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MANDATORY ADOPTION OF IASB STANDARDS, INCOME SMOOTHING, AND REACTIONS OF THE JORDANIAN EMERGING ASE MARKET

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ABSTRACT: *Our paper aims to study the impact of the regulatory disclosure requirements enacted in 2004 on the income smoothing behaviour (a proxy for quality of financial reporting) and on firm valuation (measured by Topins' q ratio) of Jordanian listed firms on Amman Stock Exchange (ASE). Our perception is that the new disclosure requirements of 2004 hold higher quality as a reporting system for the ASE market than did the one of 1998. A higher reporting quality is expected as the new disclosure requirements of 2004 had removed the conditions over adopting IASB-based standards that existed under the previous regulatory disclosure requirements along with bringing new structural and procedural changes. Previous literature suggested that IASB standards have been long perceived as a set of high quality reporting standards. Under such perceptions, we expect the reporting quality to increase, which in return, would impact the market valuation for listed firms. To perform our study, we selected a sample of 94 out of 133 publicly listed service and industrial Jordanian firms at the ASE. The sample consists of 58 industrial and 36 service listed firms. Our findings indicate a positive impact on both of the quality of reporting and market valuation of service firms with the new regulation of 2004 compared to a negative impact on the quality of reporting and a positive impact on market valuation of industrial firms*.

KEYWORDS: **IASB Standards, Income Smoothing, Reporting Quality, Tobin's q Ratio, Emerging Markets, ASE Jordan**

INTRODUCTION

Our paper aims to study the impact of the regulatory disclosure requirements enacted and effective in 2004 on the income smoothing behaviour (through which quality of financial reporting is reflected) and firm valuation (measured by Topins' q ratio) of Jordanian publicly listed firms on Amman Stock Exchange (ASE). We measure the effects of the regulatory disclosure requirements act of 2004 on financial statements prepared by Jordanian listed firms and the reaction of ASE capital market to this regulation.

According to the regulatory disclosure requirements of 1998 Act, article 24, Jordanian Security Exchange Commission (J-SEC) required all Jordanian listed firms to abide by the mandatory adoption of the ISAB-based accounting standards in the preparation and presentation of their published year-

end financial statements as long as the ISAB standards comply with local regulations. This condition was removed in the regulatory disclosure requirements of 2004. According to the regulatory disclosure requirements of 2004 Act, article 14, J-SEC required all Jordanian listed firms to abide by the mandatory and unconditional adoption of the ISAB standards to prepare and present all period financial statements. This step which removed the restrictions previously placed on the mandatory adoption of IASB standards aimed to increase the integrity, credibility, and reliability of financial reporting in ASE which would reduce the level of information asymmetry and, thereby, enhance the level of economic investment in ASE. The higher quality of financial reporting would improve the markets' resource allocation mechanism leading to further financial development by creating a transparent environment and more efficient financial capital market. We aim to provide further empirical evidence on the impact of the mandatory adoption of IASB standards on the quality of financial reports of listed Jordanian service and industrial firms and the correspondent market reaction under an emerging economy setting such as the ASE of Jordan. Our paper contributes further to the current literature surrounding two areas first of which is the area of income smoothing and quality of financial reporting by examining a sample under the Jordanian business environment; and second of which is the area of firm valuation using the Tobin's q ratio to measure the impact reflected by the transformation of the mandatory adoption of IASB-based standards from a conditional to an unconditional state in Jordan. The International Accounting Standards Board (IASB) was established in 2001 as a replacement to the International Accounting Standards Committee (IASC)[1]. IASB aims at developing the International Financial Reporting Standards (IFRS) as a set of globally harmonised and acceptable high quality financial reporting standards (Barth, Lang, & Landsman, 2007)[2]. The International Organization of Securities Commissions (IOSCO) recommend in 2000 that the use of IASB standards should be a mandatory requirement in the preparation of financial reports for foreign firms in fulfilment of listing requirements at domestic stock exchange and capital markets (IOSCO, 2000).

J-SEC had issued a new set of regulatory listing requirements in 2004 which also was updated by the regulatory listing requirements act of 2012. It is noted that the financial measurement and disclosure articles in both sets of the regulatory listing requirements are based on the regulatory disclosure requirements Act of 2004 and hence all listed firms must abide by the IASB standards in their financial reporting. By 2005, Jordanian firms along with almost all European publicly listed firms are legally required to prepare financial statements with IASB standards in order to fulfil the reporting harmonization prospects as proposed by the IASB (Elbannan, 2011). Findings of previous academic research signalled the positive impact of IASB standards on the quality of financial reporting as it was set to limit opportunistic managerial discretion by limiting the options available for different accounting treatments and thereby, reduce the earnings management (Elbannan, 2011).The high quality financial reporting under IASB standards and the world-wide wave of adopting such standards

1 The International Accounting Standards Committee (IASC) was established in 1973 and had issued the International Accounting Standards (IAS). (IASC) issued 41standards of(IAS) of which only 29 standards are effective and the rest was cancelled.

2 IASB issued 13 standards of the International Financial Reporting Standards (IFRS) the last of which is the fair value measurement standard issued in 2011. For further information on (IAS) and (IFRS) see:http://www.iasplus.com/en/standards

was one of the primary motives to remove the conditions on the adoption of IASB-based standards in the Jordanian ASE.

However, we aim at exploring the impact reflected by the transformation of the mandatory adoption of IASB standards from a conditional to an unconditional state on Jordanian listed firms at the ASE as an emerging market. The transformation came under the issuance and enacting of the regulatory disclosure requirements of 2004 which cancelled the regulatory disclosure requirements of 1998 along with bringing new structural and procedural changes. We measure the impact of enacting the regulatory disclosure requirements of 2004 which includes the impact of both the transformation and the structural and procedural changes together. Measuring the impact reflected by the regulatory disclosure requirements of 2004 on income smoothing behaviour and market valuation would help measure the change in quality of financial reporting and assess the market reaction to regulation before and after 2004. We selected a sample of 94 out of 133 publicly listed service and industrial Jordanian firms at the ASE of which 58 are industrial and 36 service firms. The financial information of the selected samples were collected from the ASE website[3]

Our paper aims to equip the Jordanian Accounting regulators with empirical findings in order to enable them to trace and follow up the changes reflected by the enforcement of 2004 regulatory disclosure requirements as a feedback that could be used later on for further enhancement of the current financial reporting system, issuance of new accounting regulations, and improving the current enforcement mechanisms. If the findings of our paper turn out to be recording a positive impact by the regulatory disclosure requirements act of 2004 on the quality of financial reporting by the observation of reduced income smoothing behaviour, then it will indicate the effectiveness of this regulatory act at improving the transparency of the ASE and potentially enhancing economic investment activities. If the findings turn out to be otherwise, then the accounting regulators of Jordan need to look at the reasons underlying the failure of the new regulation and search for either further improvements or other alternatives to bridge the current reporting gap. We used Eckle formula (1981) to measure income smoothing and proxy for the quality of reporting in ASE market. Our findings indicate a positive impact on both of the quality of reporting and market valuation of service firms with the new regulation of 2004 compared to a negative impact on the quality of reporting and a positive impact on market valuation of industrial firms.

The rest of this paper is ordered as follows. The second section will discuss previous literature round income smoothing and then help to overview the mandatory adoption of IASB standards in the ASE. The hypotheses and study variables would be developed and stated in the third section while research methodology and data analysis is presented in the fourth section. A review of the empirical findings would be conducted under the fifth section and the conclusion is summarised in the sixth section.

3 For further information, see: http://www.ase.com.jo/en and http://www.ase.com.jo/en/equities.

LITERATURE REVIEW

Income Smoothing

Beidleman (1973) defined Income smoothing as the use of managerial discretion to intentionally smooth out variations in reported earnings. Faello (2012) and Tucker & Zarowin (2006) explained that income smoothing is mostly studied and looked at from two main perspectives which are the informative and deceptive perspective. On the first perspective, Faello (2012) and Tucker & Zarowin (2006) argued that managers smooth income to inform users of financial statement about financial potentials of the firm. Hence, income smoothing is used to communicate private information to shareholders about future growth prospects of earnings. Financial analysts use the reported earnings to estimate the firms' fair value based on its past, current, and potential financial prospects. Firm value is estimated using *"a function of the growth potential of sustainable earnings of the firm"* (Elbannan, 2011). Tucker & Zarowin (2006) found evidence that *"the change in the current stock price of higher-smoothing firms contains more information about their future earnings than does the change in the stock price of lower-smoothing firms"*. However, reported earnings affected by managerial discretion, though coming from professional individuals and experts running the firm is not an objective assessment for financial analysts to use and depend on, therefore, it is considered to be manipulative and deceptive. Hence, the second perspective of income smoothing is considered to be deceptive as managers utilise it under their subjective discretion to manage earnings and maximise their own interests at the shareholders' expense (Faello, 2012; and Tucker & Zarowin, 2006). Such form of earnings management and deceptive manipulation lowers the quality of reported earnings and could cause financial analysts to face forecast errors and misevaluations. Elbannan (2011) argued that the managerial discretionary practices are presenting creditability issues that question the integrity of financial reporting and, thereby, could negatively affect the liquidity of emerging capital markets and reduce the market efficiency of allocating scarce economic resources to the most efficient and rewarding investment opportunities. Since a great deal of managers compensation mechanisms are based on the reported income of the firm, it is believed that managers tend to manipulate reported income as claimed by the positive accounting theory (Watts & Zimmerman, 1978) for a number of reasons such as achieving remuneration targets (Healy, 1985) or to maintain a level of prestige and job security (Arya, Glover, & Sunder, 1998). Other perceived motives for manipulative discretionary reporting practices by managers are to lower the perceived risk of the firm (Ronen & Sadan, 1975) and reduce the financing costs (the cost of capital), as claimed by Tucker and Zarowin (2006), leading to the ultimate motive of all manipulative reporting practices which is a higher forecast of the firms' equity market value by financial analysts (Bitner & Dolan, 1996) to maximize the interests of managers. Hence, the quality of financial reports and, thereby, the quality of reporting standards are of significant value to reduce managerial discretion over financial reporting practices and minimise the information asymmetry that arises from principal-agent relationships between shareholders and managers (Ball, 2001). Low quality or deceptive financial reporting is a significant obstacle that holds back the development of financial markets in emerging economies as such reporting does negatively affect the market efficiency to allocate scarce economic resources towards the best performing profitable investment opportunities (Hail & Leuz, 2006). The quality of financial reporting is based on the main characteristics of financial information such as relevance and reliability. The relevance is sub-based on the timeliness, feedback value, and predictive value of the financial information, while reliability is sub-based on the neutrality, verifiability and faithful representation of financial information. Reliability reflects the extent of objectivity, accuracy, transparency, and credibility

presented in the financial information (Dye & Sridhar, 2004). Therefore, the reliability of financial information is a core need for users of financial information with a very specific focus, to financial analysts who use the reported financial information of earnings to estimate future cash flows, and thereby, the firms value in order to make well-informed financial decisions (Barth et al. 2007). Many studies verified the fact that reported income is the best accounting measurement that presents superior information as the main basis for financial analysis and market value predictions (Liu, Nissim, & Thomas, 2002)and that the more reliable financial statements are (i.e. free of manipulative reporting), the more accurate financial forecasts and fair value estimations are. It is thought that managers use their managerial discretion within a flexibility range as offered in the financial reporting standards and regulations (the so-called reporting gap) to smooth reported earnings and, thereby, reduce both of the quality of financial reporting and the informativeness of reported earnings (Tucker and Zarowin,2006). Such reporting gaps reflect the low quality of accounting standards and disclosure regulations under which all types of income manipulations could be practiced. As argued by previous literature, there are a number of measures for managerial discretionary practices that could be used to proxy for earnings quality (Albannan, 2011). However, there had been many attempts by accounting standard-setters and legislators to control the manipulative opportunistic-oriented discretion of managers over reporting practices (Barth et al., 2007), through either, mandating fair value-oriented accounting standards such as the IASB-based standards which emphasise the use of fair values (Subramanyam & Hung, 2007)or by limiting the number of accounting choices that are subject to managerial discretion in calculating and reaching final accounting estimates (Ashbaugh & Pincus, 2001) or by forbidding the use of undeclared or hidden accounting reserves (Dumontier & Raffouriner, 1998). Income smoothing as a type of manipulative reporting practice (Albrecht & Richardson, 1990; Breton & Stolowy, 2000) is classified as either natural in the ordinary course of business or intentional by management opportunistic behaviour (Eckel, 1981). Natural income smoothing is recognised when the income of the business is inherently smoothly generated while intentional income smoothing is recognised when management exerts efforts to intentionally smooth out fluctuations in income (Eckel, 1981). Intentional income smoothing is also classified as real and artificial smoothing (Breton & Stolowy, 2000). Real intentional income smoothing is recognised when management undertakes economic decisions to control the variations of reported income while intentional artificial income smoothing is recognised as accounting manipulations conducted by management to smooth income (Eckel, 1981). In this paper, we aim to study the phenomena of intentional artificial income smoothing. Breton & Stolowy (2000) recognised three smoothing dimensions that allow intentional artificial income smoothing to take place through accounting manipulations, two of which are timing-based and the third is classificatory-based. The first type of the timing-based smoothing is when management can schedule the occurrence and/or the recognition of transactions so that their effects would smooth out variations of reported income over time. The second type of the timing-based smoothing is when management can use their discretion to manipulate numbers of accounting estimates that are based on professional judgment of managers such as the rates of deprecation and amortisations that are used to allocate costs of capital investments as expenses over time. A downward of such estimates would result in a reduction of recognised depreciation and amortisation expenses and therefore an upward of reported income. Classificatory-based smoothing is recognised when management uses the classifications of items on the income statement to smooth variations of reported income figures other than net income. By the classificatory-based smoothing, management can classify revenues and expenses items on the borderline between ordinary and extraordinary items, so that income before extraordinary items looks smoother (Breton & Stolowy, 2000).

The Mandatory Adoption of IASB-Based Standards in ASE

In this section, we present an overview of the accounting history in Jordan starting from early 1990s. The Jordanian Auditor Association (JAA) announced the adoption of IASB-Based Standards in 1990 to be applied by accountant and financial statements producers in Jordan. However, the JAA adoption of IASB-Based Standards was not mandatory for Jordanian firms as the JAA is not a legislative or regulatory authority in Jordan. Jordanian regulators issued the company law number 22and its modifications in 1997 which mandated the preparation and presentation of financial statements by IASB-Based Standards in public corporations, private corporations, and limited liability firms. In 1998, the J-SEC announced a mandated set of regulatory disclosure requirements that dictated the use of international standards for the financial reporting, disclosure, measurement and auditing standards for the fulfilment of listing requirements at the ASE capital market. The regulatory disclosure requirements of 1998 mandated the adoption and application of IASB-Based Standards as the financial reporting standards for Jordanian listed firms conditional upon compliance with local regulations of Jordan resulting in the formation of national GAAP by mixing international standards with local regulations. It also mandated, by article 26, the adoption of the international standards of auditing ISA issued by the International Federation of Accountants (IFAC) through the International Auditing and Assurance Standards Board (IAASB)[4].Jordanian regulators issued the financial securities law number 76 in 2002 which required the publicly listed firms at ASE to prepare and present IASB-Based financial statements on quarterly basis. The J-SEC announced a new set of regulatory disclosure requirements in 2004. The regulatory disclosure requirements Act of 2004, Article 14, mandated the unexceptional and unmodified adoption of IASB-based standards (IFRS) for financial reporting in ASE. A core motive to updating the regulatory disclosure requirements in 2004 is to bridge the reporting gap that existed under the regulatory disclosure requirements Act of 1998. It is perceived that such a gap enabled managers to practice all the discretionary-based opportunistic behaviour, including the income smoothing and earnings management that had compromised the quality and the integrity of financial reporting in the ASE capital market for almost seven years. Moreover, the income tax law number 28 was issued in 2009to mandate the accounting for the annual amount of income tax due by IASB-based income figures. In general, the mandatory adoption of IASB-based standards is meant to improve the quality and the content of financial information and enhance the transparency of financial reporting in the (ASE). This in turn would pave the way for foreign funds of international investors to enter the ASE financial market. IASB-based standards which are perceived as a set of fair value based (Subramanyam & Hung, 2007)would limit the managerial manipulations and contrivance in the financial reporting practices and therefore produce more reliable public financial statements by limiting the managerial opportunistic discretion. The enhanced reliability of financial information under IASB-standards would lower forecast errors and misevaluations faced by financial analysts (Ashbaugh & Pincus, 2001). A scope of flexibility or a reporting gap existed in the Jordanian regulatory disclosure requirements Act of 1998 that allowed such managerial opportunistically-oriented manipulative behaviour in the published financial statements of publicly listed Jordanian firms. The manipulated financial information could have led to many forecast errors,

[4] The regulatory disclosure requirements of 2004 article 16 continued the adoption of the ISA with no amendments or exceptions. for more information on ISA, see http://www.ifac.org/ar

misevaluation of the present values of future earning streams, and adverse selection problems faced by investors in the ASE market, as suggested by previous literature such as (Barth et. al, 2007). Therefore, under such circumstances, the ASE suffered of misevaluations of fair values leading to inefficient allocation of scarce economic resources that held back the development of the ASE for a while. Such inefficiency is well-noted by the low level of liquidity of the ASE market and the inexistent takeover mechanisms (AL-KHOURI, 2005). As a result, a mandatory removal of 'compliance with local regulations' condition for the adoption of IASB-based standards took a place in the regulatory disclosure requirements of 2004 to increase the quality of financial reporting in the ASE by limiting managerial opportunistic discretion over financial reporting and increase reliability and transparency. The removal of such conditions on the mandatory adoption of IASB-based standards came to increase reliability, integrity, credibility, and transparency of financial information, in a step for developing the market efficiency of allocating resources and therefore the overall efficiency of the ASE. Improving the integrity and transparency of financial reporting in addition to limiting the managerial discretion under high quality accounting standards and disclosure regulation (with limited flexibility or reporting gap) would increase the decision usefulness of financial information and, thereby, improve market efficiency especially with allocating resources (Elbannan, 2011). However, a number of questions remain one of which "did the IASB-standards full adoption in 2004 at the ASE decrease managerial opportunistic behaviour?" With Eckle (1981) income smoothing measure used to proxy for such opportunistic behaviour, this question will be answered in the following sections.

Hypothesis and Study Variables

Hypotheses Development

Our study examines two main null hypotheses stated as the following:

The main first null hypothesis aims to examine the reflection of applying Regulatory Disclosure Requirements Act of 2004 on the income smoothing behaviour of Jordanian listed firms. This hypothesis is stated as follows:

H01: "There are no statistically significant differences between the income smoothers and non-smoothers in Jordanian listed firms before and after applying the regulatory disclosure requirements of 2004."

Due to industry-related biases (Breton & Stolowy, 2000), the first null hypothesis would be tested by the type of economic sector. Therefore, for comparability of results, two sub-hypotheses emerge from the main first null hypothesis based on the type of economic sector and they are stated as follows:

First sub-hypothesis: "There are no statistically significant differences between the income smoothers and non-smoothers in Jordanian listed industrial firms before and after applying the regulatory disclosure requirements of 2004".

Second sub-hypothesis: "There are no statistically significant differences between the income smoothing and non- smoothing in Jordanian listed service firms before and after applying the regulatory disclosure requirements of 2004."

The main second null hypothesis aims to examine the changes in the market fair values of listed firms under the updated income smoothing behaviour in the light of the newly enacted regulatory disclosure requirements of 2004. This hypothesis is stated as follows:

H02: "There is no statistically significant impact of income smoothing behaviour on the Tobin's q ratios of Jordanian listed firms before and after applying the regulatory disclosure requirements of 2004".
Therefore, for comparability of results, two general sub-hypotheses emerge from the main second null hypothesis and they are stated as follows:

First sub-hypothesis: "There is no statistically significant impact of income smoothing behaviour on the Tobin's q ratios of Jordanian listed firms before applying the regulatory disclosure requirements of 2004(during the period of 2001-2003)".

Second sub-hypothesis: "There is no statistically significant impact of income smoothing behaviour on the Tobin's q ratios of Jordanian listed firms after applying the regulatory disclosure requirements of 2004(during the period of 2005-2011)".
We believe that the type of economic sector is an important factor that could impact the study findings. Therefore, the above mentioned sub-hypothesis of the main second hypothesis would be tested by the type of economic sector as well.

Study Variables

There are two main dependent variables in this study. The first dependent variable is income smoothing behaviour of listed firms and the second dependent variable is firm valuation. Eckel formula is used to classify income smoothing behaviour of firms and Tobin's q is used to approximate firm market valuation. Dependent variables are explained hereinafter.

Income Smoothing Using Eckel Formula 1981

Formula for income smoothing is used to classify listed firms into smoothers and non-smoothers (Eckel, 1981). Eckel formula is used to measure the coefficient of variations of changes in income against coefficient of variations of changes in sales. Eckel formula assumes that any change in the sales volume would result in change of income by an equal or increased margin throughout time. Therefore, income smoothing behaviour would be recognised if the change in income is less than the change in sales. A firm would be classified as an income smoother if the calculated outcome of Eckel formula is less than one and classified as a non-smoother if otherwise.
Eckel formula:

$$\frac{CV\Delta income}{CV\Delta sales}\frac{ip}{ip} \geq 1$$

Where: Δ Income ip= change in income (net income) for the Company i in the period p;
Δ Sales ip= change in sales for the Company i in the period p;
CV = coefficient of variation

Faello (2012) have listed a number of previous research applying similar formulas include " (Albrecht & Richardson, 1990), (Bao & Bao, 1990), (Carlson & Bathala, 1997), (Michelson, et. al, 1995) and (Michelson, et. al, 2000)."
Previous literature mentioned four measurements of income such as operating income(sales minus cost of sales and operating expenses excluding depreciation and amortization), income from operations(operating income after depreciation and amortization), income before extraordinary items, and net income (Faello, 2012). However, to avoid calculation difficulties, we have adopted four measures of income that could be different from the previously adopted ones to some extent. In this paper, we adopt the gross profit (sales net of costs of sales), income from operations resulting from primary business activities (net of depreciation, amortizations, selling and administrative expenses and other operating expenses), income before tax (net of interest expense as well as gains and losses from irregular business activities), and finally the net income after tax as measures of income in this study.

Firm Valuation Using Tobin's q Ratio

Bitner & Dolan (1996) argued that the equity market valuation (measured by Tobin's q) could be a potential motive for income smoothing behaviour. Tobin's q is calculated by scaling the market value of the firm over the replacement costs of total assets. Following (Chung & Pruitt, 1994)and (Perfect & Wiles, 1994)we shall use the book value of total assets given that it is difficult to obtain accurate values of replacement costs of total assets. Higher market value of equity leads to higher q ratio while higher values of total assets lead to a lower q ratio. Higher q ratios reflect market expectations of higher potential growth opportunities for the firm and vice versa. Higher market expectation may result from increased transparency and accounting information usefulness (Elbannan, 2011)due to the adoption of new regulatory disclosure requirements or new high quality accounting standards. Decreased information asymmetry under the mandatory application of regulatory disclosure requirements of 2004 would improve the investor's ability to monitor information risk and hence lead to higher market expectations. It is assumed that the application of regulatory disclosure requirements of 2004 will increase the reliability and credibility of published accounting information of listed firms in the ASE in addition to controlling and minimising the income smoothing behaviour leading to higher quality of financial reporting. The higher quality of financial reporting would lead to higher market value of a firm's equity resulting in higher q ratios. It is assumed that higher q ratios would be observed after the mandatory application of regulatory disclosure requirements of 2004 in the ASE. However, if q ratios are to be found lower post-application of regulatory disclosure requirements of 2004, it might be justified by the fact that the IFRS adoption is mandated within the regulatory disclosure requirements of 2004 and in the light of findings of prior research such as (Hail et. al, 2007) IFRS adoption increase the firms' book value of equity and therefore drives down Tobin's q ratios.

Elbannan (2011) argued that *"changes in Tobin's q, as a proxy for firm valuation, reflect market expectations regarding firm growth potential"*. Therefore, it is more appropriate to use the q ratio for the purpose of our study to assess the market expectations of firm values after the mandatory application of regulatory disclosure requirements of 2004 in the ASE. The use of Tobin's q increases the reliability of valuation as it employs the risk adjusted discount rate and equilibrium returns while avoiding distortions resulting from tax laws and accounting conventions (Benston, 1985). Elbannan (2011) and LeCraw (1984) argued that such characteristics of Tobin's q qualifies it to minimise industry-related biases that would result from *"systematic risk, disequilibria, tax laws, and accounting conventions that vary widely across industries"* and therefore makes it more appropriate to use Tobin's

q to measure the ex-anti and ex-post effects of mandatory application of regulatory disclosure requirements of 2004which will differ by different economic sectors.

DATA AND RESEARCH METHODOLOGY:

Data Collection and Study Sample

Study population includes all industrial and service firms listed on the Amman Stock Exchange and required data would be collected from publications made by these firms during the study period of (2001 - 2011). By 31/12/2011, there were 87 industrial and 46 service listed firms at the ASE giving a total of 133 firms. Firms that do not meet the following criteria were excluded:

1-The firm inception date is prior to 1/1/2001 and continues in business after 231/12/2011.

2-The firm's stock exchange listing must not have been suspended from trading during the study period of 2001-2011.

3-The firm must provide annually audited financial statements throughout the study period of 2001-2011.

By the above mentioned rules, there are 58 industrial and 36 service firms that remain available for study giving a total of 94 firms to form our study sample. The selected sample size as composed of both sectors gives us a coverage ratio of 70.7% out of the 133 firms. The study sample has the necessary data for the application of the coefficient of variation of the Eckel formula and Tobin's q ratio for each year of the study period. The data have been extracted from audited financial statements of sample firms listed on the Amman Stock Exchange published on the online site ASE[5].

The time frame subject for study is from 2001 to 2011 with exclusion of 2004 observations. The time frame is divided into two periods; first of which is before 2004(2001-2003) and second is after 2004 (2005-2011). The exclusion of 2004 is due to the announcement of the new set of regulatory disclosure requirements which, we believe, could compromise the observations of listed firms for the year of 2004. Listed Jordanian firms need a period of up to one year to understand and properly comply with the new set of regulatory disclosure requirements of 2004. We think that listed firms would resume the income smoothing behaviour after one year of adapting to the new set of regulatory disclosure requirements of 2004 which we consider as juncture point of time.

RESEARCH METHODOLOGY

Techniques of statistical analysis conducted in this study are descriptive statistics, percentages, D-W test, while hypothesis testing was conducted using regression analysis, parametric paired sample T-test, and non-parametric wilcoxon signed ranks test.

Descriptive Statistics for Tobin's q

Before proceeding to the formal testing, some descriptive statistics of the Tobin's q variable were conducted to know the general characteristics for the observed data. The arithmetic mean and standard deviation were calculated for firm valuation on Tobin's q model and the results were as shown in Table

[5]For further information; see:http://www.ase.com.jo/en.

No. (1). It is noted from the table that the mean of Tobin's q for both sectors is higher post 2004 but the increase for industrial is more noticed compared to the service sector. The increase of means for both sectors could be justified by either the higher earning quality with application of the new regulation or the increased income smoothing behaviour. However, the standard deviation is significantly higher for industrial compared to service firms' post 2004. It is believed that such wide variation in the Tobin's q caused the significant increase of the correspondent mean for industrial firms, therefore, presenting adequate reasoning for further analysis to justify for the increased market valuations.

Descriptive Statistics for Income Smoothers and Non-Smoothers

Income smoothers and non-smoothers of listed firms before and after the regulatory disclosure requirements of 2004 were classified according to the Eckle (1981) formula using gross profit, income from operations, income before taxes, and net income after tax as four main measures of income and the results are shown in table No. (2). The table indicates, the numbers and, thereby, the percentage of changes in income smoother firms before and after 2004. It is clear that a significant reduction in the numbers of service smoothers had followed the application of 2004 regulatory disclosure requirements for all the four measures. By contrast, a significant surge in the number of industrial smoothers is noticed after 2004 given the same measures of income. Such results give preliminary predictions that the application of 2004 regulatory disclosure requirements lead for positive results for the service rather than the industrial sector. Unlike industrial firms, such results indicate that income smoothing is positively reduced for service listed firms under the new IASB-based disclosure regulation, thereby, leading to higher quality of reported earnings in the financial statements of service firms. Further analysis was conducted relating to individual firm changes from non-smoothers to smoothers post 2004 as well as from smoothers to non- smoothers. It is clear that service smoothers before 2004 had turned in to non-smoothers by 14, 13, 17, and 16 for gross profit, income from operations, income before tax, and net income after tax respectively after 2004. On the contrary, Industrial non-smoothers before 2004 had turned in to smoothers by 18, 21, 17, and 16 for gross profit, income from operations, income before tax, and net income after tax respectively after 2004. Numbers of industrial smoothers turning into non-smoothers are lower than non-smoothers turning into smoothers after 2004, thereby, giving stronger indication of negative impact made by the IASB-based new regulation on the earnings quality of industrial firms. These preliminary results, present plausible reasoning to further our study to hypotheses testing.

Durbin - Watson Autocorrelation test

Autocorrelation between observations was tested using the D-W test. Such a test usually shows the autocorrelation between observations in large samples with values ranging between (5-4). The range of normal values for this test lies between "1.5 - 2.5". The D-W test indicates a negative autocorrelation if the value is greater than 2.5, and indicates a positive autocorrelation if the value is less than 1.5. Values of the D-W test are displayed in Table No. (3) all of which are within the normal range or close to its limits. Therefore, it could be concluded that autocorrelation does not exist between observations except for very limited autocorrelation in three measure before 2004 (gross profit, income before tax and income after tax for service firms) and three measures after 2004 (income after tax for the service firms and income before tax as well as income after tax for industrial firms).

Hypotheses Testing

Throughout this section, we would analyse and test all hypotheses previously stated for the service and industrial firms regarding the income smoothing behaviour before and after the regulatory disclosure requirements of 2004 and the impact reflected by the changes under such regulation on the Tobin's q ratios for both sectors.

Test The First Null Hypothesis

The first main null hypothesis examines the reflection of applying regulatory disclosure requirements act of 2004 on the income smoothing behaviour of Jordanian listed firms at ASE. The null hypothesis stated as follows:

H01: "There are no statistically significant differences between the income smoothers and non-smoothers firms before and after applying disclosure requirements of 2004."

Testing of the H01 had been conducted by each economic sector as follows:

Industrial Sector

Table No. (3) shows the results of testing the H01 hypothesis using the parametric paired sample t-test and the non-parametric Wilcoxon Signed Ranks tests for industrial firms. The results of both types of tests showed significant values more than the 0.05 levels for all measures of income except for the gross profit measure. Thereby, we would fail to reject the null hypothesis for all measures rather than the gross profit. Hence, we could conclude the existence of statistically insignificant differences between the income smoother and non-smoother industrial firms before and after applying disclosure requirements of 2004 across all measures of income except for the gross profit. Such findings indicate that industrial firms continue to smooth income through measures of income from operations, income before tax and income after tax even after the application of 2004 disclosure requirements.

Service Sector

Table No. (3) shows the results of testing the first null hypothesis for the service sector firms using the parametric paired sample t-test and the non-parametric Wilcoxon Signed Ranks tests. The results of both types of tests showed significant values less than the 0.05 level for all measures of income, thereby, leading to the rejection of the null hypothesis in favour for the alternative hypothesis. Therefore, we could conclude the existence of statistically significant differences between the income smoother and non-smoother service firms before and after applying disclosure requirements of 2004 across all measures of income. These results indicate that the smoothing behaviour of service firms is being significantly installed across all four measures of income post the application of 2004 regulatory disclosure requirement. Though minimized, the income smoothing behaviour of service firms yet continues after 2004.

Testing the Second Null Hypothesis

The above conclusions confirmed that income smoothing behaviour of Jordanian listed firms was impacted and thereby, changed by the proposition of the new regulatory disclosure requirements of 2004. The second hypothesis aims at examining the reflection of "changed income smoothing behaviour post the application of the disclosure requirements of 2004" imposed on the Tobin's q of Jordanian listed firms. The second null hypothesis is formulated as follows:

H02: "There is no statistically significant impact of income smoothing behaviour on the Tobin's q ratio for Jordanian listed firms before and after applying the disclosure requirements of 2004". The second null hypothesis has been tested by comparing the test results of two sub-hypotheses the first which is before 2004 and the second of which is after 2004. Both of the first and second sub-hypotheses, as formulated based on the second null hypothesis H02, had been tested for each economic sector using regression statistical test. A regression test including one independent variable which is income smoothing is conducted to study and analyse observations of the dependent variable (Tobin's q) according to the following stated model:

$$(Tobins\ (q) = a + \beta\ Income\ smoothing)$$

Testing H02 by the Industrial Sector:

The second null hypothesis had been tested for the industrial sector firms by comparing results of the two emerging first and second sub-hypothesis respectively. The first sub-hypothesis for the period of (2001-2003) of industrial firms is tested using the Tobin's q regression test. As appeared on table No. (3), the resulting values of significance for the gross profit and income from operations are both greater than the 5% significance level and lower than 5% of significance for the income before tax and income after tax. While taking into account the normal results of the D-W test for the four measure of income for industrial firms during (2001-2003), we fail to reject the first sub-hypothesis for gross profit and income from operations. However, the results of first sub-hypothesis for income before tax and income after tax would be rejected in favour of the alternative hypothesis. Hence, it could be concluded that, before applying the disclosure requirements of 2004, there was no statistically significant impact of income smoothing behaviour on the Tobin's q ratio between smoothers and non-smoothers of industrial Jordanian listed firms based on the gross profit and income from operations while significant impact exists based on the income before tax and income after tax.

The second sub-hypothesis for the period of (2005-2011) of industrial firms is tested using the same Tobin's q regression test of which the results are stated on table No. (3). As the table shows, the resulting values of significance for all measures of income are greater than the 5% significance level. Considering the normal and close to normal results of D-W test for all the four measures of income for industrial firms during (2005-2011), we fail to reject the second sub-hypothesis. Hence, it could be concluded that, after applying the disclosure requirements of 2004, there is no statistically significant impact of income smoothing behaviour on the Tobin's q ratio between smoothers and non-smoothers of industrial Jordanian listed firms.

Based on the test results of the industrial-based H02 sub-hypotheses pre and post 2004, we could conclude that industrial listed firms practiced income smoothing using gains and losses from secondary "irregular" business activities that helped smooth the income before tax and income after tax which, in turn, significantly impacted Tobin's q ratios as shown with regard to the corresponding significant values before 2004. Therefore, market valuation for industrial firms was significantly impacted by income smoothing before 2004. Results of the previous section showed that industrial firms had smoothed the gross profit and income from operations as well as income before tax and income after tax before 2004; yet, this section proves that only the smoothing of income before tax and income after tax that had significantly impacted Tobins' q ratios. Such result could be logically justified in our perception with the fact that ASE as an emerging market (Al-Khazali, Ding, & Pyun, 2007; Smith, 2007) is dominated with investors who are mainly and naively interested in the bottom lines of income statements. Such investors disregard the impact of income smoothing and other related

earnings management behaviour in their analysis of different parts of income statements. Investors of the ASE market might have very naive and unsophisticated financial analytical qualifications as well as limited knowledge and experience round matters of analysing the impact of income smoothing. However, after the mandating of 2004 regulatory disclosure requirements, income smoothing behaviour of industrial firms through secondary items continued but, the significance of its impact on market valuation was eliminated.

Testing H02 by the Service Sector

The second null hypothesis had been tested for the service sector firms as well by comparing results of the two emerging first and second sub-hypothesis respectively. The first and second sub-hypothesis for the period of (2001-2003) and (2005-2011) for service firms is tested by running the same Tobin's q regression test for which the test results are stated on table No. (3). The resulting values of significance of the first sub-hypothesis during the period of (2001-2003) are indicated based on the four measures of income. Value of significance for income from operations is lower than the 5% significance level but greater than 5% for the gross profit, income before tax and income after tax. While taking into account the normal and close to normal results of the D-W test for all of the four measures of income during (2001-2003), we fail to reject the first sub-hypothesis for all them except the income from operations. Hence, we could conclude that, before applying disclosure requirements of 2004, there was no statistically significant impact of the smoothed gross profit, income before tax and income after tax on the Tobin's q ratios of service Jordanian listed firms while significant impact does exist for the smoothing of income from operations. As the table also indicates, the resulting values of significance for all measures of income are greater than the 5% significance level during the period of (2005-2011). Considering the very high values of significance along with the normal and close to normal results of D-W test for all of the four measures of income for service firms during (2005-2011), we fail to reject the second sub-hypothesis. Hence, it could be concluded that there is no statistically significant impact of income smoothing behaviour of all measures on the Tobin's q ratio of service Jordanian listed firms after applying the disclosure requirements of 2004. Based on the test results of the service-based H02 sub-hypothesis pre and post 2004, we could conclude that service listed firms smoothed income from operations before 2004 which, in turn, impacted its Tobin's q ratio as shown with regard to its' corresponding significant value. Such behaviour significantly impacted market valuation for service firms before 2004. However, after the application of 2004 regulatory disclosure requirements, the smoothing of income from operations for service firms was severely hindered, therefore, eliminating the significance of its impact on firm market valuation.

FINDINGS

Our perception is that the new disclosure requirements of 2004 hold higher quality as a reporting system for the ASE market than did the 1998 ones. We justify our perception with the fact that 2004 disclosure requirements removed the conditions over adopting the IASB-based standards that existed under the 1998 regulatory disclosure requirements as the IASB standards have been long perceived as a set of high quality reporting standards. Under such perception, we expect the reporting quality represented in the quality of reported income figures to increase. Using the Eckle formula (1981) to proxy for the quality of reported income, we expect the change under the new regulation of 2004, whatever it is, to impact the market valuation for listed firms. We have traced the changes of market valuations post 2004 using the Tobin's q formula. The findings of our study record evidence of income smoothing behaviour exercised by listed industrial and service firms on the ASE capital market before

and after the application of 2004 regulatory disclosure requirements. However, when income smoothing is tested by economic sector, there were statistically significant differences of income smoothing as measured by the gross profit of the industrial sector post 2004; while for the industrial sector, there were statistically significant differences of income smoothing based on all of the four measures of income. Unlike the industrial firms, our empirical findings indicate a significant positive impact of applying the 2004 regulatory disclosure requirements on the income smoothing behaviour of service firms. This could indicate that the regulatory disclosure requirements of 2004 is presenting stricter and much more suited terms as a financial reporting system under the ASE environment than does the one of 1998. Service firms, as they are low capital expenditure oriented, could practice income smoothing through revenues and expenses from operations other than those involved with capital expenditure. In the light of evidenced findings of decreased percentages of income smoothers of the service sector have proceeded 2004, it appears that 2004 regulatory disclosure requirements are of higher quality as they have controlled and minimized income smoothing practices through limiting the scope of managerial discretion over items of revenues and expenses from operations which firms normally refer to use it to smooth reported income. It is noteworthy that accumulated practical evidences indicate so far that the 1998 regulatory disclosure requirements was more flexible in application and presented easier terms for the service firms to smooth income under its reporting gap. The current findings record that the 2004 regulatory disclosure requirements, was meant to, and did, bridge a significant portion of the reporting gap that existed under the previous 1998 regulatory disclosure requirements. However, the reporting gap is yet not completely bridged due to the remaining managerial discretion over items related to capital expenditure within the IASB-based GAAP. However, the negative impact of 2004 regulatory disclosure requirements on the income smoothing behaviour of industrial firms, as per the current findings, could be justified by the heavily capitalised nature of industrial firms which would allow them to smooth income anyway, regardless of the quality of adopted regulatory disclosure requirements. Unlike industrial firms, any change in the adopted regulatory disclosure requirements would significantly impact their income smoothing behaviour as it would control smoothing practices through items of operating revenues and expense. Industrial firms could practice income smoothing through either capital expenditures or other operating revenues and expense or a combination of both together. Capital expenditure entails writing down allowances which involve considerable levels of professional and managerial judgment. As seen with the service sector firms after 2004, income smoothing is more under control indicating that 2004 regulatory disclosure requirements are meant to control income smoothing only through operating revenues and expenses. Therefore, both industrial and service firms have very limited flexibility under 2004 regulations to smooth income through operating revenues and expenses leaving the chance only for industrial firms to smooth income using capital expenditures and writing down allowances.

Based on the abovementioned findings, we believe that the regulatory disclosure requirements of 2004 are more suitable for service than the industrial firms. Therefore, Jordanians accounting regulators should reconsider the regulatory disclosure requirements of 2004 for further applicable adjustments in order to be suitable for exercising more control on the income smoothing behaviour of industrial firms, especially with regard to controlling income smoothing through limiting managerial discretion granted to managers over capital expenditure and writing down allowances. A specific part of the adopted IASB-based standards that allows income smoothing through expenses manipulation is regarding the estimation of expenses based on managerial discretionary judgment such as depreciation and amortization of assets. Such a part in IASB-based standards allows the existence of a reporting gap

that needs to be bridged and thereby should be subjected to further adjustments in their conditionality for the adoption of such standards in order to improve the quality of earnings reported by industrial firms also. Moreover, in respect of the Tobin's q ratio of listed firms, the empirical findings indicate a significant impact of smoothing income from operations by service firms on their market valuation before 2004. Such significance is eliminated after 2004 regulatory disclosure requirements as the named regulation minimized income smoothing through limiting managerial discretion over operating revenues and expense. However, findings of Tobin's q for industrial firms before 2004 record significant impact of smoothing income before tax and net income after tax on firm market valuation. Such significance of income smoothing on firm valuation is eliminated after 2004 despite the negative impact of 2004 disclosure regulation on the smoothing behaviour on these two measures. Therefore, we could argue that the smoothing behaviour of industrial firms after 2004 has insignificant impact on firm market valuation. This could be regarded as a further proof of the high reporting quality of IASB standards, and hence, the higher quality of 2004 disclosure regulation as a reporting system for the ASE market.

CONCLUSIONS

This paper studies the impact reflected by enacting the mandated regulatory disclosure requirements Act of 2004on the income smoothing behaviour and firm valuation of publicly listed Jordanian Service and Industrial firms. The regulatory disclosure requirements Act of 2004 which had superseded the regulatory disclosure requirements Act of 1998 transformed the mandatory adoption of IASB-based standards from conditional under the 1998 Act to an unconditional state along with bringing new structural and procedural changes. The regulatory disclosure requirements Act of 1998 announced the mandatory adoption of IASB-based standards conditional upon the compliance of the IASB-based standards with local regulations. A sample of 94 publicly listed Jordanian service and industrial firms at ASE market were investigated and the findings of our study traced significant evidences of income smoothing behaviour of listed firms before and after 2004. We tested the impact of 2004 disclosure regulation on income smoothing behaviour by each economic sector to trace for differences caused by the new regulation. Our findings regarding changes in the income smoothing behaviour post 2004 showed a significant positive impact of the new regulation for service firms compared to a generally negative impact for industrial firms, thereby, proving the suitability of the new regulation as a reporting system for service more than for industrial sector. The increased smoothing behaviour in the industrial sector post 2004 could be justified by the heavily capitalized nature of industrial firms which would enable them to smooth income anyway regardless of the quality of the mandated reporting standards. The current findings lead us to conclude increased quality of reporting under the new regulation which imposed stricter control over opportunistic oriented managerial discretion regarding items of operating revenues and expenses other than those related to writing down allowances. Under such stricter control, income smoothing of service firms and the quality of their financial reporting decreased and increased respectively. Income smoothing had significantly impacted firm's market valuation prior to 2004 as measured by the Tobin's q ratio of listed firms from both sectors. Such significance was eliminated post 2004 which, in turn, represents a further prove of the higher reporting quality under the new IASB-based 2004 regulation. A general increase in the quality of reporting under the 2004 regulatory disclosure requirements have been found in the ASE capital market with proven positive effects.

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Appendix A:
Table No. (1)

Descriptive Statistics

Tobin's q			
	N	Mean	Std. Deviation
Services before	38	.930584474216563	.657146872815921
Services after	38	1.121710357043573	.676907628855422
Industry before	58	.766032241757706	.419094609122550
Industry after	58	1.084943958738195	.730126249809271

Table No. (2)

Sector	**indexes**	**T-test (income smoothing Before and after 2004)**				**Regression tests** $Tobins\ q = \alpha + \beta(income\ smoothing)$					
		Parametric (Paired sample T- test)		**Non parametric (Wilcoxon Signed Ranks Test)**				**Before 2004 (2001-2003)**		**After 2004 (2005-2011)**	
		t- value	**Sig. (2-tailed)**	**z-value**	**Sig. (2-tailed)**			**Siq**	**D-W**	**Siq**	**D-W**
services	Gross profit	3.389	.002	-3.000	.003	**services**	Gross profit	.144	1.336	.203	1.509
	Income from Operations	3.949	.000	-3.357	.001		ıcome from perations	.040	1.523	.592	1.522
	Income before tax	4.969	.000	-3.900	.000		ıcome before tax	.175	1.345	.327	1.536
	ncome after tax	4.969	.000	-3.900	.000		ncome after tax	.175	1.345	.696	1.489
industry	Gross profit	-2.453	.017	-2.353	.019	**industry**	Gross profit	.207	1.992	.261	1.596
	Income from Operations	-1.383	.172	-1.372	.170		ncome from Operations	.264	2.060	.406	1.525
	Income before tax	-.727	.470	-.730	.465		ıcome before tax	.005	2.177	.199	1.487
	ncome after tax	-.554	.582	-.557	.577		ncome after tax	.004	2.124	.199	1.487

Table No. (3)

sector	index	state	requency efore 2004	requency fter 2004	Change (+/-)		Smoothers after [6]2004	Non-Smoothers after [7]2004	o change [8]
					No	%			
ervices 6 firms	Gross profit	Smooth	19	7	-12	-33.33%	2	14	20
		Non smooth	17	29					
	Income from Operations	Smooth	22	10	-12	-33.33%	1	13	22
		Non smooth	14	26					
	ncome before tax	Smooth	22	6	-16	-44.44%	1	17	18
		Non smooth	14	30					
	Income after tax	Smooth	22	7	-15	-41.7%	1	16	19
		Non smooth	14	29					
dustry 58 rms	Gross profit	Smooth	29	40	11	19%	18	7	33
		Non smooth	29	18					
	Income from Operations	Smooth	30	39	9	15.5%	21	13	24
		Non smooth	28	19					
	ncome before tax	Smooth	36	41	5	8.6%	17	12	29
		Non smooth	22	17					
	Income after tax	Smooth	37	41	4	6.8%	16	12	30
		Non smooth	21	17					

[6] Numbers of firms that were classified as non-smoothers before 2004 and converted into smoothers after 2004.
[7] Numbers of firms that were classified as smoothers before 2004 and converted into non-smoothers after 2004.
[8] Number of firms that experienced no change after 2004.