846 and fraud management = 0.812).

Prior to carrying out tests of hypotheses, we checked our data for normality to determine the applicability of parametric tests. This was done by use of skewness and kurtosis statistics. The skewness scores for all variables were close to 0, and kurtosis results were all within the range of -2 and $+2$; besides standard errors for each of the variables were not very different from their respective Skewness and kurtosis scores, and therefore, normality assumption was not violated (Garson, 2012; Field, 2009). Levene's test (Levene, 1960) was used to test for homogeneity of variance because it is the most commonly used test for each group (Garson, 2012). The test results are non-significant ($p > 0.05$) for all the predictor variables, and thus homogeneity of variance for the categorical variables in relation to the outcome variable is not violated (Field, 2009).

Table IV.
Factor structure of internal audit activities

Item	Component: Internal control reviews	Risk profiling	Evaluation of organisational governance
Internal audit safeguards the organisations assets from misuse	0.797		
Internal audit always checks the authorisation of all expenditures	0.783		
Internal audit ensures that the economic transactions in this organisation are supported by adequate documentation	0.772		
Internal audit promotes segregation of duties	0.684		
Internal audit promotes appropriate ethics within the entity	0.627		
Internal audit facilitates the identification of risks		0.869	
Internal audit develops risk management strategy for board approval		0.863	
Internal audit participates in the preparation of the risk treatment plans			0.780
Internal audit independently evaluates the effectiveness of management			0.751
Internal audit evaluates the systems established to ensure compliance with policies			0.655
Eigen values	3.682	1.872	1.213
Percentage of variance	36.823	18.716	12.135
Cumulative percentage	36.823	55.539	67.674
KMO measure of sampling adequacy			0.637
Bartlett's test of sphericity			377.654

Notes: Extraction method: principal component analysis; Rotation method: Varimax with Kaiser normalization
Source: Primary data

The problem with univariate analyses is that they do not control for other factors, thus making the interpretation of results difficult. We, therefore, extend the analysis to a multivariate setting. We first examine correlations among our independent variables to determine whether multicollinearity problems exist. Field (2009) suggests that multicollinearity becomes a problem only when correlations exceed 0.80 or 0.90. As Table IX shows, none of the correlations between independent variables is close to these threshold values.

4 Empirical findings

4.1 Descriptive statistics

Table VI shows the mean scores of the study variables. Internal audit organisational status had the lowest mean score of 4.8832 with a standard deviation of 0.30871. Internal audit activities had the highest mean score of 5.0594 with a standard deviation of 0.32407. As standard deviations relative to mean values are small; the calculated means highly represent

Item	Prevention	Competent Detection	Response
We have technology solutions with trigger mechanisms that flag irregular activities	0.837		
We run well-established whistle-blower mechanisms in this organisation	0.833		
We take appropriate action in case of detected fraud	0.741		
Risk based internal audits are carried out in our organisation	0.709		
We ensure communication of fraud investigation outcomes		0.821	
We have disclosure procedures in place for evidence relating to detected fraud		0.813	
There is ongoing monitoring of employees' activities in high risk departments		0.616	
We have established lines of communication with police for further investigations of detected fraud in our organisation			0.980
Eigen values	2.889	1.485	0.975
Percentage of variance	36.086	18.563	12.184
Cumulative percentage	36.086	54.649	66.834
KMO measure of sampling adequacy			0.639
Bartlett's test of sphericity			203.368

Notes: Extraction method: principal component analysis; Rotation method: Varimax with Kaiser normalization
Source: Primary data

Table V. Factor structure of fraud management

Variable	n	Minimum	Maximum	Mean	SD
Internal audit organizational status	54	4.14	6.00	4.8832	0.30871
Internal audit competence	54	4.25	5.75	5.0038	0.31673
Internal audit activities	54	4.24	5.82	5.0594	0.32407
Fraud management	54	4.23	5.92	4.9613	0.33227
Firm age	54	0.00	1.00	0.6852	0.46880
Internal audit size	54	0.00	1.00	0.7778	0.41964
Qualification of internal auditors	54	0.00	1.00	0.8148	0.39210
Valid n (list-wise)	54				

Source: Primary Data

Table VI. Descriptive statistics for dependent, independent and control variables

the observed data (Field, 2009). The data also indicate that predictor variables are rated high toward fraud management in the financial services firms. This implies that appropriate organizational status of internal audit, its competence and activities are key toward managing fraud in the organization.

To determine whether the firm differences influenced the study variables, a one-way analysis of variance (ANOVA) was used to determine the impact of firm sector on the study variables. The results of the one-way ANOVA presented in Table VII show that the p-values

Variables	Firm subsector	n	Mean	SD	df	F	Significance
Internal audit organizational status	Financial Institutions	25	4.8414	0.24718	2	0.620	0.542
	Capital markets sub sector	13	4.9597	0.27854	51		
	Insurance Companies	16	4.8862	0.41099	53		
	Total	54	4.8832	0.30871			
Internal audit competence	Financial Institution	25	4.9375	0.27347	2	1.152	0.324
	Capital markets sub sector	13	5.0936	0.35422	51		
	Insurance Companies	16	5.0345	0.34510	53		
	Total	54	5.0038	0.31673			
Internal audit activities	Financial Institutions	25	5.0229	0.30299	2	0.532	0.591
	Capital markets sub sector	13	5.1376	0.27821	51		
	Insurance Companies	16	5.0527	0.39331	53		
	Total	54	5.0594	0.32407			
Fraud management	Financial Institutions	25	4.9315	0.35918	2	0.357	0.701
	Capital markets sub sector	13	5.0279	0.25962	51		
	Insurance Companies	16	4.9535	0.35266	53		
	Total	54	4.9613	0.33227			

Source: Primary data

Table VII. Global variables and firm sector

for all study variables are above 0.05; also, the actual difference in mean scores between the groups on each of the global variables are reasonably small, indicating that the various group differences between firms did not significantly influence their responses on the study variables. Similarly, results in Table VIII suggest that the overall differences between respondents did not bias the results of this study.

4.2 Correlation analysis results

We present Pearson's correlation coefficient analysis of the study variables. Correlations from Table IX indicate a significant positive relationship between internal audit organisational status and fraud management (r = 0.590** and $p < 0.01$). Meaning that when internal audit organisational status increases, fraud management is enhanced. Thus, *H1* is supported. Similarly, there is a significant positive relationship between internal audit competence and fraud

Variables	Respondent's position	n	Mean	SD	df	F	Significance
Internal audit organizational status	Chief Finance Officers	54	4.8373	0.34197	1	0.271	0.604
	Internal Audit managers	54	4.8730	0.37016	106		
	Total	108	4.8552	0.35513	107		
Internal audit competence	Chief Finance Officers	54	4.9884	0.38985	1	0.769	0.383
	Internal Audit managers	54	4.9248	0.36411	106		
	Total	108	4.9566	0.37679	107		
Internal audit activities	Chief Finance Officers	54	5.0251	0.35673	1	0.245	0.621
	Internal Audit managers	54	5.0610	0.39633	106		
	Total	108	5.0430	0.37572	107		
Fraud management	Chief Finance Officers	54	4.9188	0.47098	1	0.284	0.595
	Internal Audit managers	54	4.9630	0.38642	106		
	Total	108	4.9409	0.42933	107		

Source: Primary data

Table VIII. Global variables and position of respondent's in the firm management (r = 0.583** and $p < 0.01$), implying that any positive change in internal audit competence is related to a positive change in fraud management. Thus, *H2* is accepted. There is also a significant positive relationship between internal audit activities and fraud management (r = 0.387** and $p < 0.01$). This means that an increase in internal audit activities leads to improved fraud management. Therefore, *H3* is also supported.

The correlation analysis results also show that, control variables that is, firm age, internal audit size and qualification of internal auditors in the firm are not significantly related at the 1 per cent level. This implies that control variables do not confound the results of testing for the relationship between internal audit organizational status, internal audit competence, internal audit activities and fraud management in financial service firms. Consequently, the relationship between internal audit organizational status, internal audit competence, internal audit activities and fraud management is not affected by the control variables.

4.3 Hierarchical regression analysis results

To further test for the sensitivity of the results to the control variables and the contribution of each construct under internal audit, we performed hierarchical regression analysis as a means of statistical control and for examining incremental validity. Study variables were entered simultaneously within each hierarchical group (Field, 2009; Aiken and West 1991) as shown in Table X. Standardized versions of the β values are used because they are easier to interpret and are not dependent on the units of measurement of the variables (Field, 2009). The standardized beta values also tell us the number of standard deviations that the outcome will change as a result of one standard deviation change in the predictor; thus, they are directly comparable and provide a better insight into the importance of each predictor in the model (Field, 2009).

The hierarchical regression results in Table X indicate that Model 1 reports the baseline model with only control variables. The results show that control variables do not explain any significant variance in fraud management. This suggests that, the models in this study are not sensitive to confounding factors and the models are highly acceptable (Field, 2009). Results in Models 2, 3 and 4 show that the F is significant at the 1 per cent level or better with an internal audit organizational status (standardized β = 0.594, $p <$ 0.01) and competence (standardized β = 0.395, $p < 0.01$) as the only significant predictors of fraud management. Essentially, Model 4 presents the combined effect of all the predictor variables on the outcome variable, and the results show that, internal audit organizational status is the best and significant predictor variable of fraud management (standardized β = 0.393**), followed by internal audit competence which is also

Variables	1	2	3	4	5	6	7
Internal audit organizational status (1)	1						
Internal audit competence (2)	0.525**	1					
Internal audit activities (3)	0.301*	0.666**	1				
Firm age (4)	0.144	0.036	0.038	1			
Internal audit size (5)	0.129	0.234*	0.296*	0.213	1		
Qualification of internal auditors (6)	−0.023	0.034	−0.008	0.395**	−0.025	1	
Fraud management (7)	0.590**	0.583**	0.387**	0.102	0.069	0.061	1

Notes: n = 54. *, **indicate that correlation is significant at the 0.05 and 0.01 levels, respectively (one-tailed)
Source: Primary data

Table IX. Pearson correlations between the dependent, independent and control variables

Variables	Model 1	Model 2	Model 3	Model 4
Constant	4.869	1.792	0.849	0.738
Internal audit organizational status		0.594**	0.389**	0.393**
Internal audit competence			0.395**	0.357*
Internal audit activities				0.057
Control variables				
Firm age	0.078	−0.015	0.032	0.032
Internal audit size	0.053	−0.002	−0.079	−0.088
Qualification of internal auditors	0.031	0.081	0.042	0.043
Model F	0.229	6.699**	8.174**	6.716**
Adjusted R^2	−0.046	0.301	0.404	0.393
F Change	0.229	25.769**	9.453**	0.148**
R^2 Change	0.014	0.340	0.106	0.002
Durbin–Watson statistic				1.749

Notes: $^{**}p < 0.01$; $^{*}p < 0.05$
Source: Primary data

Table X.
Hierarchical regression results

significant (standardized β = 0.357*), and internal audit activities has the least predictive potential of the variance of fraud management in the general model (standardized β = 0.057). This means that *H3* which states that "internal audit activities are positively related to fraud management" is not supported at this level of analysis. Accordingly, internal audit organizational status and internal audit competence are the only significant predictors of fraud management in financial services firms in Uganda, providing further support for *H1* and *H2* that "Internal audit organisational status is positively related with fraud management" and "internal audit competence is positively related with fraud management", respectively. This means that when internal audit has an appropriate status in the organization and with competent internal auditors, they are likely to perform adequate activities to manage fraud. Taken together, the predictor variables explain about 39.3 per cent of the variance in fraud management in financial services firms in Kampala, Uganda. Generally, the results suggest that Model 4 in Table X is the most acceptable model. The incremental validity in adjusted R^2 in Models 1-4 in Table X suggests a better fitting model which develops as internal audit organizational status, internal audit competence and internal audit activities are successively introduced (Field, 2009) because in all the cases but Model 1, the F change is significant. Durbin–Watson test was carried out to test for serial correlations between errors in regression models. As a very conservative rule of thumb, values lesser than 1 or greater than 3 are definitely cause for concern, but, the closer to 2 the value is, the better it is (Field, 2009). For this study, the Durbin–Watson statistic was 1.749, which justifies the assumption of independent errors or no serial correlation.

4.4 Discussion

The results reported in this paper suggest that internal audit organizational status and competence are significant predictors of fraud management. For example, the results indicate that when internal audit administratively reports to executive management and functionally to the audit committee of the board, this is likely to enhance fraud management. This is consistent with the suggestion that the hybrid reporting lines of the internal audit improves the quality of governance that is important in fraud firms

(Farber, 2005) such as financial services' firms – making agency theory a relevant framework for understanding variances in fraud management. Because internal auditors' scope of activities includes detection and prevention of fraud within an organization (Perry and Bryan, 1997), this role makes it considered part of management and thus it could be argued that this is not enough in curbing management's presumed pursuit of its egotism. However, the independence of internal auditors will be enhanced if contemporaneously they report to the audit committee of the board. That way the internal auditor's role in managing fraud is improved by the enhanced independence. The results also suggest that management should always consult internal audit on matters of fraud management improvement. In this respect, internal audit function is seen as a partner to management in the quest for fraud management improvement which seems to concur with Norman *et al.*'s (2010) observation that internal auditors may increase their assessment of risk of fraud when reporting to executive management rather than to audit committee. But, it is still expected that the reporting line to the audit committee offers the necessary moral courage of internal auditors in reporting fraud cases (Khelil *et al.*, 2016). So, while the internal audit should always report functionally to the audit committee, in fraud management, this study suggests that internal auditors must receive adequate support from management.

The results reported in this paper suggest that, it is one of the requisite competences of internal auditors that they say no to instances that lead to fraud in organizations and should be rewarded by management basing on performance. This paper suggests that this performance should include the extent to which the internal auditor has been instrumental in fraud management. Value addition of the auditor, in this perspective, is seen through such performance as being consistent with the suggestion by Chambers (2014). Internal auditor's competence thus plays a key role in stirring entity-wide fraud awareness, fraud investigations and reporting. Therefore, internal audit competence will increase compliance with audit plans and making of clear audit reports to management and the audit committee to ensure proper communication of fraud investigations outcomes and taking appropriate action in case of detected fraud. The empirical results presented herein confirm the prior literature in this regard, thus contributing to the internal audit and fraud management literature, particularly that focusing on the financial services sector.

The results further suggest that individual contribution of internal audit activities to fraud management are subdued when internal audit competence and appropriate organisation status (for example, the dual reporting lines of internal audit) are present. Therefore, if internal auditors have appropriate status in the organisation and are competent, they will help management implement effective controls, manage risks and evaluate the sufficiency of various governance procedures to prevent, detect and respond to fraud. This corroborates with Ebaid (2011) on the effectiveness of internal audit among the Egyptian listed firms. Other corroborative studies have indicated that internal auditors are sensitive to factors that may lead to fraudulent financial reporting and that when they encounter such factors, internal auditors may be more likely to design tests to search for fraud, which in turn can increase the likelihood of detection (Church *et al.*, 2001; Rae and Subramaniam, 2008; Chambers and Odar 2015).

5. Summary and conclusion

The purpose of this paper is to examine the contribution made by the internal audit organisational status, internal audit competence and internal audit activities on fraud management in the financial services firms. We surveyed 54 financial services firms and we find that internal audit organisational status and internal audit competence are significant predictors of fraud management. Once internal auditors are competent and have appropriate status in the organization, they are likely to perform activities which enhance fraud management.

This study offers several implications. We explore the role played by the internal audit organisational status in enhancing fraud management, meaning that internal auditors who are unbiased and report functionally to the audit committee and administratively to executive management are likely to enhance fraud prevention, detection and reporting. This study has also established that internal auditors with adequate knowledge, skills and experience are in a better position to help management in establishing effective anti-fraud measures. Internal audit activities do not significantly predict fraud management in the Ugandan setting once the internal auditors have appropriate status in the organisation and are competent. For policymakers like the Bank of Uganda, the findings of this study will help them in prescribing the qualifications for internal auditors. Besides, internal auditors should be given the appropriate status in the entity and perform their new and expanded activities as per the institute of internal auditors (IIA, 2013a, 2013b). The results are important for internal audit policy development, for example, in terms of prescribing the competences and reporting lines for the internal auditors to enhance fraud management in the financial services sector.

Despite the contributions and implications, this study focused on financial services firms in Kampala – Uganda to determine the contribution of internal audit organisational status, internal audit competence and internal audit activities on fraud management. It is possible that these results are only applicable to financial services sector unlike other sectors. The study also used more of quantitative data which sometimes misses certain information and limits the respondent's opinions on the study variables. While care was taken to control for response bias, it is unlikely it could be ruled out completely. However, this study clearly brought out the overall contribution of internal auditors in fraud prevention, detection and reporting as necessary.

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Appendix. Questionnaire

Kindly, evaluate the subsequent variable items using the criterion shown below:

- Strongly disagree
- Disagree
- Slightly disagree
- Slightly agree
- Agree
- Strongly agree

Internal audit organisational status

- Internal audit administratively reports to executive management.
- Internal audit functionally reports directly to the audit committee.
- Internal audit receives adequate feedback from management on audit findings.
- Internal audit recommendations are implemented by management.
- Management provides internal audit with adequate resources.
- Management usually consults internal audit on fraud management.
- Management perceives internal audit as a value adding activity.

Internal audit competence

- Internal auditors are always mentored on performance standards.
- Internal auditors have the strength to say no to instances that lead to fraud.
- Internal audit findings are always based on documents and reliable data.
- Internal audit has full knowledge of the transaction systems of the entity.
- Internal auditors are trained to acquire the necessary skills to perform their duties.
- There is adequate continuing professional development for our internal auditors.
- Internal audit is carried out in accordance with international standards for professional performance of internal audit.
- Internal auditors are normally appraised basing on set targets.
- The internal auditors secure outcomes through interpersonal interactions.
- Internal auditors are rewarded by management basing on performance.

Internal audit activities

- Internal audit safeguards the organisations assets from misuse.
- Internal audit always checks the authorisation of all expenditures.
- Internal audit ensures that the economic transactions in this organisation are supported by adequate documentation.
- Internal audit promotes segregation of duties.
- Internal audit promotes appropriate ethics within the entity.
- Internal audit facilitates the identification of risks.
- Internal audit develops risk management strategy for board approval.
- Internal audit participates in the preparation of the risk treatment plans.
- Internal audit independently evaluates the effectiveness of management.
- Internal audit evaluates the systems established to ensure compliance with policies.

Fraud management

- We have technology solutions with trigger mechanisms that flag irregular activities.
- We run well-established whistle blower mechanisms in this organisation.
- We take appropriate action in case of detected fraud.
- Risk based internal audits are carried out in our organisation.
- We ensure communication of fraud investigation outcomes.
- We have disclosure procedures in place for evidence relating to detected fraud.
- There is ongoing monitoring of employees' activities in high risk departments.
- We have established lines of communication with police for further investigations of detected fraud in our organisation.

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