FLUCTUATIONS OF STOCK PRICE AND REVENUE AFTER THE EARLY ADOPTION OF IFRS 15, "REVENUE FROM CONTRACTS WITH CUSTOMERS"

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Abstract. The adoption of International Financial Reporting Standards (IFRS) around the world is gaining popularity and Jordan not being an exception. This adoption brings about improvement in accountability and quality of accounting Information through a uniform set of standards for financial reporting. The objective of this paper is to examine whether the early adoption of IFRS 15 that supersede the International Accounting Standards (IAS) 18 concerning revenue recognition has effected Jordanian companies revenue levels and the value of stock price or not. The paper measures revenue and stock prices pre and post the IFRS 15 implementation. Two hypotheses was developed and tested at five (5) percent level of significance. The findings revealed that there is significance quantitative difference between the arithmetic means for both of revenue and stock price pre and post the standard application. Further, the results of the study provided conclusive evidence that IFRS 15 have impacted on accountability and quality of information that reported in financial statement for Jordanian mining, construction and engineering companies.

Keywords: IFRS 15, IAS 18, revenue, stock prices, volatility, Jordan.

1. Introduction

The main objective for business entities is to generate profit, this motive, however, although this concept have been criticised widely, income is regarded as vital element to business financial performance, and also seen as the essential component for business profitability and sustainability. The treatment of revenues is crucial when recognizing income; and the primary source of revenue is the income that is generated from daily operating activities. Therefore, revenue is one of the most decisive items of financial reports as it often forms the fundamental basis for investment decision-making. The main aim of the standard IAS 18 and IFRS 15 is to give guidance on the revenue recognition and help in the application of the revenue recognition criteria. Revenue recognition has become controversial issue today, hence, the major objectives (among others) when International Accounting Standard Board (IASB) issued the IASB 18 is to overcome any problems associated with the principle of revenue recognition by providing more guidance and clarity to accountants to report reliable and relevant information concerning revenue; however, the standard worked well for more than decade (Knachel, 2016; Bloom and Kamm, 2014; Aladwan and Alsinglawi, 2016).

In order to achieve the convergence project between FASB and IASB to unify the accounting standards, on May, 2014, the FASB and IASB issued their long-awaited converged standard on revenue recognition, IFRS 15; as a replacement of previously applied IAS 18. Almost all entities will be affected to some extent by the significant increase in required disclosures. But the changes extend beyond disclosures, and the effect on entities will vary depending on industry and current accounting practices (IASB, 2014; FASB, 2015; Ernst and Young, 2014). Entities that apply this standard need to consider changes that might be necessary to information technology systems, processes, and internal controls to capture new data and address changes in financial reporting (Beaver et al., 2012; Aladwan, 2018). This new converged standard aims to eliminate the differences and inconsistencies incorporated between US GAAP and IFRS to promote a single set of high-quality globally accepted accounting standards that allows for comparability of firms within an industry and on a global financial market; furthermore, the standard targets to incorporate the changes made to the theoretical basis of IFRS that took place during recent years with the project on the Conceptual Framework (FW) and other important standards.

Most studies on IFRS have concentrated on it as a financial reporting issue. But financial reporting is one aspect of the total impact of IFRS composition. Much more significant is the impact of a set of standards on a companys organization, accountability philosophy, and business structure compliance to the standards, performance management, and internal control and so on (Hale, 2016; AICPA, 2016; Deloitte, 2014; KPMG, 2016). Therefore, the objective of the study is to examine whether the new enacted and implemented IFRS 15 has enhanced the entity financial status in comparison to IAS 18. Further, the study is promoted by the need to bring more insight to such issue by investigating the comprehensive effect of IFRS 15 on both of earnings and company value in emerged country Jordan as that early adopted this standards in some economic sectors. Another contribution to the existing literature that, this study is considered from the earliest studies in the whole region intends to examine the new effect for such standards on companies.

The remaining part of this paper is devoted for the in-depth review of the literature of IAS 18 and the IFRS 15 with proper formulation of the study hypotheses through literature review hypotheses development section followed by the methodology of the study, discussion of results and discussion and the last section for conclusion.

2. Review of literature

2.1 Financial reporting

The (IASB) Framework assured that; the main objective of financial statements is to provide a set of financial statements about entity financial position, performance and changes in financial position that is useful to a wide range of decisions makers (IASB, 2010; IASB, 2015). These financial statements are regarded traditionally as the first source of independent and true communication about the performance of managers (Sloan, 2001; Wagenhofer, 2014). And in order to be able to meet the needs of users, such financial statements must not only comply with the (IFRS), but also be beneficial for decision making (IASB, 2010). Historically, The IFRS/IAS standards consist of a set of international accounting and reporting standards established to provide a clear rules and guidance for the accounting profession. Such rules are the fundamental for accountants to draw up comparable and transparent annual reports and financial statements (Cardozza, 2008; IASB, 2010; Alsinglawi and Aladwan, 2016). Their adoption represents an essential element to the success of accounting and auditing profession (Deloitte, 2016).

Nowadays, the term (IFRS) has both a narrow and a broad meaning (Iasplus, 2010); narrowly, those IFRS refer to the any new numbered series of pronouncements that the IASB is issuing continuously, as distinct from the International Accounting Standards (IASs) series issued by its predecessor. More broadly, IFRSs are regarded as the entire body of International Accounting Standards Board (IASB) pronouncements, including standards and interpretations approved by the IASB and IASs and the Standards Interpretations Committee (SIC) (now replaced with International Financial Reporting Interpretations Committee (IFRIC) interpretations approved by the predecessor International Accounting Standards Committee (Iasplus, 2010).

2.2 IFRS 15 vs. IAS 18

The (IASB) and the US Financial Accounting Standards Board (FASB) (collectively, the Boards) have jointly issued a new revenue standard, IFRS 15 Revenue from Contracts with Customers, that will supersede virtually all revenue recognition requirements in IFRS and US GAAP. Noting several concerns with existing requirements for revenue recognition under both US GAAP and IFRS, the Boards decided to develop a joint revenue standard that would: remove inconsistencies and weaknesses in the current revenue recognition literature; provide a more robust framework for addressing revenue recognition issues; improve comparability of revenue recognition practices across industries, entities within those industries, jurisdictions and capital markets; reduce the complexity of applying revenue recognition requirements by reducing the volume of the relevant standards and interpretations; and provide more useful information to users through new disclosure requirements (Schipper et al., 2009; Prakash and

Sinha, 2012). IFRS 15 Revenue from Contracts with Customers specifies the accounting treatment for all revenue arising from contracts with customers. It applies to all entities that enter into contracts to provide goods or services to their customers (IFRS 15, 2015).

The new standard is mandatorily effective for annual periods beginning on or after January 1, 2018, with earlier application permitted starting on May 1, 2014, and to be applied retrospectively using either a full retrospective approach (subject to certain practical expedients) or a modified retrospective approach. IFRS 15 establishes a comprehensive framework for recognition of revenue from contracts with customers based on a core principle that an entity should recognize revenue representing the transfer of promised goods or services to customers in an amount that reflects the consideration to which the entity expects to be entitled in exchange for those goods or services (IFRS 15, 2015; Cohen et al., 2014). The core principle of IFRS 15 is that an entity shall recognize revenue to depict the transfer of promised goods or services to customers in an amount that reflects the consideration to which the entity expects to be entitled to in exchange for those goods or services (Deloitte, 2014; Dyson, 2015).

IFRS 15 defines revenue somewhat more simply than the existing standard IAS 18, as income arising in the course of an entitys ordinary activities. According to IFRS 15, an entity shall generally recognize revenue when (or as) the entity transfers a promised good or service (i.e. an asset) to a customer. An asset is transferred when (or as) the customer obtains control of that asset; previously, the revenue model depended on whether a contract was covered by IAS 11 or IAS 18 and was based on the type of transaction or event (i.e. whether the entity was performing under a construction contract, sold a good, rendered a service or had income from interest, royalties and dividends (Deloitte, 2014; KPMG, 2016). The amount of revenue recognized is the amount allocated to the satisfied performance obligation. A performance obligation may be satisfied at a point in time (typically for promises to transfer goods to a customer) or over time (typically for promises to transfer services to a customer (Badertscher et al., 2012). For performance obligations satisfied over time, an entity recognizes revenue over time by selecting an appropriate method for measuring its progress towards complete satisfaction of that performance obligation (IFRS 15, 2015; Dyson, 2015).

Altogether, revenue is the gross inflow of economic benefits during the period arising in the course of the ordinary activities of an entity when those inflows result in increases in equity, other than increases relating to contributions from equity participants. The objective of the revenue standard is to provide a single, comprehensive revenue recognition model for all contracts with customers to improve comparability within industries, across industries, and across capital markets. The revenue standard contains principles that an entity will apply to determine the measurement of revenue and timing of when it is recognized. The underlying principle is that an entity will recognize revenue to depict the transfer of goods or services to customers at an amount that the entity expects to be entitled to in exchange for those goods or services.

2.3 Previous literature and hypotheses development

Recent convergence in accounting standards could provide direction and guidance on how business enterprises in a globalized world could achieve the goal of proper record keeping, transparency, uniformity, comparability and enhancing public confidence in financial reporting (McCarthy and McCarthy, 2014). Moreover, the failure for such global convergence according to Altamuro et al (2005) would result in inconsistencies, lack of accountability and transparency, distortion in financial reports, which in turn results into poor financial reporting practices and dissemination of accounting information that is of less value to any particular group of users (Zang, 2012; Aladwan et al., 2018). Revenue is regarded as a type of income that arises in the course of ordinary activities of an entity and is referred to by a variety of different names including sales, fees, interest, dividends and royalties. The primary issue in accounting for revenue is determining when to recognize revenue; and according to IAS 18 and IFRS 15; revenue is recognized when it is probable that future economic benefits will flow to the entity and these benefits can be measured reliably. This definition of revenue caused debate on the exact time and conditions that allow entities to report income; this argument promoted the need for practical guidance on the application of revenue recognition (IFRS 15, 2015).

Most of theoretical literature agreed that revenue is the total of benefits that inflow during a period of time arising from the course of the ordinary activities of an business when those inflows result in increases in equity, other than increases relating to contributions from equity participants (IAS 18). According to Ernst and Young (2014) revenue does not include any gains from the sale of property plant and equipment (PPE) unless the PPE items were leased out under an operating lease - or other fixed assets and net finance income (IAS 18). As a consequence for the changes occurred on the scope of IFRS 15 the amount of revenue that recognized in financial statements is expected to be changed, therefore our first hypothesis is:

H1: There is a significant difference in the mean of revenue for companies pre and post the application of new revenue standard IFRS 15.

There is a consensus among scholars, researchers, analysts and users that financial information have to mirror that business performance reality (Atrill and Mclaney, 2015; Benedict and Elliott, 2011). Thus, the content of financial reports must give the true substance for entity economic status. One of the fundamental requirements of Generally Accepted Accounting Principles (GAAP) is that entities should prepare and disclose financial information that serve the internal and external interested parties of such information (IASB, 2010). So the standards legislators demanded all business entities to publish financial statements about their financial position (statement of financial position), performance (comprehensive income statement), monetary position (cash flow statement), and owners position (changes in owner equity). Moreover, the conceptual framework of accounting stated that the financial statements have to include useful information for the decision making process (IASB, 2010). According to Kenneth (2012) the quality of financial reporting is indispensable to the need of users who requires them for investment and other decision making purposes. Financial reports can only be regarded as useful if it represents the economic substance of an organization in terms of relevance, reliability, comparability and aids interpretation simplicity.

In Jordan, Amman stock exchange (ASE) requires from companies to fully comply with IFRSs, entities whose financial statements do comply with IFRSs are prevented from publishing their financial reports in the market (ASE, 2007). All companies that have publicly traded stocks are mandated to comply with the new standards and they should revise their periodical financial statements to comply with such standards. Duru (2012) assured that, any revisions on financial statements that are published will in turn change the opinion of internal users as well as a wide range of external parties. Likewise, Leuz and Wysocki (2016) also believed that financial statement guide the decision maker behavior.

The pioneer work of Ball and Brown (1968) was always admired as the starting point for all research concerned with the relationship between accounting information and stock price. Their study provided a strong empirical evidence for the relationship between earnings disclosures and stock prices; they pointed that, if entity reported excess earnings this could enable investors to obtain abnormal returns. Their remarkable foundings also suggests that, the financial informations usefulness relies basically on the ability of this information to guide stock price behavior. Several other studies also confirmed this assumed relationship between stock prices value and the accounting information that disclosed through regular financial reports (Safajou et al., 2005; Bohusova and Nerudova, 2015; Chandra and Ro, 2008; Pourheydari et al., 2008; Fosbre et al., 2009). Dechow et al (2010) pointed out that financial statements can take many forms; the best known is the profit or loss account and balance sheet of businesses. Decision makers attention historically approved to be mostly on income from regular operations therefore revenue gain high priority in decision maker mind relative to other accounting disclosed numbers (Chandra and Ro, 2008; Dechow et al., 2010; Srivastava, 2014).

Historically, the annual reports and accounts of companies are produced by management to serve shareholders and other people such as potential investors, tax authorities, banks, regulators, suppliers, customers and employees may also have an interest in knowing that the financial statements are presented fairly, in all material aspects (Chandra and Ro, 2008; Fosbre et al., 2009). Such produced annual reports contain or effected by the amount of revenue reported by the business; when these reports that contain information about revenue or net income are disclosed to market the stock price of entity in market is influenced and volatile depending on the amount reported (Ball and Brown, 1968). Based on previous review of literature our second hypothesis is:

H2: There is a significant difference between the relationship of stock price and revenue of companys pre and post the application of new revenue standard IFRS 15.

3. Methodology

3.1 Sample and method

The population used in this study comprises the listed mining, construction and engineering companies in Amman stock exchange. This sample sector in Jordan is very crucial part of Jordanian economic sector, the mining sector is regarded as the important sector that might be effected by the new standard IFRS 15; on the other hand construction and engineering sectors is also greatly affected by the new standard after IAS 11 on construction is eliminated and these companies are now comply with IFRS 15 concerning revenue. The study data was obtained from company quid and annual reports issued by Amman Stock Exchange (ASE) for the years from 2012 to 2017. The sample consisted of 23 company; companies that do not apply IFRS 15 were excluded from the sample. The final total sample consisted of 138 observations; these observation comprises 69 before the application of the standard and for the years from 2012-2014 and the same 69 after the standard application for the years from 2015-2017.

The methodology of the study follows two steps; firstly a comparison of means for revenue before and after the inclusion of the standard to capture if there is any difference in athematic means. Secondly, a simple regression analysis will be used Ordinary Least square (OLS) in order to examine the relationship between revenue and stock prices pre and post the IFRS 15 application. The proposed model to test this relationship is as follows:

$$P_{it} = \alpha_0 + \alpha_1 REV_{it} + E \tag{1}$$

Where Pit: Stock price Firm i at the end of year t. REVit: Revenue (sales) for firm i during period t. Eit: any other value relevant information of firm i for period t.

3.2 Results and discussion

3.2.1 Descriptive statistics

The descriptive statistics of the studys variables are over viewed in table (1), the average of market value of stocks price before the standard application was 2.78 JD, and this value fluctuated between the minimum value of 0.26 JD and the maximum value of 28.05 JD. On the other hand, the average of stocks price after the standard application was 1.85 JD, and this value fluctuated between a minimum value of 0.17 JD, and the maximum value of 21.00 JD. As appear from these results that the value of stock prices was decreased with about 51%; the possible explanation for this decrease can be attributed to the decrease of revenue for these companies after the application of the standard. As we can observe from the same table that the average of revenue before the standard application was 114,622 JD, and this value fluctuated between the minimum value of 256.77 JD and the maximum value of 938,429 JD; whilst the average of revenue after the standard application was 61,943 JD, and this value fluctuated between a minimum value of 0 JD, and the maximum value of 750,174 JD. The percentage decrease in revenue average after the application of the standard was about 85% ; and the percentage decrease in total revenue was about 25% . These results provides preliminary evidence that the new standard of revenue recognition (IFRS 15) affected negatively the reported revenues by companies, moreover, the new standard as observed from the results caused also a decrease in the stock prices of these companies after the year 2014.

Table 1: Descriptive Statistics of Model Variables

Variables	Minimum	Mean	Maximum	Std. Deviation
P_-befor	0.26	28.05	2.78	4.74
REV_-before_(000)	-256.77	938,429	114,622	164,504
P_-after	0.17	21.00	1.85	3.93
REV_-after_(000)	0	750,174	61,943	155,672
* N= 69				

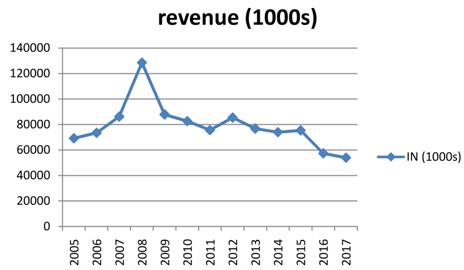

Figure 1: The average revenue for companies from 2005-2017

3.2.2 Empirical results

For further exhibition of the effect of IFRS 15 on both of revenue and stock price we demonstrated this effect using excels charts. As appear from chart 1&2 both of revenue and stock prices was continuously declined for the three years that followed the inclusion of IFRS 15 starting the year 2015.

In order to examine the effect for the inclusion of IFRS 15 on companies a compare of means test was conducted to investigate whether there is a difference

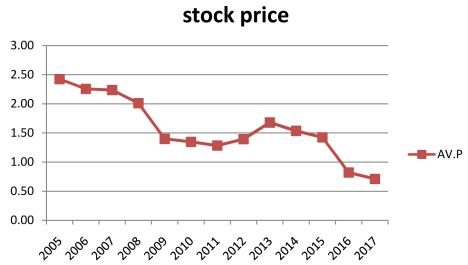

Figure 2: The average stock price of companies from 2005-2017

between the means before and after standard inclusion. But before that we tested if there is a correlation between the years before and after the inclusion of the standard to capture if there any effect for previous years before 2015 on revenue and stock prices after 2015. The results of paired samples correlation appear in table (2). The results of this test show that there is no significant correlation between the two samples before and after the reforms. Therefore we can conclude that the change in companies revenues and stock prices is devoted to the new standard application.

3.2.3 Paired samples correlation

Table 2: the correlation of results before and after IFRS 15

Variables	N	Correlation	Sig.
Pair 1 BEFOR and AFTER	69	0.009	0.916

The second step in compare of means for the new standard effect, we conducted a test of means difference between the both of revenue and stock price pre and post the inclusion of IFRS 15, a paired t-test was employed to capture this effect; and the comparison results between the two means are shown in table (3). In table (3) we can observe that the revenue mean after the standard inclusion was (55,943), while the mean before the standard was applied was (67,622), the change in mean was a decrease with about (-21)%. Similarly, the stocks price mean after the standard inclusion was (2.15) and appears less than that of mean before (2.78), the change in mean was a decrease with about (-29)%. These results prove that the new accounting standard (IFRS 15) that applied starting year 2015 negatively influenced both of revenue and stock prices for the companies under study. Moreover, the results in table (3) for parametric and non-parametric statistical tests that show the means difference for revenue and stock prices showed that, the calculated (t-stat) for both of revenues and stock price was significant; and the P-value (two-tails test) for both of variables was below 5%. Thus we can conclude that, there is a significant difference in the value of revenue and stock prices before and after the new standard inclusion. Also the two related samples test (Wilcoxon) show that, the (Z-stat) for both of revenue and stock prices was 0.000, which is significantly below 5%. Consequently, Jordanian mining, construction and engineering companies t-stat and Z-stat, parametric and non-parametric statistical tests supports the results that we obtained from our previous tests that is, there is a significant difference between the means of revenue and stock prices before and after new standard inclusion.

Table 3: compare of means for revenue & stock prices before and after inclusion of IFRS 15

Variables	**(under IAS 18)**	**(under IFRS 15)**	**change**
Revenue Mean_(000)	67,622	55,943	-21%
Revenue Variance_(000)	27,061	22,233	-22%
Stocks Mean	2.78	2.15	-29%
Observations	69	69	
Def.	68	68	
t-stat (revenue difference)	2.875		
Sig	0.000		
t-stat (stocks difference)	3.495		
Sig	0.000		
2-related-samples test (Wilcoxon)			
Z stat(revenue difference)	-2.785		
Sig	0.000		
Z stat (stock difference)	-4.557		
Sig	0.000		
* the results are sig ($p < 0.05$).			

3.2.4 Regression results

For more exploration to compare of means results, we conducted simple regression test in order to capture the change for the effect IFRS 15 before and after year 2015 on revenue. The results are shown in table (4). We recall our previously mentioned model equation as:

$$P_{it} = \alpha_0 + \alpha_1 REV_{it} + E \tag{2}$$

Our simple regression applied run twice the first run on data from 2012-2014 before the inclusion of IFRS 15, and the second run on data from years 2015-2017 after the application of IFRS15. The results of simple regression for the correlation between revenue (REV) as independent variable and the dependent variable sock price (P) are presented in table (4). As appear in table simple regression results for the effect of revenue on stock price before IFRS 15 show that; the model was fit and statically significant with an F-value of 49.788; Adj R2 was about 51 percent, Coef = 2.08, t-value = 7.056 with sig less than 5 percent. On the other hand the second run of regression show that model also was significantly fit with F-value of 30.365; the Adj R2 was about 39 percent, Coef =1.59, t-value =5.510 with sig less than 5 percent.

Table 4: regression results for revenue & stock prices before and after inclusion of IFRS 15

Ind-variable	**R**	**R2**	**Adj R2**	**Coef**	**t**	**t- sig.**	**F**	**F-sig**
Rev-before	0.721	0.520	0.509	2.08	7.056	0.000	49.788	0.000
Rev-after	0.631	0.398	0.385	1.59	5.510	0.000	30.365	0.000
change	-14%	-30%	-32%	-30%	-28%		-64%	

These results indicate that there is a statically significant effect for revenue on stock price pre and post the IFRS 15 inclusion, but this effect was decreased with about 32% percent as appear in the difference between Adj R2 before and after standard implementation. Another difference appears in the value of coefficients and t-value these two results also was decreased with about 29%. This great decrease in all results of regression indicates that the inclusion of IFRS 15 starting the year 2015 instead of AIS 18 has significant negative effect on revenue level that caused witnessed negative decrease in the stock prices for Jordanian companies. However, these results provide more indication that, in Jordan there is a gradual decrease in realization of revenue following the year 2015 and this decrease can be contributed to IFRS 15, thus, and based on previous results of compare of means test and regression test results the hypotheses of the study 1 & 2 are accepted that is, Jordanian companies revenue was gradually changed after the application of new revenue standard IFRS 15; furthermore, stock prices of Jordanian companies were also greatly negatively affected after IFRS 15 application.

4. Conclusion

This study was an attempt to contribute for accounting literature by examining the effect of the adoption of the new revenue recognition standard IFRS 15 and its economic consequences on both of revenue and stock market price. The study was conducted on a sample of Jordanian companies that highly influenced after the inclusion of the new standard. The study measured revenue and stock prices pre and post IFRS 15 implementation; results showed that there were a significant difference in the value of revenue and stock prices before and after the new standard inclusion. Moreover, both of revenue and stock prices was found negatively decreased after IFRS 15 inclusion. These findings provide supportive evidence to literature that Jordanian market have the ability to capture and reflect any changes that occurs in accounting standards. This study contributes to the knowledge through several aspects. First, it provides new evidence on the use of IFRS 15 in Jordanian context. Hence, our findings can be generalized to for developing countries that have stock exchanges with similar characteristics to more developed countries. Second, this study provides more insight for market value behavior association with revenue recognition principle. Third, higher levels of restrictions on revenue recognition could cause an increase in accounting discretion regarding the different forms of earnings. Finally, this study suggests a new avenue for future research in Jordan to investigate the influence of this standard on other economic sectors.

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