Assessing the Consistency among Accounting Measures of Earnings Quality: A Study of Stocks Listed on National Stock Exchange 500

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ABSTRACT

This paper examined the consistency among accounting measures of earnings quality for companies listed on National Stock Exchange 500 over the period 2008-2020. Earning is one of the most significant corporate financial information. Any investment choices are normally taken into account by taxpayers whenever making financial statements and benefit disclosures. Earnings measures actually allows investors to determine the financial results of the firms listed in the financial statements. The research employs four income quality accounting indicators, which are persistence, predictability, accrual quality, and smoothness. The spearman rank correlation is used to investigate consistency, which is a non-parametric test. The study showed that the indicators of earnings quality are not entirely consistent. For the sample period, majority of the times accrual quality and predictability is found to be significant. The results through spearman rank test implied that sample Indian firms have good accrual quality and predictability but lack of persistence and smoothness.

Keywords: Earnings Quality, Financial Performance, Spearman Rank Correlation, Persistence, Predictability, Smoothness and Accrual Quality
JEL Classifications: M41, G32

1. INTRODUCTION

The concept of earnings quality has been one of the key phenomena in the field of accounting research all over the world since the 1980s. The quality of a company's earnings is an important aspect used as consideration of investment decisions by users of financial information. Equity investors, debt contractors and management thinkers used accounting information for multiple reasons (Barth et al., 2001). Earning is the exhibition of operating results during a specified time and an important indicator to evaluate the performance of firms through a definite period. There are so many accounting scandals in the past years like Parmalat, Enron, WorldCom that have raised questions against the earnings quality of business firms.

Furthermore, there is consensus between researchers on earnings quality indicators. The earnings attributes are 7 and are split into two parts based on accounting and marketing. The first section covers accrual quality, persistence, predictability, smoothness, as well as conservatism, value-relevance and timeliness. Market attributes for deciding how close accounting profits and the primary purpose of these attributes is to adjust stock market valuation. This study focuses only on accounting attributes of earnings quality to measure the consistency among them. Assessment of the earnings quality often involves the splitting of earnings between cash and accruals, the greater the income quality the more the benefit is shut off from the operation. Penman (2001) measured the quality of earnings with an emphasis on gaining persistence and high-quality earnings are more persistent and useful in decision-making processes. A variety of the provisional proxies have been used to

measure the efficiency of the profits. The Jones formula (1991) is also used to measure the quality of earnings using the discretionary accrual model. This model was later updated and renamed.

Modified Jones' Model by Dechow et al. (1995). A substantial number of studies found the effectiveness of the earnings for investors and earning quality is the key indicator of market success for a firm (Dechow, 1994; Michelson et al., 2000; Graham et al.; 2005, Francis et al., 2004). Finally, a time-series analysis of earnings quality plays an important role to various stakeholders since earnings quality means the firm's accounting performance and is a useful measure for assessing firm value (Dechow and Schrand, 2004).

The cash flow assigned to reporting periods is known to be accounting earnings, and the earnings estimates mitigate the information risk of investors, provided they represent a company's present and potential capability to generate cash flow. This argument is endorsing implicitly Francis et al. (2004), who states that for the accounting characteristics of income efficiency the greatest shareholder expense is being found. Earnings not shown on the basis of the evidence would trick the customer in reality. If the investor makes use of such a false benefit to determine a company's market value, it would have an effect that the sales cannot represent the company's real market value (Boediono, 2005). Investment Opportunity Set (IOS) is another factor that may affect earnings quality. A company will generate a higher earnings if the company has a high investment opportunity set rate. The market in this case will give a bigger response. The magnitude of market response to the firm indicates the high quality of earnings generated by the company (Mulyani et al., 2007). Different research results were found by Wahh (2002) who found an association between investment opportunity set and the earnings quality. The high level of investment opportunity set of a company tends to indicate the high value of discretionary accrual which impact on the low quality of the company's earnings. High discretionary accruals caused by the Financial Accounting Standards provide allowances for management in determining accounting policies. This provides an opportunity for management to act opportunistically. In terms of managing earnings management that is not often done by managers, the board of commissioners serves as a function of supervision over financial reporting so that the company can produce good earnings quality (Siallagan and Machfoedz, 2006). In addition, the other part who is also responsible for the financial statements is the audit committee by overseeing the external audit and internal control system. Management actions can also be controlled through a process of supervision by institutional ownership.

This paper commences with introduction, and then section two talks about previous academic literature on earnings quality. Section 3 discusses the methodology used in the paper. In section 4, empirical results are reported. At last, section 5 presents conclusions for the paper.

2. REVIEW OF LITERATURE

The academic circle has a number of definitions of earnings quality over time but, there is no uniform definition of earnings quality

yet. Li (2009) thinks that earnings is like a two-way sword that could be used in either deceitful profits or tell the accurate position of a business. Hodge (2003) described earnings quality as the discrepancy between the exact earnings and earnings reported in accounting statements. Melumad and Nissim (2008) argued that "earnings are of high quality if they are representative of long-term earning ability." Hawkins (1998) found some characteristics of higher earnings quality like maintaining a steady accounting policy, optimum cash levels and a clean and true financial statement that depicts the accurate position of the company. A company should far from the impact of tax fluctuations and capital structure manipulations. Financial reporting quality is described by the distinction between net reported earnings in financial statements and true earnings (Ecker et al. 2006; McEwen, 2009). Mikhail et al. (2003) identified that past earnings of a firm are related to its future cash flows. Dechow and Schrand (2004) are in the view of that earnings quality is helpful to find out the actual position of a company and truly characterize the performance of a company. Also in another study, Dechow et al., (2010) investigated that higher quality of earnings is more helpful for decision-makers because they provide further information about the financial performance of a company. According to (Gaio, 2010), earnings are closely related to sharing returns and higher the value of the share would reflect higher the quality. Penman (2001) affirms that the purpose of accounting quality analysis is to discriminate between the "hard" numbers resulting from cash flows and the "soft" numbers resulting from accrual accounting. Relevancy and trustworthiness of financial statements is the key issue that is emphasized by all the above definitions. The objective of financial reporting is to provide valuable information to investors. There are numerous factors that influence the quality of earnings.

Accounting conservatism principle is one of them that help to identify the possible losses and gains in the near future Watts (2003). (Kazemi, 2011) also concluded about conservatism that earnings are used as forecaster which led to desired earnings quality. (Basu, 1997) in favor of accounting, conservatism said that a company can produce earnings of high quality through this principle.

Differences in terms of income level concepts are the origin of different measurement methods for assessing the quality of earnings. The usefulness of accounting numbers that display the financial results of a company can be further evaluated depending on a variety of factors by the earnings quality and measurement of it. The quality of the reported earnings from companies is continuously reviewed by investors and other security analysts. The final earnings in financial reports are used to assess the financial position of the business. Experts use financial statements information and call it earnings quality. Accurate investment decisions can be taken with the help of efficient financial use of information. High and poor quality of earnings depends on the trustworthiness of reporting standards and profits. Investors should understand the information given in the financial reports of the company and evaluate it in terms of quality. It can help investors in building self-reliance in investment decisions. Schipper and Vincent (2003) in their study states that managers of a firm usually have a tendency to improve the earning numbers because their compensation is fixed with the

financial results. Also, constricting decisions based on low-quality earnings, in general, will induce unintended welfare transfers. Abdelghany (2005) focused on three basic approaches to measure the quality of earnings which control three different dimensions of earning management. He developed a model by using three different measures of Leuz et al. (2003), Barton and Simko (2002) and Penman (2001). According to the first approach i.e. Leuz et al. (2003) earnings quality is measured by using the ratio of the standard deviation of operating earnings to standard deviation of cash from operations. Managers have a tendency to smooth earnings because they think that investors like to choose smooth or less variable earnings. Variability of earnings is related to the quality of earnings. Absence in the variability of earnings is allied with higher-quality earnings and if there is variability in earnings then earnings will be called of low quality. Another approach given by Barton and Simko (2002) emphasized on the earnings surprise. Earning surprise can be calculated with the ratio of net operating assets and sales. Firms having a huge opening balance of net operating assets as relative to sales are supposed to report a less predestined earnings surprise. The last approach Penman (2001) take into account the cash from operations. This measure of earnings quality is based on the concept that the proximity to cash means higher quality earnings. However, the relevance of using real activities as an alternative means for assessing earnings quality has been stressed in the previous studies. The consistency of the earnings has an effect on decision-makers, such as investors and borrowers who make investment decisions using financial reporting. Poor income quality decreases the company's value. High-quality income is considered more sustainable because recorded income offers guidance about potential results of a business. A relationship between earning quality and firm value is explored in another study by (Lu and Liu, 2007) while the risk is considered. The study found those firms very risky that has low earnings quality and poor financial reporting standards.

3. RESEARCH METHODOLOGY

The objective of the present study is to measure the consistency among accounting indicators of quality of earnings of NSE 500 companies. This study is confined to companies listed on NSE500 index. A sample of 159 companies is selected among 500 companies. For consistency in earnings quality, the companies ending with financial year other than 31st March are excluded from the sample of 500 companies. All utilities, insurance companies, banking, and financial institutions also excluded. Because cash flow patterns and accruals of these companies are different from those of others and their different reporting practices make their data incomparable with other non-financial companies. The study also excluded companies without enough information for computing our all earnings indicators. Government-owned companies also being excluded because their disclosure is subject to government regulations. On the basis of the nature of some of the tests, the sample is restricted to those firms that have data on all financial variables being used in this study. Earnings quality have two types of measures accounting based and marketing based measures. In this study, accounting measures of earning quality have been considered. Following is the brief description of measures being used in the study.

3.1. Measures of Earnings Quality are
3.1.1. Persistence
Persistence measures the extent that current earnings persist or recur in the future. It simply means how much of present earnings will maintain in the future for a long period. Persistence of the reported earning is commonly used as a measure of earnings quality which is measured by the sustainability of the reported earnings of a firm (Penman and Zhang 2002; Francis et al., 2004). Higher persistence is positively associated with high earnings quality since it indicates a stable, sustainable and less volatile earnings generation process that is particularly valued by investors.

If earnings would lack persistence then it will not be useful for evaluation (Melumad and Nissim, 2008). Earnings which are highly persistent are identified by financial users as more sustainable and less transitory (Richardson et al., 2003). Similarly, earnings which are less persistent are more transitory are considered to be of lower quality (Penman and Zhang 2002; Francis et al, 2004).

$$\frac{\text{Earnings}_{i,t}}{\text{Total Assets}_{i,t-1}} = \frac{\text{Earnings}_{i,t}}{\text{Total Assets}_{i,t-1}} + \varepsilon_{i,t}$$

Where for firm i and year t, Earnings i,t is net income before extraordinary items in current year; Earnings i, t-1 is earnings before extraordinary items in previous year; $\varepsilon_{i,t}$ is the residuals.

3.1.2. Predictability
Predictability is viewed as a desirable attribute of earnings because it increases the precision of earnings forecasts. The time series of earnings is affected by the volatility of operations, the economic environment and the accounting systems employed. Predictability of earnings represents the ability of the reported earnings to predict future component of operating income (Penman and Zhang, 2002). Predictability captures the notion that earnings are of higher quality the more useful they are in predicting future earnings. The higher ability to predict future earnings indicates high earnings quality and poor ability to predict future earnings indicates poor earnings quality. It improves users' ability to forecast items of interest i.e. ability of past earnings to predict future earnings (Dechow et al., 2010).

$$\text{Predictability} = \sqrt{\wp\,\varepsilon_{i,t}}$$

Earnings predictability of firm calculated as the square root of the error variance from earnings persistence equation (the error variance of firm c in year t calculated from earnings persistence equation.

3.1.3. Accrual quality
The difference between cash from operating and recorded earnings generated by business indicates accrual quality (Desai et al., 2006). Likewise, error in estimating the accrual has also been used in measuring the quality of accrual (Francis et al., 2004; Jing 2007 and Johnston 2009). So far the first method that focuses on the magnitude and second focusing on an error on estimating accrual are commonly used as a proxy for earnings quality (Richardson et al. 2001; Francis et al., 2004; Desai et al., 2006). The large the value obtained from each method imply poor earnings quality and

a small value obtained from each method indicates high-quality earnings (Desai et al., 2006).

$$\frac{TCA\,i,t}{AVERAGE\,ASSETS\,i,t} = \partial 0 + \beta 1 \frac{CFO_{i,t-1}}{AVERAGE\,ASSETS_{i,t}} +$$

$$\beta 2 \frac{CFO_{i,t}}{AVERAGE\,ASSETS_{i,t}} + \beta 3 \frac{CFO_{i,t+1}}{AVERAGE\,ASSETS_{i,t}} + \varepsilon_{i,t}$$

3.1.4. Smoothness

The term income smoothing refers to effort done by managers of an entity to reduce irregular variation in earnings (Tucker and Zarowin, 2006). Moreover, it is revealed that managers exercise their power to reduce abnormality on the earnings as means to inform interested users about their assessment of the future earnings to the degree allowed by the accounting standard. Smoothing is usually measured relative to cash flows because they are non-discretionary to a great extent. Low ratios will indicate that insiders exercise accounting discretion to smooth earnings if firm use accruals to manage earnings. The variability of change in operating income should be lower than that of cash flows. It is also discovered that earning smoothness generally uses cash flow as construct on unsmoothed earnings as it is assumed that one cannot easily manipulate cash flows (Pinasti and Asnawi, 2009). Favourable economic effects of smooth earnings are also documented by Francis et al. (2004), Michelson et al. (2000) and Crabtree and Maher (2005).

$$Smoothness = \frac{Standard\,deviation\,of\,\left(NP/TAB\right)}{Standard\,deviation\,of\,\left(CFO/TAB\right)}$$

Where NP= Net income before extra-ordinary activities
TAB = Total assets at the beginning of the year for firm i in time t
CFO = Cash flow from operation for firm i in time t

3.2. Data Collection

For estimating earnings quality, to calculate the measures of earnings quality, the study utilized secondary data. The required data is obtained from Prowess Database maintained by the Centre for Monitoring Indian Economy (CMIE) and annual reports of the companies listed on NSE 500.

3.3. Hypothesis Development

High value shows low quality and low value shows high quality in case of Accrual Quality, smoothness and predictability while in case of persistence, high value shows high quality and low value shows low quality.

We arranged all our earnings attribute such that low rank indicates to high quality and high rank indicates to low quality. we negate the persistence to follow the same ranking order.

We then ranked them in ascending order and hypothesized that;

H_a(null): Earnings quality indicators ranked are independent.

H_b(alternate): Earnings quality indicators are not independent of each other.

4. DATA ANALYSIS

The descriptive statistics concerning indicators of the earnings quality are shown in Table 1. The results showed the value of accrual quality mean is 0.018 and median is 0.017, as a benchmark, Dechow and Dichev (2002) provide mean and median values of 0.028 and 0.020 respectively. This shows that accrual quality of NSE listed Indian companies is quite lower than U.S firms Dechow and Dichev (2002). Persistence which captures (the negative of) the extent to which an earnings innovation remains in the series, has a mean −0.000351 and median −0.00296, Francis et al. (2004) provide mean and median values of −0.482 and −0.520 respectively. Therefore, a very low persistence has been seen in Indian companies. Predictability has mean value of 0.1427 and median 0.1065, Francis et al. (2004) provide mean and median values of earnings predictability as 0.876 and 0.536 respectively. Large values are more predictable and low values are less predictable which again implies the transitory earnings of Indian companies.

The mean is 0.8980 and median is 0.7693 for smoothness, while, Francis et al. (2004) provide mean and median values of earnings smoothness as 0.640 and 0.578 and Leuz et al., (2003) report a mean smoothness measure of 0.765. Large values of smoothness (more than one) indicate more earnings smoothness and low earnings quality.

Table 2 13 present result on year basis of spearman rank correlation for accounting measures (i.e. accrual quality, persistence, predictability, smoothness) of earnings quality indicators from 2008 to 2019. We rank our variables on year basis and run rank correlation using spearman rank for the entire sample.

Table 2 present the spearman rank correlation for year 2008-2009. We find that, for two pairs means accrual quality and persistence and the other pair i.e. predictability and persistence, P < 0.05, therefore we accept the null hypothesis that ranks are independent and there is a consistency among these two indicators of earnings quality. Besides this, other pairs of earnings quality indicators the value of P > 0.05, therefore we fail to reject the null hypothesis that the ranks are independent. Therefore, the result shows that there is consistency for year 2008-2009, between accrual quality and persistence and between persistence and predictability.

Table 3, demonstrated the results for year 2009-2010. In this particular year, smoothness and persistence is negatively correlated with accrual quality. Also, predictability is negatively correlated with persistence. The P-values of predictability with accrual quality and persistence is < 0.05, so we accept the null hypothesis for the relationship among these indicators. We find consistency of Accrual Quality with both predictability and persistence. In addition to this, consistency between persistence and predictability is also found.

Table 4, report the results of spearman rank correlation among our earnings quality measure for year 2010-2011. Consistency is found

between the measures Unlike previous years, Accrual Quality is consistent with persistence and predictability. Persistence and predictability is also correlated. However, no consistency is found for the remaining measures of earnings quality.

Table 5, reports the output of spearman rank correlation for the year 2011-2012. Similar with the previous years, P-value of accrual quality with persistence and predictability is < 0.05. We did not find any consistency in the other measures like persistence and smoothness with each other. However, the remaining indicators did not indicate any consistency.

In Table 6, out of 6 options we only find one option with consistency in measuring the quality of earnings for the year 2012-2013. We find that quality of earning completely consistent when using persistence and accrual quality with P = 0.0001.

In Table 7, similarly, with the above year 2012-2013, We find that indicators of quality of earnings completely consistent when using

persistence and accrual quality with P = 0.002 that is <0.05. There is a negative relation of AQ with persistence and smoothness.

In Table 8, complete consistency is found for the indicator accrual quality with persistence, predictability and smoothness because P < 0.05. Most of the indicators are negatively related with each other than correlation of predictability and smoothness.

In Table 9, accrual quality is consistent with persistence and predictability as P < 0.05. Also, smoothness is found consistent with persistence in this year, as P-value of spearman correlation between smoothness and persistence is significant or <0.05.

In Table 10, we find results similar to year 2012-2013 and 2013-2014. We find that only persistence is consistent with accrual quality (P = 0.0000). However, the remaining indicators of earnings quality did not indicate any consistency among them.

Table 1: Descriptive statistics

Earning attribute	Mean	Min.	Std. Dev.	Median	Max.	C.V	Skewness	Kurtosis
Persistence	−0.00039	−7.9864	0.2300	−0.0032	19.495	627.6	−31.70	1269.4
Predictability	0.14651	0.048051	0.06877	0.1071	0.2615	0.467	0.732	−1.275
Accrual quality	0.01905	-0.14482	0.02469	0.01739	0.2355	1.31	0.31	9.30
Smoothness	0.88712	0.0562	0.9459	0.76926	20.018	1.088	13.51	242.77

Source: Computed from e-views 10 by researcher

Table 2: Spearman rank correlation results 2008-2009

EQ proxy	Accrual quality	Persistence	Predictability	Smoothness
Accrual quality	1			
Persistence	−0.140745 (0.0120)*	1		
Predictability	0.06125 (0.2762)	−0.34261 (0.0000)*	1	
Smoothness	0.006058 (0.9143)	−0.010337 (0.8543)	−0.027345 (0.6271)	1

Source: Computed from e-views 10 by researcher

Table 3: Spearman rank correlation results 2009-2010

EQ proxy	Accrual quality	Persistence	Predictability	Smoothness
Accrual quality	1			
Persistence	−0.197715 (0.004)*	1		
Predictability	0.147324 (0.0085)*	−0.509672 (0.0000)*	1	
Smoothness	−0.030532 (0.5875)	0.026588 (0.6367)	0.045827 (0.415)	1

Source: Computed from e-views 10 by researcher

Table 4: Spearman rank correlation results 2010-2011

EQ proxy	Accrual quality	Persistence	Predictability	Smoothness
Accrual quality	1			
Persistence	−0.246822 (0.000)*	1		
Predictability	−0.283402 (0.0000)*	0.266062 (0.0000)*	1	
Smoothness	0.016453 (0.7701)	−0.106611 (0.0576)	−6.88E-05 (0.9990)	1

Source: Computed from e-views 10 by researcher

Table 5: Spearman rank correlation results 2011-2012

EQ Proxy	Accrual quality	Persistence	Predictability	Smoothness
Accrual quality	1			
Persistence	−0.200249 (0.003)*	1		
Predictability	0.132435 (0.0181)*	0.109533 (0.0510)	1	
Smoothness	0.018723 (0.7394)	−0.056459 (0.3155)	0.006504 (0.9080)	1

Source: Computed from e-views 10 by researcher

In Table 11, Similar with the years, 2011-2012 and 2015-2016, there is found a consistency of measure accrual quality with persistence and predictability but they are negatively correlated with each other. Smoothness is positively related with accrual quality and predictability.

Similar to the years 2012-2013, 2013-2014 and 2016-2017, as shown in Table 12, accrual quality and persistence are consistent as P-value is significant. Apart from this, all other measures have no consistency among them because P-value exceeds from 0.05.

Table 13, presents the consistency of accrual quality with the indicators persistence and predictability for the year 2019-2020. Apart from this, persistence is also found consistent with predictability only.

Table 6: Spearman rank correlation results 2012-2013

EQ Proxy	Accrual Quality	Persistence	Predictability	Smoothness
Accrual quality	1			
Persistence	−0.212225 (0.0001)*	1		
Predictability	−0.060167 (0.2848)	−0.013826 (0.8060)	1	
Smoothness	0.063179 (0.2613)	0.069514 (0.2164)	−0.033842 (0.5476)	1

Source: Computed from e-views 10 by researcher

Table 7: Spearman rank correlation results 2013-2014

EQ Proxy	Accrual quality	Persistence	Predictability	Smoothness
Accrual quality	1			
Persistence	−0.210046 (0.0002)*	1		
Predictability	0.072207 (0.1991)	0.012005 (0.8311)	1	
Smoothness	−0.001708 (0.9758)	0.021113 (0.7076)	0.093494 (0.0961)	1

Source: Computed from e-views 10 by researcher

Table 8: Spearman rank correlation results 2014-2015

EQ Proxy	Accrual quality	Persistence	Predictability	Smoothness
Accrual quality	1			
Persistence	−0.155275 (0.0055)*	1		
Predictability	−0.132361 (0.0182)*	−0.012863 (0.8193)	1	
Smoothness	−0.131833 (0.0187)*	−0.055602 (0.3230)	0.049405 (0.3799)	1

Source: Computed from e-views 10 by researcher

Table 9: Spearman rank correlation results 2015-2016

EQ Proxy	Accrual quality	Persistence	Predictability	Smoothness
Accrual quality	1			
Persistence	−0.263074 (0.0000)*	1		
Predictability	0.238295 (0.0000)*	−0.084103 (0.1345)	1	
Smoothness	−0.043653 (0.4379)	−0.11609 (0.0385)*	0.024484 (0.6636)	1

Source: Computed from e-views 10 by researcher

Table 10: Spearman rank correlation results 2016-2017

EQ Proxy	Accrual quality	Persistence	Predictability	Smoothness
Accrual quality	1			
Persistence	−0.259723 (0.0000)*	1		
Predictability	−0.051119 (0.3636)	0.072820 (0.1953)	1	
Smoothness	−0.034429 (0.5407)	−0.070898 (0.2073)	−0.000585 (0.9917)	1

Source: Computed from e-views 10 by researcher

Table 11: Spearman rank correlation results 2017-2018

EQ Proxy	Accrual quality	Persistence	Predictability	Smoothness
Accrual quality	1			
Persistence	−0.216172 (0.0001)*	1		
Predictability	−0.126694 (0.0239)*	−0.004402 (0.9377)	1	
Smoothness	0.005400 (0.9236)	−0.13824 (0.8135)	0.080379 (0.1527)	1

Source: Computed from e-views 10 by researcher

Table 12: Spearman rank correlation results 2018-2019

EQ Proxy	Accrual quality	Persistence	Predictability	Smoothness
Accrual quality	1			
Persistence	−0.195379 (0.0005)*	1		
Predictability	0.18538 (0.7419)	0.006776 (0.9042)	1	
Smoothness	0.102069 (0.0691)	0.016913 (0.7638)	−0.023934 (0.6707)	1

Source: Computed from e-views 10 by researcher

Table 13: Spearman rank correlation results 2019-2020

EQ Proxy	Accrual quality	Persistence	Predictability	Smoothness
Accrual quality	1			
Persistence	−0.18515 (0.002)*	1		
Predictability	0.147324 (0.0065)*	−0.525672 (0.0000)*	1	
Smoothness	−0.041532 (0.5875)	0.03588 (0.6612)	0.047127 (0.315)	1

Source: Computed from e-views 10 by researcher

5. CONCLUSION AND IMPLICATIONS

The overall finding shows that there is no consistency among the earnings quality indicators. In 2008-209 we fail to reject the null hypothesis that the ranks are independent for 2 options, out of six options of ranking our measure of earnings quality. Likewise, in 2009-2010, we rejected the null hypothesis that ranks are independent rank for three options out of six options. For years 2010-2011 and 2011-2012, we accepted the hypothesis only for consistency among two indicators i.e. accrual quality with persistence and predictability. Moreover, in years 2012-2013 and 2013-2014, we accepted the null hypothesis that ranks are independent for only one option out of six options. Furthermore, in 2014-2015, null hypothesis is accepted for correlation of accrual quality with persistence, predictability and smoothness. In, 2015-2016 we rejected the null hypothesis of independent rank for three options out of six. We rejected null hypothesis that ranks are independent for persistence and predictability, smoothness and accrual quality and predictability and smoothness. In 2016-2017 and 2018-2019, out of six correlations, accrual quality with persistence is found significant and therefore, null hypothesis is accepted. Similar with the previous years, in 2019-2020, null hypothesis is accepted for accrual quality, persistence and predictability. Therefore, the findings of the study suggest that there is not complete consistency among the indicators of earnings quality and the results are similar with prior studies led by Abdelghany (2005); Houqe and Islam (2011), Lyimo (2014) and Ezat et al., (2019).

The implications include all the existing and potential investors, who want to invest in the stocks. Investors depend on the quality of earnings of a company. This analysis will help them to understand that criteria of earning quality. Persistence earnings are not necessarily to be predictable or smooth. There are chances of earning management in the financial statement which is proved by the above analysis that all measures are not consistent.

The study has its own limitations. First is related with sample size. The absence of data of companies reduced the sample size. Therefore, in future the study can focus on more number of companies. Second, the study considered only accounting indicators of earning quality, hence, marketing based variables can be studied in future.

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