



Earnings Quality of Selected Textile Manufacturing Companies Listed in the Dhaka Stock Exchange (DSE) of Bangladesh

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Abstract

This study investigates the earnings quality of textile industry of Bangladesh. The accounting literature judges earning quality on different dimensions. In this study, we used two-part analysis of the earnings quality of the Textile industry of Bangladesh. In first part, we used balance sheet based and cash flow-based accrual ratios to investigate earnings quality of the selected industry, in which we found that on an average the selected twenty-nine companies had 35.93% balance sheet-based accruals and 24% cash flow-based accruals over seven years (2010-16) under study. The second part of our analysis was designed to determine the accrual quality for which we used Modified Jones Model. Results indicate that two companies that experienced sudden positive change in total accruals in one year followed by more than four years of negative accrual have positive discretionary accrual while two companies with similar pattern of total accruals have negative discretionary accrual.

Keywords: Earnings Quality, Accruals, Balance Sheet Based Accruals, Cash Flow Based Accruals.

1.0 Introduction

Earnings quality is an important aspect of evaluating an entity's financial health. Earnings quality is defined as the ability of reported earnings to reflect the company's actual earnings, as well as the usefulness of reported earnings to predict future earnings. Earnings quality also refers to the stability, persistence, and invariability in reported earnings. The income statement alone is not useful in predicting future earnings. Nowadays stakeholders are demanding greater assurance about the quality of earnings. Analysts need a more suitable basis for earnings estimates.

Earnings quality is typically defined in terms of persistence and sustainability. Analysts claim that earnings are of better quality when they are sustainable; meaning, the cash earning is more persistent than accrual earnings. To measure the quality of earning we have to decompose earnings into two parts: cash earnings and accruals earnings. In domestic trading higher accrual indicate lower quality of earnings. Accruals can be distorted by applying various accounting judgements, but cash earnings cannot be. If we can find out the accrual earning and its ratio, then we can come to a reasonable conclusion about the earnings quality of companies.

There are a variety of definitions and models used for assessing the quality of earnings quality. We used two-part analysis to find out the earnings quality of the selected industry. In the first part of our analysis, we used two types of ratio to evaluate the earnings quality of the industry; while in the second part, we did a comparative analysis among the companies that show a significant change in accruals in a year in order to identify if there are any managed accruals.

A proper quality of earnings analysis encompasses a variety of elements. It typically sees if the reported earnings of companies are in fact relatable with the real earnings earned by that company in a year. It helps the readers as well as analysts to evaluate their investments more efficiently. The objective is to separate the genuine earnings earned by companies from anomalies; based on which earnings can be concluded to be either high or low quality.

We analyzed the earnings quality of textile industry of Bangladesh realizing its relative importance on the overall economy as well as GDP. According to the IMF, Bangladesh's economy is the second fastest growing economy of 2016 and the Textile industry

has around 28% contribution in the GDP. Also in the same year, according to Bangladesh Bank Statistics, the Foreign Direct Investment has experienced an 11% growth rate in this sector. It is imperative that the industry sustain its growth, and for that matter, the earnings should be persistent as well as sustainable. However there has been a very little research on Textile industry and its earnings quality. The aim of our paper is to assess the current earnings of the selected textile companies and the sustainability of the growth of the textile industry of the country by evaluating its quality of reported earnings.

2.0 Literature Review

Earnings quality is defined in previous literature from different dimensions. Most of the cases it is described as similar as qualitative characteristics of accounting. For example many researchers said that if there is reliability found in accounting information then those earnings are of good quality. Dechow et al. (1995), Aboody et al. (2005), Wang (2006) Olsson and Shipper (2005) have the same findings as mentioned earlier. On the other hand, Ahmad (2003) used component of relevance as a proxy of earning quality.

One of the models to determine accrual quality is to separate discretionary and non-discretionary accruals (Jones 1991; Modified Jones model proposed by Dechow, Sloan and Sweeney, 1995). According to the model, if earnings are managed, it can be found out by separating discretionary accruals or managed accruals from non-discretionary accruals. The non-discretionary part of the accruals are expected to arise from the natural changes of credit sales.

Dichev and Dechow (2002) initiated a model of working capital to measure the quality of accrual. They concluded that accrual quality is negatively related to the magnitude of total accruals, operating cycle length, and the standard deviation of sales, and earnings and cash flows. They also found that accrual quality is positively related with firm size and there is a strong positive relationship between accrual of accruals and earnings persistence.

Richardson et al. (2001) concluded that total accrual (the difference between earnings and free cash flows) provides a clear, strong and stingy measure of quality of earnings. They indicated that the information in accruals about earnings quality is not attributable to a single factor, like 'discretionary' accruals or firm growth.

Dechow et al. (2010) in their paper tried to uncover various method of identifying earnings quality which include persistence, accruals, smoothness, timeliness, responsiveness of investor. Other external factors were restatements and SEC enforcement releases. They did not find any single best measure of earning quality rather they point out that the “quality” of earnings is a function of the firm’s fundamental performance.

Richardson et al. (2005) show that less reliable accruals lead to lower earnings persistence and investors do not appear to fully anticipate this lower persistence, leading to significant security mispricing & magnitude of the security mispricing. They also concluded that providing unreliable information in financial statements has a significant cost.

Rahimipoor and Ebrahimi (2016) found that there is direct and significant relationship exists between accruals and abnormal stock return. There is

also direct and significant relationship between discretionary accruals and abnormal stock return and non- discretionary accruals and abnormal stock return.

Maherani et al. (2014) analyzed the relationship between earnings quality, financing, corporate performance and investment decisions from Tehran perspective. The study was based on 63 Tehran Stock Exchange (TSE)-listed companies. The results showed significant relationships between earnings quality and financing, corporate performance and investment decisions.

Chan et al. (2006) pointed that there is a reliable, inverse relationship between accruals (difference between accounting earnings and cash flows) and future stock returns. Many studies were conducted in the area of earning quality in different time from different countries perspective. The review some of those prominent literature with their region are as in the following table.

Table-I: Review of some of the prominent literature:

| Authors | Objective | Statistical Techniques | Key Findings | Country/ Region |
|---------------------------|---|---|---|------------------------|
| Besten et al (2015) | To see the effect of IFRS adoption on earnings quality after voluntary IFRS adoption allowed in the United States. | T statistics, F statistics, P value & Robustness test. | In case of discretionary accruals there is no statistical difference found between the pre-IFRS and the post-IFRS period. The earning quality remains same irrespective of adoption of IFRS. | United States |
| Houqe et al (2013) | To see whether business strategy is related with the earnings quality. | F statistics, P value & Mean Strategy scores. | Prospector-strategy firms are associated with higher levels of accounting conservatism and defender-strategy firms are associated with higher levels of earnings management. | United States |
| Perotti and Alfred (2014) | To study the association among commonly used earnings quality measures by analyzing how much of future excess returns they are able to explain. | Wilcoxon-z , T Statistics ,F Statistics | Market-based measures of earnings quality (earnings response coefficient, value relevance) are generally associated with higher hedge returns than accounting-based measures. | United States |
| Houqe et al (2017) | To evaluate the role of external auditors on financial reporting quality as well as firms "cost of equity". | Jones model, T statistics, p value & Robustness test | There is a positive association between earning quality and auditor quality. The cost equity also reduced with higher quality auditor. One of the interesting observation was that firms belonging to business groups have higher quality of earnings and lower cost of equity than their non-business group counterparts. | India |
| Peter et al (2013) | To examine the association between managerial ability and earnings quality. | MA-Score, pooled logistic regression, accruals quality measure, p value | Managerial ability has a positive relation with earning quality. Competent managers have fewer restatements, higher earnings with accruals persistence, lower error in bad debt and higher quality accruals. Thus the quality of earning is positively related with the competency of manger. | United States |
| Houqe et al (2015) | To find out the effect of national culture on earnings quality after International Financial Reporting Standard (IFRS) adoption. | Financial Secrecy Index, econometric model, p value, Robustness tests | Adoption of IFRS has a positive effect on earning quality. IFRS adoption decreases abnormal accruals and earning conservatism. There is an evidence that the interaction between national culture which is indicated by secrecy, and IFRS adoption helps to explain differences in earnings quality across different jurisdictions after IFRS adoption. | 14 Different Countries |
| Justin Mindzak (2013) | To see the effects of interlocked boards of directors on voluntary disclosures, governance and earnings quality. | Modified Jones Model, t statistics | Board interlocks have twofold effect. It has a negative effect on the level of voluntary disclosures and a positive effect on firm earnings quality. | Canada |

3.0 Methodology of the Study:

For data analysis, we have used a quantitative approach based on data from the annual report of textile industry. In textile industry there are 47 companies enlisted in Dhaka Stock Exchange Ltd, among those we have selected 29 companies from 2010 to 2016. For the first part of the analysis, that is to find the average accrual ratio of the industry, we used both balance sheet based, and cash flow based accrual ratio analysis. In the second part of analysis, we selected companies that showed significant positive accruals in a year despite consistent negative accruals over the previous years and separated discretionary accruals from non-discretionary accruals to evaluate the earnings quality of those companies.

3.1 Conceptual Framework of the Study-Part A

Earnings quality is typically defined in terms of persistence & sustainability. Earnings are considered to be of high quality when they are sustainable, or they expect the reported level of earnings to be sustained or continued. Focusing on changes in balance sheet accounts, or equivalently the multitude of accruals or deferrals in net income, is an efficient & effective way to see the variation in earnings quality. There are several ways that we can decompose reported accruals earnings into a cash flow & accrual component. We can focus on information in the balance sheet, or we can focus on information in the statement of cash flows. We outline the following two approaches as used by Richardson and Tuna (2009) to this decomposition of accruals and the definition of accrual ratio for comparing accruals for one company over time and across companies over time.

3.1.1 Balance Sheet based aggregate accruals:

First, using balance sheet data, we can measure the net change across all noncash accounts to compute the aggregate accruals for any financial period. With the balance sheet data of textile industry of Bangladesh listed in DSE, aggregate accruals were calculated as simply the change in net assets (net of the cash & debt related accounts) from the start to the end of the period. Net operating assets (NOA) is defined as the difference between operating assets & operating liabilities.

$$\text{Operating Assets} = \text{Total Assets} - \text{Cash} \dots \dots \dots (i)$$

$$\text{Operating Liabilities} = \text{Total Liabilities} - \text{Total Debt} \dots \dots \dots (ii)$$

$$\text{NOA}_t = (\text{Total Assets}_t - \text{Cash}_t) - (\text{Total Liabilities}_t - \text{Total Debt}_t) \dots \dots \dots (iii)$$

Aggregate accruals for period t is the change in NOA over the period, depicted in following equation.

$$\text{Aggregate Accruals}_t = \text{NOA}_t - \text{NOA}_{t-1} \dots \dots \dots (iv)$$

To adapt the measure as an indicator of earnings quality, it must be made comparable across companies. An adjustment is required for differences in company size. Here adjustment is done using the average value of NOA. So the accruals ratio can be calculated as:

$$\text{Accruals ratio} = \frac{\text{NOA}_t - \text{NOA}_{t-1}}{(\text{NOA}_t + \text{NOA}_{t-1})/2} \dots \dots \dots (v)$$

3.1.2 Cash Flow Statement based aggregate accruals:

Cash flow based accruals ratio is the combination of the following two equations.

$$\text{Aggregate Accruals}_t = \text{net Income}_t - (\text{CFO} + \text{CFIt}) \dots (i)$$

$$\text{Accruals ratio}_t = \frac{\text{Aggregate Accruals}_t}{(\text{NOA}_t + \text{NOA}_{t-1})/2} \dots \dots \dots (ii)$$

A high accrual ratio is a bad sign for the company indicates the company is depending heavily on accruals earning which indicate low quality of the earning. The company is accruing more each year than it is collecting in outstanding accounts receivable. If the company continues to extend credit to customers who do not pay on time, or at all, the ability of the company to finance its daily necessary expenditure will be hampered.

3.2 Conceptual Framework of the Study-Part B

For the second part of our analysis, we looked at a few specific companies whose total accruals were not consistent. To be specific, this analysis includes companies whose accruals were negative for more than 4 years and in year 5 the accruals turned out to be positive. The selection of those companies for further analysis was based on an intuition that the companies might have managed the accruals upward so as to show positive accruals despite the fact that they had consistent negative accruals over the past years.

We used Modified Jones Model to separate discretionary and non-discretionary accruals of such companies in order to conclude whether the sudden change in accruals is a result of managed accruals or not. We used time-series data. Accordingly, we first calculated total accruals of all the companies for six years under study using the following formula:

Total Accruals= Income before extraordinary items-
Cash flow from operating activities

We used Net income as a proxy for Income before extraordinary items.

Then, based on our selection criteria, we selected 7 companies and subjected them to the following analysis.

Total Accruals= $a + b_1 (\text{Revenue}_t - \text{Revenue}_{t-1}) + b_2$
(Gross Property Plant & Equipment) + Prediction error

After estimating the above regression, we used the constant a , coefficients b_1 and b_2 and calculated Non-discretionary accruals (NDA) with the following equation:

$\text{NDA} = a + b_1 [(\text{Revenue}_t - \text{Revenue}_{t-1}) - (\text{Receivables}_t - \text{Receivables}_{t-1})] + b_2 (\text{Gross PPE})$

Then we calculated the Discretionary accruals by:

$\text{DA} = \text{Total Accruals} - \text{NDA}$

In case where the discretionary part of the accrual is significantly positive, we concluded that there is a likelihood that the companies under study might be overstating income.

4.0 Analysis and Findings

For the first part of the analysis, we calculated accrual ratios, both balance sheet based, and cash flow based, for each of the companies selected over the years 2011-2016. Next, we averaged the ratios to determine the industry average for accruals. On an average, the sample companies have had 35.93% balanced sheet based accrual ratio over the sample years; whereas the average cash flow based accrual ratio over the sample years was 24%. The findings indicate that the industry experienced positive change in net assets on balance sheet over a year and that the companies are accruing more each year than they are collecting in outstanding accounts receivables resulting in positive accruals. This first phase of analysis reveals only a broader picture of accruals, whether it is positive or not, for the industry under study. The second phase, on the


other hand, puts light on specific companies those are likely to manage the accruals to show bigger earnings numbers.

For the second part of analysis, we calculated total accruals (Net Income-Cash flow from operations) for 18 companies of years 2010 to 2016. Based on the intuition that companies that have experienced significant positive change in total accruals in a year followed by several negative accruals over the past 4 or more years, we selected 5 such companies and applied Modified Jones Model on to their data.

For instance, we identified that the total accruals of a company had increasingly negative accruals from 2011 to 2014; meaning that the cash flow from operations were much higher than the earnings. However, it had a positive total accrual in 2015. We run the regression model of Total accruals (Modified Jones Model), the results of which gave us the necessary coefficients and constant to calculate Non-discretionary accrual for the year 2015. The difference between the total accrual of 2015 and non-discretionary accruals of 2015 turned out to be negative for the year 2015. The result indicates that the accrual that the company had in 2015 is more likely the result of business transactions and not managed. However, the result of same analysis for a company for the year 2014 and for another company for the year 2015 indicate that the difference between actual total accrual and non-discretionary accrual is positive. This finding suggests that the sudden increase in total accruals might be the result of some management discretions as the analysis reveals that the companies have had discretionary accruals in those particular years; however, without in depth analysis of the positive increase in accruals for each of the firms for each of those years, it cannot be concluded that the companies are manipulating income.

5.0 Conclusion

Accruals are a means of growth in any emerging industry as it indicates more business. The textile industry has played an important role in Bangladesh's economy for a long time since its independence. Currently it is one of the highest contributors of the country's GDP. Now that the country has entered a lower middle-income country, and foreign investments are coming, the textile industry as a whole is expected to experience an increase in its earnings. However, the consequent increase in total

accruals is questionable when the discretionary or managed accruals are much higher than a company's expected or non-discretionary accruals. To determine whether the accrual ratio of the industry is high and if the accruals are as expected, we analyzed the earnings quality of 27 companies listed in DSE and found results suggesting that on an average the companies had 35.93% Balance Sheet based accrual ratio and 24% cash flow-based accrual ratio over the past four years. Further analysis of the accruals of 4 companies revealed that the sudden positive change in accruals for some companies are likely to be discretionary while others were non-discretionary. This phenomenon can be further examined by looking into the specific reasons acting behind the sudden increase in positive accruals. 

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