Audit committee effectiveness, internal audit function, firm-specific attributes and internet financial reporting: a managerial perception-based evidence

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Abstract

Purpose – This study aims to examine the contribution of audit committee effectiveness (ACE), internal audit function (IAF) and firm-specific attributes to internet financial reporting (IFR). It also seeks to understand which ACE and IAF attributes contribute to variances in IFR.

Design/methodology/approach – Data are collected through a questionnaire survey of 40 financial services firms.

Findings – The analysis shows that ACE and IAF significantly contribute to positive variances in IFR. It also shows that among the firm-specific attributes, only capital structure significantly contributes to positive variances in IFR. Audit committee meetings and authority contribute significantly to positive variances in IFR unlike audit committee expertise and independence. In terms of the IAF attributes, the risk management role and the regulatory compliance role contribute significantly to positive variances in IFR as compared to the governance processes role and evaluation of the internal control role.

Originality/value – This study enhances our understanding of the relationship between ACE, IAF, firm-specific attributes and IFR in an environment where IFR is not mandated and where corporate governance practices are very much in infancy. This is especially so given that for the first time, to the best of the authors' knowledge, the contribution made by ACE, IAF and firm-specific attributes in IFR using evidence from an African developing country (Uganda) is now documented in a single study.

Keywords Internet financial reporting, Audit committee effectiveness, Internal audit function, Diffusion of innovation theory, Firm-specific attributes

Paper type Research paper

1. Introduction

Studies on internet financial reporting (IFR) are continuously gaining an audience among scholars and practitioners (Bananuka, 2020; Dunne *et al.*, 2013). This is because financial information disclosed on the entity's website can reach a wider spectrum of stakeholders in a quicker and less costly manner (Bananuka, 2020; Dolinšek and Lutar-Skerbinjek, 2018; Ahmed *et al.*, 2017; Dunne *et al.*, 2013). Undoubtedly, the costs of IFR are much lower because every company especially those covered by this study is already operating a website. The internet facilitates the improved availability of financial information and improves transparency which encourages investment as several investors can access information with ease (Waweru *et al.*, 2019).

Existing studies have mainly used firm-specific characteristics (Dolinšek and Lutar-Skerbinjek, 2018; Mokhtar, 2017; Aly *et al.*, 2010) and corporate governance mechanisms (Waweru *et al.*, 2019; Bin-Ghanem and Ariff, 2016) to investigate their association with IFR.

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Studies investigating the association between firm-specific characteristics and IFR document contradicting results. For example, Mokhtar (2017) documents that firm size, profitability, leverage and auditor type have significant associations with IFR while Aly *et al.* (2010) find that firm size and auditor type do not explain corporate internet reporting, which is contrary to Mokhtar (2017) findings. For corporate governance attributes, studies such as Waweru *et al.* (2019) focus on the role of audit committee (AC) independence and financial expertise and ignore other AC attributes such as AC meetings, diligence and size. Similarly, Bin-Ghanem and Ariff (2016) only focus on the overall audit committee effectiveness (ACE) and do not investigate among the ACE attributes, which one is more critical for IFR than the other. Kelton and Yang's (2008)'s study focuses on the role of diligent ACs and the percentage of AC members with financial expertise in engaging in IFR. Other studies focus on the role of intellectual capital, board role performance and isomorphism in IFR (Bananuka, 2020; Bananuka *et al.*, 2019a, 2019b). To the best of the authors' knowledge, minimal studies document the association between ACE using proxies such as AC size, independence, authority, meetings and expertise using evidence from Uganda. Also, studies that document the association between IAF and IFR are minimal.

An effective AC enhances IFR, especially if its composition includes at least three members where the majority are non-executive directors. Firms whose AC members have financial expertise and have their roles performed diligently are expected to register improvements in IFR. Also, firms whose AC members attend meetings as scheduled are more likely to have better IFR practices given that during such meetings, matters of IFR are likely to be discussed. From the literature, Waweru *et al.* (2019) indicate that AC independence, financial expertise and IFR are significantly associated. In another study, Bin-Ghanem and Ariff (2016) find that ACE is significantly associated with IFR. Kelton and Yang (2008) find that diligent ACs and a higher percentage of AC members with financial expertise are more likely to engage in IFR.

A functioning internal audit is commonly known for reviewing governance processes and providing assurance on such processes, participating in risk management, evaluating the effectiveness of internal controls and giving assurance on whether an entity complies with the existing laws (Oussii and Taktak, 2018; Bananuka *et al.*, 2018a, 2018b; Sarens *et al.*, 2012; Abbott *et al.*, 2004). Internal audit function (IAF) has been linked to other outcomes such as accountability, financial reporting quality and, not specifically, the IFR. For example, Bananuka *et al.* (2018b) find that the IAF is significantly associated with accountability among Uganda's state-owned enterprises. In terms of the association between the specific internal audit roles/attributes and IFR, none such studies exist. Yet, IAF is significant for the improvement of corporate governance (Arena and Azzone, 2009). This means that the role of IAF in corporate governance and how IAF can improve corporate governance through the promotion of new reporting techniques such as IFR are underscored in the literature.

Existing studies on IFR use evidence from countries other than Uganda and yet each country has its own culture and business systems. For example, Waweru *et al.* (2019) used evidence from Kenya and Tanzania which are close to the Indian Ocean, and accordingly, the cost of constructing internet infrastructures in such countries is cheaper as compared to Uganda which is a land-locked country (CIPESA, 2014). Uganda is one of those countries in Africa where internet connectivity is slow (Bananuka, 2020; Belson, 2016) and this affects negatively IFR. Legally, Section 50(1), (2) and (3) of the Uganda Financial Institutions Act of 2004 requires every financial institution to publish its annual and quarterly financial statements in a newspaper circulating in the whole of Uganda and display such statements in its banking halls. Further, Section 105(2) of the Insurance Act of 2017 requires

every insurance firm to publish the auditor's report and the financial statements in a conspicuous place in its offices and branches and a local newspaper of wide circulation within four months after the end of the financial year. Therefore, both commercial banks and insurance firms in Uganda are not mandated to disclose their financial performance and position on their websites but are not barred from disclosing such information on their websites.

Majority of the existing studies on IFR use content analysis (Kelton and Yang, 2008; Bin-Ghanem and Ariff, 2016; Dolinšek and Lutar-Skerbinjek, 2018; Waweru *et al.*, 2019). Content analysis has been used in disclosure studies and is largely known for being objective and verifiable (Tauringana, 2021). However, results from the content analysis have largely theoretical contributions rather than policy implications (Belal and Owen, 2007). In undertaking a perception-based study, we can document other reasons why companies chose to or not to upload their financial performance and position on their websites. Perception-based studies incorporate the opinions of respondents on why or not companies upload their financial statements on their websites unlike content analysis studies which depend on established categories rather than exploring IFR issues from a contextual analysis perspective. Because this study follows the positivism philosophical stance, the quantitative approach involving the use of questionnaires is used.

The purpose of this study is therefore to establish the contribution of ACE and its attributes, IAF together with its attributes and firm-specific attributes to IFR using evidence from Uganda. Using a questionnaire survey of 40 financial services firms, results indicate that both ACE and IAF significantly contribute to positive variances in IFR. Our initial understanding of ACE was such that, effective ACs can pass decisions on IFR only if they have the financial expertise, are independent of management, have authority over the IAF, hold meetings quarterly and are of appropriate size – at least three members. This study only confirms that the core attributes of ACE for purposes of IFR are ACE meetings and authority. For IAF attributes, only risk management and regulatory compliance contribute significantly to positive variances in IFR, unlike governance processes and internal control reviews. In terms of firm-specific attributes, only capital structure contributes to positive variances in IFR.

This study results make the following contributions to the existing literature. As a distinction from most of the previous studies that used content analysis methodologies (Kelton and Yang, 2008; Aly *et al.*, 2010; Dolinšek and Lutar-Skerbinjek, 2018; Waweru *et al.*, 2019) which are largely known for their contribution to theory rather than practice (Belal and Owen, 2007), this study contributes to managerial perception-based studies on IFR (Bananuka, 2020; Bananuka *et al.*, 2019a). Further, this study contributes to the existing literature on the determinants of IFR (Bananuka, 2020; Waweru *et al.*, 2019; Mokhtar, 2017; Bin-Ghanem and Ariff, 2016) by documenting the contribution made by the ACE, IAF and firm-specific attributes to IFR in a single study using evidence from Uganda where internet connectivity is slow and expensive. This study further provides initial empirical evidence on the role of ACE and IAF attributes in the improvement of IFR

The remainder of the paper is structured as follows. Section 2 is the literature review where the theoretical foundation and hypotheses development are discussed. Section 3 presents the methodology where the research design and the model are specified. Section 4 presents the results while Section 5 presents the discussion. The final section is the summary and conclusion.

2. Literature review

2.1 Theoretical foundation

IFR is the distribution of corporate financial performance and position information through the entity's website to a wide range of users for timely decision-making (Bananuka, 2020). This study uses the diffusion of innovation (DOI) theory to establish the contribution of ACE, IAF and firm-specific attributes to IFR. The DOI theory has previously been used to explain innovations in reporting (Bananuka, 2020; Gunarathne and Senaratne, 2017). However, as far as the authors of this work are aware, no study has used DOI to explain the role of ACE, IAF and firm-specific attributes in IFR in a single study. The basic assumption of the DOI theory is that innovation spreads without limit and without specifying the adopters (Rogers, 1995). It can be noted that for an innovation to take shape, established systems and resources are necessary. This means that older firms, large-sized firms and those that are audited by the big 4 audit firms are more likely to embrace innovations like IFR. Also, the ownership and capital structure of a firm are key determinants of IFR because firms with multiple ownership need to communicate to a variety of shareholders in a timelier fashion. Further, firms with a diverse capital structure (equity versus debt), especially where equity is more than debt, may disclose to indicate to their stakeholders that their going concern is assured.

Rogers (2003) explains that, for an innovation to take shape, various actors such as the AC members and internal audit staff have to play a great role. The ACE is responsible for ensuring that all the risks likely to affect the financial institution are under control. One such risk is failure to disseminate information to various stakeholders timely. While the AC may not be responsible for the dissemination of information, it performs an oversight role and as such recommends and passes decisions aimed at improving communication between the entity and its stakeholders. In the Financial Institutions Act of 2004 – Uganda, the ACs are expected to review the financial statements of the institutions and make recommendations on them. In performing such a task, the recommendations may include uploading such financial statements on the entity website. The IAF is another critical governance mechanism that is at the forefront of promoting IFR.

2.2 Hypotheses development

2.2.1 Firm-specific attributes and internet financial reporting. The focus of the previous studies on IFR has centered on firm-specific attributes/characteristics by documenting whether a relationship exists. The commonly studied firm-specific attributes include firm size, firm age, ownership structure, auditor type/quality and capital structure. However, there are contradicting results as discussed below.

In their meta-analytic study, Mokhtar (2017) finds that firm size is significantly associated with IFR. In another study, Dolinšek and Lutar-Skerbinjek (2018) find that company size is significantly associated with IFR. Similarly, Ahmed *et al.* (2017) find a significant association between firm size and IFR. The study results mean that larger firms are more involved in IFR as compared to smaller firms. In contrary, using content analysis evidence from Egypt, Aly *et al.* (2010) find that firm size cannot explain corporate internet reporting. In other accounting literature, Nkundabanyanga *et al.* (2021) find that firm size is not significantly associated with environmental performance disclosure. Nkundabanyanga *et al.* (2021)'s study was undertaken in Uganda's manufacturing firms while other previous studies that document significant associations between firm size and IFR were conducted in other national settings other than Uganda.

Previous studies on the association between firm age and IFR are common but document no significant associations. Dolinšek and Lutar-Skerbinjek (2018) find that firm age is not a

significant determinant for IFR. In another study of Kuwait companies, Alanezi (2009) finds that firm age is not significantly associated with IFR. In other literature, Nkundabanyanga *et al.* (2021) find that firm age is not significantly associated with environmental performance disclosures. Further, Bananuka *et al.* (2021) find that firm age is not significantly associated with environmental performance. This study attempts to confirm whether there is no significant association between firm age and IFR and, yet, it is expected that older firms have the necessary systems for IFR in place such as company websites as compared to young companies.

Dolinšek and Lutar-Skerbinjek (2018) find that ownership concentration is significantly associated with IFR. In contrary, Alanezi (2009) finds that ownership structure is not significantly associated with IFR. Further, Bananuka (2020) and Bananuka *et al.* (2019a) find that ownership structure (treated as a control variable) is not significantly associated with IFR. Also, ownership structure has been linked to the adoption of international financial reporting standards but found to be none significant (Bananuka, *et al.*, 2019c, 2019b). Here, the argument is that firms that are owned by foreigners disclose financial information on the internet because the various stakeholders are found both within the country where the business entity is located and in the country where the owners of the firm originate from or if anything, are found.

Regarding the relationship between auditor type and IFR, Mokhtar (2017) and Ahmed *et al.* (2017) find auditor type to be significantly associated with IFR. Conversely, Aly *et al.* (2010) find that auditor size is not significantly associated with corporate internet reporting. Similarly, Bananuka (2020) find that auditor type is not significantly associated with IFR. The argument here is that firms that are audited by the big 4 audit firms are more likely to upload their financial information as compared to those firms that are audited by the small and medium audit practices.

Finally, studies on the relationship between capital structure and IFR are minimal, except for Bananuka (2020) who documents that capital structure is not significantly associated with IFR. Available studies on capital structure focus on leverage which is a small component of capital structure that focuses on the debt-to-equity ratio (Mokhtar, 2017). Mokhtar (2017) finds leverage to be significantly associated with IFR. The argument here is that firms with more equity will disclose more information on the internet to restore confidence in the various stakeholders of the entity regarding its assurance on the going concern.

Given the mixed results as seen in the reviewed literature, it is hard to generalize study findings to all national settings. This is because, each national setting has its own culture, history and business system. For example, Uganda's history is characterized by civil wars and political unrest. Uganda is a land-locked country and thus internet infrastructures are expensive, which increases the cost of IFR and the culture of disclosure practices is minimal. Based on Uganda's unique features, this study builds on the previous studies' findings by hypothesizing that:

H1. Larger firms disclose their financial information on their websites than smaller firms.

H2. Older firms disclose their financial information on their websites than young firms.

H3. Ownership structure and IFR are related.

H4. Firms audited by the big 4 disclose their financial information on their websites than firms that are audited by the small and medium audit practices.

H5. Capital structure and IFR are related.

2.2.2 Audit committee effectiveness and internet financial reporting. Studies that establish the link between ACE and IFR are uncommon to the authors' knowledge except for Bin-Ghanem and Ariff (2016) and Bananuka *et al.* (2018a). Also, studies that explore the association between the ACE attributes and IFR are scant except for Waweru *et al.* (2019) and Kelton and Yang (2008) who link a few ACE attributes (AC financial expertise and independence) to IFR. In their qualitative study, Bananuka *et al.* (2018a) find that ACE is one of those governance mechanisms capable of improving IFR. Bin-Ghanem and Ariff (2016) find that ACE is significantly associated with the level of IFR disclosure of firms in Gulf cooperation council countries. The understanding of ACE by Bin-Ghanem and Ariff (2016) is such that an effective AC will be independent of management, is of an appropriate size – based on the regulation/policy, has financial expertise and meets quarterly. The weakness with such an understanding of the ACE is that the AC authority is not considered. AC authority is described as a "clearly articulated mandate of audit committee 'responsibility' in any particular organizational task" (Haji and Anifowose, 2016). The AC authority involves the supervision of IAF activities such as evaluation of internal audit in terms of performance of their roles, supervision of internal audit systems and provision of assurance on the various activities of the organization. In the absence of such an attribute, it is doubtable that the AC is fully effective.

Kelton and Yang (2008) find that a diligent AC with financial expertise is more likely to engage in IFR. Waweru *et al.* (2019) find that AC independence and financial expertise increase corporate internet reporting. This means that ACs with financial expertise understand the importance of timely communication of financial information to users. In other reporting literature, Li *et al.* (2012) document that an independent AC enhances the quality and credibility of corporate reporting processes and this may mean that an independent AC can enhance IFR. The association between ACE meetings, ACE size and IFR is scant. Haji and Anifowose (2016) document no significant association between AC size and the extent and quality of integrated reporting practices. According to Agyei-Mensah (2019), ACs that meet frequently are likely to disclose quality voluntary information. Similarly, Salehi and Shirazi (2016) document that an AC with regular meetings contributes to the quality of financial disclosure. Further, Beasley *et al.* (2009) document that agendas for meetings are set before the meeting to enable members to carry out consultations or be acquainted with the matters to be discussed. These findings on AC meetings and reporting practices mean that, during the meetings, there are likely to be discussions that aim to promote the usage of the internet in financial reporting. Therefore, financial services firms whose ACs have the appropriate AC size, AC independence, AC authority, AC meetings and financial expertise have an upper hand in IFR over those without. Based on the foregoing discussion, it can be hypothesized that:

H6. ACE is positively related to IFR.

H6(a). AC independence is positively related to IFR.

H6(b). AC expertise is positively related to IFR.

H6(c). AC meetings are positively related to IFR.

H6(d). AC size is positively related to IFR.

H6(e). AC authority is positively related to IFR.

2.2.3 Internal audit function and internet financial reporting. A functioning internal audit according to cooper *et al.* (2006) entails reviews and evaluations of internal controls, risk management and compliance to regulations. Bananuka *et al.* (2017) document that internal auditors perceive their roles to be reporting on the system for generating financial information and reporting on the reliability of financial statements. Studies that directly investigate the IAF role in IFR are none existent to the authors' knowledge except for Bananuka *et al.* (2018a) who identify IAF as a weak determinant of IFR in Uganda using qualitative methods. Few studies find significant associations between IAF and financial reporting (Kaawaase *et al.*, 2021; Johl *et al.*, 2013; Gras-Gil *et al.*, 2012). Because one of the qualitative characteristics of financial information is timeliness, then internal audit may recommend that information is provided to users in a timelier fashion using the internet.

Based on Bananuka *et al.* (2018b) findings, the IAF is critical for improvement in accountability. This means that, if the firm is mindful of its various stakeholders, the IAF will recommend that financial statements be uploaded on the entity's website to enable easy access by the users as faster as possible. According to the Institute of Internal Auditors (2021), internal audit contributes to risk management processes. This means that if none provision of financial information on the entity website is assessed as high risk, then the IAF will recommend to the AC of the board to pass decisions and/or directives in favor of IFR. Bananuka *et al.* (2018b) correlation analysis results suggest that review and evaluation of internal controls are positively and significantly associated with accountability. Therefore, the entity needs to ensure that there are controls in place especially those that aim to promote financial reporting quality. The Financial Institutions Act of 2004 (Uganda) requires every financial institution to have an internal auditor and among his or her roles is to evaluate compliance with laws, policies and operating instructions. There are minimal studies that link regulatory compliance to IFR. However, a few studies attempt to link regulatory compliance with accountability. For instance, Bananuka *et al.* (2018b) correlation results indicate that regulatory compliance is significantly associated with accountability. Given the scant literature on the role of IAF on IFR, an attempt to close the gap is done. We therefore hypothesize that:

H7. IAF is positively related to IFR.

H7(a). Governance processes role is related to IFR.

H7(b). Risk management role is related to IFR.

H7(c). Evaluation of internal controls role is related to IFR.

H7(d). Regulatory compliance role is related to IFR.

3. Methodology

3.1 Design, population and sample characteristics

This study uses cross-sectional and correlational research designs with a quantitative approach involving the use of a questionnaire. This means that this study follows the positivism ontological stance. According to Saunders *et al.* (2007), the reality is independent of the researcher and thus objective. While there are arguments that perception-based studies take on an inductive approach, studies that use questionnaire surveys largely take on the deductive approach. In the accounting literature, there exist studies such as

Kaawaase *et al.* (2021) that establish the association between corporate governance, internal audit quality and financial reporting quality using questionnaires and such studies have followed the deductive approach. Saunders *et al.* (2007) argue that studies that use deductive approaches aim to establish the relationship between variables and as such use hypotheses.

The study population is 53 financial services firms (Bank of Uganda, 2017; IRA, 2017). Of the 53 financial services firms, 24 are commercial banks licensed by the Bank of Uganda (the central bank) and 29 are insurance firms. Among the insurance firms, there are 20 non-life insurance companies and 9 are life insurance companies. Questionnaires are distributed to Chief Finance Officers (CFOs) and Chief Internal Auditors (CIAs) of all the financial services firms. CFOs are considered because they are the primary preparers/custodians of the financial statements and as such are responsible for ensuring that such financial statements are distributed to various stakeholders/users. CIAs are considered because they review those controls related to financial reporting practices of a company in addition to participating in the risk management processes of a firm related to disclosure practices, report on whether the firms comply with regulations/policies or not and check on governance processes. CIA and CFOs are further considered because they are required by Uganda's Financial Institutions Act of 2004 to attend all AC meetings. This means that they are in a better position to evaluate the ACs. Of the 53 firms, completed questionnaires were received from 40 firms, indicating a response rate of 75%. The response is high for a survey of this type considering that previous studies involving such surveys are known to generate lesser percentage response rates. A higher percentage response rate is possible because respondents are given three months to complete the questionnaire and several callbacks are made.

In terms of sample characteristics, the male respondents are 38 (or about 65%) and the female respondents are 20 (or about 35%). About 62% completed university education (bachelor's degree) and 38% have master's degree. A total of 43% are members of the Institute of Certified Public Accountants of Uganda (ICPAU), 48% are members of the Association of Chartered Certified Accountants (ACCA) and 5% are members of other professional bodies. This means that the respondents can comprehend the questions asked in the questionnaire and it also means that chief finance officers and chief internal auditors are professional accountants. A total of 58% of the respondents have work experience in the same firm for more than five years and this means that they have the necessary experience for this study.

3.2 Questionnaire and measurement of variables

A five-point Likert scale questionnaire ranging from strongly disagree to neutral to strongly agree designed to measure the opinion of a respondent on the independent variables is used. The questionnaire survey is used because it is a useful tool for assessing those direct managerial motivations for IFR. Prior research indicates that content analysis studies document those indirect managerial motivations for IFR and ignore the direct managerial motivations because feedback from the preparers or users of financial statements is not sought (Belal and Owen, 2007; Dolinšek and Lutar-Skerbinjek, 2018). This is likely to leave the problem less understood in terms of why it continues to persist. Because the study is perception-based, even those firms whose websites do not have the financial statements are included in the study. The questionnaire design is based on reviewing the existing literature on the study variables. The operationalization of the study variables is as follows.

IFR is operationalized in terms of online general financial information and financial statements presentation. This study follows a disclosure index on IFR used by Kelton and Yang (2008) with fewer modifications as a result of the recent trends in the financial reporting practices and study setting. The authors check various websites of financial services firms because each financial services firm understudy has an operating website. The authors develop a checklist of all the items to look for at the entity's websites. The checklist has majorly two columns. These columns include the disclosure column and the finding column, which is divided into two columns. The two columns are for YES and NO. If the disclosure item is found on the entity's website, then a YES response is captured. If the disclosure item is not found on the entity's website, then a NO response is captured. After collecting the data, a percentage level of disclosure of the items on online general financial information and financial statements presentation is computed. The number of items disclosed (where the respondent tick YES) is divided by the total items included in the questionnaire on a specific section. Borrowing from Nalukenge *et al.* (2018), the percentage score is then put on a five-point Likert scale to match the independent variables. In this case, 0%–20% = 1; 21%–40% = 2; 41%–60% = 3; 61%–80% = 4 and 81%–100% = 5. The disclosure checklist is shown in Appendix 1.

ACE is operationalized in terms of AC independence, financial expertise, AC meetings, authority and size (Bin-Ghanem and Ariff, 2016; Haji and Anifowose, 2016; Bananuka *et al.*, 2019b). Further, IAF is operationalized in terms of reviews of governance processes, risk management, reviews of internal controls and regulatory compliance (Oussii and Taktak, 2018; Bananuka *et al.*, 2018a, 2018b; Sarens *et al.*, 2012; Abbott *et al.*, 2004; Arena and Azzone, 2009). Firm-specific attributes include firm size, auditor type, ownership structure, firm age and capital structure. Some previous studies have measured firm size in terms of the natural logarithm of the book value of the total firm assets (Bin-Ghanem and Ariff, 2016; Waweru *et al.*, 2019; Aly *et al.*, 2010) while other studies have measured firm size in terms of the number of employees of the company (Dolinšek and Lutar-Skerbinjek, 2018). Some studies have measured firm size in terms of a dichotomous variable, where a code of 1 is if the company has more than 50 employees and 0 otherwise (Bananuka *et al.*, 2018b). Similarly, Bananuka (2020) measures firm size as a dichotomous variable, where a dummy assuming the value of 1 means that the firm has more than 20 branches; "0" otherwise. This study, therefore, follows measures used in Bananuka (2020) in measuring firm size. For auditor type, we measure it following Aly *et al.* (2010) measures. Aly *et al.* (2010) assign code 1 for firms audited by any of the big 4 audit firms and 0 otherwise. Previous studies such as Tauringana (2021) measure ownership structure as a dummy assuming the value of 1 if the company is foreign-owned; 0 otherwise. This study also adopts such measures. For firm age, the majority of the previous studies measure firm age in terms of the age of the company (Nkundabanyanga *et al.*, 2021; Tauringana, 2021; Dolinšek and Lutar-Skerbinjek, 2018). This study also follows similar measures but categorizes firms that have been in existence for five years and above from those that have been in existence for less than five years. This is because most firms in Africa, especially Uganda, Kenya, and South Africa, do not survive for more than five years (Orobia *et al.*, 2020). Previous studies such as Bananuka *et al.* (2019a, 2019b, 2019c) measure capital structure as a dummy variable assuming the value of 1 if the firm uses both equity and loans, 2 if the firm's source of finance is only loans, and"0" otherwise. This study follows Bananuka *et al.* (2019a, 2019b, 2019c) measure of capital structure but with modifications where the option of only debt financing is dropped. The option of only debt financing/loans is dropped as it may be difficult for firms operating in small stock markets to operate on only debts. Because of the complications with equating firm-specific characteristics to a five-point Likert scale, standardized beta coefficients are

used in the analysis and interpretation of results. Field (2009) argues that the unstandardized beta values take on real variables with no common measurements while standardized beta values/coefficients are all measured in standard deviation units and so are directly comparable. Field (2009) further argues that standardized beta values provide a better insight into the "importance" of a predictor in the model. Table 1 summarizes the measurement of variables.

3.3 Validity and reliability of the research instrument

Before field data collection, the questionnaire is given to practitioners and experts in the subject area for validation. The views of the various practitioners and academicians are incorporated into the final questionnaire which is sent to the respondents. Content validity index is computed and a value of 0.8 is obtained. Such content validity index values are common in accounting research and therefore acceptable. Cronbach's alpha coefficient to test for reliability of the questionnaire is also undertaken. Cronbach's reliability index for ACE, IAF and IFR is 0.928, 0.752 and 0.973, respectively. The results affirm that all the components of the instrument have an acceptable Cronbach's alpha greater than 0.7, which indicates that the instrument is reliable (Field, 2009). To further test for reliability and validity, factor analysis is undertaken. The rotated component matrices are generated and the results are indicated in Appendices 2 and 3. Before factor analysis, data is checked for suitability for data analysis. Field (2009) recommends the use of communalities or Kaiser–Meyer–Olkin (KMO) measure of sampling adequacy. The KMO values for ACE and IAF are all above 0.5, which is acceptable according to Field (2009). The KMO results are shown in Appendices 2 and 3.

Table 1.
Measurement of the main study variables

Variable	Acronym	Variable description
Dependent		
Internet financial reporting	IFR	Constructing an un-weighted disclosure index on the IFR checklist (see Appendix 1 for items used to construct the index). An item disclosed on the entity's website (YES) is given a weight = 1 and an item not disclosed (NO) = 0. These are then converted into a five-point Likert scale
Independent		
Audit committee effectiveness	ACE	The average score of questions on AC independence, financial expertise, meetings, authority and size
Internal audit function	IAF	The average score of questions on reviewing governance processes, risk management, review and evaluation of internal controls and regulatory compliance
Firm size	SIZE	Dichotomous variables, 1 if the firm has more than 20 branches; "0" otherwise
Auditor type	AUD	Dichotomous variables, 1 if the firm is audited by small and medium audit practices (SMPs); "0" otherwise
Ownership structure	OWN	A dummy variable is coded as 0 if the firm is owned by indigenous Ugandans, 1 if the firm is owned by foreigners
Firm age	AGE	Dichotomous variables, 1 if the firm is aged 10 years and above, "0" otherwise
Capital structure	CAP	Dichotomous variables, 1 if the firm uses both equity and debt financing, "0" if the firm uses only equity financing
β_0		Constant
εj		Error term

3.4 Model

This study uses the hierarchical regression model because it aims to establish the contribution of ACE and its attributes, IAF and its attributes and firm-specific characteristics to IFR. According to Field (2009), hierarchical regressions are powerful analyses as they explain which predictor variable contributes more to the variances in the dependent variable. Hierarchical regressions show the incremental power of an additional predictor variable to the already existing variables in the model (Sekaran, 2003; Field, 2009). In accounting literature, several studies that use hierarchical regression models exist (Bananuka *et al.*, 2021; Kaawaase *et al.*, 2021; Bananuka *et al.*, 2018b).

Specifically, the following models are stated:

$$\text{IFR} = \beta_0 + \beta_1\text{SIZE} + \beta_2\text{AUD} + \beta_3\text{OWN} + \beta_4\text{AGE} + \beta_5\text{CAP} + \varepsilon\text{j} \quad \text{Model 1}$$

$$\text{IFR} = \beta_0 + \beta_4\text{ACI} + \beta_5\text{EXP} + \beta_6\text{ACM} + \beta_7\text{AUT} + \beta_8\text{ACS} + \varepsilon\text{j} \quad \text{Model 2}$$

$$\text{IFR} = \beta_0 + \beta_4\text{GOV} + \beta_5\text{RISK} + \beta_6\text{CONT} + \beta_7\text{COMP} + \varepsilon\text{j} \quad \text{Model 3}$$

$$\text{IFR} = \beta_0 + \beta_1\text{SIZE} + \beta_2\text{AUD} + \beta_1\text{OWN} + \beta_1\text{AGE} + \beta_3\text{CAP} + \beta_3\text{ACE} + \beta_3\text{IAF} + \varepsilon\text{j} \quad \text{Model 4}$$

4. Results

4.1 Descriptive statistics

Concerning IFR, the mean is 3.00 and the standard deviation is 0.97. Also, the maximum and minimum scores for IFR are 5.00 and 1.32. The results suggest that there are those firms that have fully adopted IFR and those that have not fully done so. A mean of 3 may indicate that 60% of the financial services firms are already disseminating their financial performance and position information on their websites. The means and standard deviations for ACE and IAF are 3.83 and 0.60, 4.21 and 0.55, respectively. The means and the standard deviations for firm-specific characteristics together with those of other variables are indicated in Table 2. Field (2009) argues that means and standard deviation represent a summary of the data while standard deviations show how well the means represent the data. In this study, standard deviations are small as compared to the means and this suggests that calculated means highly represent the observed data (Field, 2009; Saunders *et al.*, 2007). We also test for the normality of the data by obtaining the skewness and kurtosis values. All the values are within the range of 3.29 to −3.29, which is an indicator that our data is normally distributed (Field, 2009). Field (2009) indicates that the closer the skewness and kurtosis values are to zero, the data is normally distributed. The skewness and kurtosis values are indicated in Table 2.

4.2 Multivariate analysis

Initially, the correlations among independent variables are examined, and they are presented in Table 3. Correlation analysis results in Table 3 show that ACE is significant

Table 2.
Descriptive statistics

Variable	*N* Statistic	Minimum Statistic	Maximum Statistic	Mean Statistic	SD Statistic	Skewness Statistic	Skewness Std. error	Kurtosis Statistic	Kurtosis Std. error
Internet financial reporting	40	1.38	5.00	3.11	1.02	−0.08	0.37	−1.27	0.73
Online general financial information	40	1.00	5.00	2.95	1.03	0.03	0.37	−1.07	0.73
Financial statements presentation	40	1.00	5.00	3.26	1.17	−0.14	0.37	−1.27	0.73
AC independence	40	1.00	5.00	3.41	1.04	0.01	0.37	−0.51	0.73
AC financial expertise	40	2.00	5.00	3.68	0.75	−0.11	0.37	−0.39	0.73
AC meetings	40	1.40	5.00	3.86	0.83	−0.87	0.37	0.79	0.73
AC authority	40	1.17	5.00	3.99	0.85	−0.21	0.37	0.17	0.73
AC size	40	2.00	5.00	4.31	0.64	−0.24	0.37	0.93	0.73
Internal audit function	40	1.63	4.94	4.24	0.56	−0.63	0.37	0.82	0.73
Governance processes	40	2.75	5.00	4.35	0.54	−0.63	0.37	0.39	0.73
Risk management	40	1.00	5.00	3.98	0.81	−0.31	0.37	0.68	0.73
Evaluation of internal control systems	40	1.29	5.00	4.28	0.74	−0.94	0.37	0.99	0.73
Regulatory compliance	40	1.50	5.00	4.36	0.65	−0.18	0.37	0.42	0.73
Firm size	40	0.00	2.00	0.88	0.88	0.25	0.37	−1.70	0.73
Auditor type	40	0.00	1.00	0.18	0.38	0.78	0.37	1.22	0.73
Ownership structure	40	0.00	2.00	1.18	0.54	0.09	0.37	0.15	0.73
Firm age	40	0.00	1.00	0.80	0.40	−0.55	0.37	0.45	0.73
Capital structure	40	0.00	1.00	0.35	0.48	0.65	0.37	−1.66	0.73

Source: Primary data

Table 3.
Correlations among the dependent and the independent variables

Variable	1	2	3	4	5	6	7	8	9	10	11
Internet financial reporting (1)	1										
Online general financial information (2)	0.940**	1									
Financial statements presentation (3)	0.937**	0.761**	1								
Audit committee effectiveness (4)	0.472**	0.362*	0.525**	1							
Financial expertise (5)	0.185	0.142	0.205	0.656**	1						
Audit committee meetings (6)	0.422**	0.324*	0.470**	0.834**	0.461**	1					
Authority (7)	0.547**	0.430**	0.598**	0.853**	0.365*	0.620**	1				
Audit committee size (8)	0.316*	0.233	0.361*	0.828**	0.447**	0.657**	0.636**	1			
Audit committee independence (9)	0.336*	0.253	0.378**	0.805**	0.416**	0.560**	0.670**	0.600**	1		
Internal audit function (10)	0.477**	0.399**	0.497**	0.191	0.102	0.091	0.340*	−0.008	0.165	1	
Reviewing governance processes (11)	0.238	0.164	0.283*	−0.181	−0.215	−0.141	0.004	−0.355*	−0.089	0.661**	1
Risk management (12)	0.419**	0.309*	0.479**	0.331*	0.189	0.175	0.497**	0.101	0.273*	0.676**	0.536**
Review of internal controls (13)	0.219	0.134	0.278*	0.039	−0.029	−0.071	0.180	−0.111	0.142	0.667**	0.535**
Regulatory compliance (14)	0.328*	0.257	0.359*	0.021	−0.149	0.094	0.182	−0.182	0.049	0.770**	0.615**
Firm size (15)	0.098	−0.009	0.195	0.124	−0.011	0.080	0.123	0.274*	0.029	−0.030	−0.104
Auditor type (16)	0.081	−0.011	0.165	0.332*	0.509**	0.189	0.106	0.239	0.368**	0.247	0.067
Ownership structure (17)	0.219	0.285*	0.124	0.270*	0.312*	0.062	0.188	0.338*	0.221	0.009	−0.159
Firm age (18)	−0.006	0.024	−0.036	−0.074	−0.097	−0.126	−0.044	−0.102	0.083	−0.228	−0.059
Capital structure (19)	0.283*	0.401**	0.127	0.077	−0.012	0.031	0.062	0.162	0.076	−0.124	−0.176

Notes: **Correlation is significant at the 0.01 level (one-tailed); *correlation is significant at the 0.05 level (one-tailed)
Source: Primary data

(*continued*)

Table 3.

Variable	12	13	14	15	16	17	18	19
Internet financial reporting (1)								
Online general financial information (2)								
Financial statements presentation (3)								
Audit committee effectiveness (4)								
Financial expertise (5)								
Audit committee meetings (6)								
Authority (7)								
Audit committee size (8)								
Audit committee independence (9)								
Internal audit function (10)								
Reviewing governance processes (11)								
Risk management (12)	1							
Review of internal controls (13)	0.505**	1						
Regulatory compliance (14)	0.601**	0.544**	1					
Firm size (15)	0.162	0.195	0.019	1				
Auditor type (16)	0.278*	0.221	−0.084	0.025	1			
Ownership structure (17)	0.275*	0.113	−0.061	0.258	−0.018	1		
Firm age (18)	0.010	−0.210	−0.193	0.287*	−0.035	0.046	1	
Capital structure (19)	−0.302*	−0.150	−0.186	0.043	−0.220	0.199	0.176	1

and positively related to IFR ($r = 0.472^{**}$, $p < 0.01$). This means that a unit positive change in ACE leads to a 47.2% change in IFR. The correlation analysis results also show that IAF is positively and significantly associated with IFR ($r = 0.477^{**}$, $p < 0.01$), which means that a unit change in IAF translates into a 47.7% change in IFR. This provides the first-order tests for our study hypotheses. Regarding the ACE and IAF attributes, results indicate that other than AC expertise, all the other AC effectiveness dimensions are significant and positively related to IFR. Results further indicate that only risk management and regulatory compliance as dimensions of IAF are significantly and positively associated with IFR while the review of governance processes and review and evaluation of internal controls are not. For firm-specific variables, only capital structure is significantly associated with IFR. This means that a unit change in firm capital structure will lead to a change in the level of IFR.

In the second level analysis – hierarchical regression – the study first examines whether firm-specific attributes variables (firm size, auditor type, ownership structure, firm age and capital structure) contribute significantly to positive variances in IFR. Findings indicate that only capital structure plays a significant role in IFR (Model 1), thus providing support for *H5* while *H1–H4* are not supported. In Model 2, the study examines whether ACE attributes contribute significantly to variances in IFR and find that only ACE meetings and authority are significantly associated with IFR, thus providing support for *H6(c)* and *H6(e)*. In Model 3, the study examines whether IAF attributes significantly contribute to positive variances in IFR. Results show that risk management and regulatory compliance are significantly associated with IFR, thus providing support for *H7(b)* and *H7(d)*. In Model 4, the study examines whether both ACE and IAF significantly contribute to positive variances in IFR and results show that both IAF and ACE contribute significantly to positive variances in IFR, thus providing support for *H7* and *H6*. The hierarchical regression analysis results are presented in Table 4. Table 4 results reveal that the independent variables predict 37.7% (Adjusted $R^2 = 0.377$) of the variance in IFR. Going by the significant F change and Model F, the results also suggest the contribution made by each of ACE and IAF is significant.

We also test for the presence of multicollinearity problems in our data. Multicollinearity problems arise when there are higher correlations among the study variables (Field, 2009). Multicollinearity exists if the correlation coefficients between the predictor variables or between the predictor and the dependent variables are above 0.8 (Field, 2009, p. 224). For this study, the correlation coefficients among the main study variables (ACE, IAF, firm age, firm size, auditor type, capital structure and ownership structure) are all below 0.8, and specifically, none of the correlation coefficients is above 0.5. However, we note that the correlation coefficients between the dimensions and the main study variables are high but this is acceptable given that those dimensions are conceptually closely related with the respective main study variable. For example, general online financial information and financial statements presentation are highly correlated with IFR. This is because the two variables are components of IFR. Hair *et al.* (2019) suggest that for conceptually closely related variables, the correlations among those variables can be as high as 0.9. Other than the correlation coefficients between the predictor variables and the dependent variables being as low as below 0.5, we further test for the existence of multicollinearity using the tolerance statistic and the variance inflation factor (VIF). VIF indicates whether a predictor has a strong relationship with other predictors (Field, 2009) and a VIF value below 10 is an indicator that multicollinearity does not exist (Field, 2009). However, if the VIF is significantly greater than 1, then the regression model may be biased (Field, 2009, p. 242; Bowerman and O'Connell, 1990). The tolerance statistic is the reciprocal of VIF. The tolerance statistic should have values of 0.2 and above (Field, 2009). The VIF values for the main study variables are below 10 and not significantly greater than 1 while the tolerance

Item	Model 1	Model 2	Model 3	Model 4	Tolerance	VIF
Constant	2.406	1.157	2.231	3.526	na	na
Independent variables						
Audit committee effectiveness				0.384**	0.775	1.290
Internal audit function				0.479**	0.880	1.136
ACE attributes						
AC independence		0.081				
AC financial expertise		0.109				
AC meetings		0.210**				
AC authority		0.494**				
AC size		0.123				
IAF attributes						
Review of governance processes			0.004			
Risk management			0.336**			
Evaluation of internal controls			0.066			
Regulatory compliance			0.214**			
Firm-specific attributes						
Firm size	0.066			0.023	0.851	1.176
Auditor type	0.144			−0.104	0.833	1.200
Ownership structure	0.149			0.047	0.841	1.189
Firm age	−0.079			0.072	0.851	1.175
Capital structure	0.296**			0.248**	0.909	1.100
Model summary						
Model F	1.061	2.302**	1.918**	4.373**		
R square	0.135	0.373	0.341	0.489		
Adjusted *R* square	0.008	0.211	0.197	0.377		
R square change	0.135	0.158	0.193	0.354		
F change	1.061	2.125	0.202	11.080**		
Durbin Watson				2.195		

Note: **Significant at the 0.01 level
Source: Primary data

Table 4.
Multiple regression analysis

values are all above 0.2. This means that there are no multicollinearity problems with our results. We further run the Durbin Watson test to check whether there are any serial correlations between errors. Our results indicate that there are no serial correlations between errors as the Durbin Watson statistic value is 2.15, which is closer to 2 as recommended by Field (2009).

5. Discussion

Underpinned by the DOI theory, the contribution of ACE, IAF and firm-specific characteristics to IFR is now understood. ACE has a significant role to play in IFR. This can be done largely through exercising its responsibility and conducting meetings. The AC may exercise its authority through having a clear responsibility in the financial reporting process, emphasizing the processes that promote financial reporting, demanding that financial statements be uploaded on the firm's website, supervising internal audit systems that promote IFR, evaluating internal audit on aspects of IFR and ensuring that there is a provision of a combined assurance on IFR. Further to note is that the AC needs to organize meetings quarterly and at least 75% of the members must attend such meetings. The

finding that ACE plays a significant role in IFR is consistent with the DOI theory and this is because AC is one of such actors responsible for spearheading the adoption of IFR. The finding that ACE is significantly associated with IFR is consistent with previous studies such as those of Bin-Ghanem and Ariff (2016) who find that ACE improves IFR.

Regarding the ACE attributes, this study finds that AC authority and AC meetings contribute significantly to positive variances in IFR. In exercising its authority, the AC is expected to evaluate internal audit on aspects of financial reporting practices such as controls related to efficient communication of financial results to users of the entity's financial statements. The most important users are the shareholders, lenders and suppliers. The AC needs to ensure that the supervision of IAF is effective. All internal audit systems that promote IFR need to be supervised by the AC. For the case of AC meetings, the members of the AC need to be residents within the country as this will minimize absenteeism. Resident AC is well-grounded with the business environment. In addition to the statutory meetings (quarterly meetings for the case of Uganda), AC needs to have extra meetings to exhaust outstanding issues such as designing mechanisms for timely reporting to all stakeholders. The finding that AC authority is significantly associated with IFR is consistent with the DOI theory and means that if the key actors do not perform their roles, it is likely that the innovation will not spread. This study finding is also consistent with Haji and Anifowose (2016) who find that AC authority is significantly associated with integrated reporting quality.

The association between AC size, independence, financial expertise and IFR is not significant, which contradicts previous studies such as Waweru *et al.* (2019) and the DOI theory. This may be because Uganda's Financial Institutions Act of 2004 is silent on the level of the financial expertise of the AC members. It may also be because a large AC may spend more time in arguments related to their remuneration and non-key issues rather than focusing on the entity's reporting process. The independence of the board may also lose meaning especially if some of the board members expect benefits from the financial institutions, such as favorable credit terms, to their close family members or themselves.

IAF and IFR are significantly associated. This means that internal auditors can check the effectiveness of the internal controls, review the governance process, participate in risk management and ensure regulatory compliance. However, the emphasis of internal auditors is on risk management function and regulatory compliance because they are strongly associated with IFR. For Uganda's case, the Financial Institutions Act of 2004 Section 61(2) requires that the IAF ensures efficiency, effectiveness and economy of operations. The finding that IAF and IFR are significantly associated is consistent with the DOI theory because internal auditors are seen as a third eye of the board, which is responsible for passing decisions aimed at minimizing risks. This finding is consistent with Bananuka *et al.* (2018b) who find that a functioning internal audit is critical for ensuring accountability in statutory corporations in Uganda. The finding that risk management and regulatory compliance are key for IFR is consistent with previous studies such as Bananuka *et al.* (2018b) who find significant correlations between risk management, regulatory compliance and accountability. However, the finding that review of governance processes and evaluation of internal controls are not significant contradict the DOI theory because the roles of internal audit rotate around evaluation of internal controls.

For firm-specific attributes, our study findings only confirm that capital structure is significantly associated with IFR. This means that firms with more equity financing have the financial resources available to spread the innovation unlike those dominated by debt financing. This study finding on capital structure and IFR agrees with DOI theory because innovations cannot spread unless there are financial resources to enable their diffusion.

However, the finding that capital structure and IFR are significantly associated, contradicts Bananuka *et al.* (2019a, 2019b, 2019c) findings. The finding that auditor type, firm size, firm age, ownership structure and IFR are not significantly associated contradicts previous study findings such as those of Mokhtar (2017) who find that firm size is significantly associated with IFR.

6. Summary and conclusion

This study aimed to investigate the contribution of ACE, IAF and firm-specific attributes to IFR. The study further aimed to test whether the ACE and IAF attributes contribute to variances in IFR or not. Using a questionnaire survey of 40 financial services firms, results indicate that ACE, IAF and firm-specific attributes contribute significantly to positive variances in IFR. Our results further indicate that AC authority, independence, meetings and size contribute significantly to positive variances in IFR while AC financial expertise is not. Further, only the IAF attributes of risk management and regulatory compliance contribute significantly to positive variances in IFR. For firm-specific characteristics, only capital structure contributes to positive variances in IFR.

This study contributes to the existing literature on the determinants of IFR (Mokhtar, 2017; Waweru *et al.*, 2019) by documenting that capital structure, ACE and IAF contribute significantly to IFR. This study further contributes to managerial perception studies (Bananuka, 2020; Bananuka *et al.*, 2019a, 2019b, 2019c) by using perceptions to obtain respondents' opinions on the motivations for adoption of IFR. The results confirm the DOI theory's prediction that the AC can exert the necessary influence on a financial institution in the adoption decision of internet reporting. Because the internal audit is intuitively understood to act as an advisor to management in matters of risk management, the internal auditors are also in a better position to evaluate the IFR adoption decisions by management.

In terms of practical implications, the management of financial institutions needs to minimize the costs of printing and distributing annual reports through uploading such reports on the entity's websites. This will imply that all stakeholders of such a firm are sufficiently catered for. However, for companies to achieve that, there is need to have an effective AC and an IAF that performs its roles diligently. In terms of policy implications, there is a need for Government through the regulatory bodies to amend the existing laws on disclosure practices in Uganda to accommodate the recent reporting practices such as IFR. This implies that Section 50(1) (2) and (3) of the Uganda Financial Institutions Act of 2004 and Section 105(2) of the insurance act of 2017 could be amended. This is because the use of the entity's website to disclose its financial performance and position is cheaper as compared to newspapers.

This study's major limitation is that it was conducted on Uganda's financial services firms. This study's results may be only generalizable to Uganda's financial services firms. We believe that in other contexts whose environment is similar to Uganda's case, this study's results remain useful. However, future research may be extended to other national settings because each country has its own culture, history and business systems to enable comparisons. This study also uses only quantitative methodologies involving questionnaires. The weakness with such methodologies is that the deeper thoughts of respondents on the study problem are not brought out as literature-based questionnaire items are used. This means that future studies may focus on the use of mixed methods in understanding the causes of variances in IFR practices among financial institutions.

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Appendix 1

The IFR disclosure checklist:

(1) Online general financial information

- This firm's sales forecasts are uploaded on its website.
- This firm's dividend pay ratio for the previous years is uploaded on the entity's website.
- This entity's share prices are uploaded on its website.
- This entity's website has a tab for investor relations.
- This entity's profitability is displayed on its website.
- This entity's financial highlights are uploaded on the entity's website.
- Video documentaries capturing the entity's performance is uploaded on the entity's website.
- This entity's website has the financial calendar of the current year.
- Last year's financial calendar is uploaded on the entity's website.
- The name of investor relations or the public relations officer is on the entity's website.
- The email address of the entity's investor relations officer or public relations office is displayed on this entity's website.
- This entity has an option on its website for email subscription alerts.
- Interactive share price charts can be found on this entity's website.
- The chairman's statement for the current year is uploaded on this entity's website.
- This entity uploads its audit reports on its website regularly.

- This entity's annual reports are uploaded on the entity's website.

(2) Financial statements presentation

- Our entity uploads a statement of financial position on its website for the past accounting period.
- Our entity uploads a statement of financial position on its website for the current accounting period.
- Our entity uploads a statement of profit or loss on its website for the previous accounting period.
- Our entity uploads a statement of profit or loss on its website for the current accounting period.
- Our entity uploads a statement of cash flows for the year ended on its website for the previous accounting period on its website.
- Our entity uploads a statement of cash flows for the year ended on its website for the current accounting period on its website.
- Our entity uploads a statement of changes of equity for the previous accounting period on its website.
- Our entity uploads a statement of changes of equity for the current accounting period on its website.
- Our entity uploads its accounting policies on its website.
- This entity's financial statements are in a downloadable format.
- This entity's financial statements are easily visible on the website.
- This entity's financial statements are in a PDF format.
- This entity's financial statements are in an HTML format.
- This entity's financial statements are in an alternative language say Kiswahili, Arabic or Hindu, etc.
- This entity's financial statements are in an alternative currency.

Appendix 2

Item	Component				
	AC authority	AC size	AC meetings	AC expertise	AC independence
In our firm, audit committees evaluate internal audit on aspects of financial reporting practices	0.888				
There is an assurance provision in place in respect to internet financial reports of our firm	0.857				
Audit committees demand that financial information be uploaded on our firm's website	0.849				
In our firm, audit committees supervise internal audit systems that promote internet financial reporting	0.789				
Our audit committee has a clear responsibility in the financial reporting processes	0.541				
Our audit committee size is satisfactory enough to execute its functions		0.798			
Our audit committee is composed of at least three members		0.775			
Our audit committee size is according to established guidelines as per the regulator		0.724			
Our audit committee has more members than the required minimum		0.677			
Audit committee members reside within Uganda			0.799		
There exists a scheduled plan of all audit committee meetings			0.682		
At least 75% and above of the audit committee members attend audit committee meetings			0.668		
The audit committee held more meetings than the required minimum (quarterly)			0.634		
Audit committee meetings are organized at the appropriate time			0.591		
The majority of the audit committee members were once auditors				0.879	
The majority of the audit committee members have previously been members of the audit committees in other organizations which upload their financial information on their websites				0.844	
The majority of the audit committee members have an accounting background				0.683	
Our audit committee is formed of largely the external members					0.864
Our audit committee is not under strict guidelines or favors from any authority within the management					0.674
Eigenvalues	6.922	2.181	2.049	1.451	1.082
Percentage variance	20.592	16.013	14.062	13.195	8.161
Cumulative variance	20.592	36.605	50.667	63.862	72.023
Kaiser–Meyer–Olkin measure of sampling adequacy = 0.787; approx. Chi square = 674.582; df = 171; Sig = 0.000					

Note: Extraction method: principal component analysis; rotation method: Varimax with Kaiser normalization
Source: Primary data

Table A1. Rotated component matrix for audit committee effectiveness

Appendix 3

Item	Component			
	Evaluation of internal controls	Risk management	Regulatory compliance	Governance processes
The internal audit safeguards this firm's tangible assets from misuse	0.777			
The internal audit ensures internal controls promote proper segregation of duties in the preparation of financial statements and uploading them on the entity's website	0.741			
The internal audit confirms all the documentation of this firm such as policies related to financial management and reporting	0.705			
The internal audit ensures that the controls for uploading other financial information on the entity's website are effective	0.697			
The internal audit ensures that economic transactions of this firm are supported by adequate documentation	0.686			
The internal audit generates periodic reports regarding the effectiveness of internal controls	0.667			
Our internal audit makes recommendations on the improvement of controls related to financial reporting practices	0.663			
Internal audit encourages the firm to maintain its accounting records with reasonable detail	0.659			
The internal audit always checks the authorization of all expenditures	0.637			
The internal audit gives assurance on risk management processes		0.820		
Internal audit contributes to the improvement of risk management		0.794		
Internal audit provides advisory services in terms of risk management		0.729		
Internal audit submits a work plan to the audit committee regarding risk management processes		0.726		
The internal audit ensures that the risks associated with not adopting internet financial reporting are communicated to those charged with governance in time		0.712		
Internal audit updates staff on the changes in the applicable laws and regulations			0.862	
Internal audit guides employees on how to deal with compliance issues			0.833	
Internal audit recommends compliance with the Financial Institutions Act			0.802	
Internal audit complies with the code of ethics for accountants in performing their duties			0.773	
Internal audit commends that financial statements are prepared following the IFRS			0.662	
Our internal audit reviews processes in place to ensure accountability				0.852
The internal audit ensures that the organization maintains its culture				0.805
The internal audit ensures our firm maintains its integrity				0.715
Eigenvalues	9.806	2.250	2.008	1.900
Percentage variance	23.557	19.982	18.120	12.267
Cumulative variance	23.557	43.539	61.658	73.926
Kaiser–Meyer–Olkin measure of sampling adequacy = 0.816; approx. Chi square = 1,187.860; df = 231; Sig = 0.000				

Table A2. Rotated component matrix for internal audit function

Note: Extraction method: principal component analysis; rotation method: Varimax with Kaiser normalization
Source: Primary data