



مجلة البحوث المحاسبية

[/https://abj.journals.ekb.eg](https://abj.journals.ekb.eg)

كلية التجارة – جامعة طنطا

العدد : الثالث

سبتمبر ٢٠٢٣

The Impact of Financial Statement Comparability on Income Classification Shifting: Evidence from Egypt

Mohamed Saber Hamouda Elsayed

Assistant Professor of Accounting Department, Faculty of Commerce,
Menoufia University

Email: mohamed.elsayed@commerce.menofia.edu.eg

Osama Abd Almonem Abd Alhamid Elkholy

Lecturer of Accounting Department, Faculty of Commerce, Menoufia
University

Email: elkholy.osama@hotmail.com

Mahmoud Marzouk

Lecturer of Accounting Department, Faculty of Commerce, Menoufia
University

Email: mahmoodmarzouk@yahoo.com

The Impact of Financial Statement Comparability on Income Classification Shifting: Evidence from Egypt

Abstract:

Purpose – This study examines the impact of financial statement comparability (FSC) on income classification shifting (ICS) measured by expenses classification shifting (ECS) and revenues classification shifting (RCS).

Design/methodology/approach – The study uses a quantitative approach to measure the impact of FSC on ICS for a sample of 62 Egyptian-listed firms for the period 2018-2021. The logistic regression analysis and Kruskal-Wallis test were run to test the hypotheses.

Findings – The results demonstrate a significant negative impact of FSC on ICS. The study reveals significant differences among the Egyptian Stock Exchange (ESE) sectors regarding RCS, but no significant differences were found concerning ECS and FSC.

Originality/value – The study contributes to the existing literature by examining the impact of FSC on ICS that could help regulators and accounting standards setters to alleviate ICS and thus mitigate earnings management in the Egyptian environment. Our findings are of particular importance for investors to help them make better decisions by improving the quality of information related to core earnings. Moreover, the study provides evidence related to the emerging market of Egypt.

Keywords Financial Statement Comparability, Earnings Management, Expenses Classification Shifting, Revenues Classification Shifting.

ملخص الدراسة:

الهدف: استهدفت الدراسة اختبار أثر قابلية القوائم المالية للمقارنة على إعادة تصنيف بنود قائمة الدخل عن طريق إعادة تصنيف المصروفات وإعادة تصنيف الإيرادات.

المنهجية: اعتمدت الدراسة على الأساليب الاحصائية لتقييم أثر قابلية القوائم المالية للمقارنة على إعادة تصنيف بنود قائمة الدخل بالتطبيق على عينة مكونة من (٦٢) شركة مقيدة في سوق الأوراق المالية المصري خلال الفترة ٢٠١٨م-٢٠٢١م، وقد استخدمت الدراسة لاختبار فروضها تحليل الانحدار اللوجستي واختبار كروسكال واليس.

النتائج: خلصت نتائج الدراسة إلى وجود أثر سلبي لقابلية القوائم المالية للمقارنة على إعادة تصنيف بنود قائمة الدخل من خلال إعادة تصنيف المصروفات وإعادة تصنيف الإيرادات. كما توصلت نتائج الدراسة إلى وجود اختلاف بين قطاعات سوق الأوراق المالية المصري حول إعادة تصنيف الإيرادات، وعدم وجود اختلاف حول إعادة تصنيف المصروفات، وقابلية القوائم المالية للمقارنة.

الأهمية: تساهم الدراسة في تقديم أدلة تطبيقية حول أثر قابلية القوائم المالية للمقارنة على إعادة تصنيف بنود قائمة الدخل التي يمكن أن تساعد المنظمين وواضعي المعايير المحاسبية للحد من إعادة تصنيف بنود قائمة الدخل، وبالتالي الحد من ممارسات إدارة الأرباح في البيئة المصرية. كما أنها ذات أهمية خاصة للمستثمرين لمساعدتهم على اتخاذ قرارات أفضل من خلال تحسين جودة المعلومات المتعلقة بالأرباح الأساسية. علاوة على ذلك، تقدم الدراسة أدلة تتعلق بالسوق الناشئ في مصر.

الكلمات الدالة: قابلية القوائم المالية للمقارنة، إدارة الأرباح، إعادة تصنيف المصروفات، إعادة تصنيف الإيرادات.

1. Introduction

The purpose of financial reporting is to help information users make informed decisions (IASB, 2018). However, the decision-usefulness of financial reporting can be undermined by earnings management practices. Earnings management is concerned with managers' opportunistic behavior of manipulating financial information through several methods including classification shifting to mask a firm's true/poor performance (McVay, 2006; Zalata and Roberts, 2017). Classification shifting is a type of earnings management where managers inflate core earnings by intentionally misclassifying some items within the statement of profit or loss through either understating expenses or overstating revenues (McVay, 2006). Core earnings can be manipulated by shifting core expenses into non-recurring items (McVay, 2006; Zalata and Roberts, 2017) or misclassifying revenue items (Malikov et al., 2018; Bansal et al., 2022).

Classification shifting is different from other types of earnings management including accrual-based earnings management and real earnings management in several aspects. Firstly, classification shifting is the least expensive type of earnings management as it does not impact net income, and thus requires fewer audit hours/fees (Nelson et al., 2002; McVay, 2006). Secondly, it is less likely to negatively impact on the firm value than accrual-based earnings management and real earnings management (Roychowdhury, 2006; Cohen and Zarowin, 2010). Thirdly, classification shifting inflates operating profits and keeps the residue of net income fixed. Thereby, it is less probable to be explored by auditors and has a slighter litigation risk (Athanasakou et al., 2009; Alfonso et al., 2015). Fourthly, the classification of expenses and revenues is highly subjective, and hence it is well-appropriate for earnings management (Bansal et al., 2022). Fifthly, it does not cause substantial distortion as accrual-based earnings management and real earnings management (Hwang et al., 2022). Finally, Income Classification Shifting (ICS) does not lead to accrual reversals in the following years as accrual-based earnings management nor does it sacrifice any coming benefits as real earnings management (Bansal et al., 2022).

Managers have incentives for ICS, to increase the value of earnings disclosed as a part of normal operations (McVay, 2006). Meet analyst predictions thereby avoiding the adversative consequences of lost predictions (Athanasakou et al., 2009; Haw et al., 2011), and misguide the

investors (Fan et al., 2010). Although ICS does not impact the net income of a firm, it could mislead investors about a firm performance by engaging in Expenses Classification Shifting (ECS) and inflating core earnings (Fan et al., 2010; Haw et al., 2011). Significantly it impacts on discernments of earnings persistence and firm growth (Haw et al., 2011). The market overestimation of core earnings of firms that practice classification shifting (Alfonso et al., 2015). Additionally, negatively impact decision-making by misguiding the users of financial statements about evaluating earnings and predicting future earnings (Nagar et al., 2021).

Existing studies have explored the impact of various factors on ICS. For example, Zalata & Roberts (2016) provided ample evidence that an effective audit committee alleviates ICS. Similarly, Nagar & Sen (2017) found that firm life cycle is correlated with ICS, where companies are more likely to engage in ICS practices during the decline stage. However, Skousen et al. (2019) indicated that managerial ability mitigates the extent of ICS. Likewise, Nagar et al. (2021) reveal that Big 4 auditors could alleviate ICS practices. Bansal (2021) concluded that big and elder firms engage in more Revenues Classification Shifting (RCS) than ECS, while young and small firms engage in more ECS practices than RCS. Moreover, Zalata & Abdelfattah (2021) reported that firms with non-executive female directors are more likely to engage in ICS practices. Hwang et al. (2022) also found that firms that undertake more corporate social responsibility are less likely to engage in ICS practices.

An important factor that could impact ICS is Financial Statement Comparability (FSC), which can be defined as the enhancing qualitative characteristic of financial information that enables information users to determine and understand similarities and differences between business entities (FASB, 2010; IASB, 2010).

Standards setters and prior studies highlight the importance of FSC for helping stakeholders determine the similarities and dissimilarities among financial statement items (IASB, 2018), decreasing opportunity costs because it enhances financial reporting quality (FASB, 2018), reducing the information asymmetry and assisting stakeholders in monitoring opportunistic managerial behavior (De Franco et al., 2011), reducing information uncertainty which results in greater estimation accuracy (Young and Zeng, 2015), reducing managers' incentives to hide bad news and stock price crash risk (Kim et al., 2016), increasing firm value (Neel,

2017), reducing cash holdings level (Habib et al., 2017), decreasing stock return volatility (Habib et al., 2018), improving the quality of information on future earnings (Choi et al., 2019), reducing the uncertainty related to performance assessment and improving disclosure quantity and quality (Hou, 2022).

Thus, FSC is one of the major aims of International Financial Reporting Standards (IFRS) adoption that enhances the objective of the financial statements (Huang and Yan, 2020; Wu, 2020; Cao et al., 2022), and also is considered one of the enhancing qualitative characteristics of financial information in the financial reporting framework (FASB, 2018).

Prior studies have examined the relationship between FSC and earnings management and revealed mixed results. On one hand, numerous studies found a negative association between FSC and earnings management. For example, Sohn (2016) reported a significant negative impact of FSC on accrual-based earnings management, and Islam (2018) indicated that firms with higher FSC have lower earnings management using ICS. Likewise, Habib et al. (2020) demonstrated that FSC is negatively associated with smoothing earnings management. Similarly, Liem (2021) reported that FSC alleviates the practice of accruals-based earnings management practices. Furthermore, Hou (2022) showed that a higher level of FSC negatively impacts information risk measured by accruals quality.

On the other hand, other studies reported a significant positive impact of FSC on real earnings management (Sohn, 2016; Hajiha and Chenari, 2017). While Martens et al. (2020) indicated that there was no correlation between FSC and real earnings management.

Accordingly, there is mixed evidence on the relationship between FSC and earnings management. Even though the existing evidence highlights the significant impact of FSC on earnings management through either accruals-based earnings management or real earnings management, there is a paucity of studies on the impact of FSC on other less costly methods such as ICS.

Additionally, empirical studies on FSC were comparatively scant because it is a relative concept different from other financial information characteristics. Furthermore, Prior studies have also predominantly focused on developed economies and disregarded developing economies, where FSC and earnings management are relatively larger major

problems. Hence, the current study seeks to fill this gap by examining the impact of FSC on ICS in the Egyptian setting, which is unique in terms of the institutional environment, the nature of firms' activities, and business practices.

This study contributes to the existing literature in a number of ways. Firstly, the study sheds light on ICS which is different from accrual-based earnings management and real earnings management, and extends ICS literature by exploring ICS not only among expense items but also among revenue items. Secondly, this study provides evidence on the benefits of FSC where there is a lack of studies that investigate the impact of FSC on ICS. Thirdly, the study is helpful for regulators and standards setters by providing evidence on the impact of FSC on earnings management through ICS and enhancing the usefulness of the information. Fourth, the study assists investors in evaluating information related to core earnings and hence making better investment decisions. Lastly, the findings are of particular importance to auditors to detect ICS by misclassification of expenses and revenues.

The remainder of this paper is structured as follows. Section 2 reviews the literature review and develops the hypotheses. Section 3 describes the research methodology followed by the results and discussion in Section 4 and Section 5 provides the conclusion and points to future research.

2. Literature Review and Hypotheses Development

ICS is a comparatively low-cost tool for earnings management where there is no reflection on accruals in the future and there aren't any lost revenues from missed opportunities (McVay, 2006). Firms engage in ICS for three reasons. Firstly, assessing different items on the income statement differently by investors (Bartov & Mohanram, 2014; Nagar et al., 2021). Secondly, items closer to sales that are normally related to core expenses are considered more constant than items farther away from sales that are usually related to non-operating expenses (Nagar et al., 2021). Finally, the opportunistic behavior of insider parties where they can relish benefits by using their control over the firm at the cost of outsider parties by disguising the truth of performance and obscuring their benefits (Sohn, 2016).

Furthermore, financial statement information is most likely useful to stakeholders for making decisions when they can be facilely compared similar information with other firms in the same period or with the same

firm in other periods (FASB, 2018). FSC indicates the degree of the likeness among financial statements for two or more firms for a specific group of economic events. Financial statements can be more comparable when firms operating in the same industry measure and disclose information using similar methods (De Franco et al., 2011; Hasan et al., 2020).

Previous studies have examined the relationship between FSC and ICS and revealed mixed evidence. Several studies show that comparable financial statements reduce earnings management because a high FSC reduces the motivation for concealing bad news because of reduced predictable benefits and increase predictable expenses, in addition to enhancing the usefulness of accounting information (Kim et al., 2016). Moreover, prior studies provide ample evidence that FSC reduces information asymmetry among stakeholders (Chen et al., 2018; Fang et al., 2016; Kim et al., 2013; Naranjo et al., 2013). Lower information asymmetry enables stakeholders to monitor managers' actions, which mitigates earnings management practices (Islam, 2018).

Comparable information reduces the costs of information gaining and processing of peer firms (Sohn 2016; Engelberg et al., 2018). Therefore, external stakeholders can evaluate real firm performance by comparing a company with its peers. Furthermore, FSC is positively related to analyst following where analysts are more likely to use another firm as a benchmark when analyzing the performance of a particular firm (De Franco et al., 2011).

Accordingly, reducing information asymmetry results in increased peer effects, external monitoring, and analyst following, and hence highly comparable firms are less probable to ICS. Several studies also provide evidence of a negative association between FSC and earnings management. For example, Sohn (2016) found a significant negative impact of FSC on accrual-based earnings management for a sample of 4486 firms from 1983 to 2012. Furthermore, Islam (2018) revealed that firms with higher FSC have lower earnings management using ICS for a sample consisting of 34,686 firm-year observations from 1988 to 2015.

Moreover, Habib et al. (2020) reported that FSC was negatively associated with income smoothing using a sample of 628 US banks from 1999 to 2013. Likewise, Liem (2021) demonstrates that FSC reduces accruals-

based earnings management practices in a sample consisting of 502 Vietnamese-listed firms from 2010 to 2019. Hou (2022) also show that a higher level of FSC negatively impacts information risk measured by accruals quality using a sample of 22588 firm-year observations from 1981 to 2001.

On the other hand, Sohn (2016) reported a significant positive impact of FSC on real earnings management in a sample consisting of 32,211 firm-year observations from 1983 to 2012. Similarly, Hajiha & Chenari (2017) concluded that FSC has a positive association with real earnings management in a sample consisting of 80 firms on the Tehran Stock Exchange. While Martens et al. (2020) indicated that there was not a significant relationship between FSC and real earnings management based on a sample of 19 frontier market countries consisting of 2475 firm-year observations from 2001 to 2017.

Accordingly, the findings of prior studies reveal mixed evidence on the relationship between FSC and earnings management. Additionally, there is scant literature on the relationship between FSC and earnings management, especially in ICS practice, which requires further investigation. Therefore, the following hypotheses have been developed.

H₁. FSC has a significant impact on ECS.

H₂. FSC has a significant impact on RCS.

H₃. There are significant differences among ESE sectors regarding ECS.

H₄. There are significant differences among ESE sectors regarding RCS.

H₅. There are significant differences among ESE sectors regarding FSC.

3. Research Methodology

3.1 Sample Selection and Data Collection

The initial sample of the study comprised all firms listed on the ESE during the period from 2018 to 2021, which were 184 firms in 18 sectors (Egyptian Stock Exchange, 2022). The sample firms were chosen according to some criteria. Firstly, the sample comprised firms that had been listed on ESE continuously during 2018-2021. Secondly, the availability of financial reporting of firms during the study period. Thirdly, firms that issued their annual financial statements on 31 December. Fourthly, firms that issued their financial statements in the Egyptian pound. Finally, banks and non-bank financial services that were excluded due to the particular nature of their activities. The final sample included 62 firms representing 33.7% of firms listed on ESE and 248 observations in seven sectors. The data were extracted from the firms' annual financial statements, ESE, and Investing database.

3.2 Variables Description

Following McVay (2006); Malikov et al. (2018); Nagar et al. (2021); Anagnostopoulou et al. (2021) and Hwang et al. (2022), the current study employs two measures of the dependent variable, the first relied on ECS and the second depended on RCS.

ECS was measured using the two-step method proposed by McVay (2006). In the first step, the core earnings of firms were analyzed into the expected and unexpected components. This is illustrated by the below-expected core earnings model to estimate unexpected core earnings by the variance between expected and actual core earnings.

$$CE_{it} = B_0 + B_1 CE_{it-1} + B_2 ATO_{it} + B_3 ACCRUALS_{it-1} + B_4 ACCRUALS_{it} + B_5 \Delta SALES_{it} + B_6 NEG \Delta SALES_{it} + \varepsilon_{it} \quad (1)$$

Where for firm (i) and year (t), the dependent variable is core earnings (CE_{it}) defined as operating income before special items and depreciation, which was measured as sales minus cost of goods sold and selling, general, and administrative expenses divided by sales. (CE_{it-1}) is defined as lagged core earnings from the previous year to control for core earnings persistence. The asset turnover ratio (ATO_{it}) is the ratio of sales to average net operating assets where net operating assets were measured as the difference between operating assets and operating liabilities, while

operating assets were measured by total assets minus cash and short-term investments, and operating liabilities were calculated as total assets minus total debt, book value of common and preferred equity, and minority interests. ($ACCRUALS_{it-1}$) and ($ACCRUALS_{it}$) are operating accruals for the lagged year and the current-year respectively, which are calculated as net income before extraordinary items minus cash flows from operations divided by sales. The ratio sales change ($\Delta SALES_{it}$) was calculated as sales in the current-year minus sales in the prior year divided by sales in the prior year. A dummy variable ($NEG \Delta SALES_{it}$) is the ratio sales change, which equals one when the ratio sales change is negative and zero otherwise. The error term (ε_{it}) from an expected core earnings model is an estimate of unexpected core earnings ($UE CE_{it}$), which was measured by the difference between actual and expected core earnings.

Unexpected core earnings can be associated with the absolute value of income-decreasing special items in the second step; this can be illustrated in equation (2) as follows:

$$UE CE_{it} = \alpha_0 + \alpha_1 \%SI_{it} + \varepsilon_{it} \quad (2)$$

Where for firm (i) and year (t) the dependent variable is unexpected core earnings ($UE CE_{it}$) which was measured as the residual from an expected core earnings model as shown in equation (1), ($\%SI_{it}$) is income-decreasing special items divided by sales. Income-decreasing special items were multiplied by minus one, and hence $\%SI_{it}$ has a positive value if income-decreasing special items were reported and a value of zero if income-increasing special items were reported (McVay, 2006). In addition, a positive coefficient of $\%SI_{it}$ (α_1) shows the presence of misclassification of core expenses as special items in order to amplify core earnings.

Moreover, the second measure that relied on RCS was calculated following the two-step. In the first step, the operating revenues of firms were analyzed into the expected and unexpected components as illustrated by the expected operating revenues model suggested by McVay (2006) and Malikov et al. (2018) to appreciate unexpected operating revenues by the difference between expected and actual operating revenues as follows:

$$OR_{it}/AT_{it-1} = \alpha_0 + B_1 1/AT_{it-1} + B_2 OR_{it-1}/AT_{it-2} + B_3 MTB_{it-1} + B_4 AR_{it-1}/AT_{it-2} + B_5 AR_{it}/AT_{it-1} + \varepsilon_{it} \quad (3)$$

Where for firm (i) and year (t), the dependent variable is operating revenues (OR_{it}) is calculated as sales revenue plus other operating revenues. (AT_{it-1}) and (AT_{it-2}) were defined as total assets for the previous two years respectively. (OR_{it-1}) is defined as lagged operating revenues from the previous year. This study included a lagged market-to-book ratio (MTB_{it-1}) to control for growth chances. (AR_{it-1}) and (AR_{it}) are accounts receivable for the lagged year and the current-year respectively. The model used accounts receivable rather than total accruals because accounts receivable are more directly associated with operating revenues. The error term (ε_{it}) from an expected operating revenues model is an estimate of unexpected operating revenues ($UE OR_{it}$), which was measured as the variance between actual and expected operating revenues.

In the second step, unexpected operating revenues were regressed on non-operating revenues. This can be illustrated as follows:

$$UE OR_{it} = \alpha_0 + \alpha_1 NOR_{it} + \varepsilon_{it} \quad (4)$$

Where for firm (i) and year (t), the dependent variable is unexpected operating revenues ($UE OR_{it}$) which was calculated as the residual from an expected operating revenues model in equation (3). Meanwhile, (NOR_{it}) is non-operating revenues measured by income-increasing special items and discontinued operations added to foreign exchange gains added to the interest and related income added to other non-operating income including rental income scaled by lagged total assets. Additionally, a negative coefficient of NOR_{it} (α_1) shows the existence of revenue classification shifting.

Furthermore, the current study used De Franco et al. (2011) measure of firm-year level comparability. The essential idea of this measure is that two firms with comparable financial statements should have similar accounting numbers for a specific group of economic events. Accordingly, this measure has been widely used by recent studies (e.g. Hasan et al., 2020; Majeed & Yan, 2021; Alhadi et al., 2021; Liem, 2021; Cao et al., 2022). De Franco et al. (2011) also used stock returns as an alternative for the net impact of a specified group of economic events and used earnings as an alternative for financial statements. This can be illustrated as follows:

$$\text{Earnings}_{it} = \alpha_i + \beta_i \text{Return}_{it} + \varepsilon_{it} \quad (5)$$

Where for firm (i) and period (t) the dependent variable is (Earnings_{it}) which was calculated as the ratio of net income before extraordinary items divided by the beginning-of-period market value of equity. (Return_{it}) is the stock price return during the period as an alternative for the net impact of economic events, which was calculated as the stock price in the current period minus the stock price in the prior period divided by the stock price in the prior period.

The accounting function relates to firms (i) and (j) for a certain period. The firms would yield the same accounting numbers in response to a similar economic event when the accounting systems are the same. So, De Franco et al. (2011) relied on economic events for firms (Return_i or Return_j) to measure the estimated earnings by accounting system parameters for each firm (α_i, β_i or α_j, β_j). They calculated the accounting response for firms (i) and (j) (earnings) to economic events for firm (i) (return) according to the two below equations.

$$E(\text{Earnings})_{iit} = \hat{\alpha}_i + \hat{\beta}_i \text{Return}_{it} \quad (6)$$

$$E(\text{Earnings})_{ijt} = \hat{\alpha}_i + \hat{\beta}_i \text{Return}_{it} \quad (7)$$

Wherever $E(\text{Earnings})_{iit}$ refers to expected earnings of firm (i), according to stock return of firm (i) during period (t). Likewise, $E(\text{Earnings})_{ijt}$ denotes expected earnings of firm (j), according to firm j's accounting function and firm i's stock return during period (t).

Lastly, (CompAcct_{ijt}) refers to FSC between two firms (i) and (j) which was evaluated by the negative value of the mean absolute variances between the predicted earnings for two firms (i) and (j) during the period (t). If the financial statements of the two firms are comparable, the difference between the earnings of both firms is expected to be small. This can be illustrated in the below equation.

$$\text{CompAcct}_{ijt} = (-1/4) \times \sum_{t-3}^t |E(\text{Earnings})_{iit} - E(\text{Earnings})_{ijt}| \quad (8)$$

Where CompAcct_{ijt} is the comparability score between firm (i) and firm (j), given that CompAcct_{ijt} in equation (8) is non-positive. The higher the value of (CompAcct_{ijt}), the greater the degree of FSC between firms (i) and firm(j).

Finally, the study used numerous control variables that can be associated with FSC and ICS. Following prior studies (e.g., Anagnostopoulou, et al., 2021; Boahen & Mamatzakis, 2021; Nagar, et al., 2021; Almaleki, et al., 2021; Hwang, et al., 2022), the current study includes five control variables. First, firm size (FSize) measured by the natural logarithm of total assets. Second, the return on assets (ROA) measured by income before extraordinary items divided by average total assets. Third, financial leverage (Lev) measured by total liabilities divided by total assets. Fourth, audit firm size (AudFirm) is a dummy variable that takes a value of 1 when the auditor is a Big-4 audit firms and 0 otherwise. Fifth, this firm age (FAge) measured by the natural logarithm of the time interval between the date of the firm's incorporation and the year under review.

4. Results and Discussion

Before displaying the results of the regression models that tested the study hypotheses. The study explores whether the variables follow a normal distribution using the Kolmogorov-Smirnov and Shapiro-Wilk tests. The significance values as shown in Table 1 are less than 0.05 indicating that the variables did not follow a normal distribution (Pallant, 2016).

Table 1: The normal distribution test results

Variable	Kolmogorov-Smirnov		Shapiro-Wilk	
	Statistic	Sig.	Statistic	Sig.
FSC	.185	.000	.684	.000
FSize	.096	.000	.958	.000
ROA	.224	.000	.551	.000
Lev	.070	.005	.832	.000
FAge	.070	.005	.987	.026

To detect the existence extent of the multicollinearity problems, the study used collinearity diagnostics to identify the values of Variance Inflation Factor (VIF) and Tolerance. Table 2 shows that the VIF values for all variables are less than (10), and the Tolerance values are greater than (0.05), which indicates the absence of multicollinearity problems within variables (O'Brien, 2007), and the ability of models to predict of ICS.

Table 2: Multicollinearity test results

Variable	ECS		RCS	
	Tolerance	VIF	Tolerance	VIF
FSC	.963	1.039	.963	1.039
FSize	.501	1.995	.501	1.995
ROA	.850	1.177	.850	1.177
Lev	.689	1.451	.689	1.451
AudFirm	.602	1.662	.602	1.662
FAge	.882	1.133	.882	1.133

To avoid the autocorrelation problem, the study ran an autocorrelation test using Durbin Watson (D-W). The values of D-W for ECS and RCS are (2.007, 1.788) respectively, within the specified range of test 1.5: 2.5 (Basheer, 2003). This shows that the variables do not suffer from autocorrelation problems.

Furthermore, Table 3 reveals the descriptive analysis for variables divided into continuous variables and interval variables through panels A and B respectively to describe variables, determine the core characteristics, and provide support for the interpretation of the resulting relationships through the use of logistic regression.

Table 3: Descriptive statistics results

Panel A: Continuous variables				
Variable	Min	Max	Mean	Std. Dev.
FSC	-0.34	0.00	-0.051	0.029
FSize	17.23	26.20	20.947	2.102
ROA	-1.38	1.78	0.055	0.192
Lev	0.01	3.18	0.491	0.304
FAge	2.08	4.74	3.406	0.496
Panel B: Interval variables				
Variable	(1)		(0)	
	Frequenc y	%	Frequenc y	%
ECS	144	58.1	104	41.9
RCS	159	64.1	89	35.9
AudFirm	83	33.5	165	66.5

The mean value of FSC is (-0.051) with minimum and maximum (-0.34, 0.00) respectively, which is similar to the values reported by Liem (2021); Thuy et al. (2021) which reached (-0.026, -0.021) respectively, but FSC is lower than the values reported by Islam (2018); Cao et al. (2022) which reached (-0.440, -0.399) respectively.

Additionally, the descriptive statistics for the control variables further reported that the mean value of FSize is (20.947) with minimum and maximum (17.23, 26.20) respectively, which is consistent with the values revealed by Seve & Wilson (2019); Majeed & Yan (2021) which reached (18.036, 22.173) respectively, but FSize was higher than the values reported by Zalataa & Roberts (2017); Almaleki et al. (2021) which reached (11.92, 14.25) respectively. Nevertheless, FSize is slightly lower than the values revealed by Liem (2021); Thuy et al. (2021) which reached (27.146, 28.193) respectively. Meanwhile, the mean value of ROA is (0.055) with minimum and maximum (-1.38, 1.78) respectively, which is consistent with the values reported by Liem (2021); Boahen & Mamatzakis (2021) which reached (0.072, 0.076) respectively, but ROA is higher than the values revealed by Seve & Wilson (2019); Biswas et al. (2022) which reached (-0.029, -0.035) respectively.

Moreover, the mean value of Lev is (0.491) with minimum and maximum (0.01, 3.18) respectively, which is consistent with the values documented by Sohn (2016); Zalataa & Roberts (2017) which reached (0.479, 0.480) respectively. Nonetheless, Lev is higher than the values revealed by Seve & Wilson (2019); Biswas et al. (2022) which reached (0.209, 0.222) respectively. Furthermore, the mean of FAge is (3.406) with minimum and maximum (2.08, 4.74) respectively, which conform to the values provided by Thuy et al. (2021); Alhadi et al. (2021) which reached (2.760, 2.746) respectively, but FAge was lower than the values shown by Hasan et al. (2020); Lin et al. (2020) which reached (14.617, 17.185) respectively.

With regard to the interval variables represented in ECS, the study found that the percentage of firms that included practice ECS compared to the average during the study period reached (144) observations at (58.1%),

while the number of observations that included non-practice ECS compared to the average during that period (104) observations at (41.9%). This refers to a higher level of practice ECS compared to the percentage reported by Islam (2018) which reached (18%), this may be due to lower FSC which reached (5.01%). Likewise, the percentage of firms that included practice RCS compared to the average during the study period reached (159) observations at (64.1%), whilst the number of observations that included non-practice RCS compared to the average during that period (89) observations at (35.9%). This refers to a higher level of practice RCS compared to ECS which reached (58.1%).

Finally, the percentage of firms audited by Big-4 audit firms (AudFirm) during the study period reached (83) observations at (33.5%), while the number of observations that included non-auditing by Big-4 audit firms during that period (165) observations at (66.5%). Which was lower than the values documented by Lin et al. (2020); Boahen & Mamatzakis (2021) which reached (84.6%, 69.11%) respectively.

The study employed logistic regression analysis for testing the hypotheses. In particular, the study developed two different models to assess the accuracy of the regression models and test the hypotheses. All models are shown in Table 4, and they all were controlled by FSize, ROA, Lev, AudFirm, and FAge.

In Model (1) the study tested the extent of the direct causal impact of FSC on ECS, where the results show the existence of a significant negative impact of FSC on ECS ($B = -9.125$; $\text{Sig.} = .016 < .05$). This result reveals that firms with a high level of FSC lead to a lower ECS, because of a reduction in information asymmetry, increased peer effects, external monitoring, and analysts following, which lead to greatly comparable firms being less likely to engage in earnings management using ECS. This result is consistent with Islam (2018) which demonstrates the existence of a negative and significant impact of FSC on ECS.

Table 4: Logistic regression analysis results

Variable	Model (1): ECS				Model (2): RCS			
	B	S.E.	Wald	Sig.	B	S.E.	Wald	Sig.
FSC	-9.125	5.807	6.469	.016	-4.968	5.667	5.069	.024
FSize	0.246	.099	6.119	.013	0.229	.100	5.223	.022
ROA	0.671	.838	0.640	.424	-2.051	1.123	3.337	.068
Lev	-1.351	.707	4.648	.044	-1.709	.702	5.927	.015
AudFirm	-0.159	.360	0.194	.660	-0.177	.366	0.234	.628
FAge	-0.185	.285	0.423	.516	0.076	.293	0.067	.796
Constant			-3.965				-3.698	
Omnibus tests of model coefficients	Chi-square		64.418				62.045	
	Sig.		0.015				0.026	
Model summary	Cox & Snell R ²		0.256				0.247	
	Nagelkerke R ²		0.376				0.365	
Hosmer and Lemeshow test	Chi-square		6.193				12.855	
	Sig.		0.626				0.117	
	Model specificity (0)		27.9				12.4	
Model correctly classified	Model sensitivity (1)		84.7				97.5	
	Overall percentage		60.9				66.9	

Furthermore, the results in Model (1) suggest that the coefficient of FSize as the control variable is positively significant on ECS with a regression coefficient value of (0.246) at a significance level of (.013). This result reveals that large firms engage in ECS because they have more chances due to complicated business structures and longer operating cycles. These large companies also have greater capital market pressure to meet analysts' sales estimates. They are also comparatively different in nature and generate enough amount of revenue from non-operating activities, which leads to a larger scope for earnings management using ECS. This result is consistent with the results of Nagar et al. (2021) and Eilifsen & Knivsfla (2021). However, the result is inconsistent with the results of Islam (2018) and Bansal et al. (2022).

Whilst the results report that the coefficient of Lev is negatively significant on ECS with a regression coefficient value of (-1.351) at a significant level of (.044). This result indicated that low-leverage firms engage in ECS practices since high leverage leads to increased control of creditors and reduces management opportunities for classification management practices. It also leads to an increased payment to repay debts, thereby decreasing the available funds and reducing earnings management practices. This result is consistent with the results presented by Islam

(2018) and Bansal et al. (2022) and inconsistent with the findings of Eilifsen & Knivsfla (2021) which indicated that there was a positively significant of leverage on ECS. In the meantime, the coefficients of ROA, AudFirm, and FAge are insignificant on ECS.

Generally, the results for evaluating the accuracy of the logistic regression model (1) show that the chi-square value of Omnibus tests of model coefficients is (64.418) at a significance level of (0.015). The significance level is lower than 0.05 highlighting the efficiency of the model and goodness of fit test. The values of model summary which are represented in Cox & Snell R^2 and Nagelkerke R^2 are (0.256, 0.376) respectively, which shows to between 25.6% to 37.6% of the amount of variation in ECS can be explained by independent variables. Furthermore, the chi-square value of the Hosmer and Lemeshow test reached is (6.193) at a significance level of (0.626). The significance level is higher than 0.05 thus referring support for the model. Moreover, the results show that the model correctly classified (60.9%) of cases, highlighting the classification accuracy and the model's ability to predict the correct category. Also, the model was able to correctly classify (84.7%) of the firms which had ECS. Additionally, the model was able to correctly classify (27.9%) of the firms that did not have ECS, that point to the model specificity. Hence, FSC has a significant impact on ECS, and the first hypothesis (H_1) is accepted.

In Model (2) the study examined the extent of the direct causal impact of FSC on RCS where the results indicate the existence of a significant negative impact of FSC on RCS ($B = -4.968$; Sig. = .024 < .05). This result shows that firms with a high level of FSC result in a lower RCS, because of firms with greater comparability, managers have no capacity for RCS because of a decrease in information asymmetry, increased peer effects, increase in external monitoring, and increase in analysts following, which leads to greatly comparable firms being less possible to earnings management using RCS. This result is consistent with the views of Martens et al. (2020) and Liem (2021) which reached the existence of a negative and significant impact of FSC on earnings management.

Moreover, the results in Model (2) highlight that the coefficient of FSize was positively significant on RCS as the regression coefficient value is (0.229) at a significance level of (0.022). This result indicates that large firms engage in RCS practices because they have more chances due to complicated business structures and longer operating cycles. Moreover,

large firms also have greater capital market pressure to meet analysts' sales estimates. They are also comparatively various in natures and have enough amounts of revenues generated from non-operating activities, which creates a larger scope for earnings management using RCS. This result is consistent with the views of Ali et al. (2015) and Bansal et al. (2022) revealing a positive and significant impact of FSize on earnings management.

The results revealed that the coefficient of Lev was negatively significant on RCS as the regression coefficient value is (-1.709) at a significance level of (0.015). This result shows that low-leverage firms engage in RCS practices since the high Lev results in increased control of creditors and reduces management opportunities for classification management practices. It also leads to increased payments to repay debts, thereby reducing available funds and earnings management. This result is similar to the results presented by Zamri et al. (2013) and Widagdo et al. (2021), but inconsistent with the results of Asim & Ismail (2019) and Bansal et al. (2022) which reported that there was a positively significant of leverage on earnings management. Moreover, the coefficients of ROA, AudFirm, and FAge are insignificant on RCS.

Generally, the results for evaluating the accuracy of the logistic regression model (2) show that the chi-square value of Omnibus tests of model coefficients is (62.045) at a significance level of (0.026). The significance level is lower than 0.05 highlighting the efficiency of the model and goodness of fit test. The values of model summary which are represented in Cox & Snell R^2 and Nagelkerke R^2 are (0.247, 0.365) respectively, which shows to between 24.7 % to 36.5 % of the amount of variation in RCS can be explained by independent variables. Furthermore, the chi-square value of the Hosmer and Lemeshow test reached is (12.855) at a significance level of (0.117). The significance level is higher than 0.05 thus referring support for the model. Moreover, the results show that the model correctly classified (66.9%) of cases, highlighting the classification accuracy and the model's ability to predict the correct category. Also, the model was able to correctly classify (97.5%) of the firms which had RCS. Additionally, the model was able to correctly classify (12.4%) of the firms that did not have RCS, that point to the model specificity. Hence, FSC has a significant impact on RCS, and the second hypothesis (H_2) is accepted.

Moreover, the study used the Kruskal-Wallis test for comparing ECS, RCS, and FSC among ESE sectors. A significance level lower than (0.05) will indicate the existence of significant differences among ESE sectors regarding ECS, RCS, and FSC (Pallant, 2016). This is illustrated in Table 5.

Table 5: Kruskal-Wallis test results

Sectors	ECS				RCS				FSC			
	Mean rank	Chi-Square	Sig.	ranking up	Mean rank	Chi-Square	Sig.	ranking up	Mean rank	Chi-Square	Sig.	ranking up
Basic resources	133.10	3.006	0.808	1	88.40	68.583	0.000	7	127.53	8.396	0.211	5
Healthcare, and pharmaceuticals	124.83			4	122.50			3	123.83			6
Industrial goods, services, and automobiles	106.75			7	91.50			6	145.19			1
Real estate	127.18			3	157.73			2	128.76			3
Travel, and leisure	114.50			6	162.80			1	142.40			2
Food, beverages, and tobacco	121.65			5	95.08			5	101.37			7
Contracting, and construction engineering	130.00			2	107.00			4	128.75			4

The results presented in Table 5 show that the test significance level for ECS is (0.808) which is higher than (0.05) indicating no significant differences among ESE sectors regarding ECS for a chi-square value of (3.006). This is evident from the decrease in the mean rank of ECS among ESE sectors which is a value between the minimum and maximum ranges (106.75, 133.10) respectively.

The mean ranks of the sectors (basic resources; contracting, and construction engineering; real estate; healthcare, and pharmaceuticals; food, beverages, and tobacco; travel, and leisure; industrial goods, services, and automobiles) amounted to (133.10, 130.00, 127.18, 124.83, 121.65, 114.50, 106.75) respectively, which indicate the decline in the mean rank of ECS among ESE sectors, highlighting there are no significant differences among ESE sectors regarding ECS. Hence, the third hypothesis (H_3) is rejected.

Furthermore, the results in Table 5 reveal that the test significance level for RCS is (0.000) which is lower than (0.05), revealing the existence of significant differences among ESE sectors regarding RCS for a chi-square

value of (68.583). This is evident from the expansion in the mean rank of RCS among ESE sectors which is a value between the minimum and maximum ranges of (88.40, 162.80) respectively.

By investigating the mean rank of RCS among ESE sectors, the mean ranks of the sectors (travel, and leisure; real estate; healthcare, and pharmaceuticals; contracting, and construction engineering; food, beverages, and tobacco; industrial goods, services, and automobiles; basic resources) amounted to (162.80, 157.73, 122.50, 107.00, 95.08, 91.50, 88.40) respectively, which indicate the increase in the mean rank of RCS among ESE sectors, and thus there are significant differences among ESE sectors in terms of RCS. Accordingly, the fourth hypothesis (H_4) is accepted.

The results in Table 5 also show that the test significance level for FSC is (0.211) which is more than (0.05), indicating no significant differences among ESE sectors regarding FSC for a chi-square value of (8.396). This is evident from the decrease in the mean rank of FSC among ESE sectors which is a value between the minimum and maximum ranges of (101.37, 145.19) respectively.

By Exploring the mean rank of FSC among ESE sectors, it was noted that the mean ranks of the sectors (industrial goods, services, and automobiles; travel, and leisure; real estate; contracting, and construction engineering; basic resources; healthcare, and pharmaceuticals; food, beverages, and tobacco) amounted to (145.19, 142.40, 128.76, 128.75, 127.53, 123.83, 101.37) respectively, which indicate the decline in the mean rank of FSC among ESE sectors, and hence there are no significant differences among ESE sectors regarding FSC. Consequently, the fifth hypothesis (H_5) is rejected.

5. Conclusion

This study investigates the impact of FSC on ICS using a sample of 62 Egyptian-listed firms in seven sectors from 2018 to 2021. The results reveal the existence of a significant negative impact of FSC on ICS measured by ECS and RCS. The findings also demonstrate the existence of significant differences among ESE sectors regarding RCS and the absence of significant differences among ESE sectors regarding ECS and FSC.

The current study contributes to the literature by investigating the impact of a key factor, FSC, on ICS given the dearth of studies in this area. This study also focuses on exploring ICS not only among expense items but also among revenue items. Additionally, the study will be valuable to regulators and accounting standards setters by providing evidence in the Egyptian environment about the impact of FSC on earnings management through ICS. Furthermore, the study will enhance the decision-making process of investors by increasing their ability to evaluate accounting information related to core earnings, as well as assist auditors in detecting ICS by misclassification of expense items and revenue items.

Nevertheless, the main limitation of the study is the exclusion of financial companies and the exclusion of the cost of goods sold classification shifting and selling, general, and administrative expenses classification shifting as a kind of ICS. So future studies could consider the following aspects. Firstly, more research is needed to examine the impact of FSC on ICS in financial companies. Secondly, future studies could evaluate the impact of FSC on the kind of ICS which is represented in cost of goods sold classification shifting and selling, general, and administrative expenses classification shifting. Thirdly, future research can take into account other variables such as social responsibility, information asymmetry, audit quality, and corporate governance to further investigate the relationship between FSC and earnings management. Finally, more studies are needed to investigate this problem in other economies/countries and reveal generalizable conclusions.

References

- Alfonso, E., Cheng, C.S.A. and Pan, S. (2015), "Income classification shifting and mispricing of core earnings", *Journal of Accounting, Auditing & Finance*, pp. 1–32. Available at: <https://journals.sagepub.com/doi/pdf>.
- Alhadi, A., Habib, A., Taylor, G., Hasan, M. and Al-Yahyaee, K. (2021), "Financial statement comparability and corporate investment efficiency", *Meditari Accountancy Research*, Vol. 29 No. 6, pp. 1283-1313.
- Ali, U., Noor, M.A., Khurshid, M.K. and Mahmood, A. (2015), "Impact of firm size on earnings management; a study of textile sector of Pakistan", *European Journal of Business and Management*, Vol. 7 No. 28, pp. 47-56.
- Almaleki, M., Salehi, M. and Moradi, M. (2021), "The relationship between narcissism, managerial overconfidence and comparability of financial statements of listed companies", *Journal of Facilities Management*, Vol. 19 No. 5, pp. 681-700.
- Anagnostopoulou, S.C., Gounopoulos, D., Malikov, K. and Pham, H. (2021), "Earnings management by classification shifting and IPO survival", *Journal of Corporate Finance*, Vol. 66, pp. 1-27.
- Asim, A. and Ismail, A. (2019), "Impact of leverage on earning management: empirical evidence from the manufacturing sector of Pakistan", *Journal of Finance and Accounting Research*, Vol. 1 No. 1, pp. 70-91.
- Athanasakou, V.E., Strong, N.C. and Walker, M. (2009), "Earnings management or forecast guidance to meet analyst expectations?", *Accounting and Business Research*, Vol. 39 No. 1, pp. 3-35.
- Bansal, M. (2021), "Influence of firm size and firm age on classification shifting: an empirical study on listed firms in India", *Journal of Financial Reporting and Accounting*, Vol. 19 No. 5, pp. 772-792.
- Bansal, M., Kumar, A., Bhattacharyya, A. and Bashir, H.A. (2022), "Predictors of revenue shifting and expense shifting: evidence from an emerging economy", *Journal of Contemporary Accounting & Economics*, Vol. 17, pp. 1-28.
- Bartov, E. and Mohanram, P.S. (2014), "Does income statement placement matter to investors? The case of gains/losses from early debt extinguishment", *The Accounting Review*, Vol. 89 No. 6, pp. 2021-2055.
- Basheer, S. (2003), *Your guide to the statistical program SPSS*, Tenth Edition, Arab Institute for Training and Research in Statistics, Iraq.

- Biswas, P.K., Habib, A. and Ranasinghe, D. (2022), "Firm life cycle and financial statement comparability", *Advances in Accounting*, Vol. 58, pp. 1-17.
- Boahen, E.O. and Mamatzakis, E.C. (2021), "What are the effects of culture and institutions on classification shifting in India?", *Journal of International Accounting, Auditing and Taxation*, Vol. 44, pp. 1-22.
- Cao, S., Wang, J. and Zhou, J. (2022), "Pricing like things alike: the role of financial statement comparability in bond pricing", *International Review of Economics and Finance*, Vol. 79, pp. 428-447.
- Chen, C.W., Collins, D.W., Kravet, T.D. and Mergenthaler, R.D. (2018), "Financial statement comparability and the efficiency of acquisition decisions", *Contemporary Accounting Research*, Vol. 35 No. 1, pp. 164-202.
- Choi, J.H., Choi, S., Myers, L.A. and Ziebart, D. (2018), "Financial statement comparability and the informativeness of stock prices about future earnings", *Contemporary Accounting Research*, Vol. 36 No. 1, pp. 389-417.
- Cohen, D.A. and Zarowin, P. (2010), "Accrual-based and real earnings management activities around seasoned equity offerings", *Journal of Accounting and Economics*, Vol. 50, pp. 2-19.
- De Franco, G., Kothari, S.P. and Verdi, R.S. (2011), "The benefits of financial statement comparability", *Journal of Accounting Research*, Vol. 49 No. 4, pp. 895-931. doi: [10.1111/j.1475-679X.2011.00415.x](https://doi.org/10.1111/j.1475-679X.2011.00415.x).
- Egyptian Stock Exchange*, (2022). Available at: [https:// www. egx. com. Eg /ar/NewsSearch.aspx?com=&word=&from= 17/02/ 2022 &to =17 / 03 /2022&isin=&sec_id=20](https://www.egx.com.Eg/ar/NewsSearch.aspx?com=&word=&from=17/02/2022&to=17/03/2022&isin=&sec_id=20).
- Eilifsen, A. and Knivsfla, K.H. (2021), "Core earnings management: how do audit firms interact with classification shifting and accruals management?", *International Journal of Audit*, Vol. 25 No. 1, pp. 142-165.
- Engelberg, J., Ozoguz, A. and Wang, S. (2018), "Know thy neighbor: industry clusters, information spillovers and market efficiency", *Journal of Financial and Quantitative Analysis*, Vol. 53 No. 5, pp. 1937-1961.
- Fan, Y., Barua, A., Cready, W.M. and Thomas, W.B. (2010), "Managing earnings using classification shifting: evidence from quarterly special items", *The Accounting Review*, Vol. 85 No. 4, pp. 1303–1323.
- Fang, X., Li, Y., Xin, B. and Zhang, W. (2016), "Financial statement comparability and debt contracting: evidence from the syndicated loan market", *Accounting Horizons*, Vol. 30 No. 2, pp. 277-303.

- Financial Accounting Standards Board (FASB)*, (2010), Statement of financial accounting concepts No. 8: Conceptual framework for financial reporting, Chapter 1: The Objective of General Purpose Financial Reporting, and Chapter 3: Qualitative Characteristics of Useful Financial Information. Norwalk, CT, FASB.
- Financial Accounting Standards Board (FASB)*, (2018), "Statement of Financial Accounting Concepts No.8". Available:[https://www.fasb.org/jsp/FASB/Document_C/DocumentPage?cid=1176171111398 &acceptedDisclaimer=true](https://www.fasb.org/jsp/FASB/Document_C/DocumentPage?cid=1176171111398&acceptedDisclaimer=true).
- Habib, A., Hassan, M.M. and Al-hadi, A. (2017), "Financial statement comparability and corporate cash holdings", *Journal of Contemporary Accounting & Economics*, Vol. 13 No. 3, pp. 304-321.
- Habib, A., Hassan, M.M. and Al-hadi, A. (2018), "Financial statement comparability and idiosyncratic return volatility", *International Review of Finance*, Vol. 20 No. 2, pp. 383-413.
- Habib, A., Hasan, M.M., Mollah, S. and Molyneux, P. (2020), "Financial statement comparability, earnings smoothing and loan-loss provisioning in banking", June. pp. 1-43. Available at:https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3622974
- Hajiha, Z. and Chenari, H. (2017), "Financial statements comparability and real earnings management", *Journal of Financial Accounting Research*, Vol. 9 No. 3, pp. 33-48.
- Hasan, M.M., Cheung, A.W. and Taylor, G. (2020), "Financial statement comparability and bank risk-taking", *Journal of Contemporary Accounting and Economics*, Vol. 16, pp. 1-22.
- Haw, I., Ho, S.S.M. and Li, A.Y. (2011), "Corporate governance and earnings management by classification shifting", *Contemporary Accounting Research*, Vol. 28 No. 2, pp. 517-553.
- Hou, L. (2022), "Financial statement comparability and information risk", *Journal of Applied Business and Economics*, Vol. 24 No. 1, pp. 83-92.
- Huang, Y. and Yan, C. (2020), "Global accounting standards, financial statement comparability, and the cost of capital", *International Review of Economics and Finance*, Vol. 69, pp. 301-318.
- Hwang, J., Choi, S., Choi, S. and Lee, Y.G. (2022), "Corporate social responsibility and classification shifting", *Journal of Accounting and Public Policy*, Vol. 41, pp. 1-23.

- International Accounting Standards Board (IASB)*, (2010), The conceptual framework for financial reporting, London.
- International Accounting Standards Board (IASB)*, (2018), Conceptual framework for financial reporting, London. Available at: <http://www.ifrs.org>.
- Islam, M.N. (2018), "*Three essays on financial statement comparability*", Doctor Thesis, Florida International University, Miami, Florida.
- Kim, J.B., Li, L., Lu, L.Y. and Yu, Y. (2016), "Financial statement comparability and expected crash risk", *Journal of Accounting and Economics*, Vol. 61 Nos. 2–3, pp. 294-312.
- Kim, S., Kraft, P. and Ryan, S.G. (2013), "Financial statement comparability and credit risk", *Review of Accounting Studies*, Vol. 18, pp. 783-823.
- Liem, N.T. (2021), "Accounting comparability and accruals-based earnings management: evidence on listed firms in an emerging market", *Cogent Business & Management*, Vol. 8 No. 1, pp. 1-19.
- Lin, S., Xia, H.H. and Ryabova, T. (2020), "The effect of analysts' gaap earnings forecasts on managers' classification shifting", *Journal of Contemporary Accounting and Economics*, Vol. 16 No. 3, pp. 1-17.
- Majeed, M.A. and Yan, C. (2021), "Financial statement comparability, state ownership, and the cost of debt: evidence from China", *Research in International Business and Finance*, Vol. 58, pp. 1-17.
- Malikov, K., Manson, S. and Coakley, J. (2018), "Earnings management using classification shifting of revenues", *The British Accounting Review*, Vol. 50 No. 3, pp. 291-305.
- Martens, W., Yapa, P.W.S. and Safari, M. (2020), "The impact of financial statement comparability on earnings management: evidence from frontier markets", *International Journal of Financial Studies*, Vol. 8 No. 73, pp. 1-26.
- McVay, S.E. (2006), "Earnings management using classification shifting: an examination of core earnings and special items", *The Accounting Review*, Vol. 81 No. 3, pp. 501-531.
- Nagar, N., Desai, N. and Jacob, J. (2021), "Do big 4 auditors limit classification shifting? Evidence from India", *Journal of International Accounting, Auditing and Taxation*, Vol. 42, pp. 1-10.
- Nagar, N. and Sen, K. (2017), "Classification shifting: impact of firm life cycle", *Journal of Financial Reporting and Accounting*, Vol. 15 No. 2, pp. 180-197.

- Naranjo, P., Saavedra, D. and Verdi, R.S. (2013), "Financial reporting regulation, information asymmetry and financing decisions around the world", July, pp. 1-54. Available at: <https://business.rice.edu/sites/default/files/Financial-Reporting-Regulation.pdf>
- Neel, M. (2017), "Accounting comparability and economic outcomes of mandatory ifrs adoption", *Contemporary Accounting Research*, Vol. 34 No. 1, pp. 658-690.
- Nelson, M.W., Elliott, J.A. and Tarpley, R.L. (2002), "Evidence from auditors about managers' and auditors' earnings management decisions", *The Accounting Review*, Vol. 77, Supplement: Quality of Earnings Conference, pp. 175-202.
- O'Brien, R. (2007), "A caution regarding rules of thumb for variance inflation factors", *Quality & Quantity*, Vol. 41 No. 5, pp. 673-690.
- Pallant, J. (2016), "*SPSS survival manual: a step by step guide to data analysis using IBM SPSS*", Sixth Edition, McGraw-Hill Education, New York, USA.
- Roychowdhury, S. (2006), "Earnings management through real activities manipulation", *Journal of Accounting and Economics*, Vol. 42 No. 3, pp. 335-370.
- Seve, F. and Wilson, M. (2019), "Direct and substitution effects of regulations impacting the scope for classification shifting", *Journal of Accounting and Public Policy*, Vol. 38 No. 3, pp. 171-198.
- Skousen, C., Sun, L. and Wu, K. (2019), "The role of managerial ability in classification shifting using discontinued operations", *Advances in Management Accounting*, Vol. 31, pp. 113-131.
- Sohn, B.C. (2016), "The effect of accounting comparability on the accrual-based and real earnings management", *Journal of Accounting and Public Policy*, Vol. 35 No. 5, pp. 513-539.
- Thuy, C.T.M., Khuong, N.V., Canh, N.T. and Liem, N.T. (2021), "Corporate social responsibility disclosure and financial performance: the mediating role of financial statement comparability", *Sustainability*, Vol. 13, pp. 1-15.
- Widagdo, A.K., Rahmawati, R., Djuminah, D. and Ratnaningrum, R. (2021), "Institutional ownership, family firms, leverage, and earnings management", *Jurnal Akuntansi dan Bisnis*, Vol. 21 No. 2, pp. 252-266.

- Wu, Q. (2020), "*Managerial entrenchment and financial statement comparability*", Doctoral Thesis, Faculty of the Graduate School, The University of Texas, El Paso, Texas.
- Young, S. and Zeng, Y. (2015), "Accounting comparability and the accuracy of peer-based valuation models", *The Accounting Review*, Vol. 90 No. 6, pp. 2571-2601.
- Zalata, A.M. and Abdelfattah, T. (2021), "Non-executive female directors and earnings management using classification shifting", *Journal of Business Research*, Vol. 134, pp. 301-315.
- Zalata, A.M. and Roberts, C. (2016), "Internal corporate governance and classification shifting practices: an analysis of U.K. corporate behavior", *Journal of Accounting, Auditing & Finance*, Vol. 31 No. 1, pp. 51-78.
- Zalata, A.M. and Roberts, C. (2017), "Managing earnings using classification shifting: UK evidence", *Journal of International Accounting, Auditing and Taxation*, Vol. 29, pp. 52-65.
- Zamri, N., Rahman, R.A. and Isa, N.S.M. (2013), "The impact of leverage on real earnings management", *Procedia Economics and Finance*, Vol. 7, PP. 86-95.