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# The Effect of Company Characteristics on Disclosure Quality of Khartoum Stock Exchange Listed Companies

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**Abstract:** This research aims to relate disclosure quality of published annual reports of listed companies in Khartoum Stock Exchange (KSE) to its hypothesized determinants. Such a relation, if exists, would be used to predict the level (size) and kind (quality) of accounting information disclosure. Annual reports of 42 listed companies in KSE out of 52 total listed companies for the year 2007 were used to assess the quality of disclosure. An unweighted disclosure index of 191 mandatory and voluntary information items was developed and utilized using all disclosure requirements by regulating bodies in Sudan, as well as relevant studies from nine developing countries. Actual degrees of disclosure quality of more than 80% of KSE listed companies were measured and analyzed. Correlation and Pearson Product Moment Correlation Coefficient Model tests were used to check the existence of association between the disclosure quality (the dependent variable) and seven independent variables (assets size, sales value, industry type, firm age, return on assets, liquidity ratio and debt ratio). Statistical analysis showed that disclosure quality was positively correlated to the firm size (measured in assets and sales values), and type of industry (measured in regulated versus non-regulated industry). On the other hand, the quality of disclosure was not significantly correlated to company age (measured in number of listing years), company profitability (measured in rate of return on assets) and company debt level (measured in liquidity and leverage ratios).

**Keywords:** Disclosure Quality, Disclosure Determinants, KSE, Firm Size, Industry Types and Company Performance

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## 1. Introduction

Firm's characteristics such as size, type of industry, and performance create the firm image, which is highly affected by and may affect its surrounding environment. The hypothesized association between these characteristics and corporate disclosure, if proven, may explain the level of existing disclosure quality and predict the anticipated future degree of it.

Firm size is supposed to be positively correlated with disclosure quality. Large companies are better in disclosing their information, as they have no fear of losing competitive advantages by adequate disclosure. Additionally, large companies tend to have better access to modern technology and are more capable of producing information that is less costly. Many studies confirm positive correlation between firm size and disclosure quality, e.g., Abdullah, Ardiansah &

Hamida found that firm size, company age and public ownership were significantly associated with disclosure levels in Indonesian companies [1].

Schadewitz & Blevins found that disclosure quality in emerging markets is a regulatory driven, rather than a price driven, and hence, highlighted the effect of having a strong enforcement mechanism on improving disclosure quality, i.e. companies in regulated industry tend to provide better disclosure quality than companies in unregulated industry [2].

The impact of company age on disclosure quality can be explained in terms of learning curve. It, usually, takes the newly listed companies longer time to become familiar with the burden of being public companies, including their external financial accounting and reporting responsibilities. In other words, a company's disclosure score is supposed to increase over time as it becomes used to reporting

regulations, which reflects the disciplinary roles of stock markets [3].

Based on the arguments of the Agency Theory, a positive effect of profitability on disclosure quality is expected because managers of profitable companies are more likely to disclose high quality information in their annual reports to justify their high salaries and incentives, on one hand, and to signal their superior performance to the market, on the other hand [4].

Liquidity and leverage are also assumed to be positively correlated with disclosure quality because companies tend to disclose more information about their performance to satisfy their lenders' needs for adequate and reliable information, and to comply with some covenant terms. Kamran & Kourtis used meta-analysis to integrate 29 studies about corporate disclosure and its association with corporate specific characteristics. They confirmed significant and positive relationships between disclosure levels and corporate size, listing status and leverage [5].

## 2. Brief Review of Literature

Buzby tried to isolate the effects of size of assets, on disclosure quality, from those of listing status. Based on informational needs of financial analysts, a disclosure index was constructed with 39 voluntary information items in order to investigate the relationship between adequate disclosure and firm size and listing status.

The disclosure index was, then, applied to annual reports of a sample of 44 unlisted companies and 44 listed companies on either New York Stock Exchange or the other American stock exchanges. The two samples were matched with respect to size of assets, fiscal year ending dates and type of industry (manufacturing industry). Then, 44 matched pairs (a company from each sample in each pair) were constructed and tested statistically to ensure consistency between each pair and among the whole sample of the study.

The relative disclosure scores were statistically tested to check for an association between the extent of disclosure and the two company specific characteristics; listing status and size of assets. Statistical analyses indicated that the extent of disclosure had been positively associated with the size of assets, but not with the listing status [6].

Stagna tried to complement the study of Buzby by examining the influence of firm size and industry type on disclosure quality of large U.S.A. industrial firms. The author developed an index of 79 voluntary information items to measure disclosure quality of selected 80 large American industrial firms. Statistical analysis showed that type of industry, rather than firm size, was the major explanatory factor for the quality of disclosure [7].

Cooke examined annual reports of 90 manufacturing Swedish companies in order to assess the significance of relationship between disclosure levels as a dependent variable and listing status and firm size as independent variables. The study sample contained 38 unlisted companies, 33 companies listed on the Swedish Stock

Exchange (SSE) only, and 19 companies listed on the SSE with at least one foreign quotation (multiple listing). 224 information items were included in the study index, and disclosure scores were computed. It was found that firm size explained 56% of variations in disclosure extent while listing status explained the remaining 44% [8].

Schadewitz & Blevins examined the major determinants of interim disclosure in Finland. 29 independent variables were considered as determinants of disclosure levels in interim reports of Finnish listed companies. Using 256 interim reports of non-financial companies, the explanatory power of the research model was found to be 42%. Out of the 29 independent variables, only ten variables were found to be significantly associated with discloser levels. These associated variables were institutional ownership, change in net sales and change in net investment (business risk), capital structure, growth, growth potential, size, and market maturity for the years 1990, 1991 and 1992. In term of significance of influential factors, Finnish interim disclosure over the period 1985-1993 was directly correlated to quantitative measures of business risk, capital structure, size and market maturing. It was, also, found that market risk and price adjustment variables had not been correlated to disclosure levels [2].

Mc Nally, Eng, & Hasseldine examined the quality of discretionary disclosure practices and their association with corporate characteristics in annual reports of 103 listed manufacturing companies in New Zealand, for the fiscal year 1979. Disclosure of 41 items was studied to examine the association between corporate disclosure and corporate characteristics, on one hand, and with unweighted index to measure the extent of corporate actual disclosure, on the other hand. Financial characteristics under study were firm size, rate of return, rate of growth, industry type and auditing firms. Of the three financial characteristics studied, only size of assets was found to be positively and significantly related to disclosure levels. Also, no relationship was found between disclosure levels and industry type or audit firms [9].

Chow investigated the extent of voluntary financial disclosure by 52 manufacturing listed companies in Mexico for the year 1982, and related it to the firm size, financial leverage and proportion of assets-in-place. Based on the study of Buzby, voluntary disclosure levels were measured with weighted and unweighted indexes of 24 items that considered optional. Multivariate regression models showed that there was a significant correlation between the extent of disclosure and both firm size and financial leverage. However, the disclosure extent was not significantly correlated with the assets-in-place [10].

Aljifri & Hussainey explored, empirically, the factors that might affect the extent to which forward-looking information had been disclosed in annual reports of 74% of total listed companies in Dubai Financial Market and Abu Dhabi Securities Market in the U.A.E. Using a list of forward-looking information, leverage was found to be significantly and positively correlated to levels of disclosing forward-looking information. Inversely, sector type, audit firms and firm size variables were found to have an insignificant

impact on the levels of disclosure [11].

Owusu-Ansah investigated the influence of eight corporate attributes on the extent of mandatory disclosure in annual reports of 49 listed non-financial companies in Zimbabwe for the year 1994. The adequacy of mandatory disclosure was measured by using an unweighted disclosure index of 32 disclosure items (disaggregated into 214 sub-items). Statistical analysis indicated that company size, ownership structure, company age, multinational corporate affiliation and profitability were significantly associated with the level of mandatory disclosure. On the other hand, the quality of external audit, industry type, and liquidity were statistically insignificant determinant of the level of mandatory disclosure [12].

Akhtaruddine investigated the extent of mandatory disclosure and its association with specific corporate characteristics (age, industry type, firm size, and profitability) in annual reports of 94 non-financial listed companies in Bangladesh for the year 1999. 160 information items were selected to measure the extent of disclosure using unweighted disclosure index. Only company size and profitability were found to be significantly associated with the extent of compliance with mandated requirements of disclosure [13].

### 3. Methodology, Data Collection and Analysis

To investigate disclosed and not disclosed information items, the researchers developed a wide-range disclosure index (list) that was not, specifically, directed at a particular group of users. Of course, bias could arise if the selected list was not sufficiently comprehensive.

The scope of the selection would usually be determined by the focus of the research, as there is no general theory on items' selection as stated by Wallace [14]. To overcome this deficiency, a list of information items studied by nine researchers was constructed to help determine items selection. These were the items studied by Mc Nally, Eng, & Hasseldine in New Zealand [9], Firer & Meth in South Africa [15], Wallace in Nigeria [14], Naser & Nuseibeh in Saudi Arabia [16], Alrazeen in Saudi Arabia [17], Akhtaruddine in Bangladesh [13], Barako in Kenya [18], Aljifri & Hussainey in UAE [11], and Hossain in India [19].

The selection criterion was that any item investigated by two or more of these studies was included in the list. Additionally, any item required by a regulatory body in Sudan, and not mentioned in these previous studies was included, e.g., all Sudanese financial companies are subject to the standards of the Accounting and Auditing Organization of Islamic Institutions (AAOIFIs). Also, most items of the IASs check list of disclosure were included as many Sudanese companies, voluntarily, adopt the IFRS. Selection process results in a list of 191 items.

Opinion about information items that should be disclosed was extracted from annual reports of companies in the sample. At least, annual reports of two fiscal years of each company in the sample were used to check the applicability

and non-applicability of each information item. Also, using available annual reports, a crosswise investigation was made for companies in each sector to get a double check for applicable information items.

Based on published annual reports of KSE listed companies, a disclosure sheet for each item, was prepared to display the number of companies to which each item was applicable and the number of companies which disclosed each applicable item. Then, disclosure statistics of information items were presented and analyzed. This was achieved by applying a dichotomy approach, i.e., an item scored "1" if it was disclosed, or "0" if it was applicable, but not disclosed. Therefore, each information item was evaluated by the ratio of the number of companies to which that item was applicable and the number of companies that disclosed the item as shown by the coming formula:

$$TD = \sum_{i=1}^m d_i$$

Where:  $d_i = 1$ , if the item  $d_i$  is disclosed, or  $d_i = 0$ , if the item  $d_i$  is applicable but not disclosed.

$m < n$  (number of applicable information items to be disclosed).

Once all items have been scored, an unweighted index is developed to measure the relative level of disclosure by a company. The index is the ratio of the total scores awarded to the company, to the maximum scores which that company is expected to earn. This relative index is calculated as:

$$M = \sum_{i=1}^n d_i$$

Where,  $M$  denotes maximum score a company can earn,  $d_i$  denotes the number of actual items disclosed, and  $n$  is the number of items which the company is expected to disclose, i.e.,  $n \leq 191$  items. Then, the total index (TI) for each company is the ratio:  $TI = TD / M$ .

The year 2007 was chosen to ensure proper access to published annual reports of the studied companies. On 31/12/2007, there were 52 listed companies in KSE. Out of them, the study sample contains 42 companies of about 97% of KSE capitalization ratio.

The study tries to test hypotheses that the quality of corporate disclosure in annual reports of Sudanese listed companies is positively and significantly associated with firm size, industry type, firm age, and firm performance (profitability, liquidity and leverage ratios). Such a relation is examined by correlation tests which state that two variables occur together in some specified manner, without implying that one causes the other [20].

Many techniques can be used to test correlation significance. However, this research uses Pearson Product Moment Correlation Coefficient Model. This model is used for continuously and linearly related variables. The correlation coefficient takes the form " $-1 \leq 0 \leq 1$ ". The value of the coefficient reveals the magnitude (the degree to which variables move in unison or opposition), whereas the coefficient sign signifies the direction of the relationship which tells whether large values on one variable are

associated with large values on the other variable and small values with small values. When the variables correspond in this way, the two variables have a positive relationship. On the other hand, if the two variables are negatively related, large values on one variable are associated with small values on the other variable, and vice versa [21].

Levels of significance on which correlation coefficient is accepted will be 0.05 or 0.01, since the studied observations are limited to only 42 cases (companies). Other levels of significance such as 0.10 or 0.25 are accepted for greater amounts of observations. If the correlation coefficient is equal to or more than 0.50, then, there is a strong relationship between the dependent and independent variables. Also, positive and negative signs of correlation coefficient refer to the direction of the relationship between the dependent and independent variables. As the direction of the correlation may be a positive or a negative, a 2-tailed distribution is used [21].

To test its hypotheses, the study correlates the overall disclosure level (the dependent variable) with each of the corporate specific characteristics, which are assumed to be the determinants of disclosure quality (the independent variables). A hypothesis is accepted for a company characteristic if it is found that there is a significant statistical relationship between that characteristic and disclosure levels. Such relationships are measured statistically by coefficients of correlation between disclosure levels and each one of the

specific characteristics.

### 3.1. The Effect of Firm Size on Disclosure Quality

In this research, firm size will be measured by assets size and values of annual sales. Assets value represents total resources available for a company (total capacity) whereas annual sales or revenues measure its activities for the whole period.

The research uses net values of fixed assets after deducting accumulated depreciation to refer to total assets' values. "Table 17 The effect of Assets Size on Disclosure Quality" in the appendices displays the effect of assets size on disclosure levels, where companies are ranked in a descending manner according to their asset's values. Disclosure mean of each company is, also, presented. To give more detailed picture, "Table 1 Disclosure Levels According to Assets Size" below was extracted from "Table 17 The effect of Assets Size on Disclosure Quality". The table shows that companies with large assets size have, on average, high disclosure levels. That is, 22 companies with assets size of more than 50,000,000 SDG have disclosure levels of more than 50%. Among them, all companies whose assets are more than 500,000,000 SDG (12 companies) have disclosure levels of more than 50%. On the other hand, 16 companies with assets size less than 50,000,000 SDG have disclosure levels of less than 50%.

**Table 1.** Disclosure Levels According to Assets Size.

Disc. Mean in (%)	Assets size of all companies in the study sample in (000) SDG							Total	%
	Up to 25000	25001-50000	50001-100000	100001-200000	200001-500000	500001-1000000	Above 1000000		
20 < 30	2							2	04.76
30 < 40	3	1				2		6	14.29
40 < 50	9	1	1	1				12	28.57
50 < 60			1	1	7	5	4	18	42.86
60 < 70				1		1	1	3	07.14
> 70							1	1	02.38
Total	14	2	2	3	9	6	6	42	100.0

Source: Table 17 The effect of Assets Size on Disclosure Quality.

Using Pearson correlation analysis, table 2 below shows that coefficient of correlation between assets size and disclosure level is found to be 0.697 and the correlation is significant at the 0.01 level. This coefficient means that

assets value and disclosure degree are positively and significantly correlated. The correlation is strong (the correlation coefficient is more than 0.50 and the correlation is significant at the 0.01 level).

**Table 2.** Correlation between Assets Size and Disclosure Levels.

		Disclosure Levels	Assets Category
Disclosure levels	Pearson Correlation	1.000	.697
	Sig. (2-tailed)	.	.000
	Number of Companies	42	42
Assets size	Pearson Correlation	.697	1.000
	Sig. (2-tailed)	.000	.
	Number of companies	42	42

Source: Researchers Own Calculations. Correlation is significant at the 0.01 level (2-tailed).

This result shows the positive effect of assets size on disclosure quality of annual reports of Sudanese listed companies. Hence, the study accepts that firm size (measured

by assets size) is a determinant of disclosure quality in annual reports of Sudanese listed companies, which implies that assets size may be a predictor of disclosure quality of

Sudanese listed companies.

The second measurement of firm size is annual sales values. "Table 18 The effect of Sales Values on Disclosure Quality" in the appendices shows that, on aggregate terms, companies with large annual sales values have, on average, high disclosure levels. "Table 3 Disclosure Levels According to Sales Values" is extracted from "Table 18 The effect of Sales Values on Disclosure Quality" to give more precise information on the effect of annual sales on disclosure levels. It shows disclosure levels of the study sample by sales categories.

The table shows that 15 companies of annual sales values of not more than 20,000 SDG have disclosure levels of less than 50%. That is, except 4 companies, all companies whose annual sales values are less than 20,000 SDG (19 companies) have disclosure mean of less than 50%. On the other hand, 19 companies of annual sales values of more than 20,000 SDG have disclosure levels of more than 50%. That is, except 4 companies, all companies whose annual sales values are more than 20,000,000 (23 companies) have disclosure mean of more than 50%.

**Table 3.** Disclosure Levels According to Sales Values.

Disc. Mean in (%)	Annual sales values of all companies in the study sample in (000) SDG							Total	%
	Up to 10000	10001-20000	20001-40000	40001-60000	60001-90000	90001-200000	Above 200000		
20 < 30	2							2	04.76
30 < 40	3	1	1				1	6	14.29
40 < 50	6	3	1		1			11	26.19
50 < 60	2	2	4	7	2	2		19	45.24
60 < 70			1	1	1			3	07.14
> 70							1	1	02.38
Total	13	6	7	8	4	3	1	42	100.0

Source: Table 18 The effect of Assets Size on Disclosure Quality.

Table 3 highlighted the effect of annual sales volumes on disclosure levels in annual reports of Sudanese listed companies. However, the correlation between annual sales values and disclosure levels is not clear as the correlation between assets size and disclosure levels, although asset size and sales volumes are significantly correlated.

Using Pearson correlation analysis, the coefficient of

correlation between firm size (measured in annual sales values) and disclosure level is found to be 0.531 and the correlation is significant at the 0.01 level, which means that firm size (measured in annual sales) and disclosure level are positively and significantly correlated, and the correlation is strong since the correlation coefficient is more than 0.50. See "Table 4 Correlation between Annual Sales Value and Disclosure Levels" below:

**Table 4.** Correlation between Annual Sales Value and Disclosure Levels.

		Annual Sales Values	Disclosure Levels
Annual sales value	Pearson Correlation	1.000	.531
	Sig. (2-tailed)	.	.000
	Number of Companies	42	42
Disclosure levels	Pearson Correlation	.531	1.000
	Sig. (2-tailed)	.000	.
	Number of Companies	42	42

Source: Researchers Own Calculations. Correlation is significant at the 0.01 level (2-tailed).

Also, "Table 5 Correlation between Assets Size and Values of Annual Sales" below correlates the relationship between

assets value and sales value. It shows that they are positively correlated, and the correlation is strong (more than 50%).

**Table 5.** Correlation between Assets Size and Values of Annual Sales.

		Value of Total Assets	Annual Sales
Value of total assets	Pearson Correlation	1.000	.648
	Sig. (2-tailed)	.	.000
	Number of companies	42	42
Annual sales	Pearson Correlation	.648	1.000
	Sig. (2-tailed)	.000	.
	Number of companies	42	42

Source: Researchers Own Calculations. Correlation is significant at the 0.01 level (2-tailed).

Hence, annual sales size is a determinant of disclosure quality and may be a predictor of disclosure quality of Sudanese listed companies. This result is consistent with the finding of Ikpor & Nancy in Nigeria [22].

### 3.2. The Effect of Industry Type on Disclosure Quality

In Sudan, financial sector (namely banks and insurance companies) is regulated and operate under close supervision of the Central Bank through regulatory bodies. KSE lists both

regulated and non-regulated companies. To test the effect of the industry type on disclosure levels, listed companies are classified as regulated or unregulated, on assumption that the disclosure quality is influenced by the regulations imposed on financial institutions by the Central Bank of Sudan. Regulated companies (financial institutions) are required to prepare their final accounts according to the standards of the AAOFIFs.

Unregulated companies (non-financial companies) have different references concerning their applied accounting standards. Table 19 The Effect of Industry Type on Disclosure Quality in the appendices shows the effect of this classification on disclosure degree. Table 6 is derived from "Table 19 The Effect of Industry Type on Disclosure Quality" to display categories of disclosure levels by industry type.

*Table 6. Disclosure Levels According to Industry Type.*

Disc. Mean	Regulated Companies		Unregulated Companies		Total
	No. of Companies	%	No. of Companies	%	
20% < 30%			1	06.25	1
30% < 40%	1	03.85	6	37.50	7
40% < 50%	5	19.23	3	18.75	8
50% < 60%	17	65.38	5	31.25	22
60% < 70%	3	11.54			3
> 70%	0		1	06.25	1
Total	26	100.0	16	100.0	42

Source: Table 19 The Effect of Industry Type on Disclosure Quality.

"Table 6 Disclosure Levels According to Industry Type" shows that 77% of regulated companies have disclosure levels of more than 50%, compared to 37% of unregulated companies.

Using Pearson correlation analysis, the coefficient of correlation between industry type and disclosure level is

found to be 0.479 and the correlation is significant at the 0.01 level. "Table 7 Correlations between Industry Type and Disclosure Levels" below shows that industry type and disclosure level are positively and significantly correlated, but the correlation is not so strong since the correlation coefficient is less than 0.50.

*Table 7. Correlations between Industry Type and Disclosure Levels.*

		Industry Type	Disclosure Levels
Industry type	Pearson Correlation	1.000	.479
	Sig. (2-tailed)	.	.001
	Number of Companies	42	42
Disclosure levels	Pearson Correlation	.479	1.000
	Sig. (2-tailed)	.001	.
	Number of Companies	42	42

Source: Researchers Own Calculations. Correlation is significant at the 0.01 level (2-tailed).

However, when Sudatel Company is excluded (an extreme value), Pearson correlation coefficient becomes 0.603 at significance levels of the 0.01. Table 8 below indicates a strong positive correlation between industry type and disclosure levels of annual reports of Sudanese listed

companies. Hence, the industry type is a determinant and may be a predictor of disclosure quality in annual reports of Sudanese listed companies. This result demonstrates a positive effect of regulations on improving disclosure levels.

*Table 8. Correlation between Industry Type and Disclosure Levels after Excluding Sudatel.*

		Disclosure Levels	Industry Type
Disclosure levels	Pearson Correlation	1.000	.603
	Sig. (2-tailed)	.	.000
	Number of Companies	41	41
Industry type	Pearson Correlation	.603	1.000
	Sig. (2-tailed)	.000	.
	Number of Companies	41	41

Source: Researchers Own Calculations. Correlation is significant at the 0.01 level (2-tailed).

### 3.3. The Effect of Company Age on Disclosure Quality

Company age is measured by the number of listing years, because long period of listing makes a company more familiar with required regulations of KSE and be more

compliant with disclosure requirements. KSE has started its operations since October 1994. Accordingly, listing years are calculated for every company as shown in "Table 20 The Effect of Company Age on Disclosure Quality" in the appendices. It displays the effect of company age on

disclosure degree.

*Table 9. Disclosure Levels According to Company Age.*

Disc. Mean	Number of listing years					Total	%
	0 < 3	3 < 6	6 < 9	9 < 12	> 12		
20% < 30%		1				1	02.38
30% < 40%	1	2	2	2		7	16.67
40% < 50%	2			2	4	8	19.08
50% < 60%	6	1	2	2	11	22	52.38
60% < 70%		1	1		1	3	7.14
> 70%				1		1	02.38
Total	9	5	5	7	16	42	100.0

Source: Table 20 The Effect of Company Age on Disclosure Quality.

Table 9 is derived from “Table 20 The Effect of Company Age on Disclosure Quality” to display disclosure levels in accordance with categories of listing years for all companies in the study sample. It shows that 12 companies with more than 12 years of listing have disclosure levels of more than 50%. On the other hand, 8 companies with less than 6 years of listing have disclosure levels of more than 50%. On contrary, the table also shows that 4 companies listed for

more than 12 years have disclosure levels below 50%, whereas 6 companies listed for less than 3 years have disclosure levels of more than 50%.

Using Pearson correlation analysis, the coefficient of correlation between company age and disclosure levels is found to be 0.158 and the correlation is not significant at the 0.05 level (see Table 10 Correlation between Company Age and Disclosure Levels below).

*Table 10. Correlation between Company Age and Disclosure Levels.*

		Disclosure Levels	Company Age
Disclosure levels	Pearson Correlation	1.000	.158
	Sig. (2-tailed)	.	.319
	Number of Companies	42	42
Company age	Pearson Correlation	.158	1.000
	Sig. (2-tailed)	.319	.
	Number of Companies	42	42

Source: Researchers Own Calculations. Correlation is not significant at the 0.01 level (2-tailed).

Hence, the firm age is not a determinant of disclosure quality of Sudanese listed companies. This may be attributed to the fact that KSE has neither issued its own disclosure requirements, nor enforced applications of any set of accounting standards.

### 3.4. The Effect of Profitability on Disclosure Quality

The research measures company profitability by the rate of return on assets which relates net results of operations (net profits) to total resources used to accomplish those results.

Firm managers are likely to disclose more information when they possess good news reflected in good performance. “Table 21 The Effect of Profitability on Disclosure Quality” in the appendices displays the effect of profitability on disclosure degree and shows that KSE listed companies have poor profitability ratios (10% are loss-makers, and only 12% have return on assets of more than 10%). Extracted from “Table 21 The Effect of Profitability on Disclosure”, table 11 Disclosure Levels According to Profitability” displays disclosure levels at various categories of returns on assets.

*Table 11. Disclosure Levels According to Profitability.*

Disc. Mean	Return on Assets in Percentage						Total	%
	0 < 2	2 < 4	4 < 6	6 < 7	7 < 10	> 10		
20% < 30%	1						1	02.38
30% < 40%	3					2	5	11.90
40% < 50%	2	2	3	1		2	10	23.81
50% < 60%	8	7	5	2			22	52.38
60% < 70%	1	1				1	3	07.14
> 70%					1		1	02.38
Total	15	10	8	3	1	5	42	100.0

Source: Table 21 The Effect of Profitability on Disclosure.

The table shows that 5 companies have rates of return on assets of more than 10%. Out of them, 4 companies (80%)

have disclosure levels of less than 50%. Inversely, 15 companies have rates of return on assets of less than 2%. Out

of them, 9 companies (60%) have disclosure levels of more than 50%.

Using Pearson correlation analysis, the coefficient of correlation between company performance (rates of return on assets) and disclosure level is found to be 0.131 and the

correlation is not significant at the 0.05 (see table 12 Correlation between Profitability and Disclosure Levels). Therefore, profitability is not a determinant of disclosure quality of Sudanese listed companies.

**Table 12.** Correlation between Profitability and Disclosure Levels.

		Return on Assets	Disclosure Levels
Return on assets	Pearson Correlation	1.000	.131
	Sig. (2-tailed)	.	.409
	Number of Companies	42	42
Disclosure levels	Pearson Correlation	.131	1.000
	Sig. (2-tailed)	.409	.
	Number of Companies	42	42

Source: Researchers Own Calculations. Correlation is not significant at the 0.05 level (2-tailed).

The low levels of profitability of listed companies may, partially, explain this unexpected result. Also, Osman has stated that actual performance of KSE listed companies is not reflected on their share's prices [23]. In such cases, disclosing companies may not be rewarded for better disclosure due to the low rates of accounting information usage as stated by Hamza [24].

### 3.5. The Effect of Liquidity on Disclosure Quality

To reflect their ability to meet short term obligations when

they fall due, liquid companies are supposed to provide better disclosure than do illiquid companies. The research measured liquidity by the current ratio, which relates current assets to current liabilities, on an assumption that current liabilities are used to finance current assets, and then current assets are used, later, to repay current liabilities at maturity dates. "Table 22 The Effect of Liquidity on Disclosure Quality" in the appendices displays the effect of liquidity on disclosure degree. Details of table 22 are displayed in table 13 below.

**Table 13.** Disclosure Levels According to Liquidity Position.

Disc. Mean	Current Ratios (Times)							Total	%
	0 < 1	1 < 1.5	1.5 < 2	2 < 3	3 < 7	7 < 10	> 10		
20% < 30%			1					1	02.38
30% < 40%		2			1			3	07.14
40% < 50%	3	7	1				1	12	28.57
50% < 60%	2	11	5	1	1	1	1	22	52.38
60% < 70%		2		1				3	07.14
> 70%				1				1	02.38
Total	5	22	7	3	2	1	2	42	100.0

Source: Table 22 The Effect of Liquidity on Disclosure Quality.

The table shows that KSE companies have poor current ratios. 33 companies (above 80% of the sample) have current ratios of less than 2 times. Among them there are 22 Out of 26 financial institutions companies. Table 13 shows that disclosure levels of 26 companies are more than 50%. Out of them, 20 companies (77%) have current ratios of less than 2 times. Oppositely, 16 companies have disclosure levels of less than 50%. Out of them, 14 companies (88%) have

current ratios of less than 2 times too.

Using Pearson correlation analysis, the coefficient of correlation between company liquidity and disclosure level is found to be 0.210 and the correlation is not significant at the 0.05 level (see Table 14 Correlation between Liquidity and Disclosure Levels). So, liquidity is not a determinant of disclosure quality of Sudanese listed companies.

**Table 14.** Correlation between Liquidity and Disclosure Levels.

		Current Ratio	Disclosure Levels
Current ratio	Pearson Correlation	1.000	.210
	Sig. (2-tailed)	.	.182
	Number of Companies	42	42
Disclosure levels	Pearson Correlation	.210	1.000
	Sig. (2-tailed)	.182	.
	Number of Companies	42	42

Source: Researchers Own Calculations. Correlation is not significant at the 0.05 level (2-tailed).

The poor liquidity of Sudanese listed companies may, partially, explain this unexpected result. Also, Hamza has stated that many Sudanese banks do not base their short-term lending decisions on analyzing their clients' financial statements. Such lenders will not push for more disclosure if they are not interested in liquidity analysis [25].

### 3.6. The Effect of Leverage on Disclosure Quality

Leverage is an indicator of the capital structure. It measures how much creditors contribute to finance the firm assets as opposed to equity finance. Liquid and solvent companies are supposed to provide better disclosure to reflect their good credit worthiness, which will enable them to get more debt finance when needed, and in a relatively low cost.

In this research, a firm leverage level is measured by the debt ratio which relates total liabilities to total assets.

"Table 23 The Effect of Leverage on Disclosure Quality" in the appendices displays the effect of leverage on disclosure degree. Details of the effect of leverage on disclosure levels are presented in "Table 15 Disclosure Levels According to Amounts of Debt" below, which is derived from "Table 23 The Effect of Leverage on Disclosure Quality". It shows that 25 companies have debt ratios of more than 50%. Out of them, 21 companies (84%) are financial institutions. The table shows that 26 companies have disclosure levels of more than 50%. Out of them, 13 companies have debt ratios of less than 60% and the other 13 companies have debt ratios of more than 60%.

Table 15. Disclosure Levels According to Amounts of Debt.

Disc. Mean	Debt Ratios (%)						Total	%
	0 < 15	15 < 30	30 < 45	45 < 60	60 < 75	> 75		
20% < 30%		1					1	02.38
30% < 40%	1	3	1	1	1	1	8	19.05
40% < 50%	2			3		2	7	16.67
50% < 60%	2		3	6	6	5	22	52.38
60% < 70%			1			2	3	07.14
> 70%		1					1	02.38
Total	5	5	5	10	7	10	42	100.0

Source: Table 23 The Effect of Leverage on Disclosure Quality.

Using Pearson correlation analysis, the coefficient of correlation between company leverage ratio and disclosure level is found to be 0.254 and the correlation is not

significant at the 0.05 level (see table 16). So, leverage is not a determinant of disclosure quality of Sudanese listed companies.

Table 16. Correlation between Leverage and Disclosure Levels.

		Debt Ratio	Disclosure Levels
Debt ratio	Pearson Correlation	1.000	.254
	Sig. (2-tailed)	.	.104
	Number of Companies	42	42
Disclosure Levels	Pearson Correlation	.254	1.000
	Sig. (2-tailed)	.104	.
	Number of Companies	42	42

Source: Researchers Own Calculations. Correlation is not significant at the 0.05 level (2-tailed).

Abdelmageed has stated that many bank loans are based on personal relationships with directors rather than on financial statements analyses [26].

## 4. Conclusion

The research has come up with the following findings concerning the effect of the firm characteristics on the degree of disclosure quality:

- There is a positive and significant correlation between the degree of disclosure quality and firm size (measured in assets size and values of annual sales). The coefficient of correlation between levels of disclosure quality and assets size is 0.697, and the coefficient of correlation between disclosure levels and values of annual sales is 0.531. Both indicators are significant at the 0.01 level, which suggest that large companies are

better in disclosing their information. Thus, firm size may be a predictor of the quality of accounting disclosure in published annual reports of Sudanese listed companies.

- There is a positive and significant correlation between levels of disclosure quality and industry type (measured in regulated versus unregulated companies). The coefficient of correlation between levels of disclosure quality and industry type is 0.603 and the correlation is significant at the 0.01 level. This result may be attributed to the close supervision imposed on financial institutions by the Central Bank of Sudan. Thus, industry type can be considered as a predictor of accounting disclosure in annual reports of Sudanese listed companies.
- Firm age (measured in the number of listing years) is not found to be significantly correlated with levels of

disclosure quality. The coefficient of correlation between company age and levels of disclosure quality is 0.158 and the correlation is not significant at the 0.05 level. The insignificant correlation between company age and disclosure levels may indicate that KSE has not, yet, exercised its disciplinary role, although it has been established since 1994. The absence of the disciplinary role may be attributed to the fact that KSE has neither issued its own disclosure standards, nor recommended the adoption or application of already-set disclosure standards like the IFRSs.

d) Profitability (measured in rates of return on assets) is not found to be significantly correlated with the levels of disclosure quality. The coefficient of correlation between rates of return on assets and levels of disclosure quality is 0.131 and the correlation is not significant at the 0.05 level. This insignificant correlation may be attributed to the low rate of using accounting information by shareholders in Sudan (less than 10%) as stated by Hamza [24].

e) Liquidity (measured in current ratio) is not found to be significantly correlated with levels of disclosure quality. The coefficient of correlation between liquidity ratios and disclosure quality is 0.210 and the correlation is not significant at the 0.05 level. This result is consistent with the finding of Hamza who has stated that only 21% of investment managers, in Sudanese banks, depend on accounting information in making their lending decisions [24].

f) Leverage (measured in debt ratio) is not found to be significantly correlated with levels of disclosure quality. The coefficient of correlation between liquidity and levels of disclosure quality is 0.254 and the correlation is not significant at the 0.05 level. Indicators of company performance have little or no effect on disclosure quality. This finding is consistent with those of Hamza who has found that about one third of the motives for shares' buying/ holding/ selling decision, in Sudan, is of non-economic nature [24].

## Appendix

*Table 17. The Effect of Assets Size on Disclosure Degree.*

Company Name	Assets in (000) SDG	Disc. Level	Company Order	
			Asset Size	Disc.
Omdurman National Bank	6289747	0.5789	1	8
Sudatel	4672620	0.7349	2	1
Bank of Khartoum	1709241	0.5641	3	10
Sudanese French Bank	1087073	0.6076	4	4
Faisal Bank	1030880	0.5921	5	6
Tadamon Islamic Bank	1025474	0.5987	6	5
S F Z Company	898194	0.5098	7	22
Alsalam Bank	818709	0.5887	8	7
Islamic Devt. Cooperative Bank	797396	0.6859	9	2
Farmer Commercial Bank	649907	0.5638	10	11
Alshamal Islamic Bank	544183	0.5503	11	15
Animal Resources Bank	535071	0.5578	12	14
Emirates and Sudan Bank	490630	0.5605	13	13
Sudanese Islamic Bank	486430	0.5405	14	18
Saudi Sudanese Bank	479777	0.5364	15	19
Export Development Bank	389983	0.5163	16	21
United Capital Bank	388640	0.5745	17	9
Blue Nile Bank	356334	0.5333	18	20
Tala Investment Co. Ltd	227730	0.3191	19	40
Workers' National Bank	227219	0.5430	20	17
Nile Cement Company	226730	0.3919	21	35
Financial Investment Bank	194779	0.6259	22	3
Ivory Bank	126809	0.4247	23	34
Islamic Development Company	108940	0.5455	24	16
Global	70718	0.5615	25	12
The National Reinsurance	55230	0.4710	26	30
Joba Insurance	27854	0.3617	27	38
The National Petroleum	26519	0.4557	28	32
The Blue Nile Insurance	20545	0.4965	29	27
Alrowad Financial Services Co. Ltd	16549	0.3798	30	37
Assalama Insurance	15473	0.5035	31	25
Almohager for Investment	12210	0.5036	32	24

Company Name	Assets in (000) SDG	Disc. Level	Company Order	
			Asset Size	Disc.
Almohager for Financial Services	12000	0.5000	33	26
Watania Co-operative Insurance	7234	0.4745	34	29
Modern Construction	5784	0.4626	35	31
Elnilein Insurance	4158	0.4855	36	28
Sudanese Kuwaiti Road Transport	3163	0.2481	37	42
Alriy Alaam Press and Publishing	3162	0.3385	38	39
General Insurance	2195	0.5074	39	23
Alhijra Exchange Co. Ltd	2157	0.3814	40	36
Alsaham for Financial Services	1812	0.4274	41	33
Tagseet	1740	0.3022	42	41

Source: Researchers Own Calculations.

*Table 18. The Effect of Sales Values on Disclosure Degree.*

Company Name	Sales in (000) SDG	Disc. Level	Company Order	
			Sales	Disc.
Sudatel	1242206	.7349	1	1
Alhijra Exchange Co. Ltd	198971	.3814	2	36
Omdurman National Bank	166222	.5789	3	8
Bank of Khartoum	136438	.5641	4	10
Tadamon Islamic Bank	81389	.5987	5	5
Faisal Bank	78171	.5921	6	6
Sudanese French Bank	75590	.6076	7	4
The National Petroleum	69637	.4557	8	32
Farmer Commercial Bank	58754	.5638	9	11
Emirates and Sudan Bank	53911	.5605	10	13
S F Z	51144	.5098	11	22
United Capital Bank	51129	.5745	12	9
Islamic Development Cooperative Bank	50416	.6859	13	2
Alsalam Bank	46124	.5887	14	7
Export Development Bank	42119	.5163	15	21
Sudanese Islamic Bank	40271	.5405	16	18
Nile Cement Company	37109	.3919	17	35
Saudi Sudanese Bank	33929	.5364	18	19
Financial Investment Bank	32833	.6259	19	3
Blue Nile Bank	30738	.5333	20	20
The National Reinsurance	29656	.4710	21	30
Alshamal Islamic Bank	28761	.5503	22	15
Animal Resources Bank	28595	.5578	23	14
Islamic Development Company	23738	.5455	24	16
Joba Insurance	22627	.3617	25	38
Assalama Insurance	16225	.5035	26	25
Workers' National Bank	15253	.5430	27	17
The Blue Nile Insurance	15187	.4965	28	27
Almohager for Financial Services	11947	.5000	29	26
Watania Co-operative Insurance	9313	.4745	30	29
Alriy Alaam Press and Publishing	8672	.3385	31	39
Alrowad Financial Services Co. Ltd	8621	.3798	32	37
Global	6578	.5615	33	12
Ivory Bank	5302	.4247	34	34
Elnilein Insurance	4379	.4855	35	28
Modern Construction	3343	.4626	36	31
Almohager for Investments	3187	.5036	37	24
General Insurance	1810	.5074	38	23
Tala Investment Co. Ltd	684	.3191	39	40
Tagseet	500	.3022	40	41
Alsaham for Financial Services	411	.4274	41	33
Sudanese Kuwaiti Road Transport	410	.2481	42	42

Source: Researchers Own Calculations

*Table 19. The Effect of Industry Type on Disclosure Degree.*

Company Name	Industry Type	Company Order	
		Disc.	Order
Sudatel	Unregulated	.7349	1
Islamic Development Co-operative Bank	Regulated	.6859	2
Financial Investment Bank	Regulated	.6259	3
Sudanese French Bank	Regulated	.6076	4
Tadamon Islamic Bank	Regulated	.5987	5
Faisal Bank	Regulated	.5921	6
Alsalam Bank	Regulated	.5887	7
Omdurman National Bank	Regulated	.5789	8
United Capital Bank	Regulated	.5745	9
Bank of Khartoum	Regulated	.5641	10
Farmer Commercial Bank	Regulated	.5638	11
Global	Unregulated	.5615	12
Emirates and Sudan Bank	Regulated	.5605	13
Animal Resources Bank	Regulated	.5578	14
Alshamal Islamic Bank	Regulated	.5503	15
Islamic Development Company	Unregulated	.5455	16
Workers' National Bank	Regulated	.5430	17
Sudanese Islamic Bank	Regulated	.5405	18
Saudi Sudanese Bank	Regulated	.5364	19
Blue Nile Bank	Regulated	.5333	20
Export Development Bank	Regulated	.5163	21
S F Z	Unregulated	.5098	22
General Insurance	Regulated	.5074	23
Almohager for Investments	Unregulated	.5036	24
Assalama Insurance	Regulated	.5035	25
Almohager for Financial Services	Unregulated	.5000	26
The Blue Nile Insurance	Regulated	.4965	27
Elnilein Insurance	Regulated	.4855	28
Watania Co-operative Insurance	Regulated	.4745	29
The National Reinsurance	Regulated	.4710	30
Modern Construction	Unregulated	.4626	31
The National Petroleum	Unregulated	.4557	32
Alsaham for Financial Services	Unregulated	.4274	33
Ivory Bank	Regulated	.4247	34
Nile Cement Company	Unregulated	.3919	35
Alhijra Exchange Co. Ltd	Unregulated	.3814	36
Alrowad Financial Services Co. Ltd	Unregulated	.3798	37
Joba Insurance	Regulated	.3617	38
Alriy Alaam Press and Publishing	Unregulated	.3385	39
Tala Investment Co. Ltd	Unregulated	.3191	40
Tagseet	Unregulated	.3022	41
Sudanese Kuwaiti Road Transport	Unregulated	.2481	42

Source: Researchers Own Calculations

*Table 20. The Effect of Company Age on Disclosure Degree.*

Company Name	Listing Years	Disc. Level	Company Order	
			Age	Disc.
Sudanese French Bank	13.00	.6076	1	4
Tadamon Islamic Bank	13.00	.5987	1	5
Faisal Bank	13.00	.5921	1	6
Alshamal Islamic Bank	13.00	.5503	1	15
Islamic Development Company	13.00	.5455	1	16
Workers' National Bank	13.00	.5430	1	17
Sudanese Islamic Bank	13.00	.5405	1	18
Saudi Sudanese Bank	13.00	.5364	1	19
Export Development Bank	13.00	.5163	1	21
General Insurance	13.00	.5074	1	23
The Blue Nile Insurance	13.00	.4965	1	27
Elnilein Insurance	13.00	.4855	1	28
Watania Co-operative Insurance	13.00	.4745	1	29
The National Petroleum	13.00	.4557	1	32
Farmer Commercial Bank	12.67	.5638	15	11
Omdurman National Bank	12.20	.5789	16	8

Company Name	Listing Years	Disc. Level	Company Order	
			Age	Disc.
The National Reinsurance	11.90	.4710	17	30
Nile Cement Company	11.90	.3919	17	35
Sudanese Kuwaiti Road Transport	11.90	.3022	17	42
Animal Resources Bank	11.75	.5578	20	14
Ivory Bank	11.75	.4247	20	34
Assalama Insurance	11.33	.5051	22	25
Sudatel	10.75	.7349	23	1
Financial Investment Bank	8.67	.6259	24	3
Joba Insurance	7.90	.3617	25	38
Almohager for Investments	7.50	.5036	26	24
Alriy Alaam Press and Publishing	6.90	.3385	27	39
Blue Nile Bank	6.10	.5333	28	20
Alrowad Financial Services Co. Ltd	5.40	.3798	29	37
Tagseet	5.33	.2481	30	41
S F Z	5.25	.5098	31	22
Alhijra Exchange Co. Ltd	5.25	.3814	31	36
Islamic Devt Cooperative Bank	4.67	.6859	33	2
Alsalam Bank	2.50	.5887	34	7
Emirates and Sudan Bank	1.67	.5605	35	13
Global	1.50	.5615	36	12
Alsaham for Financial Services	1.33	.4274	37	33
Bank of Khartoum	1.00	.5641	38	10
Modern Construction	0.90	.4626	39	31
United Capital Bank	0.75	.5745	40	9
Almohager for Financial Services	0.75	5.000	41	26
Tala Investment Co. Ltd	0.20	.3191	42	40

Source: Researchers Own Calculations

*Table 21. The Effect of Profitability on Disclosure Degree.*

Company Name	Return on Assets	Disc. Level	Company Order	
			Profitability	Disc.
Alhijra Exchange Co. Ltd	25.60	.3814	1	36
The National Reinsurance	13.12	.4710	2	30
Financial Investment Bank	10.37	.6259	3	3
Alsaham for Financial Services	10.15	.4274	4	33
Alrowad Financial Services Co. Ltd	10.12	.3798	5	37
Sudatel	7.30	.7349	6	1
Almohager for Financial Services	6.98	.5000	7	26
The National Petroleum	6.90	.4557	8	32
Global	6.50	.5615	9	12
The Blue Nile Insurance	5.97	.4965	10	27
Almohager for Investments	5.90	.5036	11	24
Modern Construction	4.90	.4626	12	31
Blue Nile Bank	4.65	.5333	13	20
Emirates and Sudan Bank	4.62	.5605	14	13
Elnilein Insurance	4.60	.4855	15	28
Islamic Development Company	4.20	.5455	16	16
Tadamon Islamic Bank	4.13	.5987	17	5
United Capital Bank	3.57	.5745	18	9
Nile Cement Company	3.50	.3919	19	35
Faisal Bank	3.30	.5921	20	6
Assalama Insurance	3.30	.5035	21	25
Alsalam Bank	3.08	.5887	22	7
Saudi Sudanese Bank	3.03	.5364	23	19
Export Development Bank	2.50	.5163	24	21
Sudanese French Bank	2.20	.6076	25	4
Farmer Commercial Bank	2.16	.5638	26	11
Joba Insurance	2.16	.3617	27	38
Sudanese Islamic Bank	1.61	.5405	28	18
Watania Co-operative Insurance	1.60	.4745	29	29
Workers' National Bank	1.58	.5430	30	17
Sudanese Kuwaiti Road Transport	1.30	.3022	31	42
Bank of Khartoum	1.20	.5641	32	10

Company Name	Return on Assets	Disc. Level	Company Order	
			Profitability	Disc.
Omdurman National Bank	.86	.5789	33	8
Islamic Devt. Cooperative Bank	.82	.6859	34	2
Alshamal Islamic Bank	.42	.5503	35	15
S F Z	.40	.5098	36	22
Animal Resources Bank	.38	.5578	37	14
Tala Investment Co. Ltd	.00	.3191	38	40
Tagseet	-.11	.2481	39	41
Alriy Alaam Press and Publishing	-.20	.3385	40	39
General Insurance	-.40	.5074	41	23
Ivory Bank	-1.00	.4247	42	34

Source: Researchers Own Calculations.

*Table 22. The Effect of Liquidity on Disclosure Degree.*

Company Name	Current Ratio	Disc. Level	Company Order	
			Liquidity	Disc.
Global	32.43	.5615	1	12
Alsaham for Financial Services	18.02	.4274	2	33
Alsalam Bank	8.87	.5887	3	7
Alhijra Exchange Co. Ltd	5.74	.3814	4	36
United Capital Bank	3.02	.5745	5	9
Financial Investment Bank	2.83	.6259	6	3
Sudatel	2.66	.7349	7	1
Emirates and Sudan Bank	2.61	.5605	8	13
Omdurman National Bank	1.98	.5789	9	8
Tadamon Islamic Bank	1.85	.5987	10	5
Tagseet	1.81	.2481	11	41
Workers' National Bank	1.75	.5430	12	17
The National Reinsurance	1.61	.4710	13	30
Farmer Commercial Bank	1.60	.5638	14	11
Bank of Khartoum	1.50	.5641	15	10
Export Development Bank	1.40	.5163	16	21
Alrowad Financial Services Co. Ltd	1.40	.3798	17	37
Elnilein Insurance	1.38	.4855	18	28
Faisal Bank	1.32	.5921	19	6
Tala Investment Co. Ltd	1.32	.3191	20	40
Sudanese Islamic Bank	1.30	.5405	21	18
The National Petroleum	1.29	.4557	22	32
Saudi Sudanese Bank	1.27	.5364	23	19
Islamic Development Cooperative Bank	1.26	.6859	24	2
Alshamal Islamic Bank	1.26	.5503	25	15
Sudanese French Bank	1.25	.6076	26	4
Blue Nile Bank	1.25	.5333	27	20
Animal Resources Bank	1.24	.5578	28	14
Modern Construction	1.18	.4626	29	31
General Insurance	1.17	.5074	30	23
The Blue Nile Insurance	1.17	.4965	31	27
Ivory Bank	1.16	.4247	32	34
Assalama Insurance	1.11	.5035	33	25
Joba Insurance	1.08	.3617	34	38
Almohager for Investments	1.07	.5036	35	24
Watania Co-operative Insurance	1.07	.4745	36	29
S F Z	1.05	.5098	37	22
Islamic Development Company	0.58	.5455	38	16
Alriy Alaam Press and Publishing	0.53	.3385	39	39
Nile Cement Company	0.36	.3919	40	35
Almohager for Financial Services	0.35	.5000	41	26
Sudanese Kuwaiti Road Transport	0.20	.3022	42	42

Source: Researchers Own Calculations

Table 23. The Effect of Leverage on Disclosure Degree.

Company Name	Debt Ratio	Disc. Mean	Company Order	
			Leverage	Disc.
Bank of Khartoum	87.52	.5641	1	10
Ivory Bank	83.67	.4247	2	35
General Insurance	83.52	.5074	3	23
Joba Insurance	82.50	.3617	4	39
Watania Co-operative Insurance	81.87	.4745	5	29
Faisal Bank	81.82	.5921	6	6
Islamic Development Cooperative Bank	80.11	.6859	7	2
Alshamal Islamic Bank	77.30	.5503	8	15
Saudi Sudanese Bank	77.13	.5364	9	19
Sudanese French Bank	76.93	.6076	10	4
Assalama Insurance	73.63	.5035	11	25
Blue Nile Bank	73.22	.5333	12	20
Export Development Bank	71.75	.5163	13	21
Sudanese Islamic Bank	70.65	.5405	14	18
Alriy Alaam Press and Publishing	70.64	.3385	15	40
Animal Resources Bank	69.82	.5578	16	14
Almohager for Investments	64.46	.5036	17	24
The Blue Nile Insurance	59.83	.4965	18	27
Farmer Commercial Bank	58.37	.5638	19	11
The National Reinsurance	57.45	.4710	20	30
Almohager for Financial Services	54.43	.5000	21	26
Workers' National Bank	54.03	.5430	22	17
Alsalam Bank	52.07	.5887	23	7
Tagseet	50.23	.3022	24	42
Tadamon Islamic Bank	50.16	.5987	25	5
Omdurman National Bank	49.39	.5789	26	8
Elnilein Insurance	47.71	.4855	27	28
Emirates and Sudan Bank	44.78	.5605	28	13
Islamic Development Company	41.79	.5455	29	16
Modern Construction	37.14	.4626	30	31
Financial Investment Bank	34.52	.6259	31	3
United Capital Bank	32.59	.5745	32	9
Nile Cement Company	29.80	.3919	33	36
Sudatel	25.47	.7349	34	1
Alrowad Financial Services Co. Ltd	21.37	.3798	35	38
Sudanese Kuwaiti Road Transport	20.59	.2481	36	42
Alhijra Exchange Co. Ltd	15.86	.3814	37	37
The National Petroleum	7.94	.4557	38	33
Sudanese Free Zones (SFZ)	7.10	.5098	39	22
Alsaham for Financial Services	5.41	.4274	40	34
Global	3.07	.5615	41	12
Tala Investment Co. Ltd	.03	.3191	42	41

Source: Researchers Own Calculations

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