

Impact of Improvements to the International Accounting Standards on Earnings Management in the Jordanian Industrial Corporations

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This study investigates the practices of earnings management in Jordanian Industrial Corporations (JIC) after the mandatory adoption of the Improvements of the International Accounting Standards (IASs) on 1st January, 2005. The Modified Jones model was used to measure earnings management. The binomial test and Pearson correlation test were used to test the hypotheses. It was discovered that JIC practiced earnings management for the period, 2005-2013, by 50%. It was also discovered that earnings management decreased in the 2008-2010 Financial Crisis that occurred, in JIC. Overall, the results suggest that the improvements to the IASs did not prevent earnings management in these corporations.

INTRODUCTION

Accounting information are used by interested parties to assess the performance of managers, and to make economic decisions Vladu et al. (2014). It is believed that the adoption of IAS/IFRS enhances the comparability of financial statements, improves corporate transparency, and increases the quality of financial reporting (EC Regulation No. 1606/2002). International Accounting Standards (IASs) were criticized in the past for allowing alternative accounting treatments, for ambiguities of wordings, and for failing to take account of particular issues IASCF (2002). Therefore, these IASs are continuously subjected to changes, modifications, and improvements with time. Among these changes, the international committee of the International Accounting Standards Board (IASB) conducted in late 2003, made some improvements on the international standards, where some accounting alternatives were cancelled, in order to achieve transparency in accounting information and to improve the comparability of financial reporting across countries.

Most times, managers manipulate the accounting data for many and different reasons. This manipulation is referred to as earnings management, which is viewed as a purposeful and deliberate intervention of the external financial reporting Yingying (2011). Such practice reduces the reliability of the reported earnings, which does not reflect the actual performance of the company. Burgstahler and Dichev (1997), mentioned that a large number of companies are using earnings management either to maintain steady earnings growth, or to avoid reporting red ink. Earnings management produces misleading accounting data, which leads to distortions in the financial statements. Consequently, economic decisions are affected by the quality of the financial statements Kirschenheiter and Melumad (2004), especially investment decisions, where the managers use the accounting methods to give the

investors a more optimistic image. For instance, Lenard and Yu (2012), found that discretionary accruals as a measure of earnings management, are significant indicators of over-investment. In cases of reduction in earnings, earnings management was used to dismiss earnings achieved in the event of the first Gulf crisis that took place in the year 1995, when the petrol corporations used earnings management to decrease it Jackson and Pitman (2001). Earnings management, which is largely viewed as targeting parties external to the firm, can also influence internal decisions McNichols and Stubben (2008).

From the other side, it has been indicated that greater transparency in reporting requirements, facilitates the detection of earnings management Hunton et al. (2006). Moreover, less information asymmetry and earnings manipulation would lead to the disclosure of informative, and higher quality accounting information, and would therefore, assist investors in making informed and unbiased judgments Iatridis (2010). Consequently, earnings quality increases mandatory IFRS adoption (Houqe et al. (2010).

Like many developing countries, Jordan has adopted the International Financial Reporting Standards (IFRS), which is expected to increase reporting transparency and improve the quality of financial reporting. Therefore, the improvements in IASs are expected to facilitate the reduction in earnings management. Therefore, this study aims to provide evidence of the ability of the standards after improvements, to reduce the distortions in financial statements, and to increase the quality of the accounting data. Since the mandatory date to adopt the improvements started on January 1st,2005, this study aims to investigate whether Jordanian Industrial Corporations (JIC) have been practicing earnings management after this date or not. In addition, the study also aims to compare earnings management in JIC, for the periods before, during, and after the financial crises in the year 2008.

RELATED LITERATURE

This study investigates the impact of the Improvements of the International Accounting Standards, on the use of earnings management. The relationship between the adoption of IAS/IFRS and earnings management has frequently been investigated.

In this regard, most studies have documented a positive effect of the adoption of IAS/IFRS on earnings management. Yu (2014) investigated the relationship between accounting standards and earnings management around the world. He found evidence which shows that, firms are managing reported earnings around the world. Hunton et al. (2006) suggested that more transparent reporting requirements would reduce earnings management in the area of increased transparency, or change the focus of earnings management to less visible methods. Houqe et al. (2010), highlighted the importance of investor protection in financial reporting quality, and the need for regulators to design mechanisms that limit managers' earnings management practices. Goncharov and Zimmermann (2007), reported that a different amount of accounting choices embedded in different accounting standards influences the level of earnings management. Horton et al. (2013), suggested that mandatory IFRS adoption has improved the quality of information intermediation in capital markets, and as a result, the firms' information environment, by increasing both information quality and accounting comparability.

The study conducted by Ismail et al. (2013), shows that IFRS adoption is associated with a higher quality of reported earnings. It was also discovered that earnings reported during the period after the adoption of IFRS, was associated with the lower earnings management and higher value relevance. Sellami and Fakhfakh (2013), deduced that earnings quality improved in the post-IFRS period, in the French context. Zhou et al (2009), suggested some improvements in the quality of accounting information associated with the adoption of IFRS. They also suggested providing managers more opportunities for earnings manipulation under IFRS might neutralize its otherwise positive effect on earnings quality. Lippens (2008) mentioned that, despite the strict character of IFRS compared to the national Generally Accepted Accounting Principles (GAAP), accruals-based earnings management has strictly increased, as a consequence of the adoption of IFRS. Morais and Curto (2008) discovered that firms, during the period when they adopted IASB standards, reported less smooth earnings than those firms which adopted

national accounting standards in the same period, which seems to suggest an improvement in earnings quality.

However, they also found that, the value relevance of accounting information, decreased with the adoption of IASB standards. Mechelli and Cimini (2013), found a positive relationship between the reduction in earnings management and the extent to which IAS/IFRS regulates issues not covered by domestic standards. The study conducted by Iatridis (2010), indicates that the implementation of IFRSs, generally reinforces accounting quality. The findings show that the implementation of IFRSs reduces the scope for earnings management, is related to more timely loss recognition, and leads to more value relevant accounting measures. Navarro-Garcia and Madrid-Guijarro (2014), indicated that the improvement of accounting standards quality, significantly reduced the level of reported negative discretionary accruals of the German listed firms during the period of analysis, once the incentive variables were controlled. Bouchareb et al. (2014), discovered that the implementation of good governance mechanisms has really narrowed the level of earnings management, after the adoption of the new IASs, from January 2005. Barth et al. (2008), found a decrease in earnings management (smoothing) following the firms' early voluntary adoption of IAS/IFRS over the 1994-2003 period. Cai et al. (2008), also discovered that earnings management in IFRS adoption countries has decreased in recent years.

They also showed that countries with stronger enforcement generally have less earnings management. Zhou et al. (2014), suggested some improvement in the quality of accounting information associated with the adoption of IFRS. Their results also suggested that providing managers more opportunities for earnings manipulation under IFRS, might neutralize its otherwise positive effect on earnings quality.

On the other hand, some prior studies achieved inconclusive results regarding the adoption of IASs. For instance, the results of the study conducted by Gossner and Berndt (2013), does not support the IASB's claim that International Accounting Standards are superior to German-GAAP, and have a significantly positive impact on earnings' predictive power. Jaweher and Mounira (2014) and Daas (2014), introduced an evidence from the pre-IFRS and post-IFRS periods. The results of their studies were unable to support the systematic evidence that IFRS results enhance earnings attributes quality for mandatory adopters.

Jeanjean and Stolowy (2008), conducted a study on three IFRS first-time adopter countries; Australia, France, and the United Kingdom. They found that the pervasiveness of earnings management did not decline after the introduction of IFRS, and in fact, increased in France. In the reporting periods following the adoption of IFRS, Capkun et al. (2011), discovered that firms that reported positive (negative) reconciliations were more likely to show a decrease (an increase) in earnings. In addition, they found strong evidence in support of the CEOs managing earnings reconciliations, in order to increase their compensation. The study conducted by Capkun, et al. (2012), shows how the IAS-IFRS adoption, given its flexibility, enables earning management; smoothing in particular. Li et al. (2014) suggested that the increased financial reporting flexibility under IFRS provided more earnings management opportunities, which was accompanied by a decrease in earnings informativeness. Ahmed et al. (2013), found that IFRS firms exhibit significant increases in income smoothing and the aggressive reporting of accruals, and a significant decrease in the timeliness of loss recognition.

Relating to the financial crisis, Arthur et al. (2015), suggested that reduced investor confidence and market liquidity engendered by the financial crisis, motivated management to strategically enhance earnings quality in an attempt to increase investor confidence and reduce the negative impact of the economic recession. Filip and Raffournier (2014), found that earnings management significantly decreased in the 2008-2009 Financial Crisis in the European-listed firms. The results of the studies conducted by (Iatridis and Dimitras (2013); Beuren and Klann (2015) and Persakis and Iatridis (2015), show that the Global Financial Crisis of 2008, contradictorily affected the earnings quality and earnings management, where these variables increased in some countries, decreased in other countries, or to some extent, were conflicting in other countries.

Improvements of the International Accounting Standards (2001-2003)

The IASB invited public comment on an Exposure Draft (ED) proposing to revise 12 of the 34 International Accounting Standards that were in force before May 15, 2002. The deadline for comments on the ED was September 16, 2002. This project covered a variety of issues related to identifying the problems associated with implementing the existing International Accounting Standards issued by the International Accounting Standards Committee (IASC). The issues addressed were those that had been identified by various sources as narrow issues of substance, whose resolution could improve the quality of the IASC standard, and/or increase the convergence of national and international standards. Therefore, the objectives of the improvements project were to reduce or eliminate alternatives, redundancies, and conflicts within the existing standards and to make other improvements on them. It was also decided to deal with some convergence issues and to merge any related consensus of the Standing Interpretations Committee (SIC) into the standard, whenever the revision of a standard presented a suitable opportunity (IASCF, 2002).

The topics for improvements were broadly of six types: elimination of choices (explicit or implicit), elimination of conceptual inconsistencies between IASs, additional guidance, additional disclosure, drafting improvements, and improvements in the structure.

This project has been completed. The IASB published 13 revised IASs. These standards are: (IAS 1) Presentation of financial statements, (IAS 2) Inventory, (IAS 8) Accounting policies, changes in accounting estimates and errors, (IAS 10) Events after the reporting period, (IAS 16) Property, plant and equipment, (IAS 23) Borrowing costs, (IAS 24) related party disclosures, (IAS 27) Consolidated and separate financial statements, IAS (28) Investments in associates, and (IAS 33) Earnings per share.

Earnings Management

Till date, there is no agreed definition on earnings management Beneish (2001), Yanqiong (2011). Schipper (1989) defined earnings management as "a purposeful intervention in the external financial reporting process, with the intent of obtaining some private gain (as opposed to say, merely facilitating the neutral operation of the process)". According to Healy and Wahlen (1999), "Earnings management occurs when managers use judgment in financial reporting and in structuring transactions to alter financial reports to either mislead some stakeholders about the underlying economic performance of the company, or to influence contractual outcomes that depend on reported accounting practices".

There are many motivations for earnings management. Parfet (2000) contends that corporate preparers operate from a sense of obligation to produce continuous improvement in operating performance, steadily and reliably increasing financial returns, and long-term growth in the shareholder value. Beneish (2001) discussed four sources of incentives for income increasing earnings management, which are: debt contracts, compensation agreements, equity offerings, and insider trading. Healy and Wahlen (1999), stated that managers mainly engaged in earnings management for four kinds of incentives, namely, external contract incentives, management compensation contract incentives, regulatory motivations, and capital market motivations. According to Watts and Zimmerman (1990), most accounting choice studies use combinations of three sets of variables that represent the manager's incentives to choose accounting methods which are bonus plans, debt contracts, and the political processes. The choice of income-increasing or decreasing discretionary accruals, is influenced by the severity of financial distress Jaggi and Lee (2002). In this case, managers use income-increasing discretionary accruals if they are able to obtain waivers for debt covenant violations (Sweeney, 1994; Jaggi and Lee, 2002; Jha, 2013).

There are different ways through which management can manipulate the earnings. Gowthorpe and Amat (2005) stated that the preparers of financial statements are in a position to manipulate the view of the economic reality presented in those statements, to interested parties. Therefore, they examined two principal categories of manipulative behavior: The term macro-manipulation, which is used to describe the lobbying of regulators, in order to persuade them to produce regulation that is more favorable to the interests of preparers, and micro-manipulation, which describes the management of accounting figures to produce a biased view at the entity level. In this regard, Roychowdhury (2006) and Gunny (2010)

discussed two means. The first one is accrual manipulation, where the earnings could be managed by the manipulation of accruals, with no direct cash flow consequences. The second means is the real activities manipulation, where the management can manipulate the real activities during the year, to meet certain targets of earnings. Francis (2001) and Bruns Jr and Merchant (2005), categorized the main tools in which earnings can be potentially manipulated into four areas, namely, discretionary accruals and estimation of liabilities, income recognition, excessive reserves and provisions, and breaches of requirements in financial reporting. Adkins (2009) talked about two general approaches to manipulating financial statements. The first approach is to inflate the current period earnings in the income statement by artificially inflating revenue and gains, or by deflating current period expenses. This approach makes the financial condition of the company look better than it actually is, in order to meet established expectations. The second approach requires the exact opposite tactic, which is to deflate current period earnings in the income statement, by deflating revenue or by inflating current period expenses.

HYPOTHESES

The improvements on IASs (2001-2003) were effective for annual periods beginning on or after 1 January 2005. These improvements posited, were supposed to lead to an increased disclosure and transparency in the measurement of income, and a decrease in the errors of earnings forecast. Therefore, the distortions in financial statements after these improvements, was supposed to reduce. In this circumstance, it was expected that the corporations would not practice earnings management. Consequently, the first hypothesis investigates whether the Jordanian Industrial Corporations practiced earnings management after January 2005 or not:

H₀₁: There were no earnings management practices in Jordanian industrial corporations during the periods 2005-2013.

Prior studies found that earnings management was used in periods of the economic crisis, such as decreasing the earnings achieved during the Gulf Crisis Jackson and Pitman (2001), and income-increasing earnings management in Malaysian Initial Public Offers (IPOs) during a period of severe economic stress; the East Asian crisis Ahmad-Zaluki (2011). A new global financial crisis began in September 2008. Most of the economies around the world have been affected by this crisis, including developing countries such as Jordan. Similar to other crises, it is expected that the corporations would practice earnings management. This study aimed to make a comparison of practices of earnings management in Jordanian industrial corporations (JIC), before, during, and after the last global crisis. Therefore, we have developed the following hypotheses:

H₀₂: There were no earnings management practices in JIC during the global crisis (2008-2010).

H₀₃: There were no earnings management practices in JIC before the global crisis (2005-2008).

H₀₄: There were no earnings management practices in JIC after the global crisis (2011-2013).

Industry type and the size of the corporation, in general, are factors that affect many variables relating to the firms. In this study, it was assumed that these two variables had relationships with the earnings management in Jordanian industrial corporations. Therefore, the following hypotheses have stated that:

H₀₅: There is no relationship between the type of corporation and the practice of earnings management in JIC during the periods 2005-2013; 2005-2007; 2008-2010; and 2011-2013.

H₀₆: There is no relationship between the size of the corporation and the practice of earnings management in JIC during the periods 2005-2013; 2005-2007; 2008-2010; and 2011-2013.

RESEARCH DESIGN

This study focused on accruals-based earnings management. Total accruals consists of non-discretionary accruals, which are normally related to economic activity, and discretionary accruals, which results from the manipulative actions by management. Only total accruals can be observed, which means that discretionary accruals have to be estimated Lippens (2008). The modified Jones model Dechow et al. (1995), is considered the best model in detecting discretionary accruals, compared to the other models (Dechow et al., 1995; Dechow and Skinner, 2000; Be'drad et al., 2004; Louis and White, 2007; and Gong et al., 2008; Tianran, 2011; Sharifahet al., 2012; Ugbede et al., 2013). Therefore, the modified Jones model was used in this study.

The Modified Jones Model

The discretionary accruals can be measured using the Modified Jones Model, as follows:

1. Measuring total accruals using the following equation:

$$TACC_{i,t} = ONI_{i,t} - OCF_{i,t} \quad (1)$$

Where, $TACC_{i,t}$ is the total accruals for corporation (i) in year (t); $ONI_{i,t}$ is the operating net income for corporation (i) in year (t), and $OCF_{i,t}$ is the operating cash flow for corporation (i) in year (t).

2. The following regression equation is used to obtain the firm-specific parameters. To estimate Non-Discretionary Accruals (NDA), we use the following equation;

$$TACC_{i,t}/A_{i,t-1} = a_1(1/A_{i,t}) + a_2(\Delta REV_{i,t} - \Delta REC_{i,t})/A_{i,t-1} + a_3(PPE_{i,t}/A_{i,t-1}) + E_{i,t} \quad (2)$$

Where, $\Delta REV_{i,t}$ is the change in the corporation's revenue (i) in year (t), $\Delta REC_{i,t}$ is the change in accounts receivable for corporation (i) in the year (t), $PPE_{i,t}$ is the property, plants and equipment for corporation (i) in year (t), $A_{i,t-1}$ is the total assets for corporation (i) in year (t-1), and $E_{i,t}$ is the random errors.

3. Determination of non-discretionary accruals based on the estimated regression coefficients from equation (2).

$$NDACC_{i,t} = a_1(1/A_{i,t-1}) + a_2(\Delta REV_{i,t} - \Delta REC_{i,t}) + a_3(PPE_{i,t}) \quad (3)$$

4. Finally, normal accruals ($DACC_{i,t}$) can be Calculated as follows:

$$DACC_{i,t} = TACC_{i,t} - NDACC_{i,t} \quad (4)$$

After measuring all accruals for all companies in the sample for the period of 2005 to 2013, we analyzed the data in two stages, in order to classify the corporations into practice or non-practice of earning management. In the first stage, we computed the average discretionary accruals for all these periods. If the discretionary accruals for the corporation (i) in the year (t) exceed the average, then the

corporation is classified as practicing earning management and coded (1), otherwise (0). In the second stage, we reclassified the corporations based on the times they practiced earning management, over 9 times. If the corporation practiced earning management for 5 times or more, it is considered practiced and coded (1), otherwise (0). These procedures were repeated for the purposes of analyzing the data before, during, and after the financial crisis period of 2008-2010.

Sample Selection and Data Sources

The study population consists of all Jordanian Industrial corporations registered in the Amman Stock Exchange (ASE). The number of corporations listed in ASE was always changing during the period, from the year 2005-2013. In general, the average was about 70 corporations. The study sample was selected in accordance with two predetermined criteria, which are: (1) the corporation should be registered in the ASE since the beginning of 2005; (2) the corporation's financial reports should be available on the website and cover all the period from 2005-2013. Under these two criteria, the final sample consisted of 42 corporations, which represents almost 60% (42/70) of the whole population. Data were collected from the published annual financial reports that covered periods from 2005 to 2013. The methods of analysis employed in the study were descriptive statistics, Pearson correlations, and binomial test.

CHARACTERISTICS OF SAMPLE

Table 1 summarizes the characteristics of the sample of the corporations. These characteristics contain industry type, as it exists in the guide of corporations in ASE, and the number and percentage of corporations in each type. The size of the corporations in each type was classified into the following

TABLE 1
CHARACTERISTICS OF SAMPLE OF CORPORATIONS

Industry type	No. of Cor.	Percentage %	Corporation Size	No. of Size
Chemical	6	14.29%	S	4
			M	2
			L	2
Electrical	4	9.6%	M	1
			L	3
Engineering & Construction	8	19.2%	S	2
			M	2
			L	1
Food & Beverages	9	21.3%	S	2
			M	4
			L	3
Glass & Ceramic	1	2.4%	S	1
Mining & Extraction	4	9.6%	S	2
			M	2
Paper & Cardboard	3	7.2%	S	1
			M	2
Pharmaceutical & Medical	3	7.2%	S	1
			M	1
			L	1
Printing & Packaging	1	2.4%	S	1
Textiles, Leathers & Clothing	2	4.8%	L	2
Tobacco & cigarettes	1	2.4%	L	2
Total	42	100%		42

categories: Small corporations (S); where their capital is equivalent to 5000000 Jordanian Dinars (JD), Medium corporations (M); where their capital is from 5000000 to 10000000 JD, and Large corporations (L); where their capital is more than 10000000 JD. In Table1, we can see diverse characteristics of the sample, whether in Industry type, Corporation size, or the number of corporations. Consequently, we believe that the sample represents the whole population (60%).

RESULTS

Testing Hypotheses

In this study, the binomial test was used to test hypotheses H_{01} - H_{04} , which measured the practice of earnings management, while Pearson Correlation was used to test hypotheses H_{05} - H_{06} , in order to determine the relationship between both the type and size of corporations, and earnings management.

H₀₁: There were no earnings management practices in Jordanian industrial corporations during the periods, 2005-2013.

A binomial test, as shown in Table 2, indicated that the proportion of the corporations not practicing earnings management which was .50, was equal to the proportion of the corporations that practiced earnings management, .50, $p = 1.000$ Exact Sig. (2-tailed). This result suggests that, the improvements of the IASs did not prevent earnings management in the Jordanian industrial corporations. Therefore, the null hypothesis was rejected. Jordanian industrial corporations practiced earnings management during the period, 2005-2013.

TABLE 2
THE RESULTS OF BINOMIAL TEST FOR EARNINGS MANAGEMENT PRACTICES IN JIC DURING THE PERIOD, 2005-2013

		Category	N	Observed Prop.	Test Prop.	Exact Sig. (2-tailed)
All periods	Group 1	NP	21	.50	.50	1.000
	Group 2	P	21	.50		
	Total		42	1.00		

P= Practice, NP= Not practice

H₀₂: There were no earnings management practices in JIC before the global crisis (2005-2008).

A binomial test, as shown in Table 3, indicated that the proportion of corporations that practiced earnings management was .52, while the proportion of corporations that did not practice earnings management, was .48, $p = .878$ Exact Sig. (2-tailed). This result suggests that, the improvements of the IASs did not prevent earnings management in the Jordanian industrial corporations. Therefore, the null hypothesis was rejected. Jordanian industrial corporations practiced earnings management before the global crisis (2005-2008).

TABLE 3
THE RESULTS OF BINOMIAL TEST FOR EARNINGS MANAGEMENT PRACTICES IN JIC
BEFORE THE CRISIS (PERIODS 2005-2007)

		Category	N	Observed Prop.	Test Prop.	Exact Sig. (2-tailed)
Before crisis	Group 1	P	22	.52	.50	.878
	Group 2	NP	20	.48		
	Total			42	1.00	

P= Practice, NP= Not practice

H₀₃: There were no earnings management practices in JIC during the global crisis (2008-2010).

A binomial test, as shown in Table 4, indicated that the proportion of corporations that practiced earnings management was .45, while the proportion of corporations that did not practice earnings management was .55, $p = .644$ Exact Sig. (2-tailed). This result suggests that, the improvements of the IASs did not prevent earnings management in the Jordanian industrial corporations. Therefore, the null hypothesis was rejected. Jordanian industrial corporations practiced earnings management during the global crisis (2008-2010).

TABLE 4
THE RESULTS OF BINOMIAL TEST FOR EARNINGS MANAGEMENT PRACTICES IN JIC
DURING THE CRISIS (PERIODS 2008-2010)

		Category	N	Observed Prop.	Test Prop.	Exact Sig. (2-tailed)
During the crisis	Group 1	P	19	.45	.50	.644
	Group 2	NP	23	.55		
	Total			42	1.00	

P= Practice, NP= Not practice

H₀₄: There were no earnings management practices in JIC after the global crisis (2011-2013).

A binomial test, as shown in Table 5, indicated that the proportion of corporations that practiced earnings management was .64, while the proportion of corporations that did not practice earnings management was .36, $p = .088$ Exact Sig. (2-tailed). This result suggests that, the improvements of the IASs did not prevent earnings management in the Jordanian industrial corporations. Therefore, the null hypothesis was rejected. Jordanian industrial corporations practiced earnings management after the global crisis (2011-2013).

TABLE 5
THE RESULTS OF BINOMIAL TEST FOR EARNINGS MANAGEMENT PRACTICES IN JIC
AFTER THE CRISIS (PERIODS 2011-2013)

	Category	N	Observed Prop.	Test Prop.	Exact Sig. (2-tailed)	
During the crisis	Group 1	P	27	.64	.50	.088
	Group 2	NP	15	.36		
	Total		42	1.00		

P= Practice, NP= Not practice

H₀5: There is no relationship between the corporation's type and the practice of earnings management in JIC during the periods 2005-2013; 2005-2007; 2008-2010; and 2011-2013.

A Pearson correlation coefficient was computed, in order to assess the relationship between the corporation's type and the practice of earning management for the periods 2005-2013; 2005-2007; 2008-2010; and 2011-2013. As shown in Table 6, there were negative correlations between the two variables for the period 2005-2013, $r = -0.009$, $p = 0.957$; for the period 2005-2007, $r = -0.346$, $p = 0.025$; and for the period 2008-2010, $r = -0.021$, $p = 0.895$. Relating to the period 2011-2013, there was a positive correlation between the two variables, $r = 0.119$, $p = 0.453$. Except for the period before the crisis 2005-2007, there were insignificant correlations between the type of corporation and the practice of earnings management. Overall, there were very weak correlations between the type of corporation and the practice of earnings management, for all periods. Consequently, the null hypothesis was accepted.

TABLE 6
RELATIONSHIP BETWEEN THE TYPE OF CORPORATION AND THE PRACTICE OF
EARNINGS MANAGEMENT IN JIC DURING THE PERIODS,
005-2013; 2005-2007; 2008-2010; 2011-2013

		Correlations			
		All periods	Before Crisis	During Crisis	After Crisis
Cor. type	Correlations	-.009-	-.346*	-.021-	.119
	Sig. (2-tailed)	.957	.025	.895	.453

*. Correlation is significant at the 0.05 level (2-tailed).

H₀6: There is no relationship between the size of the corporation and the practice of earnings management in JIC during the periods 2005-2013; 2005-2007; 2008-2010; and 2011-2013.

A Pearson correlation coefficient was computed, in order to assess the relationship between the size of the corporation and the practice of earnings management for the periods 2005-2013; 2005-2007; 2008-2010; and 2011-2013. As shown in Table 7, there were negative correlations between the two variables for the period 2005-2013, $r = -0.155$, $p = 0.327$; for the period 2011-2013, $r = -0.199$, $p = 0.207$. On the other side, there were positive correlations between the two variables for the period 2005-2007, $r = 0.098$, $p = 0.539$; for the period 2008-2010, $r = -0.085$, $p = 0.595$. For all periods, there were insignificant correlations between the size of the corporation and the practice of earnings management. Consequently, the null hypothesis was accepted.

TABLE 7
RELATIONSHIPS BETWEEN THE SIZE OF THE CORPORATION AND THE PRACTICE OF
EARNINGS MANAGEMENT IN JIC DURING THE PERIODS
2005-2013; 2005-2007; 2008-2010; 2011-2013.

		All periods	Before Crisis	During Crisis	After Crisis
Cor.size	Correlation	-.155-	.098	.085	-.199-
	Sig. (2-tailed)	.327	.539	.595	.207

CONCLUSION

The adoption of International Financial Reporting Standards (IFRS), is expected to increase reporting transparency, and improve the quality of financial reporting. Therefore, the improvements in IASs are expected to facilitate the reduction of earnings management. Therefore, this study aimed to investigate this issue. Prior studies have shown contradictory results on the effect of mandatory IFRS adoption on earnings management. In this study, it was discovered that Jordanian industrial corporations practiced earnings management after mandatory IFRS adoption, by 50%. This result is inconsistent with some prior studies such as (Horton et al., 2013; Ismail et al., 2013; Sellami and Fakhfakh, 2013).

This study also aimed to make a comparison between the practices of earnings management in Jordanian industrial corporations (JIC) before, during, and after the global crisis of 2008-2010. It was also discovered that Jordanian industrial corporations practiced earnings management by different ratios during these periods; 52%, 45%, and 64% respectively. Consistent with Filip and Raffournier (2014), it appears that earnings management decreased in the 2008-2010 Financial Crisis that occurred, in Jordanian industrial corporations. Overall, the results suggest that the improvements of the IASs did not prevent earnings management in these corporations. Regarding the variables, the type of corporation and the size of the corporation, no relationships were found between these two variables and earnings management. Finally, this study recommends Jordanian industrial corporations to adopt IASs carefully, in order to facilitate the reduction of earnings management.

REFERENCES

- Adkins, T. (2009). Financial statement manipulation: An ever-present problem for investors. *Investopedia Website*. Available at: <http://www.investopedia.com/articles>.
- Ahmed A. S., Neel M., Wang D. (2013). Does Mandatory Adoption of IFRS Improve Accounting Quality? Preliminary Evidence, *Contemporary Accounting Research*, 30(4), 1344-1372.
- Ahmad-Zaluki, N. A, Campbell, K. & Goodacre, A. (2011) Earnings management in Malaysian IPOs: the East Asian crisis, ownership control and post-IPO performance, *International Journal of Accounting*, 46 (2), pp. 111-137.
- Arthur, N., Tang, Q. & Lin, Z. (2015). Corporate accruals quality during the 2008-2010 Global Financial Crisis, *Journal of International Accounting, Auditing and Taxation*, 25, 1-15.
- Barth, M.E., Landsman, W.R., & Lang, M.H. (2008). International accounting standards and accounting quality. *Journal of Accounting Research* 46:467-498.
- Be'drad, J., Chtourou, S. M. & Courteau, L. (2004). The effect of Audit committee expertise, Independence, and Activity on aggressive Earnings Management, *Auditing: A Journal of Practice and Theory*, 23(2), 13-35.
- Beneish, M.D. (2001). Earnings Management: A perspective. *Managerial Finance*, 27(12), 3, 15.
- Beuren, I. M. & Klann, R. C. (2015). Effects of the Convergence to International Financial Reporting Standards in Earnings Management, *International Journal of Finance and Accounting*, 4(1), 8-20. doi:10.5923/j.ijfa.20150401.02.

- Bouchareb, M., Ajina, A., & Soud, S. (2014). Does the Adoption of IAS/IFRS with a Strong Governance Mechanism Can Deter Earnings Management? *International Journal of Academic Research in Economics and Management Sciences*, 3(1), 264-282.
- Burgstahler, D., & Dichev, I. (1997). Earnings management to avoid earnings decreases and losses. *Journal of Accounting and Economist*, 24(1), 99-126.
- Bruns Jr, W. J., & Merchant, K. A. (2005). The dangerous morality of managing earnings. *Accounting ethics: critical perspectives on business and management*, 2(2), 90.
- Cai, L., Rahman, A. & Courtenay S. (2008). The Effect of IFRS and its Enforcement on Earnings Management: An International Comparison. *Working Paper*, Available at SSRN: <http://ssrn.com/abstract=1473571>.
- Capkun, V., Collins, D.W. & Jeanjean, T. (2012). Does Adoption of IAS/IFRS Deter Earnings Management? Google Scholar, SSRN, uiowa. edu, accessed, 22(8), 2014.
- Capkun, V., Jeny-cazavan, A., Jeanjean, T. & Weiss, I. A. (2011). Setting the Bar: Earnings Management during a Change in Accounting Standards, Available at SSRN: <http://ssrn.com/abstract=1870007>.
- Daas, A. (2014). The Impact of IAS vs. IFRS (Voluntary) and IFRS (Voluntary) vs. IFRS (Mandatory) on Accounting Quality over Time: Inferences from Jordan, *European Journal of Business and Management*, 6(22), 194-208.
- Dechow, P.M., Saloan, R.G. & Sweeny, A.P. (1995). Detecting earnings management. *The Accounting Review*, 70(2), 193-225.
- Dechow, P. M. & Skinner D. J. (2000). Earnings Management: Reconciling the Views of Accounting Academics, Practitioners and Regulators. *Accounting Horizons*. 14(2), 235-250.
- European Union (2002). Regulation (EC) No 1606/2002 of the European Parliament and of the Council of 19 July 2002 on the application of international accounting standards. *Official Journal of the European Communities*: L. 243/241 - L. 243/244.
- Filip. A. & Raffournier, B. (2014). Financial Crisis and Earnings Management: The European Evidence. *The International Journal of Accounting*, 49(4), 455-478.
- Francis, J. (2001). Discussion of empirical research on accounting choice. *Journal of Accounting and Economics*, 31(1), 309-319.
- Goncharov, I. and Zimmermann, J. (2007). Do Accounting Standards Influence the Level of Earnings Management? Evidence from German, *Die Unternehmung*, 61(5), 371-388.
- Gong, G., Louis, H., & Sun, A. X. (2008). Earnings Management and Firm Performance Following Open-Market Repurchases, *The Journal of Finance*, 63(2), 947-986.
- Gossner, S. & Berndt, T. (2013). Did the Adoption of IAS/IFRS by German Firms in 2005 Improve Earnings' Predictive Power with regard to Forecasting Future Operating Cash Flows? An Empirical Analysis of German Publicly Listed Firms, 3rd Annual International Conference on Accounting and Finance, 20-21 May 2013, Bangkok, Thailand.
- Gowthorpe, C., & Amat, O. (2005). Creative accounting: some ethical issues of macro-and micro-manipulation, *journal of business ethics*, 57(1), 55-64.
- Gunny, K. A. (2010). The relation between earnings management using real activities manipulation and future performance: evidence from meeting earnings benchmarks, *Contemporary Accounting Research*, 27(3) (Fall 2010), 855-888.
- Healy, P. M. & Wahlen, J. M. (1999). A review of earnings management literature and its implication for standard setting. *Accounting Horizons*, 13(4), 365-383.
- Hirschev, M., Palmrose, Z-V., & Susan Scholz, S. (2005). Long-term Market Underreaction to Accounting Restatements, *working paper*, university of Kansas, lawrence.
- Horton, J., Serafeim, G., & Serafeim, I. (2013). Does Mandatory IFRS Adoption Improve the Information Environment? (2013). *Contemporary Accounting Research*, 30(1), 388-423.
- Houque, M.N., Zijl, T., Dunstan, K., & Karim, W. (2010). The effect of IFRS Adoption and Investor Protection on Earnings Quality around the World, Working paper series, *Working paper No. 70*, Victoria University of Wellington.

- Hunton, J.E., Libby, R., & Mazza, C.L., (2006). Financial reporting transparency and earnings management. *The Accounting Review*, 81(1), 135-157.
- IASCF, International Accounting Standards Committee Foundation, (2002). Exposure draft of proposed improvements to international accounting standards, 30 Cannon Street, London EC4M 6XH, United Kingdom.
- Iatridis, G. (2010), International Financial Reporting Standards and the quality of Financial statement information, *International Review of Financial Analysis*, 19 (2010) 193-204.
- Iatridis, G. & Dimitras, A. I. (2013). Financial crisis and accounting quality: Evidence from five European countries, *Advances in Accounting*, 29(1), 154-160.
- Ismail, W.A.W., Kamarudin, K.A., Zijl, T., and Dunstan, K. (2013). Earnings quality and the adoption of IFRS-based accounting standards: Evidence from an emerging market, *Asian Review of Accounting*, 21(1), 53-73.
- Jackson, S. B. & Pitman, M. K. (2001). Auditors and Earnings Management. *The CPA Journal*, 7(1), 38-44.
- Jaggi, B. & Lee, P. (2002). Earnings Management Response to Debt Covenant Violations and Debt Restructuring, *Journal of Accounting, Auditing & Finance*, 17(4), 295-324.
- Jaweher, B. & Mounira, B.A. (2014). The effects of mandatory IAS/IFRS regulation on the properties of earnings' quality in Australia and Europe, *European Journal of Business and Management*, 6(3), 92-111.
- Jeanjean, T. & Stolowy, H. (2008), Do accounting standards matter? An exploratory analysis of earnings management before and after IFRS adoption, *journal of accounting and public policy*, 27(6), 480-494.
- Jha, A. (2013). Earnings Management Around Debt-Covenant Violations – An Empirical Investigation Using a Large Sample of Quarterly Data, *Journal of Accounting, Auditing & Finance*, 28(4), 369-396.
- Jones, J. J. (1991). Earnings management during import relief investigations, *Journal of Accounting Research*, 29(2), 193-228.
- Kirschenheiter, M. & Melumad, N. (2004). Earnings' Quality and Smoothing? Working Paper, Columbia Business School, pp. 65 http://www.krannert.purdue.edu/events/bkd_speakers/papers/mikespaper.pdf.
- Lenard, M.J. & Yu, B. (2012). Do Earnings Management and Audit Quality Influence Over-Investment by Chinese Companies? *International Journal of Economics and Finance*, 4(2), 21-30.
- Li, Z., Liu, Q., Luo, L. (2014). International Financial Reporting Standards (IFRS) and Earnings Management: Evidence from China, The Chinese Accounting Professors' Association of North America (CAPANA), available at: <http://www.capana.net/www/conference2014/LiLiuLuo.pdf>.
- Lippens, M. (2008). The Mandatory Introduction of IFRS as a Single Accounting Standard in the European Union and the Effect on Earnings Management, master theses, Erasmus School of Economics / Erasmus School of Accounting & Assurance. Erasmus University Rotterdam.
- Louis, H., & White, H. (2007). Do managers intentionally use repurchase tender offers to signal private information? Evidence from firm financial reporting behavior, *Journal of Financial Economics*, 85(2007), 205-233.
- McNichols, M. F & Stubben, S. R. (2008). Does earnings management affect firm's investment decisions? *The Accounting Review*, 83(6), 1571-1603.
- Mechelli, A. and Cimini, R. (2013). How have the IAS/IFRS adoption affected earnings management in EU? The effect of the absence/divergence of regulation and of legal enforcement, International conference; Economic Distress: Corporate Governance and Financial Reporting Issues, Rome, October 17-18, 2013. <http://www.virtusinterpress.org/-Virtus-Interpress-.html>.
- Morais, A. I. & Curto, J. D. (2008). Accounting quality and the adoption of IASB standards-Portuguese evidence, *Revista Contabilidade & Finanças*, 19(48), 103-111.

- Navarro-Garcia, J. C. & Madrid-Guijarro, A. (2014). The Influence of Improvements in Accounting Standards on Earnings Management: The Case of IFRS. *Australian Accounting Review*, 24(2), 154-170. doi: 10.1111/auar.12020.
- Parfet, W. U. (2000). Accounting subjectivity and earnings management: A preparer perspective, *Accounting Horizons*, 14(4), 481-488.
- Persakis, A. & Iatridis, G.E. (2015). Earnings quality under financial crisis: A global empirical.
- Purwanti, M. And Kurniawan, A. (2013). The Effect Of Earnings Management And Disclosure On Information Asymmetry. *International Journal Of Scientific & Technology Research*, 2(8), 98-107.
- Roychowdhury, S. (2006). Earnings management through real activities manipulation, *Journal of Accounting and Economics*, 42(2006), 335-370.
- Schipper, k. (1989). Commentary on Earnings management, *Accounting Horizons*, 3(4), 91-102.
- Sellami, M., & Fakhfakh, H. (2013). Effect of the Mandatory Adoption of IFRS on Real and Accruals-based Earnings Management: Empirical Evidence from France. *International Journal of Accounting and Economics Studies*, 2(1), 22-33. doi:http://dx.doi.org/10.14419/ijaes.v2i1.1485.
- Sharifah, B., Nor, H. J., Noor, R. A. R. & Fatimah, H. A. R. (2012) Board Diversity and Discretionary Accruals of the Top 100 Malaysia Corporate Governance (MCG) Index Company. *African Journal of Business Management*, 6(29), 8496-8503.
- Sweeney, A. P. (1994). Debt-covenant violation and Mangers' Accounting Responses. *Journal of Accounting and Economics*, 17(1994), 281-308.
- Tianran, C. (2011). Analysis of Accrual-Based Models in Detecting Earnings Management. *Lingnan Journal of Banking, Finance and Economics*, 2(1), 56-65.
- Ugbede, O., Lizam, M., Kaseri, A. &Lame, S. M. (2013). Do Malaysian and Nigerian Accounting Standards Produce Similar Earnings Quality for Banks? *International Journal of Management Sciences and Business Research*, 2(7), 1-16.
- Vladu, A. B., Amat, O., and Cuzdriorean, D. D. (2014). Truthfulness in accounting: how to discriminate accounting manipulators from non-manipulators, *Working Papers/ Department of Economics and Business, University Pompeu Fabra*, 1434.
- Watts, R. L., & Zimmerman, J. L. (1990). Positive accounting theory: A ten year perspective, *Accounting Review*, 65(1), 131-156.
- Yanqiong, M. (2011). *Earnings management incentives and techniques in china's listed companies: a case study*, Proceedings of the 7th International Conference on Innovation & Management, Paris, 1133-1140.
- Yu, M. D. (2014). Accounting standards and earnings management around the world, *Journal of International & Interdisciplinary Business Research*, 1, (Spring 2014), 43-69.
- Zhou, H., Yan Xiong, Y. & Ganguli, G. (2009). Does the adoption of international financial reporting standards restrain earnings management? Evidence from an emerging market, *academy of accounting & financial studies journal* ;jun2009 supplement,13, p43.