



Impact of Regulatory Change on Income Smoothing and Earning Distortions? Evidence from a Univariate Approach

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Abstract: The issue on how some managers misstate and manipulate their financial positions by underestimating or overestimating actual economic items has continued to draw attention. Research presents evidence that a change in accounting standards has implication for the reduction in such manipulations. Using evidence from in South Africa, this paper applies univariate analysis to examine whether there is difference between earnings manipulations during two accounting regulatory regimes – Generally Acceptable Accounting Practices (GAAP) and the International Financial Reporting Standards (IFRS). To ensure robustness, the paper used two measures of financial report manipulations – income smooth and earnings management. The finding confirms that the adoption of IFRS caused, to some extent a reduction in discretionary income smoothing and earnings distortion. Furtherance, the outcome is robust and not sensitive to the methods applied for the test; thus, the evidence can be used to make informed policy decisions. The result has implication for regulation, policy making and modification of extant Standards.

Keywords: Income smoothing; Earnings management; Generally Acceptable Accounting Practices; International Financial Reporting Standards; Discretionary accruals; Univariate testing

1. Introduction

Literature documents that income smoothing, and earnings distortions are accounting operations involving the manipulations of reported earnings or income, through deliberate misreporting profit, debts and asset valuation or depreciation.

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Managers may engage in misstating their financial performance by underestimating or overestimating actual economic items (Pacheco-Paredes & Wheatley, 2021; Eiler, et. al, 2021) or sometimes, through bias selection of policies to report financial estimates (Brennan, 2022; Hsieh, et. al, 2018). Notably, it has been identified that a change in accounting standards, especially the transition from the local Generally Acceptable Accounting Practices (GAAP) – a national regulatory framework – to the International Accounting Standards' International Financial Reporting Standards (IFRS) has implication for the reduction in such manipulation (Gbadebo, et. al, 2023; Paredes & Wheatley, 2021; Eiler, et. al, 2021).

The IFRS is a set of high-quality financial reporting guidelines aimed at ensuring accountability and transparency in global capital markets. The framework was developed due to the drive to ensure unified global accounting reporting procedures across boundaries (IFRS Foundation, 2023). The principles-based standards support accountants' flexibility and use of discretion to document financial information to investors. The reporting framework has since been adopted by many developed countries for their accounting information system (Adedokun, et. al, 2022; Bertrand, et. al, 2020). Several economies, ranging over 120 nations, have mandatorily implemented the with aim of attainment of pursued objectives in the global financial markets. IFRS affects earnings reporting due to the standards' core features that centre on principle-base rather than rule as well as valuation instead of contractibility (Ma, et. al, 2022). Aside, the adoption of IFRS is based on historical-cost values, thus incentivised improvement in the quality of accounting information (Isaboke & Chen, 2019; Bhatia & Mulenga, 2019).

There is evidence that the transition to the Standards would improve the quality of financial reporting and result in reduced manipulation of reported earnings. Klish, et. al. (2021) show that IFRS-adopters in both oil-dependent countries (rentier) and non-rentier have a higher reporting quality than the adopters in Middle Eastern and North African (MENA) region. Mensah (2020) shows that IFRS adoption positively and significant affect managed earnings. Cadot, et. al. (2020) note that earning smoothing fades after the IFRS adoption due to the flexibility of IFRS on derivatives reporting. This study aims to confirm likelihood of reduction in income smoothing and earnings management using listed firms on the stock exchange in South Africa (SA). We consider the samples from the Johannesburg Securities Exchange (JSE), been the largest stock exchange in Africa, and was the first amongst others in the region to mandatorily adopt the Standards based on its purest form in 2005 (IFRS Foundation, 2023).

Prior studies for SA report cases of corporate manipulations, including Masterbond and LeisureNet amongst several others (Pududu & De-Villiers, 2016). Some studies use multivariate panel relation demonstrate that the adoption has implications for earnings manipulations (Isaboke & Chen, 2019; Ozili & Outa, 2018; Yeboah &

Yeboah, 2015). Isaboke and Chen (2019) suggest that the increase in financial irregularities perpetuated in SA are due to weak institutional environment. Ozili and Outa (2018) reports that well-capitalised banks implement the IFRS apply loan-loss provisions in earning smoothing during periods of economic boom. Yeboah and Yeboah (2015) observe that comparability benefits from IFRS explain significant reduction in earning manipulations. None of the studies consider a univariate analysis to find the difference between income smooth and earnings management between the two regulatory regimes. Hence, our study fills this gap.

This paper seeks two folds objectives. First, we check whether there is likely difference in income-smoothing prior and post adoption of IFRS. Second, we verify whether there is likely difference in earnings management prior and after the adoption of IFRS. We use established metrics to estimate the extent of income smoothed and earnings managed and follow univariate procedures to confirm the likely different in the metrics based on the estimates for periods before and after the adoption of IFRS. The metric measures ensure the consistency of estimates obtained and univariate testing permit the generalisation of inference from the procedures. Since the GAAP and IFRS are aligned before the adoption, the gains from adoption may be expected to be less such that the likely difference in income smoothing may be insignificant. This is because before the mandatory official adoption, the SA harmonised its GAAP with IFRS (Gbadebo, 2023; Yeboah & Yeboah, 2015). Based on this, the paper evaluates two hypotheses each corresponding to each objective: (1) there is no significant difference in “income-smoothing” prior and after the adoption of IFRS in SA, and (2) there is no difference in ‘managed earnings’ prior and after the adoption of IFRS in SA.

The finding confirms that the adoption of IFRS caused, to some extent a reduction in discretionary income smoothing and earnings distortion. Furtherance, the outcome is robust and not sensitive to the methods applied for the test; thus, the evidence can be used to make informed policy decisions. The result has implication for regulation, policy making and modification of extant Standards. The paper makes a significant contribution to practice, as the findings inform practitioners, such as investors, external auditors and other stakeholders, to take extra care when using financial information. Stakeholders need to be more careful since firms may hide the true financial conditions during pandemic periods The study guides South African investors and policymakers to gain better understanding of earnings management practices during the Covid-19 pandemic. This will help to take appropriate actions in evaluating businesses performance during this perturbation periods. The reminder of the paper is structured such that literature is reviewed in Section 2, the methodology is discussed in Section 3, the empirical results are presented in Section 4 and conclusion in Section 5.

2. Literature

Literature identifies two perspectives regarding consequence of income smoothing: The first considers smoothing as self-centred manipulations of withholding valuable accounting information (Shubita, 2015). They suppose that income smoothing is manipulation tool used by managers to mislead market participants about future earnings. The second perspective considers income smoothing as a channel for the disclosure of private future earnings information (Gassen, et. al, 2006). This supposes that smoothing as a signalling role in an efficient capital market. Cahen, et. al. (2008) identify that for countries where investor protection is strong, earnings informativeness and income smoothing are correlated. Li and Richie (2009) show that firms that smooth income have lower cost of debts and higher credit ratings.

The adoption of IFRS has prompted research to access the impact of the Standards on earnings management (Gbadebo, 2023; Adedokun, et. al, 2022; Isaboke & Chen, 2019; Chimonaki & Konstantinos, 2020; Kousay, 2019; Malofeeva, 2018; Guermazi & Khamoussi, 2018; Bryce, et. al, 2015). Gbadebo (2023) demonstrates that earnings management is not purely time-driven but robust to specific covariates including IFRS adoption, growth, firm size, and leverage. Awan (2022) studied the impact of IFRS on banking sector efficiency and accounting quality in Pakistan and reveal significant positive correlation between IFRS and discretionary weights, but significant negative correlation between earnings per share and IFRS. They established that the adoption of IFRS enhanced efficiency and optimised its audit quality. Adedokun, et. al. (2022) shows how the adoption of IFRS affects accrual-based earnings management of 125 firms in Nigeria from 2003 and 2020. They find significant influence of IFRS dummy on the proxy for between earnings management. Mensah (2020) shows that IFRS adoption reduced earnings managed and enhanced the quality of firms' reports in Ghana.

Klish, et. al. (2021) recognized that IFRS-adopters in both oil-dependent countries (rentier) and non-rentier have a higher reporting quality than the adopters in the MENA region. They noted reduction in income smoothing relative to the GAAP, thus, indicate that IFRS benefits the region. Chimonaki and Konstantinos (2020) show that IFRS reduce information costs and motivates transparency in Greece. Odoemelam, Okafor and Ofoegbu (2019) examined the impact of earnings, book value, regulation and IFRS earnings on Share Price of 101 Nigerian firms using (2006–2017). They conclude that IFRS resulted in higher earning value relevance. Kousay (2019) confirms the impact of IFRS on earnings manipulation in Canada during 2000 and 2018 and finds IFRS has no direct effects on earnings management for public firms. The paper was unable to recover any significant enhancement due to the adoption. Malofeeva (2018) notes that large firms do engage in managing earnings than small firms in Russia. Ugrin, et. al. (2017) show that the link between

IFRS and earnings manipulation is not uniform across European nations, and that manipulations is higher due to adoption.

Baig and Khan (2016) investigate whether IFRS impacts earnings distortions of firms in Pakistan and find that the adoption led to less earnings management. Udayakumara and Weerathunga (2016) examine how the IFRS adoption impact earnings management in Sri Lanka and establish the existence of higher earnings smoothing due to mandatory adoption during 2009–2014. Martínez (2015) observe the impact of the convergence to IFRS on the accounting quality in Mexico during 2010 to 2011 and established that there has been large decrease in earnings managed because of convergence of IFRS. Bryce, et. al. (2015) confirm how financial reporting quality has improved in Australia due to IFRS adoption and observed that accounting quality are documented to be stable under local GAAP and IFRS.

Yeboah and Yeboah (2015) study 181 in SA firms from 1998 to 2012. They show how leverage, net cash flow, change in sales, turnover, total assets affect discretionary accruals, income change over small positive target. They find that earnings smoothing, and discretionary accruals reduced within post adoption period, thus suggest that IFRS leads to improve accounting quality. Abuda and Rudiawarni (2014) find no significant change in managed earnings after the mandatory IFRS adoption for firms in Indonesia investigated during 2010–2012. Dimitropoulos et al. (2013) show how book value of equity, net income per share and dummy affects the discretionary accruals of European firms from 2001 to 2008, and find that IFRS contributed less earnings management and time-loss recognition.

3. Methodology

3.1. Manipulations Metrics

We follow prior literature to obtain estimates for income smoothing and earnings management based on established metrics (Dimitropoulos, et. al, 2013; Barth, et. al, 2008). We considered two independent univariate algorithms (metrics) expected to capture the levels of manipulations of income or earning indicators, each to hypothesis 1 and 2. These measures are robust for capturing income smoothing and earnings management and are appropriately for univariate testing (Adedokun, et. al, 2022; Dimitropoulos, et. al, 2013; Barth, et. al, 2008).

To estimate income smoothing required to test the first hypothesis, we use the difference in the variability of change in the estimates of net income residuals, denoted $\hat{R}\Delta NI_{j,\sigma}$ for firm i in year t . The residual $\hat{e}_{j,i,t}$ ($\equiv \hat{R}\Delta NI_{j,i,t}$) is obtained, separately for the GAAP and IFRS periods, using the OLS estimation of equation (1).

$$\Delta NI_{j,i,t} = \alpha_0 + \alpha_1 ROA_{i,t} + \alpha_2 LEVG_{i,t} + \alpha_3 GROW_{i,t} + \alpha_4 SIZE_{i,t} + \alpha_5 BIG4_{i,t} + e_{j,i,t} \dots \dots \dots (1)$$

$$\hat{e}_{j,i,t} (\equiv \hat{R}\Delta NI_{j,i,t}) = \Delta NI_{j,i,t} - [\hat{\alpha}_0 + \hat{\alpha}_1 ROA_{i,t} + \hat{\alpha}_2 LEVG_{i,t} + \hat{\alpha}_3 GROW_{i,t} + \hat{\alpha}_4 SIZE_{i,t} + \hat{\alpha}_5 BIG4_{i,t}] \dots \dots \dots (2)$$

For firm i in year t , $\Delta NI_{j,i,t}$ is the net income; $\hat{R}\Delta NI_{j,i,t}$ is the estimate of the residuals from the change in net income model (equation (1)) and expressed mathematical as (equation (2)). We simple compute the variability (standard deviation, σ) of $\hat{R}\Delta NI_{j,i,t}$ for the prior IFRS period and post IFRS period, and apply the univariate test to confirm is the difference between them, which represent the estimate of the income smoothing metric ($\hat{R}\Delta NI_{j,\sigma}$) is significant. Usually, $R\Delta NI_{j,i,t}$ is projected to be greater after IFRS adoption to signal that income smoothing is reduced (Cadot, et. al, 2020; Lo, et. al, 2017; Barth, et. al, 2008). j is the two different accounting regime - prior (GAAP) and Post (IFRS). $ROA_{i,t}$ (Return on assets) is measured as net profit to lagged total asset; $LEVG_{i,t}$ (Financial leverage) is Computed by Total liabilities divided by total assets; $GROW_{i,t}$ (Firms (sales) growth rate) measured as the sales in year t minus sales in $t - 1$, and scaled by sales in year $t - 1$; $SIZE_{i,t}$ (Firm size) is measured by computing the natural logarithm of the firm's total assets, and $BIG4_{i,t}$ (Audit firm size) measure as a dummy coded as 1 if a firm is audited by a BIG4, 0 otherwise. The assumption is that managers apply no discretion to smooth income, hence, it (i.e., net income) is anticipated to be volatile overtime when the regulation does not permit flexibility. As such, the expectation from the null is that the adoption of IFRS has not altered the income-smoothing activities amongst the firms, thus, has no substantial impact on the earning $\Delta NI_{i,t}$ metric. We compute the variability (standard deviations, i.e., σ) of $\hat{e}_{j,i,t}$ for the j (GAAP and IFRS) periods and applied the univariate test to confirm likely differences between them, denoted as ΔNI_{σ}^e .

To estimate earnings management level needed to test the second hypothesis, we use the discretionary accruals metrics computed based on the modified Jones' earnings management (Gbadebo, 2023, Adedokun, et. al, 2022). The modified Jones model (i.e., equation (3), from Dechow et. al. (1995), adjusts associated change in net receivables from changes in the revenues to accommodate wider reported earnings management. The model regresses the scaled $TA_{i,t}$ on normalised ($\Delta REV_{i,t} - \Delta REC_{i,t}$) and $PPE_{i,t}$ for firm i in year t . The discretionary component ($DACMJ_{i,t}$) – i.e. the estimates of the residuals – is the modified Jones' discretionary accruals which capture earnings management level.

$$TA_{i,t}/A_{i,t-1} = \beta_0[1/A_{i,t-1}] + \beta_1[(\Delta REV_{i,t} - \Delta REC_{i,t})/A_{i,t-1}] + \beta_2[PPE_{i,t}/A_{i,t-1}] + e_{2i,t} \quad (3)$$

$$\hat{e}_{2i,t} (\equiv DACMJ_{i,t}) = TA_{i,t}/A_{i,t-1} - \hat{\beta}_0[1/A_{i,t-1}] + \hat{\beta}_1[(\Delta REV_{i,t} - \Delta REC_{i,t})/A_{i,t-1}] + \hat{\beta}_2[PPE_{i,t}/A_{i,t-1}] \quad (4)$$

The larger absolute values of the estimated discretionary accruals suppose higher degree of earnings management in practice. $DACMJ_{i,t}$ captures the direction (increase or decrease) in earnings management (Lo, et. al, 2017; Irani & Oesch, 2016). Note that for firm i in year t , $TA_{i,t}$ represents total accruals, and is computed as the difference between operating profit, and the cash flow from operations (Hribar & Collins, 2002). $\Delta REV_{i,t}$ is change in revenues (i.e., revenues in year t minus revenues in year $t - 1$), $PPE_{i,t}$ is gross property, plant and equipment in year t , $A_{i,t-1}$ is total assets in year $t - 1$, and $\Delta REC_{i,t}$ is the net receivables in year t minus net receivables in year $t - 1$.

3.2. Univariate Tests

For the univariate test, we use the ANOVA-F-test – suitable to verify the difference in the variances (σ_j^2) – to exercise the first null (hypothesis) of likely significant change in ‘income-smoothing’ since the regulations’ adoption. The test is based on a comparison of two independent estimates of the common population variance, σ^2 , which is obtained by partitioning the total variability of the data. The null that the k population means are equal (i.e., $H_0 : \alpha_1 = \alpha_2 = \dots = \alpha_k = 0$,) is tested against the alternative that at least two of the means are unequal ($H_1 : \text{At least } 2 \alpha_i \text{'s} \neq 0$). The ANOVA-F- statistic is computed from equation (5):

$$f = s_1^2/s_2^2 \dots\dots\dots (5)$$

If H_0 is true, the ratio s_1^2/s_2^2 is a value of the random variable F having the F -distribution with $k - 1$; $k(n - 1)$ degrees of freedom. Since s_1^2 overestimates σ^2 when H_0 is false, we have a one-tailed test with the critical region entirely in the right tail of the distribution. Thus, the null hypothesis H_0 is rejected at the α – level of significance when $f > f_\alpha[k - 1, k(n - 1)] >$. An empirically adopted approach is to estimate the p -value. Accordingly, the evidence in favour of or against H_0 using the p -value is $P = p[f[k - 1, k(n - 1)] > f]$.

In addition, we use the Satterthwaite-Welch t-test – suitable to verify the difference in means μ_j – to exercise the second null (hypothesis) of any significant change in

earning management after adoption. The test assumes that $x_{1i}(x_{i1}, x_{21}, \dots, x_{n1}); x_{j2}(x_{12}, x_{22}, \dots, x_{n2})$ are mean of independent random samples from two populations with mean $\mu_j = E(x_{j,i})$ and variance $\sigma_j^2 = Var(x_{j,i})$, and sample mean $\bar{x}_{i,j} = n^{-1} \sum_{i=1}^{n_i} x_{i,j}$; variance $s_{i^2} = (n_j - 1)^{-1} \sum_{j=1}^{n_j} (x_j - \bar{x})^2$. The t -test statistic is computed using equation (6):

$$t_w = \bar{x}_1 - \bar{x}_2 / \sqrt{s_1^2/n_1 + s_2^2/n_2} \dots\dots\dots (6)$$

In the specific case, the two populations are prior and post IFRS estimates of the net income residuals ($\hat{R}\Delta NI_{j,i,t}$) and modified Jones' discretionary accruals ($DACMJ_{i,t}$). The test gives efficient and consistent results than the Student's t -test because it ensures that the type I error's proportion is close to the nominal value for unequal variances under the normality assumption.

The test verifies the null that the sample means of residual from $\Delta NI_{i,t}$ and $DACMJ_{i,t}$ are equal for both the prior and post IFRS adoption periods. We perform the Welch t -test on the difference in standard deviation of the residuals and use same to discover the first null. We confirm if the difference (change) between the mean values of residual from $\Delta NI_{i,t}$ in the GAAP and the IFRS regime is statistically significant or simply due to chance. Moreso, the second evaluates the existence of significant difference in managed earnings between the prior (GAAP) and post-adoption (IFRS) periods. We confirm if the difference (change) between the mean values of $DACMJ_{i,t}$ for the GAAP and the IFRS regime is significant.

Lastly, we complete robustness tests to ensure the outcome is not sensitive to the method applied for the distribution tests. To verify the variability of $\hat{e}_{j,i,t}$ for the j 's period, we employ the Siegel-Tukey tests to confirm the difference in the variance of the income smoothing metric estimates for the GAAP and IFRS periods. Analogously, to verify the likely significant change in mean of estimates for discretionary accruals' earning management metrics for the GAAP and IFRS periods, we use the Welch t -test for the mean difference test involving confirming difference in means of the estimated in discretionary accruals for the two regulatory regimes.

3.3. Sampling and Data

To estimate (2) and (4), we use data from the McGregor BFA and audited reports of 186 considered firms. The study obtains information for variables needed to estimate the income smoothing and earnings management metrics for the two window periods – “prior-IFRS period (from 2000 to 2004)” and “post-IFRS period (from 2017 to 2022)”. The post IFRS periods was selected to include only the years which the

information used is considered sufficient to justify the effects of adoption (De-Moura, et. al, 2020; Odoemelam, et. al, 2019).

4. Results and Discussions

Table 1 presents the outcome of the income smoothing univariate tests for the evaluation of the first null. After estimating of equation (1) for the j different Standards' regimes and obtain the estimated residuals ($\hat{\epsilon}_{j,i,t}$, for $j = 1,2$), we compute the variability (standard deviations, i.e., σ) of $\hat{\epsilon}_{j,i,t}$ ($\equiv \hat{R}\Delta NI_{j,i,t}$) for the GAAP and IFRS periods. According to the procedures described for the income smoothing univariate testing, the output based on the difference in the variability of change in net income residuals ($\hat{R}\Delta NI_{j,\sigma}$) indicates that the examined firms are disposed to greater income smoothing during the GAAP period compared to the post-IFRS adoption period. Thus, we suppose that there is less likely evidence of income smoothing during the IFRS adoption period with a higher variability of change in net income of 0.0168 as compared to the value of 0.0155 prior adoption. This supposes a 0.0013 difference in residual variances which is 8.38% (0.0013/0.0155) of the variability of change in net income in the prior IFRS periods and 7.74% (0.0013/0.0168) of the variability of change in net income in the IFRS period. The Satterthwaite-Welch-t is based on two tail identifies that the difference of 0.0013 is significant at 5%, hence, we reject the null.

Table 2 presents the outcome of the income smoothing univariate tests for the evaluation of the second null, based on the Satterthwaite-Welch t-test. We complete the test to evaluate that the mean of modified Jones discretionary accruals ($DACMJ_{i,t}$) for the post adoption is likely the same as that of the pre-adoption regime. We implement the two-tail to establish that the means of $DACMJ_{i,t}$ confirm no significant 'change' in earnings management for the prior (GAAP) and post-IFRS regimes. The outcome confirms that the perceived difference of -0.0269 ($0.0838 - 0.0569$) between the mean of $DACMJ_{i,t}$ for the prior and post IFRS periods is highly statistically significant at 1%, providing sufficient evidence to reject the second null tested.

Table 3 presents the robustness tests to validate the initial outcomes and confirm that the outcomes are not sensitive to the applied distribution tests as well as informed policy formulation, regulation, and future research. The results support the initial outcomes established in the main tests. The difference in the spread of the residuals of net income change is significant and refute the related (first) null. Likewise, the difference in the average of the discretionary accrual's earnings distortion is significant, refuting the related (second) null.

Table 1. Income Smoothing Test

Measure	Variance (Prior) (A)	Variance (IFRS) (B)	Difference (B–A)	Test ^a (Statistics)
$\hat{R}\Delta N_{j,\sigma}$	0.0155	0.0168	0.0013	2.3015* [0.0182]

Note: ^aANOVA-F-test. The parathesis '[.]' figure is p-value. Variance: variance of the error estimates, $\hat{e}_{j,t,t}$ ($\equiv \hat{R}\Delta N_{j,t,t}$).

We estimate the p -value and use the evidence in favour of or against the null based on the probability:

$$P = p[f[k - 1, k(n - 1)] > f].$$

*Supposes significant difference in income smoothing between prior and post-IFRS, at the 5% level.

Table 2. Earnings Management Test

Measure	Mean (Prior) A	Mean (IFRS) B	Difference (B–A)	Test ^a (Statistics)
$DACM_{j,t}$	0.0838	0.0569	–0.0269	6.1872* [0.0000]

Note: ^aSatterthwaite-Welch t test. The parathesis '[.]' figure is p-value. *indicates significant difference in earnings management between the prior and post-IFRS, at the 5% level.

Table 3. Robustness Test

Measure	Prior A	IFRS B	Difference (B–A)	Test ^a (Statistics)
<u>ΔNet Income RVar Diff. – Siegel-Tukey (F) test</u>				
$\hat{R}\Delta N_{j,\sigma}$	0.0155	0.0168	0.0013	1.9038* [0.0258] ^a
<u>Earnings Management Mean Diff. – Welch (t) test</u>				
$DACM_{j,t}$	0.0838	0.0569	–0.0269	3.2169* [0.0001] ^b

Note: ^aWelch t -test p -value and ^b Siegel-Tukey p -value. The parathesis '()' figure is p -value.

*indicates significant difference in earnings management between the prior and post-IFRS at the 5% level. Δ Net Income RVar Diff. (change in net income Residual Variance difference (Diff.))

Ultimately, the evidence suggests that the adoption of IFRS caused the extent of income smoothing and discretionary earnings distortion to reduced. The evidence identifies that the difference in the spread of the residuals of net income change is positive. This supposes a higher variability of change in net income residuals after adoption, and by implication lesser income smoothing for the post-IFRS relative to the prior adoption periods. Dimitropoulos, et. al. (2013) have argued perceived difference in net income variance change may be unrelated to difference in cash flow

variability because other random factors may drive such variability for the two different regulation regimes. Martínez (2015), for Mexico, noted significant decrease in income smoothing due to the convergence phase of IFRS.

Similarly, the evidence identifies that the difference in the mean of the modified Jones discretionary accrual is negative. This supposes evidence of a lesser of earnings distortions after adoption, and by implication a lesser earnings' management for the post IFRS relative to prior adoption periods. The outcome is consistent with some prior evidence (Mensah, 2020; Martínez, 2015), but inconsistent with others (Malofeeva, 2018). Mensah (2020), for Ghana note significant negative impact of IFRS-adoption on managed earnings and Yeboah and Yeboah (2015), for SA, find that the adoption reduced earnings managed. Malofeeva (2018), for sample based on Russia, observed increase in discretionary accruals, particularly for large firms than small ones. Bryce, et. al. (2015) note that earnings quality (earnings distortion) remains stable despite the adoption of the IFRS in Australia.

5. Conclusions

The issue of income smoothing has attracted research attentions. Some authors note that the adoption of the IFRS would ensure transparency, accountability, and may discourage earnings distortions in financial reporting by managers. Consequently, several studies are directed to examined this claimed and verify whether income smoothing, and earnings distortions have reduced amongst managers of listed companies. Current evidence, based on multivariate studies appears to recover mixed outcomes with some suggesting that with IFRS adoption such manipulations have reduced (Yeboah & Yeboah, 2015), increase (Malofeeva, 2018) or even remain unchanged (Bryce, et. al, 2015), for their respective country examined. Because reported cases of corporate manipulations are evident in SA (Pududu & De-Villiers, 2016), we consider univariate procedures to confirm the likely difference in estimates for income smoothing and earnings management for periods before and after the adoption of IFRS.

In sum, the findings suggests that the adoption of IFRS caused, to some extent a reduction in discretionary income smoothing and earnings distortion. Furtherance, the outcome is robust and not sensitive to the methods applied for the test; thus, the evidence can be used to make informed policy decisions. Despite this, the evidence is mar with some limitations. For instance, the metric used to estimate these measure - income smoothing and earnings distortion - are limited with confounding effects of factors such as economic settings and incentives to switch to an IAS (Ahmed, et. al, 2013; Dimitropoulos, 2013). The data used to estimate these metrics do not control for compounding effects in confirming predictions from the univariate test of

significance. Kund and Neitzert (2020) has argued such difference in the means could not be attributed solely to the adoption of IFRS, and that other factors may account for the variability. Although the test the provides direction of the evidence from a univariate perspective but does not explain by how much quantity or “extent” income is smooth or managed due to adoption. We suggest that future studies may consider this, for improvement.

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