

Evaluations on the Earning Quality of Listed Firms in Jordan

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Abstract *Earnings Quality is a crucial indicator of companies which may have negative earnings surprises and underperform due to high amounts of accruals. Earnings quality is a relative measure and as thus is interpreted relative to some benchmark. Numerous stakeholders including company's managers, stock analysts, investor and other participants in capital market focus on the main figure of financial statements. To measure the earnings quality in context of Jordan this study adopted the methodology of IASB framework and based on five proxies we measured the earnings quality of listed firms in Jordan. The study has been divided into two phases, in the first phase of study we have determined the five proxies of earning quality based on the secondary data collected from Amman stock exchange while in the second phase of study we have measured the earning quality index to rank the firms based upon their earning quality. Results have revealed that in year 2012 Al-Kindi Pharmaceutical Industries Plc is ranked as best performed with the highest earning quality index score of 10.99. In year 2013 Jordan Cement Factories has highest earning quality index score which is 40.09, in 2014 National Steel Industry has highest earning quality index score which is 9.01. Finally, in year 2015 National Steel Industry has highest earning quality index score with value of 48.04. These analysis has indicated that overall earning quality of firms vary over the years. The study concludes with managerial implications and some suggestions for the future research.*

Key words Earning quality, accruals, index, proxies, Jordan

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1. Introduction

Company's managers, stock analysts, investor and other participants in capital market focus on the main figure of financial statements that is net earnings as last and main information that tell about loss and gain about specific firm. This number is calculated and identified on an accrual basis accounting number. Payments that are realized on accrual basis and in the presence of costs may be declared. According to the accrual based accounting approach Income and costs, as well as the determination of cash and earnings, can be used, estimated and forecasted without paying the interest in accounting and accrual accounting in this subject, and to what extent we can trust these numerical figures in measuring firm's earnings quality. Because of the wrong information's, one can take the wrong decision (Walker, 2013). Therefore, determining firms earning quality is highly important because this fact play a vital role while taking decision; lack of information and the fair share of the actions are very important (Dechow and Schrand 2004); Schipper and Vincent, 2003; Dempster, 2008).

The powers of manager's function play vital role in coordination and fulfillment of principles. The use of predicting earnings and estimating it are considered as main factors which can serve as influencing factors toward earning quality (Kent and Routledge, 2009). On the other hand, because of high increase in company information's, it can be expected that it may provide information in a manner which can better reflect the performance of firm as a best and on the other side it can be also possible that some factors such as remaining in the organization, getting rewards from firm and many other factors, the manager represents the condition of the company accidently or on purpose very well (Sales *et al.*, 2015). Therefore, author believes the quality of earning in firm can be affected by accounting principles based on manager's discretion. In simple words we may say that real earning of firm may be differ from the earning reported in company records (Davis *et al.*, 2012). In case if the user of accounting information only focus on accounting

earnings, it is possible that management may be manipulated earnings which may lead toward misunderstanding about firm quality of earnings. Therefore many researchers suggested many different models to determine the firm earning quality.

To answer the question, how and to what level quality of earning have effect decisions related to allocating capital market sources, why and how accounting information matters to investors. Theoretically it can be argued that information risk is a most significant factor which play important role in investor decision making. However, the most of empirical studies are conducted using the data of listed companies of US, which bounds the generalization of findings vis-à-vis contexts outside the US because working environment in each and every country is different. Many researchers focused on the importance of earning quality of companies listed in different countries. In our study we have selected companies of industrial sector listed in Amman Stock exchange Jordan to measure the earning quality of these companies. To best of my knowledge this would be the first study which will determine the earning quality of listed firms in Jordan.

Earning quality is a significant construct in current market scenario of Jordan. In situation while state owned enterprises are going to be privatized by the government of Jordan. Many companies are trying to attract new investors in the country. At current companies are facing pressure to complete their sales targets and managerial expectations. Many organizations are channel suffers, this is one and main form of accruals that significant influence on firm earning quality in context of Jordan. In this situation measuring the quality of earning in companies listed in Jordan is highly significant.

This study will determine the earning quality of companies listed at Amman stock exchange in Jordan. Further it will provide valuable guidelines to companies and investors. On the end of companies if their earning quality is low will suggest them to improve their earning quality to attract more investors and on the other end for investors it would be a valuable guideline through which they can check the quality of earning in firms listed in Jordan.

2. Literature review

2.1. Concept of earning quality

Earning of companies is considered as one of the most important factor that is used to assess the performance of company and further it also help to calculate the value of firm (Francis, 2004). Due to the existence of fundamental limitations in accounting systems, it is most probable that the firm earning that is shown in financial statements may not be compatible with the original earning of firm. Different researchers used firm earning quality in many different ways. Stability in firm earning can be considered as high quality earning of firm. It has been further argued that earning quality is the level morality which represents the earning as same required in earning report. Many peoples have different views about earning quality of firm. The one main reason of these different views may be the different view of scholars those are quoted in different aspects related to this concept. This phenomenon makes earning quality more complex issue in the literature of accounting. In overall review it is very hard to find a unique definition of the concept of earning quality (Sales *et al.*, 2015). According to the most common mechanism available related to concept of earning quality, closeness of current earning of organization with cash flow from operations is recognized as firm earning quality. If the distance of current earning is higher from cash flow of operations it means firm have low earning quality and it have low ability of earning to describe changes in stock returns (Lyimo, 2014). Accrual items indicates the negative relationship with predicting future stock returns therefore authors believe that weak association of earning with future stock returns may be attributed to low quality of earnings (El Moatasem, 2005). On the other hand the closer value of earnings with firm cash flow indicates that firm have less accrual items in financial data this is evident of high earning quality of firm.

There are many different methods are available to measure the earning quality of firm in non-financial sector organizations. In this study we will use three different methods to determine the firm earning quality of listed firms in Amman Stock Exchange Jordan. Our mechanism to measure earning quality will lead in diverse valuations that will work as valuable guidelines for investor, managers and all other stakeholders those are interested to see earning quality of firms listed in Jordan. Most of scholars and practitioner recommend using different methods to assess earning quality of firm before take investment

decisions 'regarding specific firm. Darjezi (2016) argued that the accrual figures play a vital role to measure and assess performance of companies in time series analysis. As we know that future cash flows are highly important figures those are required in assuming and predicting firms future cash flows, the quality of accrual figures and earning are minimized by increasing in prediction error of accrual figures.

Many scholars in accounting used earning quality in different ways and everyone have defined it in different way. According to (Rajan, 2006) the more stable earning is considered as high quality of earning. Penman and Zhang (2002) found that firm earning quality can be considered as firm ability to determine its future earnings based on its current earnings. The earning quality of firm is related to the firm required earning that is reported (Schipper and Vincent, 2003). Firm earning quality is the degree of honesty which represents the firm required earning in its reports. According to (Mikhail *et al.*, 2003) earning quality is the extent through which firm previous earning is related to firm future cash flows.

2.2. Evaluating methods of earning quality

There are many studies available in accounting literature to determine the earning quality but here we discuss some studies from recent past. Penman (2002) studied earning quality in context of listed firms in Indonesia. Sales *et al.*, (2015) studied earning quality and checked its relation with managerial ability and disclosed the role of unsystematic risk factor in measuring firm earning quality. Errors in estimating accruals also play a significant role in determining firm earning quality (Darjezi, 2016). Kent and Routledge (2015) discussed the role of benchmarks in earning management prediction. Darjezi (2016) have evaluated earning quality of public listed companies in Malaysia. Sayrani (2012) have evaluated accrual quality in companies of African countries.

This study has used five main variables as proxies these are most frequently used variable to determine earning quality of firm. These proxies include quality of firm accruals, persistence of firm earning, predictability of earning, smoothness and earnings surprise. These constructs determine firms earning quality from five different aspects (Walker, 2013; Dechow *et al.*, 2010). The accrual based quality will reflect the level through which one can see to what extent working-capital accruals of firm record into last period accruals, current period and upcoming period cash flow from firm operations. A strong association among accruals and cash flow from operations indicate firms' quality of earning as high. Earning persistence refers to the level of earnings volatility of firm. Sustainable, stable and less volatile earning of firm is considered as more valuable for investors (Perotti and Wagenhofer, 2014). Sustainability of earning refers to high earning quality of firm. Earning predictability reveals the degree to which earning of firm are valuable in predicting future earnings. It means that if earnings number of firm repeats itself in future it is considered as high quality of earning. Earnings predictability and earning persistence are significant factors because these factors increase the level of precision in forecasting future earnings.

3. Methodology of research

This study used five main variables as proxies these are most frequently used variable to determine earning quality of firms. These proxies include quality of firm accruals, persistence of firm earning, smoothness, earnings surprise and predictability of earning. These constructs determine firms earning quality from four different aspects (Walker, 2013; Dechow *et al.*, 2010). The accrual based quality will reflect the level through which one can see to what extent working-capital accruals of firm record into last period accruals, current period and upcoming period cash flow from firm operations. A strong association among accruals and cash flow from operations indicate firms' quality of earning as high. Earning persistence refers to the level of earnings volatility of firm. Sustainable, stable and less volatile earning of firm is considered as more valuable for investors (Perotti and Wagenhofer, 2014). Sustainability of earning refers to high earning quality of firm. Earning predictability reveals the degree to which earning of firm are valuable in predicting future earnings. It means that if earnings number of firm repeats itself in future it is considered as high quality of earning. Earnings predictability and earning persistence are significant factors because these factors increase the level of precision in forecasting future earnings.

Accruals quality of firm can be measured as the degree to which firm accruals map into realization of firm cash flow. Literature related to accounting operationalize it as standard deviation of residuals from particular firm regression of accruals of working capital on previous year, the current year and one

upcoming year operational cash flow (Dechow and Dichev, 2002). To measure the accruals quality in context of Jordan this study adopted the methodology from the previous studies (Mikhail 2003; Desai *et al.*, 2006) as given below. The proposed model to determine accruals quality of listed firms in Jordan is as follows.

$$\text{Accruals quality} = \frac{\text{Earnings} - \text{CFO}}{\text{Average Assets}} \quad (1)$$

Where:

Earnings=Earnings before extraordinary items; CFO= Cash Flow from Operations;
 Average assets at specific time.

Sustainability of earnings is commonly referred as firm earning persistence, the study of Miller and Rock (1985) outlined the earning persistence as the change of expected earnings in future due to unexpected earnings at present. Different scholars in accounting and finance measured earning persistence in many different ways but the most commonly used mechanism in accounting literature is given by (Richardson *et al.*, 2005). They argued that earning persistence can be measured as slope coefficient by regressing present earnings on preceding earnings. Therefore author believe and propose the same mechanism to be used to determine earning persistence of listed firm in Jordan.

$$EPS_{i,t} = x_0 + x_1 EPS_{i,t-1} + \sigma_{i,t} \quad (2)$$

Where:

$EPS_{i,t}$ =Earnings per share for firm i at time t. and $\sigma_{i,t}$ = Error term of the equation.

The IASB framework indicates that present information have capability to determine the future values, outcomes and firm financial performance. Peterson (2015) argued that firm past data ability to predict future earnings and measures the firm earning predictability as variation of earnings in firm financial data. In this study we will use measure predictability of earning as square root of estimated error variance using values that we will calculate in previous step earnings persistence by using Equation (2) (Francis *et al.*, 2004).

$$Pred = \sqrt{\sigma_{i,t}} \quad (3)$$

In above equation Pred is basically the earnings predictability of firm *c* at time *t*, it can be calculated as square-root of the error- variance from the equation used to determine earnings persistence (Equation (2)); = the error variance of firm *c* at time *t*.

$$SM = sd\left(\frac{NP}{TAB}\right) / sd\left(\frac{CF}{TAB}\right) \quad (4)$$

Where;

SM=Smoothness, sd= Standard deviation, NP= Net income before extra-ordinary activities

TAB= Total assets at the beginning of the year for firm i in time t.

CF=Cash flow from operation for firm i in time t.

$$\text{Earnings Surprise} = \text{Net operating assets at the begining of the year/Sales} \quad (5)$$

In summery the earning quality is highly important for firm, investor and as well as for the government in context of listed firms of Jordan. Literature highlighted different methods to determine the earning quality of listed firms. To determine the earning quality of listed firm of Jordan we selected five

methods accruals quality, sustainability of earning and earning predictability, smoothness and earning surprise as proxies to determine the earning quality of firm listed in Jordan. We cannot ignore the significance of earning quality because most of the studies in this context indicated the relationship of earning quality with stock return, firm growth, firm profitability, industrial growth, economic growth and many other factors are related to earning quality. But our study is considering determining the earning quality of listed firms in Jordan.

3.1. Sample and selection criteria

This study used the secondary data obtained from the database of Amman Stock Exchange Jordan that is maintained by the Government of the Jordan. In this study, we used the data of four years spanning from 2012 to 2015. We used listed companies of Amman stock exchange, however, in this study we excluded all banking and financing companies. In the next stage, we also excluded the firms without complete information for computing all indicators used in this study; therefore this reduced our sample to 73 companies each year.

4. Results and findings

This study has focused determining the earning quality proxies in first phase of study; these earning quality proxies include accruals quality, earning persistence, earnings surprise, smoothness and earning predictability. In the second phase of study we measured earning quality index based upon the aforesaid earning proxies in context of firms listed in Jordan. In our analysis we used ordering method, the higher value of earning quality index indicate the higher level of earning quality and the lower value of the earning quality index indicate the lower earning quality. Based upon this mechanism we ranked earning quality index on year basis.

Table 1 -4 are used to represent the results on year basis from earning quality index for five earnings quality proxies used in this study. We used the secondary data from year 2012 to year 2015. In this paper we ranked earning quality on year basis using ranking method for the entire sample.

Table1. Evaluation on Earning Quality in Year 2012

Rank	Company Name	Accruals Quality	Earnings Persistence	Smoothness	Earnings Surprise	Earnings Predictability	Earning Quality Index
1	AL-KINDI PHARMACEUTICAL INDUSTRIES PLC	-0.66	-0.24	38.47	17.38	0.00	10.99
2	ARAB COMPANY FOR INVESTMENT PROJECTS	-0.03	-0.06	3.37	24.96	0.00	5.65
3	AL-QARIA FOOD AND VEGETABLE OIL INDUSTRIES CO. P.L.C	0.19	0.25	20.07	0.68	0.50	4.34
4	PREMIER BUSINESS AND PROJECTS CO.LTD	-0.15	-0.55	17.27	0.00	0.00	3.31
5	THE JORDAN WORSTED MILLS	0.04	0.31	2.13	8.17	0.56	2.24
6	NORTHERN CEMENT CO.	0.06	0.08	8.59	1.32	0.29	2.07
7	JORDAN TRADE FAC	0.02	0.09	2.79	7.09	0.29	2.06
8	AKARY FOR INDUSTRIES AND REAL ESTATE INVESTMENTS	0.49	0.31	-1.12	9.22	0.55	1.89
9	INTERNATIONAL SILICA INDUSTRIAL	-0.01	-0.07	1.23	5.99	0.00	1.43
10	THE ARAB POTASH	0.02	2.39	1.32	1.85	1.54	1.43
11	JORDAN ROCK WOOL INDUSTRIES	0.02	2.39	1.32	1.85	1.54	1.43
12	SALAM INTERNATIONL TRANSPORT AND TRADING	-0.03	-0.09	4.61	2.53	0.00	1.40
13	ARAB CENTER FOR PHARM.AND CHEMICALS	-0.04	-0.15	1.86	4.90	0.00	1.31
14	GENERAL MINING CPMPLY PLC	0.05	0.15	4.16	1.59	0.39	1.27
15	JORDAN PHOSPHATE MINES	0.05	1.76	1.83	1.31	1.33	1.26
16	TRUST INTERNATIONAL TRANSPORT	1.39	0.17	-0.21	3.61	0.41	1.07
17	FIRST NATIONAL VEGETABLE OIL INDUSTRIES CO.	-0.16	-0.07	-0.84	6.04	0.00	1.00
18	GENERAL INVESTMENT	0.02	0.20	1.47	2.25	0.45	0.88
19	HAYAT PHARMACEUTICAL INDUSTRIES CO.	0.05	0.18	1.89	1.64	0.42	0.84
20	INVEST AND INTGRTED IND CO. PLC (HOLDING CO)	-0.01	-0.04	-0.86	4.92	0.00	0.80
21	THE ARAB PESTICIDES AND VETERINARY DRUGS MFG. CO.	0.03	0.16	1.86	1.44	0.40	0.78
22	AL-EQBAL INVESTMENT COMPANY LTD	-0.06	1.05	0.90	0.84	1.02	0.75
23	JORDAN NATIONAL SHIPPING LINES	-0.04	0.20	0.66	2.35	0.45	0.72
24	JORDAN INDUSTRIAL RESOURCES	0.00	0.03	1.43	1.96	0.16	0.72
25	NATIONAL STEEL INDUSTRY	0.01	0.05	1.36	1.93	0.21	0.71
26	INTERMEDIATE PETROCHEMICALS INDUSTRIES CO. LTD.	-0.01	0.02	0.69	2.42	0.13	0.65
27	AL-EKBAL PRINTING AND PACKAGING	0.01	0.06	1.60	1.10	0.25	0.61
28	ARAB WEAVERS UNION COMPANY P.L.C	-0.05	0.03	0.39	1.96	0.18	0.50
29	SINIORA FOOD INDUSTRIES PLC	-0.05	-0.23	0.67	1.17	0.48	0.50
30	THE JORDAN CEMENT FACTORIES	0.02	-0.35	0.94	1.86	0.00	0.49
31	ASSAS FOR CONCRETE PRODUCTS CO. LTD	-0.09	-0.03	-0.33	2.81	0.00	0.47
32	THE INDUSTRIAL COMMERCIAL AND AGRICULTURAL	0.00	0.13	0.99	0.88	0.36	0.47

Rank	Company Name	Accruals Quality	Earnings Persistence	Smoothness	Earnings Surprise	Earnings Predictability	Earning Quality Index
33	NATIONAL CHLORINE INDUSTRIES	-0.04	0.06	0.66	1.42	0.24	0.47
34	UNITED CABLE INDUSTRIES	-0.04	0.01	0.09	2.15	0.07	0.46
35	JORDAN CHEMICAL INDUSTRIES	-0.05	0.02	0.12	1.84	0.16	0.42
36	JORDAN MARBLE COMPANY P.L.C.	-0.17	0.02	0.05	1.98	-0.12	0.40
37	READY MIX CRTE AND CONST SUPPLIES	-0.08	0.05	0.27	1.49	0.22	0.39
38	TRAVERTINE COMPANY LTD	0.02	0.01	-0.94	2.75	0.10	0.38
39	JORDAN CLOTHING COMPANY P.L.C	0.11	-0.02	0.10	1.67	0.00	0.37
40	JORDAN POULTRY PROCESSING AND MARKETING	-0.09	0.01	0.04	1.75	0.11	0.36
41	COMPREHENSIVE MULTIPLE PROJECT COMPANY	0.02	0.01	-0.31	2.00	0.10	0.36
42	SHEBA METAL CASTING	0.05	0.01	-0.17	1.82	0.10	0.36
43	EL-ZAY READY WEAR MANUFACTURING	-0.04	0.02	0.24	1.38	0.14	0.35
44	JORDAN DAIRY	-0.08	0.16	0.48	0.70	0.40	0.33
45	ARAB ALUMINIUM INDUSTRY /ARAL	-0.18	0.08	0.18	1.19	0.29	0.31
46	MIDDLE EAST PHARMA. AND CHMICAL IND. AND MED APPLIANC	-0.06	-0.10	-1.54	3.22	0.00	0.30
47	DAR AL DAWA DEVELOPMENT AND INVESTMENT	-0.19	-0.14	-0.27	2.02	0.00	0.28
48	PEARL- SANITARY PAPER CONVERTING	-0.07	0.27	0.69	0.00	0.52	0.28
49	THE JORDANIAN PHARMACEUTICAL MANUFACTURING	-0.06	-0.08	-0.44	1.93	0.00	0.27
50	THE ARAB INTERNATIONAL FOOD FACTORIES	-0.01	0.12	0.82	0.00	0.34	0.25
51	JORDAN VEGETABLE OIL INDUSTRIES	-0.08	0.01	0.04	1.14	0.09	0.24
52	UNITED IRON AND STEEL MANUFACTURING CO. P.L.C	-0.08	0.03	0.24	0.81	0.18	0.23
53	NATIONAL OIL AND IELECTRICY PRON FROM OIL SHALE CO	-0.01	-0.03	1.22	0.00	0.00	0.23
54	JORDAN STEEL	0.09	0.00	-0.02	0.94	0.03	0.21
55	RUM ALADDIN INDUSTRIES	-0.04	-0.08	-6.55	7.43	0.00	0.15
56	CENTURY INVESTMENT GROUP	-0.05	0.06	0.46	0.00	0.25	0.15
57	UNIVERSAL MODERN INDUSTRIES	-0.29	0.06	0.15	0.54	0.25	0.14
58	NATIONAL POULTRY	0.04	0.06	-0.72	1.02	0.23	0.13
59	NATIONAL CABLE AND WIRE MANUFACTURING	-0.21	-0.11	-0.47	1.33	0.00	0.11
60	UNION TOBACCO AND CIGARETTE INDUSTRIES	0.08	0.22	-1.73	1.49	0.47	0.11
61	MIDDLE EAST SPECIALIZED CABLES CO	-0.43	-0.16	-0.41	1.40	0.00	0.08
62	PHILADELPHIA PHARMACEUTICALS	-0.21	-0.18	-2.25	2.91	0.00	0.06
63	AFIA INTERNATIONAL COMPANY - JORDAN	0.18	0.02	-0.29	0.00	0.13	0.01
64	THE JORDAN PIPES MANUFACTURING	0.01	0.02	-2.39	1.73	0.13	-0.10
65	ARABIAN STEEL PIPES MANUFACTURING	0.13	0.22	-3.39	1.52	0.47	-0.21
66	ARAB ELECTRICAL INDUSTRIES	0.01	0.01	-2.70	1.52	0.08	-0.22
67	UNIVERSAL CHEMICAL INDUSTRIES	-0.18	-0.22	-3.77	2.13	0.00	-0.41
68	JORDAN PAPER AND CARDBOARD FACTORIES	-0.07	-0.13	-4.69	2.45	0.00	-0.49
69	NUTRI DAR	-0.60	-0.64	-3.47	1.08	0.00	-0.73
70	AL-QUDS READY MIX	-0.33	-0.20	-5.72	1.27	0.00	-1.00
71	JORDAN WOOD INDUSTRIES / JWICO	-0.04	-0.12	-8.21	1.56	0.00	-1.36
72	NATIONAL ALUMINIUM INDUSTRIAL	0.07	0.09	-13.49	1.09	0.31	-2.39
73	JORDAN CERAMIC INDUSTRIES	-0.31	-0.27	-18.63	4.67	0.00	-2.91

Results from the analysis of year 2012 has revealed that the AL-KINDI PHARMACEUTICAL INDUSTRIES PLC has highest earning quality index score which is 10.99, ARAB COMPANY FOR INVESTMENT PROJECTS is ranked as second with earning quality index value of 5.65, AL-QARIA FOOD and VEGETABLE OIL INDUSTRIES CO. P.L.C ranked as third with earning quality index value of 4.34 and PREMIER BUSINESS AND PROJECTS CO.LTD is ranked at 4th with index value of 3.31 while rest of the companies don't have earning quality score more than 3. All of the remaining companies have earning quality score between 2.24 and -2.91. Ten companies including THE JORDAN PIPES MANUFACTURING, ARABIAN STEEL PIPES MANUFACTURING, ARAB ELECTRICAL INDUSTRIES, UNIVERSAL CHEMICAL INDUSTRIES, JORDAN PAPER and CARDBOARD FACTORIES, NUTRI DAR, AL-QUDS READY MIX, JORDAN WOOD INDUSTRIES/JWICO, NATIONAL ALUMINIUM INDUSTRIAL and JORDAN CERAMIC INDUSTRIES have negative value of earning quality index score. With perspective of accruals quality the TRUST INTERNATIONAL TRANSPORT has good score with value of 1.39 while AL-KINDI PHARMACEUTICAL INDUSTRIES PLC has the worst score of accruals quality with negative value of -0.66. For earning persistence the ARAB POTASH has highest values of 2.39 while NUTRI DAR has a worst situation having score of -0.64. AL-KINDI PHARMACEUTICAL INDUSTRIES PLC has highest score of smoothness with value of 38.47 while JORDAN CERAMIC INDUSTRIES has lowest value having -18.63 score. ARAB COMPANY FOR INVESTMENT PROJECTS has highest score in earning surprise with value of 24.96 while AFIA INTERNATIONAL COMPANY – JORDAN has lowest score with value of 0.00. For earning predictability score THE ARAB POTASH has highest value with score of 1.54 while NATIONAL OIL AND IELECTRICY PRON FROM OIL SHALE COMPANY has lowest score of 0.00. So as a result the AL-KINDI PHARMACEUTICAL INDUSTRIES PLC has a best performance while JORDAN CERAMIC INDUSTRIES is considered as a worst performer regarding all proxies. The final ranking has been done by using the five proxies including Accruals quality Earnings Persistence, smoothness, earning surprise and Earnings Predictability.

Table 2. Evaluation on Earning Quality in Year 2013

Rank	Company Name	Accruals Quality	Earnings Persistence	Smoothness	Earnings Surprise	Earnings Predictability	Earnings Quality Index
1	THE JORDAN CEMENT FACTORIES	-0.14	-0.46	199.01	2.05	0.00	40.09
2	FIRST NATIONAL VEGETABLE OIL INDUSTRIES CO.	-0.08	-0.08	7.91	68.07	0.00	15.16
3	JORDAN CERAMIC INDUSTRIES	-0.18	-0.29	23.30	19.24	0.00	8.41
4	ARAB COMPANY FOR INVESTMENT PROJECTS	-0.21	-0.04	-0.23	31.11	0.00	6.13
5	RUM ALADDIN INDUSTRIES	0.04	0.08	-11.48	35.79	0.28	4.94
6	NATIONAL STEEL INDUSTRY	-0.51	0.17	0.15	11.39	0.42	2.32
7	THE JORDAN WORSTED MILLS	0.02	0.26	1.56	8.05	0.51	2.08
8	INTERNATIONAL SILICA INDUSTRIAL	-0.07	-0.08	5.84	4.51	0.00	2.04
9	JORDAN TRADE FAC	0.03	0.10	2.76	5.25	0.32	1.69
10	GENERAL MINING CPMPANY PLC	-0.23	-0.43	4.61	4.04	0.00	1.60
11	UNION TOBACCO and CIGARETTE INDUSTRIES	0.03	0.23	4.23	1.79	0.48	1.35
12	ARAB CENTER FOR PHARM.and CHEMICALS	-0.17	-0.17	-1.76	8.79	0.00	1.34
13	SHEBA METAL CASTING	-0.21	-0.32	3.57	3.13	0.00	1.23
14	JORDAN CHEMICAL INDUSTRIES	0.02	0.17	3.59	1.62	0.41	1.16
15	INVEST and INTGRTED IND CO. PLC (HOLDING CO)	0.00	-0.02	0.70	4.86	0.00	1.11
16	THE ARAB POTASH	-0.05	1.57	0.80	1.93	1.25	1.10
17	JORDAN ROCK WOOL INDUSTRIES	-0.05	1.57	0.80	1.93	1.25	1.10
18	AL-EQBAL INVESTMENT COMPANY LTD	0.00	1.12	1.08	0.99	1.06	0.85
19	UNIVERSAL CHEMICAL INDUSTRIES	-0.15	-0.27	3.66	0.96	0.00	0.84
20	ARAB ALUMINIUM INDUSTRY /ARAL	0.02	0.11	2.35	1.35	0.33	0.83
21	SALAM INTERNATIONAL TRANSPORT and TRADING	-0.06	0.00	-0.12	4.19	0.02	0.81
22	GENERAL INVESTMENT	-0.05	0.15	0.65	2.88	0.39	0.81
23	SINIORA FOOD INDUSTRIES PLC	0.03	0.27	2.11	1.02	0.52	0.79
24	JORDAN NATIONAL SHIPPING LINES	-0.02	0.08	0.59	2.98	0.28	0.78
25	MIDDLE EAST SPECIALIZED CABLES CO	-0.03	-0.08	2.05	1.29	0.00	0.65
26	UNIVERSAL MODERN INDUSTRIES	0.02	0.08	2.20	0.62	0.29	0.64
27	TRAVERTINE COMPANY LTD	0.00	0.13	1.04	1.67	0.36	0.64
28	HAYAT PHARMACEUTICAL INDUSTRIES CO.	-0.08	0.21	0.75	1.51	0.46	0.57
29	JORDAN PHOSPHATE MINES	-0.01	0.02	0.67	1.94	0.14	0.55
30	PEARL- SANITARY PAPER CONVERTING	0.02	0.14	2.15	0.00	0.37	0.53
31	ARABIAN STEEL PIPES MANUFACTURING	-0.07	0.10	0.44	1.89	0.31	0.53
32	JORDAN INDUSTRIAL RESOURCES	-0.06	0.04	0.34	2.12	0.19	0.52
33	NORTHERN CEMENT CO.	-0.05	0.11	0.65	1.42	0.33	0.49
34	ARAB ELECTRICAL INDUSTRIES	0.00	0.02	1.01	1.26	0.14	0.48
35	ASSAS FOR CONCRETE PRODUCTS CO. LTD	-0.08	0.01	0.09	2.20	0.10	0.46
36	NATIONAL POULTRY	-0.03	0.16	0.68	1.06	0.40	0.45
37	UNITED CABLE INDUSTRIES	-0.07	0.03	0.23	1.88	0.16	0.44
38	READY MIX CRTE AND CONST SUPPLIES	-0.08	0.08	0.38	1.47	0.29	0.43
39	JORDAN DAIRY	-0.04	0.23	0.76	0.66	0.48	0.42
40	COMPREHENSIVE MULTIPLE PROJECT COMPANY	0.04	-0.01	0.07	1.97	0.00	0.41
41	THE JORDAN PIPES MANUFACTURING	-0.07	0.04	0.26	1.61	0.21	0.41
42	MIDDLE EAST PHARMA. and CHMICAL IND. and MED APPLIANC	-0.07	-0.04	-0.31	2.47	0.00	0.41
43	INTERMEDIATE PETROCHEMICALS INDUSTRIES CO. LTD.	0.02	0.01	-0.55	2.43	0.12	0.41
44	NUTRI DAR	0.00	-0.26	0.98	1.28	0.00	0.40
45	JORDAN MARBLE COMPANY P.L.C.	0.03	0.00	-0.08	1.97	0.07	0.40
46	THE JORDANIAN PHARMACEUTICAL MANUFACTURING	-0.09	-0.09	-0.45	2.50	0.00	0.38
47	EL-ZAY READY WEAR MANUFACTURING	-0.01	0.00	0.19	1.54	0.07	0.36
48	JORDAN POULTRY PROCESSING and MARKETING	0.05	0.01	-0.06	1.68	0.08	0.35
49	THE ARAB INTERNATIONAL FOOD FACTORIES	0.01	0.13	1.26	0.00	0.36	0.35
50	AL-QUDS READY MIX	0.17	-0.01	0.08	1.51	0.00	0.35
51	NATIONAL CABLE and WIRE MANUFACTURING	0.02	-0.01	0.21	1.52	0.00	0.35
52	AL-QARIA FOOD and VEGETABLE OIL INDUSTRIES CO. P.L.C	0.01	-0.02	1.38	0.38	0.00	0.35
53	AL-EKBAL PRINTING AND PACKAGING	-0.08	0.07	0.36	0.95	0.27	0.31
54	JORDAN VEGETABLE OIL INDUSTRIES	-0.23	0.10	0.21	1.17	0.31	0.31
55	UNITED IRON and STEEL MANUFACTURING CO. P.L.C	0.02	0.00	-0.14	1.42	0.06	0.27
56	JORDAN STEEL	-0.07	0.01	0.05	0.88	0.08	0.19
57	NATIONAL CHLORINE INDUSTRIES	-0.06	-0.03	-0.41	1.44	0.00	0.19
58	NATIONAL OIL AND ELECTRICITY PRON FROM OIL SHALE CO	0.02	-0.05	0.85	0.00	0.00	0.16
59	JORDAN PAPER and CARDBOARD FACTORIES	-0.20	-0.22	-1.19	2.40	0.00	0.16
60	THE INDUSTRIAL COMMERCIAL and AGRICULTURAL	0.11	0.13	-1.05	1.17	0.36	0.14
61	JORDAN CLOTHING COMPANY P.L.C	-0.21	-0.13	-0.75	1.77	0.00	0.14
62	AKARY FOR INDUSTRIES AND REAL ESTATE INVESTMENTS	-0.18	0.03	0.15	0.00	0.16	0.03
63	AFIA INTERNATIONAL COMPANY - JORDAN	0.24	0.01	-0.23	0.00	0.11	0.02
64	DAR AL DAWA DEVELOPMENT and INVESTMENT	0.06	0.19	-2.64	2.05	0.44	0.02
65	AL-KINDI PHARMACEUTICAL INDUSTRIES PLC	0.00	0.00	0.00	0.00	0.00	0.00
66	CENTURY INVESTMENT GROUP	0.22	0.15	-0.83	0.00	0.38	-0.02
67	NATIONAL ALUMINIUM INDUSTRIAL	0.08	0.08	-1.78	1.24	0.29	-0.02
68	ARAB WEAVERS UNION COMPANY P.L.C	0.01	0.01	-3.31	1.89	0.09	-0.26
69	PREMIER BUSINESS AND PROJECTS CO.LTD	0.01	0.03	-2.42	0.00	0.16	-0.45
70	JORDAN WOOD INDUSTRIES / JWICO	-0.08	-0.21	-5.02	1.42	0.00	-0.78
71	PHILADELPHIA PHARMACEEUTICALS	0.15	0.22	-15.38	1.06	0.47	-2.70
72	THE ARAB PESTICIDES and VETERINARY DRUGS MFG. CO.	0.09	0.20	-22.20	1.40	0.44	-4.01
73	TRUST INTERNATIONAL TRANSPORT	-0.34	-0.18	-59.84	0.00	0.00	-12.07

Results from the analysis of year 2013 has revealed that the JORDAN CEMENT FACTORIES has highest earning quality index score which is 40.09, FIRST NATIONAL VEGETABLE OIL INDUSTRIES COMPANY is ranked second with earning quality index value of 15.16, JORDAN CERAMIC INDUSTRIES ranked as third with earning quality index value of 8.41 and ARAB COMPANY FOR INVESTMENT PROJECTS is ranked at 4th with index value of 6.13 while rest of the companies don't have earning quality score more than 5. All of the remaining companies have earning quality score between 4.94 and -12.07. Eight companies including CENTURY INVESTMENT GROUP, NATIONAL ALUMINIUM INDUSTRIAL, ARAB WEAVERS UNION COMPANY P.L.C, PREMIER BUSINESS AND PROJECTS CO.LTD, JORDAN WOOD INDUSTRIES / JWICO, PHILADELPHIA PHARMACEUTICALS, THE ARAB PESTICIDES and VETERINARY DRUGS MFG. CO. and TRUST INTERNATIONAL TRANSPORT have negative value of earning quality index score. With perspective of accruals quality the AFIA INTERNATIONAL COMPANY - JORDAN has good score with value of 0.24 while NATIONAL STEEL INDUSTRY has the worst score of accruals quality with negative value of -0.51. For earning persistence the ARAB POTASH has highest values of 1.57 while THE JORDAN CEMENT FACTORIES has a worst situation having score of -0.46. THE JORDAN CEMENT FACTORIES has highest score of smoothness with value of 199.01 while TRUST INTERNATIONAL TRANSPORT has lowest value having -64.84 score. FIRST NATIONAL VEGETABLE OIL INDUSTRIES COMPANY has highest score in earning surprise with value of 68.07 while TRUST INTERNATIONAL TRANSPORT has lowest score with value of 0.00. For earning predictability score THE ARAB POTASH has highest value with score of 1.25 while TRUST INTERNATIONAL TRANSPORT has lowest score of 0.00. So as a result the JORDAN CEMENT FACTORIES has a best performance while TRUST INTERNATIONAL TRANSPORT is considered as a worst performer regarding all proxies. The final ranking has been done by using the five proxies including Accruals quality Earnings Persistence, smoothness, earning surprise and Earnings Predictability.

Table 3. Evaluation on Earning Quality in Year 2014

Rank	Company Name	Accruals Quality	Earnings Persistence	Smoothness	Earnings Surprise	Earnings Predictability	Earnings Quality Index
1	NATIONAL STEEL INDUSTRY	0.02	0.20	-0.38	44.76	0.45	9.01
2	NATIONAL ALUMINIUM INDUSTRIAL	0.04	0.08	35.17	1.36	0.29	7.39
3	ARAB COMPANY FOR INVESTMENT PROJECTS	-0.01	-0.03	1.93	33.45	0.00	7.07
4	NORTHERN CEMENT CO.	0.18	0.34	26.36	1.31	0.58	5.75
5	RUM ALADDIN INDUSTRIES	0.00	-0.13	0.93	18.72	0.00	3.91
6	ARAB CENTER FOR PHARM.and CHEMICALS	-0.08	-0.22	2.49	10.18	0.00	2.47
7	THE JORDAN WORSTED MILLS	0.02	0.27	1.71	9.51	0.52	2.41
8	SALAM INTERNATIONL TRANSPORT and TRADING	-0.07	-0.09	-1.07	8.22	0.00	1.40
9	PHILADELPHIA PHARMACEUTICALS	0.28	1.01	3.89	0.76	1.00	1.39
10	GENERAL MINING CPMPANY PLC	0.08	-0.25	0.70	6.18	0.00	1.34
11	JORDAN TRADE FAC	0.00	0.09	1.23	4.96	0.30	1.32
12	INTERNATIONAL SILICA INDUSTRIAL	0.01	-0.13	0.93	5.49	0.00	1.26
13	GENERAL INVESTMENT	0.03	0.20	2.12	2.88	0.44	1.13
14	THE ARAB POTASH	-0.06	1.20	0.71	1.77	1.09	0.94
15	JORDAN ROCK WOOL INDUSTRIES	-0.06	1.20	0.71	1.77	1.09	0.94
16	JORDAN DAIRY	0.05	0.29	2.55	0.68	0.54	0.82
17	AL-EQBAL INVESTMENT COMPANY LTD	-0.05	1.06	0.90	0.94	1.03	0.78
18	HAYAT PHARMACEUTICAL INDUSTRIES CO.	0.03	0.25	1.39	1.55	0.50	0.74
19	JORDAN NATIONAL SHIPPING LINES	-0.02	0.08	0.73	2.41	0.28	0.70
20	INVEST and INTGRTE IND CO. PLC (HOLDING CO)	-0.07	-0.04	-0.40	4.00	0.00	0.70
21	DAR AL DAWA DEVELOPMENT and INVESTMENT	0.00	0.24	1.06	1.45	0.49	0.65
22	ARABIAN STEEL PIPES MANUFACTURING	-0.02	0.09	0.86	1.77	0.30	0.60
23	SINIORA FOOD INDUSTRIES PLC	0.00	0.36	1.06	0.96	0.60	0.60
24	INTERMEDIATE PETROCHEMICALS INDUSTRIES CO. LTD.	-0.06	-0.01	-0.10	3.03	0.00	0.57
25	AKARY FOR INDUSTRIES AND REAL ESTATE INVESTMENTS	-0.11	-0.11	3.04	0.00	0.00	0.57
26	JORDAN INDUSTRIAL RESOURCES	-0.10	-0.01	-0.05	2.99	0.00	0.57
27	JORDAN PHOSPHATE MINES	-0.04	0.26	0.29	1.64	0.51	0.53
28	AL-EKBAL PRINTING AND PACKAGING	0.00	0.08	1.26	0.99	0.29	0.52
29	READY MIX CRTE AND CONST SUPPLIES	-0.02	0.14	0.81	1.26	0.37	0.51
30	JORDAN PAPER and CARDBOARD FACTORIES	-0.06	0.01	0.08	2.42	0.10	0.51
31	SHEBA METAL CASTING	0.07	0.01	-0.15	2.50	0.10	0.51
32	NATIONAL CHLORINE INDUSTRIES	-0.04	0.00	0.05	2.43	0.06	0.50
33	ARAB ALUMINIUM INDUSTRY /ARAL	-0.03	0.13	0.81	1.21	0.36	0.50
34	THE ARAB PESTICIDES and VETERINARY DRUGS MFG. CO.	-0.09	0.15	0.50	1.38	0.39	0.46
35	MIDDLE EAST PHARMA. and CHMICAL IND. and MED APPLIANC	-0.35	-0.23	-0.45	3.22	0.00	0.44
36	UNITED IRON and STEEL MANUFACTURING CO. P.L.C	0.00	-0.17	0.98	1.29	0.00	0.42
37	NATIONAL POULTRY	-0.09	0.25	0.50	0.92	0.50	0.42

Rank	Company Name	Accruals Quality	Earnings Persistence	Smoothness	Earnings Surprise	Earnings Predictability	Earnings Quality Index
38	ARAB ELECTRICAL INDUSTRIES	0.08	-0.03	0.20	1.78	0.00	0.41
39	JORDAN CHEMICAL INDUSTRIES	-0.07	0.04	0.14	1.65	0.21	0.39
40	JORDAN VEGETABLE OIL INDUSTRIES	-0.12	0.12	0.48	1.12	0.34	0.39
41	UNITED CABLE INDUSTRIES	-0.03	0.00	0.03	1.90	0.03	0.39
42	JORDAN POULTRY PROCESSING and MARKETING	-0.11	0.02	0.07	1.74	0.14	0.37
43	PREMIER BUSINESS AND PROJECTS CO.LTD	-0.07	0.26	0.42	0.73	0.51	0.37
44	AL-QUDS READY MIX	-0.03	0.02	0.44	1.27	0.13	0.36
45	THE JORDAN CEMENT FACTORIES	-0.08	0.02	0.07	1.66	0.13	0.36
46	ARAB WEAVERS UNION COMPANY P.L.C	-0.04	0.00	0.12	1.71	0.00	0.36
47	THE JORDAN PIPES MANUFACTURING	0.09	-0.03	0.12	1.59	0.00	0.35
48	THE ARAB INTERNATIONAL FOOD FACTORIES	0.00	0.20	1.04	0.00	0.44	0.33
49	JORDAN WOOD INDUSTRIES / JWICO	-0.04	0.02	0.17	1.37	0.14	0.33
50	THE INDUSTRIAL COMMERCIAL and AGRICULTURAL	-0.11	0.07	0.28	1.14	0.27	0.33
51	JORDAN MARBLE COMPANY P.L.C.	-0.10	0.01	0.11	1.46	0.11	0.32
52	NATIONAL CABLE and WIRE MANUFACTURING	-0.08	-0.01	-0.09	1.78	0.00	0.32
53	UNION TOBACCO and CIGARETTE INDUSTRIES	-0.15	0.00	0.00	1.71	0.03	0.32
54	AL-QARIA FOOD and VEGETABLE OIL INDUSTRIES CO. P.L.C	0.07	-0.05	0.68	0.66	0.00	0.27
55	NUTRI DAR	0.15	0.02	-0.08	1.02	0.13	0.25
56	ASSAS FOR CONCRETE PRODUCTS CO. LTD	-0.04	-0.03	-1.42	2.69	0.00	0.24
57	COMPREHENSIVE MULTIPLE PROJECT COMPANY	-0.06	-0.07	-0.95	1.94	0.00	0.17
58	NATIONAL OIL AND ELECTRICITY FROM OIL SHALE CO	0.03	-0.06	0.86	0.00	0.00	0.16
59	AL-KINDI PHARMACEUTICAL INDUSTRIES PLC	0.05	-0.01	0.72	0.00	0.00	0.15
60	AFIA INTERNATIONAL COMPANY - JORDAN	-0.02	0.00	0.57	0.00	0.07	0.12
61	MIDDLE EAST SPECIALIZED CABLES CO	-0.27	-0.12	-0.65	1.43	0.00	0.08
62	JORDAN STEEL	-0.13	-0.08	-0.37	0.73	0.00	0.03
63	EL-ZAY READY WEAR MANUFACTURING	-0.07	-0.06	-1.09	1.35	0.00	0.03
64	FIRST NATIONAL VEGETABLE OIL INDUSTRIES CO.	0.00	0.00	0.00	0.00	0.00	0.00
65	TRAVERTINE COMPANY LTD	-0.09	-0.08	-2.27	2.36	0.00	-0.01
66	PEARL- SANITARY PAPER CONVERTING	0.08	0.09	-0.71	0.00	0.30	-0.05
67	UNIVERSAL CHEMICAL INDUSTRIES	-0.16	-0.12	-1.53	1.35	0.00	-0.09
68	JORDAN CLOTHING COMPANY P.L.C	-0.10	-0.09	-2.81	2.24	0.00	-0.15
69	THE JORDANIAN PHARMACEUTICAL MANUFACTURING	-0.17	-0.35	-2.65	1.96	0.00	-0.24
70	TRUST INTERNATIONAL TRANSPORT	-0.54	-0.13	-0.81	0.00	0.00	-0.30
71	UNIVERSAL MODERN INDUSTRIES	0.10	0.16	-5.20	0.65	0.40	-0.78
72	JORDAN CERAMIC INDUSTRIES	-1.25	-0.61	-3.49	0.00	0.00	-1.07
73	CENTURY INVESTMENT GROUP	0.14	0.19	-43.08	0.00	0.44	-8.46

Results from the analysis of year 2014 has revealed that the NATIONAL STEEL INDUSTRY has highest earning quality index score which is 9.01, NATIONAL ALUMINIUM INDUSTRIAL is ranked second with earning quality index value of 7.39, ARAB COMPANY FOR INVESTMENT PROJECTS ranked as third with earning quality index value of 7.07 and NORTHERN CEMENT COMPANY is ranked at 4th with index value of 5.75 while rest of the companies don't have earning quality score more than 5. All of the remaining companies have earning quality score between 3.91 and -8.46. Nine companies including TRAVERTINE COMPANY LTD, PEARL- SANITARY PAPER CONVERTING, UNIVERSAL CHEMICAL INDUSTRIES, JORDAN CLOTHING COMPANY P.L.C THE JORDANIAN PHARMACEUTICAL MANUFACTURING, TRUST INTERNATIONAL TRANSPORT, UNIVERSAL MODERN INDUSTRIES, JORDAN CERAMIC INDUSTRIES and CENTURY INVESTMENT GROUP have negative value of earning quality index score. With perspective of accruals quality the PHILADELPHIA PHARMACEUTICALS has good score with value of 0.28 while JORDAN CERAMIC INDUSTRIES has the worst score of accruals quality with negative value of -1.25. For earning persistence the ARAB POTASH has highest values of 1.20 while JORDAN CERAMIC INDUSTRIES has a worst situation having score of -0.61. NATIONAL ALUMINIUM INDUSTRIAL has highest score of smoothness with value of 35.17 while CENTURY INVESTMENT GROUP has lowest value having -43.08 score. NATIONAL STEEL INDUSTRY has highest score in earning surprise with value of 44.76 while CENTURY INVESTMENT GROUP has lowest score with value of 0.00. For earning predictability score THE ARAB POTASH has highest value with score of 1.09 while JORDAN CERAMIC INDUSTRIES has lowest score of 0.00. So as a result the NATIONAL STEEL INDUSTRY has a best performance while CENTURY INVESTMENT GROUP is considered as a worst performer regarding all proxies. The final ranking has been done by using the five proxies including Accruals quality Earnings Persistence, smoothness, earning surprise and Earnings Predictability.

Table 4. Evaluation on Earning Quality in Year 2015

Rank	Company Name	Accruals Quality	Earnings Persistence	Smoothness	Earnings Surprise	Earnings Predictability	Earnings Quality Index
1	NATIONAL STEEL INDUSTRY	0.06	-0.09	0.38	239.86	0.00	48.04
2	ARAB COMPANY FOR INVESTMENT PROJECTS	-0.02	-0.03	1.88	176.13	0.00	35.59
3	ARAB CENTER FOR PHARM.and CHEMICALS	-0.21	-0.26	-4.60	21.94	0.00	3.37
4	THE JORDAN WORSTED MILLS	0.06	0.33	5.39	8.87	0.57	3.04
5	THE JORDANIAN PHARMACEUTICAL MANUFACTURING	-0.20	-0.41	9.65	3.24	0.00	2.46
6	SALAM INTERNATIONAL TRANSPORT and TRADING	0.01	-0.04	0.68	9.56	0.00	2.04
7	JORDAN INDUSTRIAL RESOURCES	-0.14	-0.06	-0.52	10.81	0.00	2.02
8	GENERAL MINING CPMPANY PLC	-0.28	-0.36	2.64	7.09	0.00	1.82
9	MIDDLE EAST SPECIALIZED CABLES CO	-0.41	-0.39	4.88	1.87	0.00	1.19
10	THE ARAB POTASH	-0.06	1.57	0.86	1.93	1.25	1.11
11	JORDAN ROCK WOOL INDUSTRIES	-0.06	1.57	0.86	1.93	1.25	1.11
12	JORDAN TRADE FAC	0.16	0.14	-0.72	5.46	0.37	1.08
13	INTERNATIONAL SILICA INDUSTRIAL	-0.07	-0.17	1.68	3.82	0.00	1.05
14	JORDAN NATIONAL SHIPPING LINES	0.02	0.11	2.22	2.36	0.34	1.01
15	SHEBA METAL CASTING	-0.07	-0.13	2.65	2.21	0.00	0.93
16	PHILADELPHIA PHARMACEUTICALS	0.14	0.54	2.23	1.00	0.74	0.93
17	INVEST and INTGRTEED IND CO. PLC (HOLDING CO)	0.00	0.03	1.09	3.18	0.18	0.89
18	INTERMEDIATE PETROCHEMICALS INDUSTRIES CO. LTD.	-0.13	-0.09	-0.76	5.14	0.00	0.83
19	AL-EQBAL INVESTMENT COMPANY LTD	-0.07	1.25	0.87	0.87	1.12	0.81
20	JORDAN PHOSPHATE MINES	0.00	0.45	1.25	1.57	0.67	0.79
21	THE JORDAN PIPES MANUFACTURING	0.06	-0.08	0.40	3.40	0.00	0.76
22	GENERAL INVESTMENT	-0.13	0.10	0.25	3.21	0.32	0.75
23	HAYAT PHARMACEUTICAL INDUSTRIES CO.	0.00	0.24	1.10	1.73	0.49	0.71
24	AKARY FOR INDUSTRIES AND REAL ESTATE INVESTMENTS	-0.11	-0.09	3.75	0.00	0.00	0.71
25	THE ARAB PESTICIDES and VETERINARY DRUGS MFG. CO.	0.01	0.14	1.34	1.49	0.38	0.67
26	NORTHERN CEMENT CO.	-0.03	0.28	0.90	1.65	0.53	0.67
27	READY MIX CRTE AND CONST SUPPLIES	0.01	0.12	1.35	1.37	0.34	0.64
28	UNION TOBACCO and CIGARETTE INDUSTRIES	0.00	-0.03	0.81	2.30	0.00	0.62
29	TRAVERTINE COMPANY LTD	0.03	-0.03	0.46	2.47	0.00	0.59
30	SINIORA FOOD INDUSTRIES PLC	-0.05	0.33	0.74	1.18	0.57	0.55
31	THE JORDAN CEMENT FACTORIES	0.02	0.11	0.36	1.87	0.34	0.54
32	NATIONAL CABLE and WIRE MANUFACTURING	0.02	-0.02	0.37	1.97	0.00	0.47
33	NATIONAL CHLORINE INDUSTRIES	-0.11	0.01	0.03	2.33	0.08	0.47
34	UNITED IRON and STEEL MANUFACTURING CO. P.L.C	0.17	-0.13	0.27	2.00	0.00	0.46
35	JORDAN DAIRY	-0.07	0.36	0.66	0.70	0.60	0.45
36	JORDAN POULTRY PROCESSING and MARKETING	-0.05	0.06	0.23	1.74	0.24	0.44
37	DAR AL DAWA DEVELOPMENT and INVESTMENT	-0.14	0.16	0.26	1.47	0.40	0.43
38	UNITED CABLE INDUSTRIES	-0.02	0.02	0.37	1.63	0.13	0.42
39	JORDAN CHEMICAL INDUSTRIES	-0.05	0.14	0.48	1.16	0.37	0.42
40	AL-QUDS READY MIX	-0.08	0.05	0.31	1.58	0.21	0.41
41	AFIA INTERNATIONAL COMPANY - JORDAN	0.00	0.00	2.01	0.00	0.05	0.41
42	NATIONAL ALUMINIUM INDUSTRIAL	-0.08	0.04	0.26	1.61	0.19	0.40
43	NATIONAL POULTRY	-0.08	0.16	0.45	1.08	0.40	0.40
44	NUTRI DAR	-0.05	0.09	0.63	0.98	0.30	0.39
45	ARAB ALUMINIUM INDUSTRY /ARAL	-0.08	0.07	0.32	1.21	0.27	0.36
46	JORDAN VEGETABLE OIL INDUSTRIES	-0.19	0.09	0.35	1.23	0.30	0.36
47	THE ARAB INTERNATIONAL FOOD FACTORIES	0.00	0.19	1.01	0.00	0.44	0.33
48	AL-EKBAL PRINTING AND PACKAGING	-0.17	0.10	0.26	0.96	0.32	0.30
49	JORDAN MARBLE COMPANY P.L.C.	-0.04	0.02	0.18	1.15	0.13	0.29
50	ASSAS FOR CONCRETE PRODUCTS CO. LTD	-0.09	-0.05	-0.87	2.43	0.00	0.28
51	UNIVERSAL MODERN INDUSTRIES	-0.26	0.21	0.36	0.64	0.46	0.28
52	ARABIAN STEEL PIPES MANUFACTURING	-0.10	-0.07	-0.56	2.13	0.00	0.28
53	THE INDUSTRIAL COMMERCIAL and AGRICULTURAL	0.03	0.00	-0.13	1.43	0.07	0.28
54	PREMIER BUSINESS AND PROJECTS CO.LTD	0.01	-0.10	0.62	0.67	0.00	0.24
55	TRUST INTERNATIONAL TRANSPORT	0.75	-0.15	0.56	0.00	0.00	0.23
56	PEARL- SANITARY PAPER CONVERTING	-0.04	0.15	0.63	0.00	0.38	0.22
57	JORDAN STEEL	-0.12	0.01	0.03	1.02	0.08	0.20
58	COMPREHENSIVE MULTIPLE PROJECT COMPANY	-0.16	-0.12	-0.49	1.79	0.00	0.20
59	ARAB WEAVERS UNION COMPANY P.L.C	-0.08	-0.05	-0.89	2.00	0.00	0.19
60	NATIONAL OIL AND EIECTRICY PRON FROM OIL SHALE CO	0.00	-0.02	0.94	0.00	0.00	0.19
61	JORDAN CLOTHING COMPANY P.L.C	-0.46	-0.15	-0.61	2.10	0.00	0.18
62	AL-KINDI PHARMACEUTICAL INDUSTRIES PLC	0.05	0.00	0.59	0.00	0.00	0.13
63	UNIVERSAL CHEMICAL INDUSTRIES	-0.29	-0.16	-1.20	2.24	0.00	0.12
64	ARAB ELECTRICAL INDUSTRIES	-0.16	-0.16	-2.14	2.94	0.00	0.09
65	RUM ALADDIN INDUSTRIES	0.00	0.00	0.00	0.00	0.00	0.00
66	FIRST NATIONAL VEGETABLE OIL INDUSTRIES CO.	0.00	0.00	0.00	0.00	0.00	0.00
67	JORDAN PAPER and CARDBOARD FACTORIES	-0.22	-0.26	-1.77	2.22	0.00	-0.01
68	EL-ZAY READY WEAR MANUFACTURING	-0.15	-0.13	-1.54	1.46	0.00	-0.07
69	JORDAN WOOD INDUSTRIES / JWICO	-0.27	-0.44	-1.41	1.36	0.00	-0.15
70	AL-QARIA FOOD and VEGETABLE OIL INDUSTRIES CO. P.L.C	-0.31	-0.06	-1.58	0.84	0.00	-0.22
71	CENTURY INVESTMENT GROUP	0.08	0.08	-1.96	0.00	0.28	-0.31
72	MIDDLE EAST PHARMA. and CHMICAL IND. and MED APPLIANC	-0.21	-0.38	-15.07	3.52	0.00	-2.43
73	JORDAN CERAMIC INDUSTRIES	-0.23	-0.11	-14.67	0.00	0.00	-3.00

Results reveals that the NATIONAL STEEL INDUSTRY has highest earning quality index score which is 48.04, ARAB COMPANY FOR INVESTMENT PROJECTS has second position in this benchmarking and ranking criteria while rest of the companies don't have more than 10 score. All of the remaining companies have score between 3.37 and -3.00. Seven companies including JORDAN CERAMIC INDUSTRIES, MIDDLE EAST PHARMA and CHMICAL IND. and MED APPLIANC, CENTURY INVESTMENT GROUP, AL-QARIA FOOD and VEGETABLE OIL INDUSTRIES CO. P.L.C, JORDAN WOOD INDUSTRIES / JWICO, EL-ZAY READY WEAR MANUFACTURING and JORDAN PAPER and CARDBOARD FACTORIES have negative value of earning quality index score. With perspective of accruals quality the MIDDLE EAST SPECIALIZED CABLES CO is considered as worst having -0.41 score while TRUST INTERNATIONAL TRANSPORT have better situation having score of 0.75. For earning persistence the ARAB POTASH has highest values of 1.57 while THE JORDANIAN PHARMACEUTICAL MANUFACTURING has a worst situation having score of -0.41. THE JORDANIAN PHARMACEUTICAL MANUFACTURING has highest smoothness 9.65 while JORDAN CERAMIC INDUSTRIES has lowest values having -14.67 score. NATIONAL STEEL INDUSTRY has highest values which is 239.86 while JORDAN CERAMIC INDUSTRIES has 0.00 score. So as a result the NATIONAL STEEL INDUSTRY has a best performer while JORDAN CERAMIC INDUSTRIES is considered as a worst performer regarding all proxies. The final ranking has been done by using the five proxies including Accruals quality Earnings Persistence, smoothness, earning surprise and Earnings Predictability.

5. Conclusions and implications

This study was aimed to measure the earnings quality of listed firms in Jordan. For this purpose, to measure the earnings quality in context of Jordan the study has adopted the methodology of IASB framework and based on five proxies we measured the earnings quality of listed firms in Jordan. The study was divided into two phases, in the first phase of study we have determined the five proxies of earning quality based on the secondary data collected from Amman stock exchange while in the second phase of study we have measured the earning quality index to rank the firms based upon their earning quality. In the year 2012, we concluded that in overall evaluation of earnings quality AL-KINDI PHARMACEUTICAL INDUSTRIES PLC has a best performance while JORDAN CERAMIC INDUSTRIES is considered as a worst performer regarding all proxies. In year 2013, the JORDAN CEMENT FACTORIES has been highlighted as a best performer while TRUST INTERNATIONAL TRANSPORT is considered as a worst performer in overall evaluation of earnings quality. In year 2014, NATIONAL STEEL INDUSTRY has been found as a best performing company while CENTURY INVESTMENT GROUP is considered as a worst performer regarding all proxies. Finally, in year 2015, NATIONAL STEEL INDUSTRY has a best performance in earnings quality while JORDAN CERAMIC INDUSTRIES is considered as a worst performer regarding all proxies. Based upon these findings, this study put forward the useful implications for investor as well as decision makers, so that they may emphasize on the performance of listed firms to improve their earnings quality to attract more and more investment.

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