



Extent of compliance with international financial reporting standards (IFRSS) disclosures in developing country: evidence from Zambian listed companies

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Abstract

There is a problem of non-compliance with IFRS disclosures and research is limited in developing countries especially in Africa. Therefore, this study examined the extent of compliance with IFRS disclosure requirements by Zambian listed companies. Data was collected from audited financial statements of 20 listed companies for the period 2012 to 2018. A self-constructed compliance checklist was used to score the compliance with IFRSs. Both the Dichotomous and Partial Compliance (PC) unweighted method were used to ascertain the level of compliance. Descriptive statistics were used to describe the extent of compliance.

The study shows that IFRS compliance level using the dichotomous method and PC method is 65% and 56% respectively whereas standard deviation is 5% and 7% respectively. These results suggest that the compliance with IFRS disclosures is low among Zambian listed companies. The implication of these findings is that there is no adequate enforcement mechanism of compliance with IFRSs.

Keywords: IFRS compliance, developing Country, Africa, Zambian listed companies

1. Introduction

About 80% of the jurisdictions in the world have adopted International Financial Reporting Standards (IFRSs) for corporate financial reporting in order to promote the provision of quality financial information and comparability (Hoogervorst, 2016) ^[25]. Around 33% of African countries have fully mandated IFRSs (Tawiah and Boolaky, 2019). IFRSs requires reporting companies to make financial information disclosures which helps to reduce information asymmetry and ensures transparency, accountability and economic efficiency, thus improving capital allocation (IFRS Foundation, 2018; Hoogervorst, 2016; World Bank, 2007; Kothari, 2000) ^[25, 31]. Owusu-Ansah (1998) ^[36] defines disclosure as the communication of economic information, whether financial or non-financial, quantitative or otherwise concerning a company's financial position and performance. Quality financial information is the product of quality accounting standards such as IFRSs and compliance with the standards disclosure requirements by companies (Kothari, 2000) ^[31]. Compliance with the standards is as important as the accounting standards themselves (Hodgdon *et al.*, 2008) ^[24]. Compliance with IFRS disclosure requirements is important because users of financial information need to have confidence that the financial information is of high quality and has not been manipulated by the management (Elliot and Elliot, 2013) ^[18]. Disclosure would assist users in understanding how transactions, other events and conditions are reflected in reported financial performance and financial position (IAS 1, 2014). In addition, it is important for the users to know the measurement basis used by an entity to prepare its financial statements because that significantly affects users' analysis. Despite the importance and benefits derived from compliance with IFRS disclosures, there is a non-compliance problem and the extant literature on IFRS

adoption and compliance in developing countries is scant (Kimeli, 2017; Samaha and Khlif, 2016) ^[30, 41]. African countries are plagued with low compliance with global standards such as IFRSs due to the weakness in the institutional and enforcement mechanism (World Bank, 2019; Bova and Perera, 2012; Nobes, 2011) ^[35]. In Zambia, the institutional and enforcement mechanism for compliance with IFRS is weak too (World Bank, 2017). Therefore, very little is known on the extent of compliance with IFRSs in developing countries and Zambia in particular. It is important for policy makers, investors, academic and regulators to know the level of IFRSs compliance as it is an indicator of the quality level of financial information provided by companies.

Prior empirical studies have shown that the problem of non-compliance with IFRS is among both the developing and developed countries; and that the level of compliance is unique to a company and country.

1.1 IFRS Compliance in Europe

Following the adoption of IFRSs in Europe, there is empirical evidence of non-compliance with IFRS mandatory disclosures among reporting entities. Glaum *et al.*, (2013) ^[21] analyzed compliance for a large sample of 357 European companies mandatorily applying International Financial Reporting Standards (IFRS) across 17 European Countries. The study findings indicated substantial non-compliance and that compliance is determined jointly by company-and country -level variables. The results showed that reporting practices continue to differ systematically across Europe despite the adoption of IFRS. The study used unweighted disclosure index to establish the extent of compliance. André *et al.*, (2017) ^[10] examined the level of compliance with mandated disclosures under IAS 36 Impairment of Assets and IAS 38 Intangible Assets using a sample of 373

companies across 16 European countries over a period of 2 years. The study revealed high variation in compliance level among firms and the disclosure levels is higher for IAS 38 compared to IAS 36. The non-compliance relates to mostly proprietary information and information that reveals managers' judgement and expectations.

Pownall and Wieczynska (2017)^[39] evaluated the common assumption that EU firms began using IFRS in 2005 when the EU formally adopted IFRS. The study covered four study points, 2005, 2007, 2009 and 2012. The study results indicate that although the incidence of firms using local (or some other) GAAP declined between 2005 and 2012, it is still insignificant. By 2012 the incidence of non-compliance with IFRSs was still in excess of 17% (87% of which were fully consolidated).

Carlin and Finch (2009)^[14] examined the extent of compliance with the goodwill accounting and reporting disclosure requirements under AASB 136 among a sample of goodwill intensive Australian firms over the first two years of their IFRS adoption with a sample of 50 companies. The study revealed continued high levels of non-compliance with IFRS goodwill accounting. This is attributed to a viable Organisational decision not to take steps to comply which undermines the consistency and comparability of financial information. The study used unweighted disclosure index (Dichotomous) to determine the compliance level. Further, Carlin and Finch (2011)^[14] focused on cataloguing the practice of goodwill impairment testing in Australia and to provide evidence of the extent of compliance with respect to the disclosure requirements of international financial reporting standards (IFRS) using a sample of 200 companies in 2006. The results provide evidence of systematic non-compliance with the disclosure requirements of the IFRS goodwill impairment testing regime on the part of large listed Australian firms.

1.2 IFRS Compliance in Non-European Developing Countries

The empirical evidence on IFRSs compliance in developing countries is limited and results are mixed (Samaha and Khlif, 2016)^[41]. Some studies have indicated higher compliance with IFRSs disclosure requirements [Rahman and Hamdan, 2017; Tsegba *et al.*, 2016; Sucuahi, 2013; Abdullah *et al.*, 2012; Al-Shammeri *et al.*, 2008; Peng *et al.*, 2008]^[40, 49, 45, 38]. In contrast, others have shown low compliance with the IFRSs disclosure requirements [Agyei-Mensah, 2017; Sellami and Tahari, 2017; Fekete *et al.*, (2008) Mısırlıoğlu, 2013; Al Mutawaa & Hewaidy, 2010; Karim and Ahmed, 2005]^[3, 44, 20, 34, 5, 7].

Regardless of whether compliance is low or high, all the empirical evidence reviewed on IFRS compliance in the developing countries have shown compliance level of less than 100% except the study by Sucuahi (2013)^[45] in the Philippine which indicated that the highest seven companies had 100% compliance score. However, the study only focused on one accounting standard (IFRS 8). For a company to be considered as compliant with IFRSs disclosure requirement, IASB (2010)^[25] financial reporting framework requires that a company should comply with all the financial disclosure requirements for each applicable accounting standard. It therefore means that none of the developing countries (literature reviewed) have attained full compliance as required by the reporting framework.

Rahman and Hamdan (2017)^[40] in Malaysia sampled 105

companies with the study period of one year (2009) using a self-constructed checklist and dichotomous disclosure index as measurement method found that the overall disclosure compliance with IAS 1 is high at 92.5%. On the other hand, Abdullah *et al.*, (2012) also in Malaysia examined the level of compliance with IFRS using self-constructed checklist and employed both Partial unweighted compliance and dichotomous disclosure index as measurement method based on a sample of 221 companies with a study period covering one year (2008). The results show compliance levels ranging from 53% to 97% with the average compliance score of 84%, under the PC method, and from 65.2% to 98% with the average compliance scores of 88% under Cooke's method. Although the results show a high level of compliance, there is a huge variation in the level of compliance.

Sucuahi (2013)^[45] in Philippines examined the level of compliance with IFRS 8 using a self-constructed checklist and dichotomous disclosure index as measurement method based on a sample of 100 companies covering the study period of 2010 to 2011. The results show that 78 companies had a high level of compliance with IFRS 8 with lowest level of compliance of 72.2% and the highest is 100% (7 companies). 17 scored moderate and 5 low level. The findings showed that there are companies in full compliance with IFRS 8 disclosures and some which do not comply with the mandatory disclosure requirements.

Tsegba *et al.*, (2016)^[49] in Nigeria sampled 57 companies with a study period of one year (2014) using Ernest & Young and KPMG Checklist and dichotomous disclosure index as measurement method found that the level of compliance with IFRS by the sampled firms is high at 85.9%. Saidu and Dauda (2014)^[43] also in Nigeria examined the level of compliance with IFRS using a Qualitative grading system based 10 Quoted banks covering a period of one year (2014). The results from the qualitative grading system show a result of 74%, which is a semi-strong compliance.

On the other hand, some studies have indicated low compliance with IFRSs. Agyei-Mensah (2017)^[3] investigated the level of compliance with IFRS 7 in Ghana with a sample of 30 Companies over a period of 3 years using a self-constructed checklist and dichotomous disclosure index as measurement method found that the extent of compliance with IFRS 7 is, on average, 53%, which is very low; the quality of the disclosures is, on average, 33%, which was also very low.

Sellami and Tahari, (2017)^[44] examined the level of compliance with IFRS based on a sample of 38 companies from Bahrain, Qatar, Jordan, Syria, Sudan, Yemen and Palestine using a self-constructed checklist and dichotomous disclosure index as measurement method. The results show a variation in compliance from the minimum of 30% to 89% and average of 69.4% which is low Compliance.

Mısırlıoğlu (2013)^[34] in Turkey examined the level of compliance with IFRS in 2005 using a self-constructed checklist and dichotomous disclosure index as measurement method based on a sample of 106 Turkish listed companies. The study findings indicate that although there are some improvements in the level of compliance with disclosures, the vast majority (80%) of the disclosure items required by IFRS were not disclosed.

Al-Akra *et al.*, (2010) in Jordan examined the level of compliance with IFRS in 1996 and 2004 based on a sample

of 80 companies using an adopted Epstein and Mirza (1997) self-constructed checklist and Price Water house Coopers (2004) checklist with dichotomous disclosure index as measurement method. The results show increase in compliance but still low compliance level. The mean of the mandatory disclosure compliance in 2004 (0.79) is notably higher than that of the 1996 sample (0.55).

Al Mutawaa and Hewaidy (2010) ^[5] in Kuwaiti examined the level of compliance with IFRS in 2006 based on sample of 48 companies using a self-constructed checklist and dichotomous disclosure index as measurement method. The overall compliance level for the sampled companies averages 69% of the disclosures required by the standards tested which is low compliance. On the other hand, Alanezi *et al.*, (2012) ^[4] examined the level of compliance with IFRS in a sample of 33 listed Kuwaiti financial institutions in 2006. The results showed an average level of compliance of 81.6% which is high. However, the compliance with IFRS-required disclosure ranged from 64% to 94% suggesting that the level of IFRS-required disclosure is widely distributed. The study used Mandatory Disclosure Compliance Index (the MDCI) to measure compliance with IFRS.

Karim and Ahmed (2005) ^[7] in Bangladesh examined the level of compliance with IFRS in 2003 based on a sample of 188 companies using a self-constructed checklist and dichotomous disclosure index as measurement method. The results showed a minimum compliance level of 17% and maximum of 63% with an average compliance level of 39.75% which is very low. Fekete *et al.*, (2008) ^[20] in Hungarian examined the level of compliance with IFRS in 2006 based on a sample of 18 companies using a self-constructed checklist and dichotomous disclosure index as measurement method. The results show a low compliance of the reporting entities and the average value of the disclosure index was 0.6169 (62%).

Despite the low compliance level among some developing countries, the compliance level with IFRS has been improving over the years implying that countries have been growing with IFRS. Tawiah and Boolaky (2019) used panel data covering the period of 3 years (2014 to 2016) from 205 companies to examine the IFRS compliance level across 13 African countries using self-constructed checklist and employed both partial unweighted compliance and dichotomous disclosure index as measurement method. The results show that the average level of compliance score among the companies over the period was 73.09%, with a minimum score of 62.86 % and a maximum of 85.61%. The study also found that compliance has been increasing over the years. Earlier in Egypt, Ebrahima and Fattah (2015) ^[17] also found an improvement in the level of compliance with IFRS. The authors examined the level of compliance with IFRS based on a sample of 116 Egyptian's companies with the study period covering one year (2007) using a self-constructed checklist and dichotomous disclosure index as measurement method.

Al-Shammeri *et al.*, (2008) examined the level of compliance with IFRS based on a sample of 137 companies from Bahrain, Oman, Kuwait, Qatar, Saudi Arabia, and UAE covering the study period of 1996 and 2002 using self-constructed checklist and dichotomous disclosure index as measurement method. The results show that the level of compliance has increased over time, from 68% in 1996 to 82% in 2002.

Peng *et al.*, (2008) ^[38] in China examined the level of

compliance with Chinese GAAP and IFRS using the self-constructed checklist and dichotomous disclosure index as measurement method with the study period covering 1999 and 2002 based on a sample of 79 companies. The mean level of compliance with Chinese GAAP is 0.970 and 0.969 for the 1999 and 2002 annual reports, respectively. However, the mean level of compliance with IFRS is 0.857 and 0.900 for the 1999 and 2002 annual reports, respectively. This shows an improvement in the level of compliance with IFRSs.

The majority of the results of the empirical studies reviewed On IFRS compliance in the developing countries may not be robust enough. The reason is that these studies have employed only one method to measure the compliance level. In order to obtain a more robust result and informative to academic and practitioners on compliance with IFRSs, it is important to combine two measurements methods (Partial Compliance unweighted (PC) and Dichotomous Method) in a single study (Tsalavoutas *et al.*, (2010). However, of the literature reviewed in developing countries only two (2) studies had employed the two methods in a single study.

Given the limited knowledge on IFRS compliance in developing countries (especially African countries), the purpose of this study is to examine the extent of compliance with IFRSs disclosures in developing country and Zambia specifically. Zambia was chosen for two main reasons. Firstly, there is no empirically known study on IFRS compliance in Zambia and therefore, this study contributes to extant literature on IFRSs compliance using Zambian listed companies. Secondly, in Zambia, the World Bank (2007; 2017) reports on the observance of standards and codes (ROSC), Accounting and Auditing observed non-compliance with IFRSs among companies. However, the reports did not empirically examine the extent of compliance with IFRS. Consequently, the World Bank (2017) called for a more robust approach to determining the level of compliance with IFRSs in Zambia. Therefore, this study employed two approaches in examining the extent of compliance, unweighted compliance method (dichotomous disclosure index) and partial compliance (PC) unweighted method in order to obtain a more robust result (Tsalavoutas *et al.*, 2010).

2. Materials and Methods

2.1 Population and Sampling

The population consisted of companies listed on the Lusaka Securities Exchange beginning or before 1st January, 2012 and are still trading on the exchange as of 31st December, 2018. The effective date of 1st January, 2012 was chosen because it follows the adoption of three tier in the financial reporting framework in Zambia. Using this criterion only 20 listed companies were included in the population. It is a requirement by LuSE and ZICA that all listed companies should comply with IFRS disclosure requirements. We employed the purposive sampling where the entire listed companies were sampled because the population was small (Etikan *et al.*, 2016) ^[19].

2.2 Data Collection

The main data source for assessing the extent of IFRS compliance is from the audited financial statements of Zambian listed companies. All the annual audited financial reports were collected from LuSE and also some downloaded from the respective companies' websites. The

study employed content analysis to collect the secondary data from the audited financial statements.

In line with other prior studies (e.g. Alfaraih, 2009 and Tsalavoutas, 2009) ^[4], a self-constructed IFRS compliance checklist was used to collect data on compliance with IFRS disclosure requirements. The IFRS compliance checklist comprised of selected accounting standards based on the following criterion:

1. Applicability to all the fiscal years between 1st January, 2012 to 31st December, 2018.
2. Relevance to the study focus (Problematic areas identified by World Bank, 2007).

Based on the above criterion, only 15 accounting standards were included in the disclosure index (IFRS compliance checklist). There is no one guiding principle that provides on the number and selection of standards for inclusion in the compliance index but will normally be determined by the focus of the research (Marson and Shrives, 1991; Wallace *et al.*, 1994; Barako *et al.*, 2006) ^[32, 51, 111].

2.3 Research Instrument

The researcher obtained the IFRS standards from the IFRS Foundation website and reviewed each selected accounting standard. The review involved identifying disclosure requirements which are mandatory in nature and not merely

encouraging. Any revision in the IFRS standard regarding disclosure item between the study period (2012 to 2018) was not included in the checklist to ensure comparability and consistency. The initial IFRS compliance checklist developed by the researcher comprised 252 disclosure items as indicated in *table 1*.

2.3.1 Content Validity

According to Yaghmale (2003) ^[56] content validity refers to the degree that the research instrument covers the content that it is supposed to measure (i.e. in this case, measuring compliance with IFRS mandatory disclosure requirements). Content validity is a subjective judgment of experts about the degree of relevant construct in the research instrument employed in the study (Yaghmale, 2003) ^[56]. Therefore, in order to achieve content validity, the initial self-constructed IFRS compliance checklist developed by the researcher was compared with other prior studies and subsequently, the final disclosure items for inclusion in the checklist for each standard was agreed upon with the other two researchers (Chartered Accountants). Major variations were noted for IAS 1 which focuses more on presentation than technical accounting disclosure requirements. A total number of 276 mandatory disclosure items were included in the disclosure index as shown in *table 1* below

Table 1: Comparison of disclosure items of each selected standard to prior studies

S/N	Accounting Standard	Effective Year	Alfaraih (2009) ^[6]	Tsalavoutas (2011)	Rahman and Hamdan (2017) ^[40]	Tawiah and Boolaky (2019)	Current Study initial Score	Agreed final Score
			Total score expected	Total score expected	Total score expected	Total score expected	Total score expected	Total score expected
1.	IAS 1	2007	45	72	105	81	76	90
2.	IAS 2	2005	8	8	Nil	7	8	8
3.	IAS 7	1992	14	10	Nil	19	15	16
4.	IAS 8	2003	16	6	Nil	19	16	16
5.	IAS 10	2003	6	6	Nil	6	6	6
6.	IAS 16	2003	15	15	Nil	22	13	13
7.	IAS 17	2003	21	19	Nil	12	21	21
8	IAS 19	2011	Nil	23	Nil	25	14	14
9	IAS 21	2003	Nil	9	Nil	9	9	10
10	IAS 24	2009	9	18	Nil	20	11	21
11	IAS 33	2003	9	7	Nil	9	9	9
12.	IAS 37	1998	13	15	Nil	15	13	13
13.	IAS 38	2004	14	14	Nil	25	13	13
14.	IAS 40	2003	14	21	Nil	21	14	12
15.	IFRS 5	2005	14	10	Nil	10	14	14
	Total		211	253	105	300	252	276

2.3.2 Reliability of the IFRS Compliance checklist

According to Heale and Twycross (2015) ^[23] reliability is concerned with the consistency of a measurement and if a measurer completes a research instrument meant to measure a phenomenon, it should have approximately the same responses each time the test is completed. Further, the authors point out that three reliability attributes of homogeneity, stability and equivalence should be achieved in a measurement. Homogeneity (or internal consistency) refers to the extent to which all the items on a scale measure one construct. Stability refers to the consistency of results using an instrument with repeated testing. Equivalence refers to consistency among responses of multiple users of an instrument, or among alternate forms of an instrument. The main threat to reliability derives from the subjective judgement exercised in completing the research instrument

(Vlachos, 2001 as cited by Tsalavoutas, 2009) ^[50].

To control for subjectivity in the interpretation of the IFRS disclosures in the audited financial statements, two independent raters (Chartered Accountants) assessed the quantitative and qualitative information in the financial statements, to determine the compliance scores. To ensure the reliability and consistency of the scores of individual raters and also between raters, we employed the test-retest and inter-rater reliability of their scores (Braam and Beest, 2013) ^[12].

To test for individual scorer consistency, the scorers were asked to assess each audited financial statement twice. The second assessment was made after all the financial statements had been scored in a first round, rather than after each initial separate report assessment, so as to reduce the chance of the first scoring influencing the second scoring

results. The results of the paired-samples *t*-tests showed no significant differences, signifying that the scorers scored the financial statements in a consistent manner. The final score for each scorer was finally agreed and taken as the score for the individual scorer.

In order to test for inter-rater reliability, we employed the percent agreement method because the raters are trained and experienced chartered accountants and therefore little guessing was expected (McHugh, 2012) [33]. We also tested the reliability using Kappa test. The analysis shows the percent agreement of 92.14% and kappa coefficient of 0.9186, which is above the required 0.70. The implication of these results is that the quality of the scores were reliable, and scorers agreed on the quality of the assessments made. The average scores between the scorers was taken as the final compliance score. Table 2 show the results for kappa coefficient test for IFRS compliance score.

Table 2: Kappa Coefficient Test results for IFRS compliance score

R1	80%	F1	80%
R2	76%	F2	79%
R3	100%	F3	80%
R4	77%	F4	81%
R5	96%	F5	100%
R6	100%	F6	84%
R7	100%	F7	100%
R8	100%	U1	79%
R9	100%	U2	84%
R10	100%	U3	80%
R11	100%	U4	88%
R12	100%	U5	100%
R13	100%	U6	95%

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.kap Rater1 Rater2
      Expected
Agreement Agreement Kappa Std. Err. Z Prob>Z
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92.14% 3.53% 0.9186 0.0160 57.33 0.0000
    
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2.4 Scoring Method

Prior studies have shown two prominent methods of measuring compliance level with IFRS disclosure requirements. The first method is the unweighted compliance method (dichotomous disclosure index) in line with Cooke (1992) [16]

1. This method gives equal weight to the individual items required to be disclosed by all standards. According to Al-Shiab (2003:222), the main limitation of this method is that it unintentionally and indirectly not treats equally standards with more disclosures with those with fewer disclosures. For instance, some accounting standards such as IAS 1 require more disclosure items compared with IAS 10. The second is partial compliance (PC) unweighted method which avoids this problem (Al-Shiab, 2003, p.223). This method assumes that each standard is of equal importance and hence gives equal weight to each standard. On the other hand, Partial Compliance method may be more sensitive to the researchers’ skills to complex accounting standards. But this problem will be less apparent under the dichotomous

approach (Tsalavoutas, 2009).

According to Tsalavoutas *et al.*, (2010), the two methods produce significantly different overall and relative compliance scores. Therefore, applying both methods simultaneously will provide more robust results and more informative findings to practitioners and academics. Consequently, this study employed both methods in order to obtain a more robust results (e.g. Abdullah *et al.*, 2015).

2.4.1 Dichotomous disclosure index approach

Under this method, the disclosure index for each company is calculated as the ratio of the total items disclosed to the maximum possible score applicable for that company. The formula is given in equation 1:

$$C_j = \frac{T = \sum_{i=1}^n d_i}{M = \sum_{i=1}^m d_i} \quad \text{Eq. (1)}$$

Where C_j is the total compliance score for each company and $0 \leq C_j \leq 1$. T is the total number of items disclosed (d_i) by company j and M is the maximum number of applicable disclosure items for company j that could have been disclosed. If a required item is disclosed, it is scored as 1 and if it is not disclosed, it is scored as 0. However, some items may not be applicable to every company and are therefore scored as “not applicable”.

2.4.2 Partial compliance unweighted approach

This method gives unequal weighting to the disclosure items in different standard as given by the formula in equation 2:

$$PC_j = \frac{\sum_{i=1} X_i}{R_j} \quad \text{Eq. (2)}$$

Where PC_j is the total compliance score for each company and $0 \leq PC_j \leq 1$. X_i is the level of compliance with each standard’s mandatory disclosure requirements. Firstly, we will calculate the compliance with each standard separately and subsequently, the sum of the compliance scores (X) is divided by the total number of relevant/applicable standards for each company j , i.e. R_j .

3. Results & Discussion

Table 3 below presents a distribution of the listed companies according to the level of their compliance with IFRSs disclosure requirements. Using the unweighted approach (Dichotomous method), the overall average compliance score by listed companies in Zambia is 65%, while the maximum and minimum scores are 77% and 54% respectively. The standards deviation is 5%. On the other hand, using the PC method the overall average compliance score by listed companies in Zambia is 56%, while the maximum and minimum scores are 74% and 39% respectively. The standards deviation is 7%. Using the Wilson Signed Rank Test, the results (Z : 10.151) show that the two methods produce significantly different compliance scores. The dichotomous method produced consistently higher compliance scores than the PC method.

Table 3: Distribution of IFRS Compliance by Listed Companies

Disclosure Level Range	Dichotomous Method	Partial Compliance (PC) Method
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	N	%	N	%
Over 90% (very high)	0	0%	0	0%
80% - 90%(high)	0	0%	0	0%
70% - 79% (moderate)	3	15%	0	0%
60% - 69%(intermediate)	14	70%	5	25%
50% - 59%(low)	3	15%	12	60%
Less than 50% (very low)	0	0%	3	15%
Total	20	100%	20	100%
Maximum Disclosure level	0.77		0.74	
Minimum Disclosure level	0.54		0.39	
Overall Disclosure Level	0.65		0.56	
Standard deviation (SD)	0.05		0.07	
Skewness	0.10		0.13	
Kurtosis	-0.217		0.86	

*N= number of listed companies

The findings indicate that the dichotomous method provides a higher overall compliance score compared with PC method. These results are consistent with the findings by prior similar studies such as Abdullah *et al.*, (2012) and Rahman and Hamdan (2017) [40]. These results also agree with the argument that relying on one method to measure the compliance score in a country has the potential to produce misleading results. Therefore, combining the two methods produces a more robust result. Tsalavoutas (2010) argue that if the two methods give significantly diverse compliance scores, such research results should be interpreted with caution.

The framework of analysis for the disclosure compliance level in Table 3.1 was in line with the one used in prior studies by Rahman and Hamdan (2017) [40], Abdullah *et al.*, (2012); Samaha and Stapleton (2008) and Ali *et al.*, (2004). The category levels are as follows: very high compliance, if the disclosure is above 90%; high compliance, if the score is between 80% and 90%; moderate compliance, if the score is between 70% and 79%; Intermediate compliance, if the score is between 60% and 69%; low compliance, if the score is between 50% and 59%, and very low compliance, if the score is less than 50%.

Based on the results in Table 3, using the dichotomous method 85% of the listed companies show compliance level with IFRS disclosure requirements of low to intermediate level while 15% show moderate compliance. Meanwhile, using the PC method all the listed companies indicate compliance of very low to intermediate. According to these findings, none of the listed companies in Zambia fully comply with the IFRS disclosure requirements and the compliance is low. A company is deemed compliant with IFRS if it complies with all the disclosure requirement (IASB, 2010) [25].

Consistent with other prior studies (e.g. Abdullah *et al.*, 2012; Glaum and Street, 2003) [22], none of the listed companies received a qualified audit report on the basis of non-compliance with IFRS disclosure requirements. All the financial statements for listed companies for the period under review (2012 to 2018) indicated that they fully complied with the IFRSs.

IAS 1 provides guidance on the presentation of the financial statements as opposed to dealing with technical accounting issues and yet it has the largest number of disclosure items. In this study, it accounts for 30.6% of the disclosure items in the indexes. Therefore, excluding IAS 1 to analyse the overall compliance with more technical accounting standards would be ideal. Table 4 show the distribution of IFRS compliance without IAS1.

Table 4: Distribution of IFRS Compliance by Listed Companies without IAS1

Disclosure Level Range	Dichotomous Method		Partial Compliance (PC) Method	
	N*	%	N*	%
Over 90% (very high)	0	0%	0	0%
80% - 90%(high)	0	0%	0	0%
70% - 79% (moderate)	0	0%	0	0%
60% - 69%(intermediate)	3	15%	1	5%
50% - 59%(low)	9	45%	8	40%
Less than 50% (very low)	8	40%	11	55%
Total	20	100%	20	100%
Maximum Disclosure level	0.69		0.69	
Minimum Disclosure level	0.22		0.33	
Overall Disclosure Level	0.49		0.49	
Median	0.53		0.50	
Standard deviation (SD)	0.13		0.07	
Skewness	-0.66		0.07	
Kurtosis	-0.79		0.6	

*N= number of listed companies

The overall level of compliance with IFRS disclosure requirements drop by 16% after excluding IAS1 under the dichotomous method and drops by only 7% under the PC method. These results are consistent with Tsalavoutas (2009) who found a 10% drop in overall compliance under the dichotomous method and 1% under the PC method.

Table 5: Distribution compliance level against each Accounting Standard

Variable	Obs	Mean	Std. Dev.	Min	Max
IAS1	140	.8076695	.0754243	.6290323	.9516129
IAS2	105	.4587302	.1875441	.25	1
IAS7	140	.7186992	.1137469	.3571429	.8571429
IAS8	140	.4642151	.1454497	.1818182	1
IAS10	140	.4883333	.2068153	0	.8
IAS16	140	.7401696	.109249	.4444444	1
IAS17	114	.4303537	.3048106	0	1
IAS19	119	.8167267	.3413273	0	1
IAS21	140	.1775	.285976	0	1
IAS24	140	.4943868	.1918382	0	1
IAS33	139	.6027749	.1839243	0	.8571429
IAS37	118	.5819426	.2256115	0	1
IAS38	88	.54421	.2379874	0	.8571429
IAS40	17	.6218487	.1510269	.4285714	.8571429
IFRS5	14	.4736395	.0966221	.3571429	.75

Table 3.3 The study results show that highest average compliance score was IAS19 (82%) and IAS 1 (81%) with a standards deviation of 34% and 8% respectively. The minimum and maximum compliance score with IAS 19 was

0% and 100% respectively. The minimum and maximum compliance score with IAS 1 was 63% and 95% respectively. Overall, these results means that the majority of the listed companies were highly compliant with IAS 1 compared with other standards. The lowest average compliance score IAS 21 with 17% and standard deviation of 29% indicating considerable variation in the compliance with this standard. The minimum and maximum compliance score for IAS 21 was 0% and 100% respectively (only 2 companies had managed to score 100%). The standard deviation ranged from 8% to 38% which indicate that there was considerable variation with compliance score with each

accounting standard.

We also observed that the minimum compliance score for IAS10, IAS17, IAS19, IAS21, IAS24, IAS33, IAS36, IAS37 and IAS38 is zero, which shows that there are companies that did not provide information as required by these accounting standards. Further, according to the results in *table 6*, majority of the companies scored less than 70% against these standards (e.g. about 80% or more of companies scored less than 70% for IAS2, IAS8, IAS 10, IAS17, IAS21, IAS24 and IAS36). The implication of these findings is that majority of Zambian listed companies have difficulty in complying these standards.

Table 6: Compliance Scores Range for each Accounting Standard

Standard	N	Over 90%	%	80% - 90%	%	70% - 79%	%	60% - 69%	%	50% - 59%	%	Less than 50%	%
IAS1	20	2	10%	11	55%	5	25%	2	10%	0	0%	0	0%
IAS2	15	0	0%	1	7%	0	0%	0	0%	6	40%	8	53%
IAS7	20	0	0%	5	25%	9	45%	3	15%	2	10%	1	5%
IAS8	20	0	0%	0	0%	2	10%	1	5%	6	30%	11	55%
IAS10	20	0	0%	1	5%	3	15%	4	20%	2	10%	10	50%
IAS16	20	1	5%	3	15%	7	35%	8	40%	1	5%	0	0%
IAS17	17	1	6%	0	0%	2	12%	2	12%	3	18%	9	53%
IAS19	20	16	80%	0	0%	0	0%	0	0%	0	0%	4	20%
IAS21	20	0	0%	1	5%	0	0%	0	0%	3	15%	16	80%
IAS24	20	1	5%	0	0%	1	5%	2	10%	6	30%	10	50%
IAS33	20	0	0%	3	15%	4	20%	2	10%	7	35%	4	20%
IAS36	3	0	0%	3	100%	0	0%	0	0%	0	0%	3	100%
IAS37	17	1	6%	0	0%	6	35%	1	6%	5	29%	4	24%
IAS38	14	0	0%	1	7%	5	36%	2	14%	1	7%	5	36%
IAS40	3	0	0%	0	0%	1	33%	0	0%	1	33%	1	33%
IFRS5	4	0	0%	0	0%	1	25%	0	0%	1	25%	2	50%

Consistent with prior studies (e.g. Tawiah and Boolaky,2019; Rahman and Hamdan, 2017; Abdullah *et al.*, 2012) ^[40] over the years IAS1, IAS7, IAS16, IAS40 and IFRS5 show a higher compliance score. Contrary to the prior studies, IAS19 show a higher compliance score over the years. However, higher compliance is due to the fact that most listed companies adopted contribution benefit plan as opposed to defined benefit plan on employee benefits. Contribution benefit plan only requires one disclosure item which was easy to do. However, most listed companies failed to disclose extensive requirements under defined benefit contributions.

In addition, the study shows that some listed companies score very low compliance against IAS17, IAS24, IAS37 which is consistent with prior studies such as Tawiah and Boolaky (2019); Sellami and Fendri (2017); Abdullah *et al.* (2012). Most of the companies could only provide figures in the financial statements but fail to make the disclosures under IAS17. Furthermore, consistent with Tawiah and Boolaky (2019) most Listed companies failed to make disclosures on post-employment benefits and termination benefits of key management under IAS24. The listed companies did not also provide any disclosure on the provision of doubtful debts related to the outstanding balance of related parties and key management personnel of the entity or its parent. Some companies also failed to disclose whether those related transactions were carried out on arms-length transactions or otherwise. However, contrary to Tawiah and Boolaky (2019) we found a lower compliance score for IAS10 and IAS33.

Further, the results show that there are variations (shown by respective standards deviations) in the level of disclosures

across the accounting standards as indicated in *table 5*. It can still be argued that mandatory disclosure is not constant over time since compliance with the accounting standards is usually at the discretion of managers and their risks of non-compliance (Tawiah and Boolaky, 2019; Abdullah *et al.*, 2012).

4. Conclusions

The purpose of this study was to examine empirically the extent of compliance with IFRS disclosure requirements among Zambian listed companies using the dichotomous method and PC method. The present study shows that the level of compliance with IFRS disclosure requirements among Zambian listed companies is low. Both the unweighted approach (Dichotomous method) and PC method indicate the overall average compliance score of 65% and 56% respectively. There is variation in the IFRS compliance for both dichotomous and PC methods of 5% and 7% respectively. This confirms the argument by Tsalavoutas (2010) that relying on one method to measure the compliance score in a country has the potential to produce misleading results. Therefore, combining the two methods produces a more robust result. Using the Wilson Signed Rank Test, the results (Z: 10.151) show that the two methods produce significantly different compliance scores and therefore the research results should be interpreted with caution (Tsalavoutas, 2010).

The findings from this study show that none of the listed companies in Zambia fully comply with the IFRS disclosure requirements however, consistent with the findings from other prior studies (e.g. Abdullah *et al.*, 2012; Glaum and Street, 2003), none of the Zambian listed companies

received a qualified audit report on the basis of non-compliance with IFRS disclosure requirements.

The study shows that majority of the Zambian listed companies have challenges in complying with IAS2, IAS8 IAS10, IAS17, IAS19, IAS21, IAS24, IAS33, IAS36, IAS37 and IAS38. Despite the noncompliance with IFRS disclosure requirements, all the Zambian listed companies received unqualified audit reports during the period under review.

The implication of these findings are that there is no adequate enforcement of compliance with IFRSs and support for the implementation of challenging accounting standards. Inadequate enforcement can be evidenced by issuance of unqualified audit reports without full compliance IFRS disclosure requirements. These findings support the observations made by the World Bank (2007; 2017) on non-compliance with IFRS by Zambian listed companies as well as weak enforcement mechanism.

The findings of this study is useful to the regulators and policymakers to know the level of compliance with IFRSs so that appropriate enforcement mechanism can be employed or strengthened. The level of compliance with IFRSs is an indicator of the level of quality of financial information provided by listed companies. These findings suggest that the quality of financial information provide by Zambian listed companies is low. Therefore, this would make it difficult to realize the benefits of IFRS adoption in Zambia. It is also important for academician to know the challenging accounting standards so that more effort can put during training of accountants in Zambia.

The limitation of this study is the narrow focus on listed companies only which cannot be generalized to other public interest companies in Zambia. Future research study on IFRS compliance can extend to other public interest companies and also small and medium sized enterprises (SMEs) in Zambia. Future research can also focus on the enforcement of IFRS compliance in Zambia.

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