



EFFECT OF MANDATORY DISCLOSURE OF IAS/IFRS ON EARNINGS MANAGEMENT AMONG LISTED FIRMS AT THE UGANDA SECURITIES EXCHANGE

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Abstract

Prior research provides conflicting results on whether mandatory adoption IAS/IFRS deters or contributes to greater earnings management. On this basis, this study sought to examine the effect of mandatory disclosure of IAS/IFRS on earnings management among listed firms at the Uganda Securities Exchange. First and in accordance with prior empirical disclosure research, mandatory disclosure of IAS/IFRS is examined using a disclosure index. Secondly, earnings management represented by the absolute value of discretionary accruals is measured using the modified Jones model. Thirdly, robust regression is used to examine the effect of mandatory disclosure of IAS/IFRS on earnings management for a census of 9 non-financial companies for the period 2012 to 2017. We find an increase in earnings management following the 2005

mandatory adoption of IAS/IFRS among listed firms at the Uganda Securities Exchange. One important implication of this study is that studying several IFRS enables the accounting standard setters to identify standards that have a significant influence on financial reporting quality and those that need to be revised as they offer the opportunity to manage earnings and allow managers to opportunistically exercise the allowed reporting latitude. Secondly, the mandatory disclosure index used in this study might act as a benchmark for regulators for purposes of future analysis and evaluation. Despite the evidence documented in this study, the population of listed non-financial firms used in this study is small. Consequently this limited the number of firm year observations available over the six year period.

Keywords: Mandatory Disclosure, IAS/IFRS, Earnings Management, Uganda Securities Exchange

INTRODUCTION

Prior research provides confounding results on whether mandatory adoption of IAS/IFRS deters, or contributes to, greater earnings management (EM). Sellami and Slimi (2016) for instance find that mandatory adoption of IFRS by South African companies is associated with lower earnings management. Ahmed, Neel and Wang (2013) and Christensen, Lee, Walker and Zeng (2015) find that EM has increased following the 2005 mandatory IAS/IFRS adoption in the European Union (EU). The dominant explanation offered by Ahmed *et al.* (2013) for these conflicting results is self-selection of firms that voluntarily adopt IAS/IFRS rather than the effects of IFRS standards, per se. They argue that early adopters of IFRS had incentives to increase the transparency of their reporting in order to attract outside capital, and, therefore, EM went down after voluntary IFRS adoption, while those firms that waited until IFRS reporting became mandatory in EU countries lacked incentives for transparent reporting leading to increases in EM after mandatory IFRS adoption.

In this paper we offer yet another explanation for the conflicting results. We believe that IFRS changed substantially from the pre-2005 early voluntary adoption period and more so following the 2002 European Union (EU) decision to make IFRS reporting mandatory. According to Capkun, Collins and Jeanjean (2016), more than one third of the existing standards at that time (14 out of 34 IAS) were revised and six new standards (IFRS) were introduced, all of which became effective in 2005. Consequently some of the revised standards may have limited the opportunity to manage earnings by reducing the number of allowed alternative accounting treatments.

To test our hypothesis and to add to our understanding of the conflicting findings presented in prior studies, we analyse a census of 9 listed non-financial firms at the Uganda Securities Exchange (USE) as of December 2017 for a period of 6 financial years (2012-2017). Our results show that mandatory disclosure of IAS/IFRS has a negative significant effect on EM. Additional analyses was done with control variables (leverage, profitability and firm size) which prior research has shown to influence EM. We find that leverage and firm size have a positive and statistically insignificant relationship with EM while profitability has a statistically significant negative relationship with EM.

The paper contributes to the literature on the effect of mandatory disclosure of IAS/IFRS on EM in a single developing country as most of the existing studies in this line of research have been conducted using data from the U.S and other developed countries by demonstrating the importance of flexibility of accounting standards as a key driver of firms' EM behaviour. Prior research generally points to the importance of firms' reporting incentives and the role of legal institutions (see for example, Hail, Leuz & Wysocki, 2010) and enforcement mechanisms (See for example, Christensen *et al.*, 2015) as key factors in determining levels of EM following mandatory IAS/IFRS adoption. As a complement to past literature, our study suggests that much as greater flexibility in the use of IAS/IFRS is permitted under GAAP, their applicability does not lead to an increase in EM even after controlling for firm characteristics. In addition, studying several IFRS might also help the accounting standard setters to identify standards that have a significant influence on financial reporting quality (FRQ) and those that need to be revised as they offer the opportunity to manage earnings and allow managers to opportunistically exercise the allowed reporting latitude. Moreover, the mandatory disclosure index employed in this study might act as a benchmark for regulators for purposes of future analysis and evaluation.

LITERATURE REVIEW

Theoretical Review

In this paper two theoretical perspectives have been used to explain the potential association between mandatory disclosure of IAS/IFRS and EM. These include the public interest theory and the agency theory.

Public Interest Theory

The public interest theory (PIT) of economic regulation was first developed by Pigou (1932) but later modified by Posner (1974). According to Omran & El-Galfy, (2014) this theory holds that

regulation is a public good that benefits society. Two basic reasons have been advanced in support of PIT of corporate disclosure requirements of stock markets. The first reason is because of the existence of inadequate incentives to disclose information, unequal possession of information and the motivation to suppress unfavourable information in an unregulated environment (Owusu-Ansah, 1998). Secondly, PIT helps in reducing the chances of misleading information disclosures by companies at least in the short term (Nalikka, 2012).

Owusu-Ansah (1998) argues that when this theory is applied to financial reporting the needs of users of corporate reports are best served if the information in them is mandated. Therefore, regulating the disclosure of corporate information would provide an important social benefit. The drawback with this theory, however, is that it ignores the opportunistic roles of regulators, the capture of the regulatory process by regulators and the private interests of other stakeholders. Moreover, the possible lack of competence by regulators and their being disinclined to protect the public interest may reduce the potential efficacy of this theory (Omran & El-Galfy, 2014).

Agency Theory

Agency theory can be conceptualised as a contract under which one or more persons engage another person to achieve some service on their behalf that includes delegating some decision-making authority to the agent (Alqatamin, 2016). The theory states that there is potential for a conflict of interests between managers and shareholders (Anis, 2016). This conflict exists when managers undertake opportunistic actions, such as EM, to maximise their interests (Sun, Salama, Hussainey, & Habbash, 2010). Managerial action can mislead stakeholders about the firm's corporate market value and financial position, and cause outsiders to make false economic decisions. EM is, therefore, an agency cost (Zahra, Priem, Rasheed, 2005).

According to Boshnak (2017), one possible way to reduce agency costs is to disclose information about the managers' actions and the economic reality of the firm. With this kind of information, shareholders will be able to monitor managers more effectively. The disclosure of information therefore serves as a mechanism for control on behalf of the firms' shareholders, as well as a mechanism of legitimacy for managers.

In summary, and based on the aforementioned arguments, we argue that increased mandatory disclosure can reduce the agency costs arising from information asymmetries and strengthen the reputation of management. Therefore, firm management have an incentive to provide a high level of mandatory disclosure (Boshnak, 2017). This theory, however, is limited for it does not provide a detailed explanation of the available accounting choices (Omran & El-Galfy, 2014).

Empirical Literature Review and Hypothesis Development

A considerable number of studies have examined the effect of IFRS adoption on accounting quality (AQ) by examining the possible effect on EM. Most of these studies investigate if and how the adoption of IFRSs is likely to be related to changes in the manipulation of earnings by company managers. Ames (2013) for example studies the effect of IFRS adoption on AQ in South Africa. In this context he defines AQ as earnings quality (EQ) and value relevance, and hypothesizes that both will increase post IFRS adoption. His sample consisted of the entire universe of COMPUSTAT global firms listed in South Africa. This resulted into 3,950 variables from 2000 through 2011, distributed roughly evenly over the years. He employs a series of tests following Barth, Landsman and Lang (2005) and Morais and Curto (2008). He finds in a variety of specifications that EQ is not significantly improved post adoption. In addition, the value relevance of major statement of financial position components changes post adoption.

Ahmed *et al.*(2013) compare EM metrics for a sample of 1,631 late and mandatory Adopter firms from 21 countries that adopted IAS/IFRS standards for the first time in 2005 to firms from non-IFRS countries (largely firms from the US). They find that firms that adopted IAS/IFRS standards in 2005 exhibit greater EM and lower frequency of large negative earnings relative to the benchmark control firms in the post-adoption period, consistent with greater EM. Interestingly, they find that both IFRS adopters and benchmark control firms exhibit a significantly lower likelihood of reporting small positive earnings in the post adoption period relative to the pre-adoption period, which is inconsistent with greater EM. Christensen *et al.* (2015), analyse a sample of 310 German firms that adopted IAS/IFRS from 1998 to 2005. They compare EM (smoothing) metrics of early adopters (pre-2005) to late adopters (2005). They find a decrease in EM (smoothing) for the Early Adopters, but a modest increase in EM (smoothing) for those firms that waited until IFRS became mandatory in Germany. They attribute these differences in results to early adopter's incentives to adopt IAS/IFRS in order to improve their EQ. They conclude that incentives play a greater role than do IAS/IFRS standards, per se, in explaining the observed differences in firms' smoothing behavior following IFRS adoption.

Capkun *et al.* (2016) examine whether IFRS adoption deters or encourages greater EM in the European Union (EU) member countries. Their sample consisted of firms from twenty-nine countries which was split into early adopters, late adopters, and mandatory adopters. They find an increase in EM from pre-2005 to post-2005 for early voluntary adopters and late adopters in countries that allowed early IAS/IFRS adoption, and for mandatory adopters in countries that did not allow early IFRS adoption. Doukakis (2014) examines the effect of mandatory adoption of IFRSs on both accrual-based management (AEM) and real earnings management (REM) in Europe. A broad based sample of 15,206 firm-year observations of

available data from 22 European countries between 2000 and 2010 countries that mandatorily adopted IFRSs in 2005 was used. The study uses absolute discretionary accruals (*ABS_DACC*) as a proxy for AEM and the modified Jones model to calculate DACC. Following Roychowdhury (2006), the researcher considers three metrics to study the level of REM: the abnormal levels of productions costs, cash flows from operations, and discretionary expenses. The empirical findings suggest that mandatory IFRSs adoption has no significant impact on the level of AEM and REM.

Yeboah and Yeboah (2015) investigate whether IFRS adoption improves earnings quality through reduced EM in South African listed firms for the period 1998 to 2012. A critical maintained hypothesis that undergirds their analysis is that adoption of adoption of IFRS will lead to higher AQ in the post-adoption period arising from less EM in South Africa. The study population comprised all companies listed on the Johannesburg Stock Exchange (JSE) between 1998 and 2012. A sample of 2,535 firm-year observations for 181 firms that adopted IFRS between 1998 and 2012 was used. They employ DACC methods (Barth, Landsman, & Lang, 2008; Kothari, Leone, & Wasley, 2005; Jones, Krishnan, & Melendrez, 2008) to measure AQ and find that the adoption of IFRSs resulted in better AQ than the South African GAAPs. Specifically, the results evidence a reduction in the pervasiveness of EM by way of earnings smoothing and DACC within the post adoption period. Bello, Salisu and Adeyemi (2016) investigate the effect of IFRSs adoption on EM of non-financial quoted companies in Nigeria. The population of the study consisted of all the 165 companies quoted on the Nigerian Stock Exchange (NSE) as at December 31, 2014. The study utilised a sample of 75 quoted companies in Nigeria that had consistently published their audited annual financial reports between 2010 and 2014. A dummy variable was used to separate the period of pre and post adoption; before January 2012 and year-end 2014. EM was measured by DACC based on the modified Jones model. The data collected were subjected to descriptive analysis, correlation analysis and a panel multiple regression analysis to explore both trends and possible effects of IFRSs adoption on general EM. The results established that IFRSs adoption in Nigeria does not significantly affect the tendency of Nigerian companies to manipulate earnings.

The preceding discussion leads us to predict that the inherent flexibility of the IAS/IFRS standards coupled with the lack of general guidance on how to implement these new standards has no significant effect on EM following the 2005 adoption of IFRS across all the USE firms. The hypothesis to be tested is thus formulated as follows:

H_1 : There is no significant effect of mandatory disclosure of IAS/IFRS on EM among the listed firms at the USE.

METHODOLOGY

Research Design

This study adopted the quantitative design. This design has been used by Lin (2011), Katmun (2012), Khalina, Mertens, and Roosenboom (2015), and Outa (2013), among other researchers. The design is justified for the following reasons. Firstly, it entails using quantitative data from corporate annual reports which fits within the objective research philosophy and the deductive methodological position adopted by the current study. Secondly, the quantitative design emphasizes the measurement and analysis of causal relationships between variables by manipulating data through sophisticated quantitative approaches such as multivariate statistical analysis, hence, enhancing research reliability through greater inherent objectivity, and thereby increasing the representativeness and generalizability of findings (Aburaya, 2012).

Lastly, the quantitative design has also been chosen in this study because it permeates the use of panel data which increases the number of observations as the population of listed firms at the USE is small. The use of balanced panel data has a number of advantages including, *inter alia*, having both cross-sectional and time-series observations, improving degrees of freedom, minimising the effect of multicollinearity problems (Ntim, Opong, & Danbolt, 2012a), helping ascertain whether cross-sectional association among corporate disclosures and EM hold over time, and helps to minimise the potential endogeneity problems that may arise from potential unobserved firm-level heterogeneity (Ntim, Opong, Danbolt, & Thomas, 2012b).

Sample Selection and Data Sources

In order to examine the effect of mandatory disclosure of IAS/IFRS on EM for the period 2012-2017, a census of 9 non-financial firms listed on the USE was used. This period was chosen because this was the point in time emerging markets started seriously reaping the benefits associated with the mandatory adoption of IAS/IFRS. The inclusion criteria was: (1) the firm's annual reports have to be available for all the 6 years, either on the USE website, the archives of the Registrar of Companies, the firms' website, and (2) the availability of firms' financial statements for the 6 firm year period. Two firms were excluded because they had no available annual reports, and one firm had to be excluded due to insufficient or missing financial information (see Table 1).

The study used pooled data drawn from secondary sources. This approach enabled the researchers to make a large number of observations relative to the use of cross-sectional or time series data (Elghuweel, 2015) and has been used by researchers like Ntim *et al.* (2012a). Data was extracted from the audited corporate annual reports using a secondary data capture form for the period 2012 to 2017. According to Vu (2012), the corporate annual report is the

most representative vehicle to analyse corporate disclosure, not only for investors and analysts but also for other stakeholders because it acts as both a traditional and a statutory formal communication channel between a listed firm and its stakeholders.

Table 1: Summary of the Sample Selection Procedure

<i>Panel A: Sectorwise Composition of Listed Firms</i>	<i>No. of Firms</i>	<i>Percentage</i>
Commercial and Services	4	44.4
Manufacturing	3	33.3
Energy and Petroleum	1	11.1
Investment	<u>1</u>	<u>11.1</u>
Total sampled Firms	9	100.0
Less: Firms with no available data	2	
Firms with missing data	<u>1</u>	
Total excluded firms	<u>3</u>	<u>33.3</u>
Total sampled firms with full data	6	66.7
<i>Panel B: Sectorwise Composition of Sampled Firms with Full Data</i>		
Commercial and Services	3	50.0
Manufacturing	<u>3</u>	<u>50.0</u>
Total sampled firms with full data	6	100.0

Source: USE Website (2019)

Earnings Management Measures

In spite of the fact that there are several proxies of EM used in extant literature, in this study we employ the one based on Jones (1991) model. This was later modified by Dechow, Sloan and Sweeney (1995) with a view to controlling the possibility that revenue recognition is manipulated by managers – a factor not predicted in the model originally proposed by Jones (1991)– and, so became known as the modified Jones (Dechow *et al.*, 1995) model. The DACC estimations according to the Dechow *et al.*(1995) model can be expressed in three steps. First, we start with an expectations model for total accruals ($TACC_{i,t}$) to control for changes in economic circumstances, as represented in Equation (3.1).

$$TACC_{i,t} = \beta_1(1/A_{i,t-1}) - \beta_2(\Delta REV_{i,t} - \Delta REC_{i,t}) + \beta_3(PPE_{i,t}) + \varepsilon_{it} \dots \dots \dots (3.1)$$

Where, $\Delta REV_{i,t}$ is the variation in the net revenue of firm i from time $t-1$ to time t , weighted by the total assets at the end of time $t-1$, $\Delta REC_{i,t}$ is the variation in the accounts receivable (net) of firm i from time $t-1$ to time t , weighted by the total assets at the end of time $t-1$, $PPE_{i,t}$ is the balance of the non-current asset accounts (gross) of firm i from time $t-1$ to time t , weighted by the total assets at the end of time $t-1$, and $\varepsilon_{i,t}$ is the error term of firm i for time t .

All the model variables were deflated by the total assets of the previous time period ($A_{i,t-1}$) to minimize the effect of company size and the problem of heteroscedasticity (Wang & Xin, 2011).

Secondly, using the estimated coefficients β_1 and β_2 of each firm-year (Equation 3.1), the non-discretionary accruals ($NDACC_{Ai,t}$) were calculated. The possible explanation for excluding NDACC is because they are used to reflect the business condition subject to the firm's condition and sales growth and thus, it cannot be controlled by managers (Islam, Ali, Ahmad, 2011). NDACC was calculated as follows:

$$NDACC_{i,t} = \beta_1(1/A_{i,t-1}) - \beta_2(\Delta REV_{i,t} - \Delta REC_{i,t}) + \beta_3(PPE_{i,t}) \dots\dots\dots (3.2)$$

Finally, because most studies (Choi, Kim, & Zang, 2010; Liao, Wang, & Chi, 2012; Liao, Sang, & Lin, 2013) use the absolute value of DACC ($DACC_{i,t}$) represented by the difference between total accruals ($TACC_{i,t}$) and non-discretionary accruals ($NDACC_{i,t}$) as a common proxy for EM, we estimate $DACC_{i,t}$ using Equation 3.3.

$$DACC_{i,t} = TACC_{i,t} - NDACC_{i,t} \dots\dots\dots (3.3)$$

According to Khalina *et al.* (2015), DACC are the residuals of the regression from the cross-sectional version of the Jones model. The farther the residual is from 0 (whether positive or negative), the greater the level of EM. In this regard therefore, the direction of managing financial results is a sign of DACC in which case a plus sign means an increase in the financial results, whereas minus sign means a decrease in the financial results. A zero difference on the other hand, indicates that a firm's current accruals in that particular year is as expected (normal) and no EM is detected. However, a positive difference indicates that the firm's actual accruals are greater than expected (abnormal) and that upward EM is detected, while a negative difference indicates the opposite.

Mandatory Disclosure Measures

In order to determine the level of compliance with mandatory disclosure requirements, a self-constructed mandatory disclosure index was used. Moreover, this is consistent with prior mandatory disclosure studies (Alfaraih, 2009; Hassaan, 2013; Popova, Georgakopoulos, Sotiropoulos, & Vasileiou, 2013). The disclosure checklist was developed by considering the disclosure requirements specified in IASs/IFRSs and amount to a total of 185 disclosure items. The selection of IASs/IFRSs for inclusion in the constructed mandatory disclosure index was based on their applicability during the financial years ending 31 December 2012, 2013, 2014, 2015, 2016 and 2017.

A score of 1 is given if the item is disclosed and 0 otherwise. Therefore, the maximum disclosure constitutes the total probable score and is equal to 185 items. A relative scoring approach whereby the disclosure index for each firm is assessed as being the ratio of the computed total disclosure score to the maximum number of items required to be disclosed by the firm was used. The relative mandatory disclosure index (MDINDEX) for each firm is expressed using the following equation:

$$MDINDEX_j = TD_j / MD_j \dots\dots\dots (3.4)$$

Where, TD is the total disclosure for firm j and MD is the maximum disclosure for firm j .

Measures of Control Variables

To control for differences in EM incentives, we include the following variables based on prior research: leverage, firm size and profitability. First, we include leverage (LEV) measured as the ratio of total debt to total assets to control for the likelihood of bankruptcy. A higher total debt to asset ratio indicates a higher possibility of debt covenant violation, which creates an incentive to increase reported earnings thorough AEM (Gras-Gil, Manzano, & Fernandez, 2016)

Second, since many studies (Cormier & Magnan, 2015; Ibrahim, Darus, Yusoff & Muhamad, 2015; Timbate & Park, 2018) use the logarithm of total assets to proxy for firm size (FSIZE), we use the natural logarithm of total assets to proxy for FSIZE. In a study by Paiva and Lourenco (2013) on the association between firm size and EM in family firms they find that family firms that are large in size have a lower level of EM and small family firms have a large level of EM. Moreover, the political cost hypothesis states that larger firms are more likely to prefer downward EM, because the potential for government scrutiny increases when firms become larger and more profitable (Gras-Gil *et al.*, 2016).

Finally, the return on assets (ROA) calculated as the ratio of net income to total asset was included in this study as a proxy for profitability (PRFT) of a firm. According to Ebraheem (2016), it is important to control the firms' performance when EM is considered, given that it is connected to the investment opportunity. High profitability can be negatively related to EM, given that companies making high profits are supposed to make no EM effort to reach their earnings threshold (Katmun, 2012).

Model Specification

In order to test for the effect of mandatory disclosure of IAS/IFRS on EM, we test for our hypothesis by estimating two EM models. Model 1 specifies the level of EM as a function of mandatory disclosure of IAS/IFRS.

The model is stated as follows:

$$DACC_j = \beta_0 + \beta_1 MDINDEX_j + \epsilon_j \dots \dots \dots (3.5)$$

Where, $DACC_j$ is the value of EM for sample j firm, β_0 is the intercept to be estimated from the data, β_1 is the coefficient of the independent variable to be established from data, $MDINDEX_j$ is the relative mandatory disclosure score for sample j firm, and ϵ_j is the error term for sample j firm.

In Model 2, we specify the magnitude of EM as measured by the absolute value of DACC as a function of mandatory disclosure of IAS/IFRS and the following three control variables: leverage, profitability and firm size. Model 2 is expressed in Equation 3.6, thus:

$$DACC_j = \beta_0 + \beta_1 MDINDEX_j + \beta_2 LEV_j + \beta_3 PRFT_j + \beta_4 FSIZE_j + \epsilon_j \dots \dots \dots (3.6)$$

Where, $DACC_j$ is the value of EM for sample j firm, β_0 is the intercept to be estimated from the data, $\beta_1 - \beta_4$ are the coefficients of the independent variable to be established from the data, $MDINDEX_j$ is the relative mandatory disclosure score for sample j firm, LEV_j is the ratio of debt to total assets for sample j firm, $PRFT_j$ is the ratio of net income to total assets for sample j firm, $FSIZE_j$ is the value of total assets for sample j firm, and ϵ_j is the error term for sample j firm

RESULTS

Univariate Analysis

This section presents the results of the univariate analysis inform of descriptive statistics for the independent variable, control variables, and the dependent variable.

The Independent Variable (Mandatory Disclosure of IAS/IFRS)

Table 2 presents the descriptive statistics for compliance levels with each of the 17 IAS/IFRS. The table exhibits noticeable variation in the levels of compliance among the standards. The mean compliance ranges from 0.0509222 for IAS 10 (*Events After the Reporting Period*) to 0.9055028 for IAS 1 (*Presentation of Financial Statements*).

In order to investigate the reasons for the high levels of compliance with some standards and the low levels of compliance with others, the 17 standards were divided into three sub-groups: high-level compliance ($MDINDEX > 80\%$), medium-level compliance group ($MDINDEX > 60\% < 80\%$) and low-level compliance group ($MDINDEX \leq 60\%$). These sub-classifications enable an investigation into whether the characteristics of certain standards or groups of standards like difficulty of meeting the standard, the standard's effective date and proprietary costs associated with the standard like the costs of preparing and disseminating information, are associated with some levels of compliance.

The high-level compliance group was IAS 1 (*Presentation of Financial Statements*) which consisted of 30 disclosure items. One possible explanation for the high-level of

compliance with this standard is that most of its requirements are not difficult to disclose. For example, IAS 1 requires firms to disclose whether financial statements include a statement of financial position, a statement of comprehensive income, a statement of changes in equity, a statement of cash flows, among other things. Consequently, it is not surprising to find high compliance with this standard as firms would probably find it easy to comply with these requirements.

The medium-level compliance group consisted of three standards: IAS 7, 24, and 33. The descriptive statistics in Table 2 shows that compliance in this group ranges from 0.4375 to 0.9167. The implication of this is that some firms nearly fully complied with the standards which suggests little difficulty in meeting the requirements of the standards.

The low-level compliance group contains 13 standards: IAS 2, 8, 10, 12, 16, 17, 18, 21, 23, 36, 37, 38, and IFRS 8. Most standards examined in this study fall in this group. IAS 10 (*Events After the Reporting Period*) which has six disclosure requirements achieved a compliance level of 0.0509222. Although its disclosure requirements are easy proprietary costs, difficulty in adherence, and the sensitive nature of the disclosure requirements seem to be contributing factors in this group.

Table 2: Mandatory Disclosure

Variable	Mean	Std. Dev.	Min	Max	CV
IAS 1	0.9055028	0.0244842	0.8667	0.9667	0.0270394
IAS 2	0.4444444	0.0868313	0.375	0.625	0.1953705
IAS 7	0.6348389	0.0883193	0.4375	0.9167	0.1391207
IAS 8	0.2241319	0.1889949	0	0.75	0.8432308
IAS 10	0.0509222	0.1310403	0	0.5	2.573343
IAS 12	0.4527778	0.138329	0.2	0.8	0.305512
IAS 16	0.5592194	0.2121788	0.2667	0.9333	0.3794196
IAS 17	0.4694445	0.2516454	0	1	0.5360493
IAS 18	0.4920639	0.1505798	0.2857	0.8571	0.3060168
IAS 21	0.2083214	0.1456885	0	0.3333	0.6993451
IAS 23	0.1666667	0.3779645	0	1	2.267787
IAS 24	0.6450889	0.0951237	0.4444	0.7778	0.1474582
IAS 33	0.6204083	0.0670556	0.5556	0.7778	0.108083
IAS 36	0.1960472	0.1657051	0	0.75	0.8452308
IAS 37	0.2756278	0.1531584	0	0.6154	0.555671
IAS 38	0.5714	0.4097722	0	0.8571	0.7171372
IFRS 8	0.4679445	0.3377459	0	0.8462	0.7217649

IAS 1 Presentation of Financial Statements, IAS 2 Inventories, IAS 7 Statement of Cash Flows, IAS 8 Accounting Policies, Changes in Accounting Estimates and Errors, IAS 10 Events After the Reporting Period, IAS 12 Income Taxes, IAS 16 Property, Plant and Equipment, IAS 17 Leases, IAS 18 Revenue, IAS 21 The Effects of Changes in Foreign Exchange Rates, IAS 23 Borrowing Costs, IAS 24 Related Party Disclosures, IAS 27 Separate Financial Statements, IAS 33 Earnings Per Share, IAS 36 Impairment of Assets, IAS 37 Provisions, Contingent Liabilities and Contingent Assets, IAS 38 Intangible Assets, and IFRS 8 Segment Reporting.

The Control Variables (Firm Specific Characteristics)

With respect to the control variables, firm size (FSIZE) varied significantly with a range of 24.7277 to 29.39679, and a mean of 26.56196 (approximately 27%). The leverage ratio (LEV) ranges from 0 to 0.83 and the mean value is 0.2937472 (29%). This suggests that the listed firms at the USE have an intermediate level of debt. Empirically, this result is close to the findings of Elghuweel (2015) who obtained an average leverage of 33% in Omani firms. The results of profitability (PRFT), however, reveal that it varies between a minimum of -0.165 (loss) and maximum of 0.4026 (profit) with a standard deviation of 0.1217.

In a bid to get meaningful information about the descriptive statistics regarding the control variables, the coefficient of variation (CV) was computed by dividing the means of each control variable with the respective standard deviations. From this standpoint, FSIZE yet again provides the highest volatility at a CV of 1.45249 followed by profitability at 1.274753. Of all the three control variables leverage registered the least volatility with a CV of 0.8885142.

Table 3: Control Variables

Variable	Mean	Std. Dev.	Min	Max	CV
FSIZE	26.5619600	1.667323	24.7277	29.39679	1.45249
LEV	0.2937472	0.2609986	0	0.83	0.8885142
PRFT	0.1127444	0.1437214	-0.165	0.4026	1.274753

FSIZE is the natural log of total assets; LEV is the ratio of debt to total assets; PRFT is the ratio of profit before tax to total assets.

The Dependent Variable (Earnings Management)

The descriptive statistics in the Table 4 reveals that the absolute value of discretionary accruals (DACC) based on the modified Jones model has a small mean value of 0.0256208 with a minimum value close to 0 (0.0074211). These results imply that the magnitude of EM in listed firms at the USE may be lower than those reported by Katmun (2012), Ugbede,

Lizam and Kaseri (2013), Habbash, Xiao, Salama and Dixon (2014) and González and García-Meca (2014), who find that the UK, Malaysian, Chinese and Latin American companies have an average absolute value of DACC of 0.065, 0.075, 0.066, and 0.11, respectively. Overall, however, our evidence shows that USE listed firms practice income increasing accruals.

Table 4: Earnings Management

Variable	Mean	Std. Dev.	Min	Max	CV
DACC	0.0256208	0.0121484	0.0074211	0.0533927	0.4741596

DACC is the absolute value of discretionary accruals from the modified Jones model

Bivariate Analysis

Table 5 provides Pearson's pair-wise correlation for the independent variable, the dependent variable and the control variables. The analysis was carried out in order to (1) observe the negative and positive relationship among all the variables, and (2) check for multicollinearity. Observations for all the variables in the correlation matrix are less than 80%. According to Katmon and Farooque (2015), a correlation coefficient of more than 80% indicates serious multicollinearity. The highest correlation among the variables was observed between MD and FCMD ($r = 0.5239$, $p < 0.01$). As such it can be concluded that multicollinearity is not detrimental to the results of the multivariate analysis.

In addition, DACC is significantly and negatively related to profitability (coef. = -0.5929, $p = 0.0001$) meaning that firms that are less profitable engage less in EM practices. Consistent with this finding, Chen, Lee and Chou (2015) who examine US firms find a negative relationship between return on assets (ROA) and REM. Their argument is that firms with better performance have less motivations to engage in REM. Similar results are reported by Kim, Lei and Pevner (2010) in a study on US firms.

On the contrary, leverage is positively correlated with DACC and statistically significant at the 5% level (coef. = 0.5270, $p = 0.0010$). This implies that firms with higher leverage are expected to adopt accounting procedures that increase current income and therefore engage more in EM. Moreover, this finding is in consonance with the observations made by Ujah and Brusa (2011) that both financial leverage and cash flow volatility impact the degrees to which firms manage their earnings.

Table 5: Pairwise Correlation

	PRFT	LEV	MD	DACC
PRFT	1.0000			
LEV	-0.3978*	1.0000		
	0.0163			
MD	-0.2378	0.2791	1.0000	
	0.1626	0.0992		
DACC	-0.5929*	0.5270*	0.3244	1.0000
	0.0001	0.0010	0.0535	
FSIZE	-0.1694	0.4771*	0.1057	0.3046
	0.3232	0.0033	0.5393	0.0709

Notes: (1) The variables are defined as follows: PRFT is the ratio of profit before tax to total assets; LEV is the ratio of debt to total assets; MD is the index for disclosure of IASs/IFRSs; DACC is the absolute value of DACC from the modified Jones Model; FSIZE is the natural log of total assets. (2) The asterisk (*) shows that correlation is significant at the 1% level.

Multivariate Analysis

This section reports and interprets the results for the multivariate tests of the research hypotheses using robust regression due to the presence of outliers in our model. According to Leone, Sang and Lin (2013), the existence of potentially influential or outlier observations is ubiquitous in empirical accounting research. Robust regression methods are available in commonly-used statistical packages and they do not entail the *ad hoc* choice of winsorization or truncation rules, thus providing a convenient way to control for influential observations and enhance inter-study comparability. In addition, prior researchers who employed this method in their studies (See for example, Sun *et al.*, 2010; Uwuigbe, Amiolem, Uwuigbe, & Jafaru, 2017) contend that robust regression is a confirmatory method in econometric analysis.

In order to answer the null hypothesis which states that there is no significant effect of mandatory disclosure of IAS/IFRS on EM among listed firms at the USE, two models (Model 1 and Model 2) were generated in two hierarchical steps. Model 1 specifies the level of EM as a function of mandatory disclosure of IAS/IFRS. The model is stated in Equation 4.1:

$$DACC_j = \beta_0 + \beta_1 MDINDEX_j + \epsilon_j \dots \dots \dots (4.1)$$

Where, $DACC_j$ is the value of EM for sample j firm, β_0 is the intercept to be estimated from the data, β_1 is the coefficient of the independent variable to be established from the data, $MDINDEX_j$ is the relative mandatory disclosure score for sample j firm, and ϵ_j is the stochastic disturbance or error term for sample j firm which captures the unexplained observations in the model.

Model 2 stated in Equation 4.2 specifies the magnitude of EM as measured by the absolute value of DACC as a function of mandatory disclosure of IASs/IFRSs and the control variables (leverage, profitability and firm size). The reason for choosing these control variables has been provided by Boshnak (2017) who argues that the motivation for selecting these variables is because of their popularity in extant literature. Popularity here means that firm characteristics have featured and have been shown to be significant predictors of EM. Model 2 is expressed in Equation 4.2, thus:

$$\text{DACC}_j = \beta_0 + \beta_1 \text{MDINDEX}_j + \beta_2 \text{LEV}_j + \beta_3 \text{PRFT}_j + \beta_4 \text{FSIZE}_j + \varepsilon_j \dots\dots\dots (4.2)$$

Where, DACC_j is the value of EM for sample j firm, β_0 is the intercept to be estimated from the data, β_1 is the coefficient of the independent variable to be established from the data, MDINDEX_j is the relative mandatory disclosure score for sample j firm, LEV_j is the ratio of debt to total assets for sample j firm, PRFT_j is the ratio of net income to total assets for sample j firm, FSIZE_j is the value of total assets for sample j firm, and ε_j is the stochastic disturbance or error term for sample j firm which captures the unexplained observations in the model.

Step one of the hierarchical multiple robust regression involved establishing the effect of mandatory disclosure of IAS/IFRS on EM. Step two involved establishing the effect of mandatory disclosure of IAS/IFRS and the control variable (leverage, profitability and firm size) on EM. In Model 1 mandatory disclosure was entered as the predictor of EM. The regression results in Model 1 yields an adjusted R squared of 7.9% implying that about 8% of the variations in EM can be explained by mandatory disclosure of IAS/IFRS. Results from Model 1 also indicates that mandatory disclosure of IAS/IFRS is positively related with EM (coef. = 0.063) implying that high disclosure of IAS/IFRS proliferates the practice of EM in USE listed firms. However, the relationship is not a significant.

In Model 2, the control variables were added to mandatory disclosure of IAS/IFRS to determine if both the control variables and mandatory disclosure of IAS/IFRS predict EM when taken as a set. Firstly and foremost, an adjusted R squared value of 0.407 is obtained. This indicates that about 41% of the changes in EM as measured by DACC is explained by both mandatory disclosure of IASs/IFRSs and the control variables. The coefficient of mandatory disclosure was also found to be negative and significant (coef. = -0.026, $p < 0.05$) meaning that an increase in mandatory disclosure leads to a decrease in EM practices of USE listed firms. Empirically, this result is consistent with prior studies (Khalina *et al.*, 2015; Lemma, Negash, & Mlilo, 2013) that show that mandatory adoption of IFRSs has a significant effect on EM. The findings are generally consistent with the predictions of the study's multi-theoretical framework that incorporates insights from public interest theory and the agency theory (Allegrini & Greco, 2013; Ntim *et al.*, 2012a; Samaha, Dahawy, Hussainey, & Stapleton, 2012). Consequently, the

null hypothesis which stated that there is no significant effect of mandatory disclosure of IAS/IFRS on EM among listed firms at the Uganda Securities Exchange was rejected.

Secondly, the results of the Model 2 also reveals that leverage (coef. = 0.013) has a positive and insignificant effect on EM. This is in line with the findings of Uwalomwa, Uwuigbe, & Okorie (2015) who find no significant relationship between financial leverage and DACC of sampled firms in Nigeria. Thirdly, profitability was found to be statistically and negatively significant in estimating EM (coef. = -0.037**, $p < 0.01$). The implication of this is that high profitability constrains EM. This result is in line with the findings of Abu-Jebbeh and Al-Thuneibat (2017) that show a statistically significant effect of profit margin ratio, ROA, return on equity (ROE) and earnings per share (EPS) on EM. Lastly but not least, Model 2 also reveals a positive and insignificant relationship between FSIZE as measured by the natural log of total assets and EM (coef. = 0.001). This is relative to the findings of Riahi and Arab (2011) and Katmon and Farooque (2015) who document a positive and significant effect of FSIZE on EM.

Table 6: Regression for Effect of Mandatory Disclosure of IAS/IFRS on Earnings Management

Variables	Model 1 Coefficient	Model 2 Coefficient
MANDATORY DISCLOSURE	0.063	-0.026*
LEVERAGE	0.013	
PROFITABILITY	-0.037**	
FIRM SIZE	0.001	
CONSTANT	0.000	-0.001
R^2_a	0.079	0.407

legend: * $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$

Notes: R^2_a = Adjusted R squared; the asterisks *, **, and *** indicate significance at 5% level, 1% level, and 0.1 level.

SUMMARY AND CONCLUSION

This study sought to empirically examine the effect of mandatory disclosure of IAS/IFRS on EM among listed firms at the USE. The findings indicate, firstly and foremost, an adjusted R square value of 0.407. This implies that about 41% of the changes in EM as measured by DACC is explained by both mandatory disclosure of IAS/IFRS and the control variables. The coefficient of mandatory disclosure was also found to be negative and significant (coef. = -0.026, $p < 0.05$) meaning that an increase in mandatory disclosure of IAS/IFRS leads to a decrease in EM practices of USE listed firms.

Secondly, the coefficient of profitability is negative and significant at the 1% significance level (coef. = -0.037, $p < 0.01$) implying that high profitability constrains EM. The study's results are consistent with the agency theory framework that assumes that high disclosure quality (DQ) reduces information asymmetry and enables investors to detect EM activity. Consequently disclosure of IAS/IFRS influences EM negatively, and accordingly enhances financial reporting quality (FRQ).

On this basis, we conclude that mandatory disclosure of IAS/IFRS leads to a decline in EM as measured by the absolute value of DACC among USE listed firms. Empirically, this result is consistent with past studies (Chua, Cheng, & Gould, 2012; Sellami & Slimi, 2016; Zeghal, Chtourou, & Fourati, 2012) that find a decrease in EM following the mandatory adoption of IAS/IFRS. In addition, we also conclude that whereas profitability constitutes an important constraint to EM leverage and firm size do not.

Analysis of the effect of IAS/IFRS on EM has important policy and managerial implications for the regulation of financial disclosure and reporting practice in Uganda in various ways. Firstly, the results of this study have important implications for accounting standard setting and contribute to the ongoing debate with relation to the optimal flexibility permitted by standard setting. Studying several IAS/IFRS helps to identify standards that have a significant influence on enhancing FRQ and also shows those standards that need to be revised as they offer the opportunity to manage earnings and allow managers to opportunistically exercise the allowed reporting latitude. In addition, standards setters could use these results as a springboard for judging whether mandatory application of IFRS is actually associated with an improvement in the quality of financial reporting in countries other than the EU, and for investors and financial market's regulators that are very concerned about the reliability and relevance of published financial statements following the mandatory adoption of IAS/IFRS. Secondly, the disclosure index used in this study might also be of use to investors, financial analysts, regulators as a basis for assessing the extent of corporate financial disclosures in USE listed firms. The index may be updated by different users by adding new mandatory disclosure items as appropriate. In a nutshell, the index could act as a benchmark for regulators and other users for purposes of future analysis and evaluation.

Despite the evidence documented in this study, the results of this study must be interpreted with some limitations in mind. The study is not free from external validity problems caused by the small population of listed non-financial firms at the USE. Consequently this limited the number of firm year observations available over the six year period (2012-2017). In

order to enhance generalizability, future research using increased number of observations including both the financial and non-financial firms trading at the USE is encouraged.

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