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# Fundamental Analysis of the Agricultural Firms Listed at the Nairobi Securities Exchange, Kenya.

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## Abstract

This study examined the fundamentals of the agricultural firms listed at the Nairobi Securities Exchange in Kenya. Cross-sectional data covering seven years was obtained from six firms and assembled into a pool of 420 data points. The study employed one-way analysis of variance in performing fundamental securities analysis using ratios data from the published financial statements of the firms. The findings suggest that there are differences among these firms with regard to solvency, liquidity and profitability which lays bare a compelling choice criteria for investors and other stakeholders who are keen on dealing with these firms.

## Introduction

Investors who buy securities with the intention of holding them over a long period are mostly interested in undertaking fundamental analysis of the various stocks. Such analysis is meant to reveal the real *financial health* metrics of the firm which may not be contained in the latest stock market data. According to Baresa, Bogdan and Ivanovic (2013), there are many unpredictable factors that affect stock prices and the best way to deal with the uncertainty is to perform fundamental analysis. Fundamental analysis is born out of the need to enhance decision-making quality and improve returns to the investors (Chen, Min and Lu, 2017). The participants at the securities market involve those who invest on their own behalf as well as those who invest on behalf of others and therefore hold portfolios under certain agreements that may provide for specified minimum returns to the real investors. It's therefore imperative that the selection of securities for investments be preceded by a formulation of a choice criteria that secures returns to all the parties involved.

In this study, an attempt has been made to analyze some selected fundamentals of all the six firms under the Agricultural Sector of the Nairobi's Securities Exchange (NSE). This study has assembled an information bearing which is critical to both individuals and institutional investors who are keen on agricultural stocks before they commit their funds. It has provided useful information to any person who intends to evaluate the investment prospects in any of the listed entities including those that may be keen to buy out investors from a listed firm and subsequently delist such securities as was witnessed with the REA VIPINGO LTD's case in the year 2015.

Fundamental analysis is therefore an important milestone in the journey towards efficient allocation of investment funds by investors as it reveals any return prospects that may be lying in sheer latency in certain securities. Imperfections in the securities market are also reduced if the traders rely on the intrinsic characteristics of the various firms as the main anchor for the market positions they take. Markets where information guides decision making processes do not therefore suffer from serious mispricing of securities and speculative bubbles that never burst.

## Empirical Review

Financial ratios are a major ingredient in undertaking fundamental analysis as it provides the building blocks of a firm's financial wellbeing. A number of scholars who have ventured to perform an analysis aimed at showing the financial wellbeing of firms have found ratios to be indispensable. Meriç, Kamışlı and Temizel (2017) conducted a fundamental analysis on the interaction of stock prices and a select financial ratios using data from banks in Turkey. They found that the strength and direction of the relationship between the variables changes from bank to bank. This laid a foundation for the one-way Anova that this study sought to use so as to bring out the differences between the agricultural firms based on the solvency, liquidity and profitability ratios.

Faruque and Islam (2018) performed a securities analysis of three banks in Bangladesh using return on equity and price-earnings ratio data obtained over a five year period from 2013 to 2017. Their findings gave a pointer about the firm that presents the best investment prospects among the three banks. This information-led choices of securities for investments among the informed dealers and investors is one of the means by which a securities market drifts towards reducing market imperfections or eliminating it altogether. Fundamental securities analysis is practiced by investors who do not want to approach investment decision making situations in a reflexive way and therefore intentionally seek information that secures reasonable return prospects. Grimm (2012) conducted a survey of investors in Austria to determine the extent to which they would perform fundamental analysis as a way of setting a

thymologic basis for their investment choices. His study confirmed that indeed investors view common stock selection as a speculative process where the best returns belong to those who are very intentional about seeking opportunities for high returns in a dynamic and uncertain environment.

An argument may arise as to whether there is consistency in the fundamental analysis process and consequently the reliability of its results. Since it largely uses financial ratios obtained from the same time frame for different entities, fundamental analysis is bound to give fairly objective assessment of the financial health of a firm. It's however clear that as it is currently, the variables being used to perform fundamental analysis have not yet been parameterized and it's also not clear if such an initiative would be objective. Durmus and Inel (2020) used financial ratios to perform fundamental analysis using two approaches of Additive Ratio Assessment (ARAS) and Complex Proportional Assessment (COPRAS) and confirm that the findings are similar with slight differences in rankings of the 20 firms used in the study.

Yan and Zheng (2017) used bootstrap approach to evaluate the impact of data mining on fundamental-based anomalies and established that fundamental signals are significant predictors of cross-sectional stock returns. Fundamental signals exhibit genuine predictive ability for future stock returns.

Studies in which differences between groups are examined are best done using one-way analysis of variance particularly if the differences are analyzed on a parameter by parameter basis. In a study to examine the differences between public and private sector banks in India, one-way analysis of variance method was used and the findings point to a decline in the performance of public sector banks (Sodhi & Waraich, 2016). The current study considered this methodology as being appropriate as it offered safeguards in addressing the challenges of specification failures like the homogeneity of variance requirements.

Firm solvency is a major determinant of the going concern status of a business. Any occurrences that threatens the solvency standing of a business is in fact directly putting to question the very existence of that firm. As was witnessed during the period of heightened covid-19 infection in the whole world, a number of businesses faced real threat of closure. Guerini, Nesta, Ragot and Schiavo (2019) conducted a study on firm liquidity and solvency under covid-19 lockdown in France and discovered that the lockdown triggered an unprecedented increase in the number of illiquid and insolvent firms. With the kind of findings that this study has generated, it's indeed clear that investors would know in advance which firms would very easily slip into insolvency if such a protracted period of lockdown was to occur again in the near future in the Kenyan scene.

Leverage affects firm value. From the early works of Modigliani and Miller, it's demonstrated that through the intervention of corporate taxes, debt results into an increase in firm value. Although the inclusion of debt in the capital structure does bring about the risk of financial distress, it was found to mediate the effects of liquidity, firm size and profitability on firm value (Zuhroh, 2019).

Firm liquidity is a parameter of interest to stakeholders who envisage short-term engagements with the firm under certain terms that provide reasonable expectation of cash receipts from time to time. That may include largely the trade creditors as well as the long-term debt providers who expect interest payment obligations to be met as per the terms. Prilmeier and Stulz (2019) conducted a study on the choice between loans and bonds for heavily levered firms and found that there is a higher liquidity advantage of cov-lite loans over cov-heavy loans for non-registered issuers due to greater information asymmetry. Part of the initiatives that reduce this information asymmetry is the undertaking of a fundamental analysis that this study has ventured to address.

Monetary policies create shocks that alter the investment decisions of firms. Jenaas (2019) conducted a study on the role of balance sheet liquidity in the transmission of monetary policy shocks to investments. He established that firms with higher leverage and fewer liquid assets reduce investments relative to others as a response to contractionary monetary policy. This study presents the leverage scores of the firms as well as their liquidity standing so that investors know in advance what they should expect if their firm of interest has to deal with a contractionary monetary policy initiative by the government

## Data

Secondary data was obtained from the published financial statements of the six (6) agricultural firms from the year 2014 to 2020. Raw data was used to calculate ten (10) ratios which were then used to perform fundamental analysis. The ten ratios were classified under three broad categories into solvency ratios, liquidity ratios and profitability ratios. The solvency ratios used in this study were; long-term debt to equity ratio; debt-equity ratio; debt ratio and financial leverage ratio. The liquidity ratios used were; current ratio, quick ratio and cash ratio. Finally, the profitability ratio used were; return on asset, return on equity and earnings per share.

## Methodology

A one-way Anova was used to determine if there is a significant difference between the firms based on each of the ten ratios. The data was tested for the assumption of homogeneity of variances for each and every ratio using Levene's test and where violations were noted, the Welch Anova was interpreted instead. For such cases, the appropriate post hoc tests were done and the Games Howell statistic read from the table of multiple comparisons. However, in the cases where homogeneity of variances assumption was upheld, the Anova results were interpreted and the Tukey's post hoc test used to generate the table of multiple comparisons.

An inverted score-based ranking was used to rank the firms on a scale of one (1) to six (6) by assigning a score of six (6) to the firm with the best result on each ratio and a score of one (1) to the firm with the worst results. These scores were based on the information contained in the Homogenous subsets tables that were generated as part of the SPSS output for each response variable (ratios). A composite score for solvency was used to rank the six firms based on their level of financial distress risk from the least risky (score of 6) to the most risky (score of 1). A similar scoring system was used for liquidity where the firm that had the highest average liquidity score was assigned six (6) points and the one with the lowest liquidity assigned one (1) point. The

scoring system was also applied to profitability after which an overall score for all the three categories of ratios computed to give a final ranking of the companies.

## Empirical Results

### 1) Long-Term Debt to Equity Ratio

A one-way analysis of variance was conducted to evaluate the null hypothesis that there is no significant difference between the agricultural firms listed at the Nairobi Securities Exchange (NSE) based on their long-term debt to equity ratio *(N = 42)*. The independent variable included six (6) listed agricultural firms forming six groups: EAAGADS LTD *(M = 0.0820, SD = 0.02807, n = 7)*, KAPCHORUA TEA LTD *(M = 0.2731, SD = 0.02836, n = 7)*, KAKUZI LTD *( M = 0.2026, SD = 0.01698, n = 7)*, LIMURU TEA LTD *(M = 0.1891, SD = 0.06615, n = 7)*, SASINI LTD *(M = 0.1290, SD = 0.08012, n = 7)* and WILLIAMSON TEA LTD *(M = 0.2233, SD = 0.02225, n = 7)*.

**Table I**

*Descriptive Statistics for the Long-term Debt to Equity Ratio of Agricultural Firms Listed at the Nairobi Securities Exchange*

| | N | Mean | Std. Deviation | Std. Error | 95% Confidence Interval for Mean | | Minimum | Maximum |
|---|---|---|---|---|---|---|---|---|
| | | | | | Lower Bound | Upper Bound | | |
| EAAGADS | 7 | .0820 | .02807 | .01061 | .0560 | .1079 | .04 | .13 |
| KAPCHORUA | 7 | .2731 | .02836 | .01072 | .2469 | .2994 | .23 | .31 |
| KAKUZI | 7 | .2026 | .01698 | .00642 | .1869 | .2183 | .19 | .23 |
| LIMURU | 7 | .1891 | .06615 | .02500 | .1280 | .2503 | .10 | .28 |
| SASINI | 7 | .1290 | .08012 | .03028 | .0549 | .2031 | .09 | .31 |
| WILLIAMSON | 7 | .2233 | .02225 | .00841 | .2027 | .2439 | .20 | .25 |
| **Total** | **42** | **.1832** | **.07684** | **.01186** | **.1592** | **.2071** | **.04** | **.31** |

The assumption of homogeneity of variances was tested using Levene's Test, $F(5, 36) = 2.774$, $p = .032$ and the violation noted. The Welch ANOVA was significant, $F(5, 16.374) = 31.584$, $p < 0.001$. Thus, there is significant evidence to reject the null hypothesis and conclude that there is a significant difference between the agricultural firms listed at the NSE based on their long-term debt to equity ratio.

**Table II**

*Welch ANOVA results for the Long-Term Debt to Equity Ratio between Agricultural Firms Listed at the NSE*

| Robust Tests of Equality of Means | | | | |
|---|---|---|---|---|
| | Statistic[a] | df1 | df2 | Sig. |
| Welch | 31.584 | 5 | 16.374 | .000 |

a. Asymptotically F distributed.

The homogenous subsets show the various combinations of the agricultural firms that belong together based on their long-term debt to equity ratio and the probability of belonging to each of the subsets is provided:

**Table III**

*Homogenous Subsets of the Agricultural Firms based on their Long-Term Debt to Equity Ratio*

| | Agricultural Firms Listed at the Nairobi Securities Exchange | N | Subset for alpha = 0.05 | | | |
|---|---|---|---|---|---|---|
| | | | 1 | 2 | 3 | 4 |
| Tukey HSD[a] | EAAGADS | 7 | .0820 | | | |
| | SASINI | 7 | .1290 | .1290 | | |
| | LIMURU | 7 | | .1891 | .1891 | |
| | KAKUZI | 7 | | .2026 | .2026 | .2026 |
| | WILLIAMSON | 7 | | | .2233 | .2233 |
| | KAPCHORUA | 7 | | | | .2731 |
| | Sig. | | .4320 | .0590 | .7480 | .0770 |

Means for groups in homogeneous subsets are displayed.

a. Uses Harmonic Mean Sample Size = 7.000.

An inverted rank-based scoring of these firms on the basis of the long-term debt to equity ratio is guided by the logic that the lower the ratio, the better the solvency score of the firm. Lower ratios show that the firm has a lower probability of experiencing financial distress. Thus, EAAGADS has the highest score of six (6) points followed by SASINI with 5 points and KAPCHORUA coming last with only 1 point as it has the highest long-term debt to equity ratio.

### 2) Debt/Equity Ratio

A one-way analysis of variance was conducted to evaluate the null hypothesis that there is no significant difference between the agricultural firms listed at the Nairobi Securities Exchange (NSE) based on their debt-equity ratio *(N = 42)*. The independent variable included six (6) listed agricultural firms forming six groups: EAAGADS LTD *(M = 0.1286, SD = 0.05119, n = 7)*, KAPCHORUA TEA LTD *(M = 0.4101, SD = 0.04181, n = 7)*, KAKUZI LTD *( M = 0.2874, SD = 0.03814, n = 7)*, LIMURU TEA LTD *(M = 0.3257, SD = 0.08281, n = 7)*, SASINI LTD *(M = 0.1787, SD = 0.09886, n = 7)* and WILLIAMSON TEA LTD *(M = 0.3263, SD = 0.03868, n = 7)*.

**Table IV**

*Descriptive Statistics for the Debt-Equity Ratio of Agricultural Firms Listed at the Nairobi Securities Exchange*

**Descriptives**

|  | N | Mean | Std. Deviation | Std. Error | 95% Confidence Interval for Mean | | Minimum | Maximum |
|---|---|---|---|---|---|---|---|---|
|  |  |  |  |  | Lower Bound | Upper Bound |  |  |
| EAAGADS | 7 | .1286 | .05119 | .01935 | .0812 | .1759 | .08 | .24 |
| KAPCHORUA | 7 | .4101 | .04181 | .01580 | .3715 | .4488 | .36 | .49 |
| KAKUZI | 7 | .2874 | .03814 | .01441 | .2522 | .3227 | .24 | .33 |
| LIMURU | 7 | .3257 | .08281 | .03130 | .2491 | .4023 | .20 | .40 |
| SASINI | 7 | .1787 | .09886 | .03736 | .0873 | .2701 | .12 | .40 |
| WILLIAMSON | 7 | .3263 | .03868 | .01462 | .2905 | .3621 | .29 | .39 |
| Total | 42 | .2761 | .11305 | .01744 | .2409 | .3114 | .08 | .49 |

The assumption of homogeneity of variances was tested and found to be tenable using Levene's Test, $F(5, 36) = 1.393$, $p = .250$. The ANOVA was significant, $F(5, 36) = 19.054$, $p < 0.001$. Thus, there is a significant difference between the agricultural firms listed at the NSE based on their debt/equity ratio.

**Table V**

*ANOVA Results for the Debt-Equity Ratio*

**ANOVA**

|  | Sum of Squares | df | Mean Square | F | Sig. |
|---|---|---|---|---|---|
| Between Groups | .380 | 5 | .076 | 19.054 | .000 |
| Within Groups | .144 | 36 | .004 |  |  |
| Total | .524 | 41 |  |  |  |

The homogenous subsets show the various combinations of the agricultural firms that belong together based on their debt-equity ratio and the probability of belonging to each of the subsets is provided:

**Table VI**

*Homogenous Subsets of the Agricultural Firms based on their Debt-Equity Ratio*

|  | Agricultural Firms Listed at the Nairobi Securities Exchange | N | Subset for alpha = 0.05 | | |
|---|---|---|---|---|---|
|  |  |  | 1 | 2 | 3 |
| Tukey HSD[a] | EAAGADS | 7 | .1286 |  |  |
|  | SASINI | 7 | .1787 |  |  |
|  | KAKUZI | 7 |  | .2874 |  |
|  | LIMURU | 7 |  | .3257 | .3257 |
|  | WILLIAMSON | 7 |  | .3263 | .3263 |
|  | KAPCHORUA | 7 |  |  | .4101 |
|  | Sig. |  | .676 | .857 | .151 |

Means for groups in homogeneous subsets are displayed.

a. Uses Harmonic Mean Sample Size = 7.000.

An inverted rank-based scoring of these firms on the basis of the debt-equity ratio is guided by the logic that the lower the ratio, the better the solvency score of the firm. Lower debt-equity ratio shows that the firm has a lower probability of experiencing financial distress. Thus, EAAGADS has the highest score of six (6) points followed by SASINI with 5 points and KAPCHORUA coming last with only 1 point as it has the highest debt-equity ratio.

### 3) Debt Ratio

A one-way analysis of variance was conducted to evaluate the null hypothesis that there is no significant difference between the agricultural firms listed at the Nairobi Securities Exchange (NSE) based on their debt ratio *(N = 42)*. The independent variable included six (6) listed agricultural firms forming six groups: EAAGADS LTD *(M = 0.1131, SD = 0.03716, n = 7)*, KAPCHORUA TEA LTD *(M = 0.2901, SD = 0.02045, n = 7)*, KAKUZI LTD *( M =*

*0.2227, SD = 0.02339, n = 7)*, LIMURU TEA LTD *(M = 0.2434, SD = 0.04891, n = 7)*, SASINI LTD *(M = 0.1466, SD = 0.06221, n = 7)* and WILLIAMSON TEA LTD *(M = 0.2457, SD = 0.02139, n = 7)*.

**Table VII**

*Descriptive Statistics for the Debt Ratio of Agricultural Firms Listed at the Nairobi Securities Exchange*

**Descriptives**

| | N | Mean | Std. Deviation | Std. Error | 95% Confidence Interval for Mean | | Minimum | Maximum |
|---|---|---|---|---|---|---|---|---|
| | | | | | Lower Bound | Upper Bound | | |
| EAAGADS | 7 | .1131 | .03716 | .01405 | .0788 | .1475 | .08 | .19 |
| KAPCHORUA | 7 | .2901 | .02045 | .00773 | .2712 | .3091 | .27 | .33 |
| KAKUZI | 7 | .2227 | .02339 | .00884 | .2011 | .2443 | .19 | .25 |
| LIMURU | 7 | .2434 | .04891 | .01849 | .1982 | .2887 | .17 | .28 |
| SASINI | 7 | .1466 | .06221 | .02351 | .0890 | .2041 | .11 | .29 |
| WILLIAMSON | 7 | .2457 | .02139 | .00809 | .2259 | .2655 | .22 | .28 |
| Total | 42 | .2103 | .07175 | .01107 | .1879 | .2326 | .08 | .33 |

The assumption of homogeneity of variances was tested and found to be tenable using Levene's Test, $F(5, 36) = 1.470$, $p = .224$. The ANOVA was significant, $F(5, 36) = 20.736$, $p < 0.001$. Thus, there is a significant difference between the agricultural firms listed at the NSE based on their debt ratio.

**Table VIII**

*ANOVA Results for the Debt Ratio*

**ANOVA**

| | Sum of Squares | df | Mean Square | F | Sig. |
|---|---|---|---|---|---|
| Between Groups | .157 | 5 | .031 | 20.736 | .000 |
| Within Groups | .054 | 36 | .002 | | |
| Total | .211 | 41 | | | |

The homogenous subsets show the various combinations of the agricultural firms that belong together based on their debt ratio and the probability of belonging to each of the subsets is provided:

**Table IX**

*Homogenous Subsets of the Agricultural Firms based on their Debt Ratio*

| | Agricultural Firms Listed at the Nairobi Securities Exchange | N | Subset for alpha = 0.05 | | |
|---|---|---|---|---|---|
| | | | 1 | 2 | 3 |
| | EAAGADS | 7 | .1131 | | |
| | SASINI | 7 | .1466 | | |
| | KAKUZI | 7 | | .2227 | |
| Tukey HSD[a] | LIMURU | 7 | | .2434 | .2434 |
| | WILLIAMSON | 7 | | .2457 | .2457 |
| | KAPCHORUA | 7 | | | .2901 |
| | Sig. | | .598 | .875 | .242 |

Means for groups in homogeneous subsets are displayed.

a. Uses Harmonic Mean Sample Size = 7.000.

An inverted rank-based scoring of these firms on the basis of the debt ratio is guided by the logic that the lower the ratio, the better the solvency score of the firm. Lower debt ratio shows that the firm has a lower probability of experiencing financial distress. Thus, EAAGADS has the highest score of six (6) points followed by SASINI with 5 points and KAPCHORUA coming last with only 1 point as it has the highest debt ratio.

*4) Financial Leverage Ratio*

A one-way analysis of variance was conducted to evaluate the null hypothesis that there is no significant difference between the agricultural firms listed at the Nairobi Securities Exchange (NSE) based on their financial leverage ratio *(N = 42)*. The independent variable included six (6) listed agricultural firms forming six groups: EAAGADS LTD *(M = 1.1244, SD = 0.01998, n = 7)*, KAPCHORUA TEA LTD *(M = 1.4096, SD = 0.01567, n = 7)*, KAKUZI LTD *( M = 1.2869, SD = 0.03863, n = 7)*, LIMURU TEA LTD *(M = 1.3257, SD = 0.03130, n = 7)*, SASINI LTD *(M = 1.1779, SD = 0.03743, n = 7)* and WILLIAMSON TEA LTD *(M = 1.3266, SD = 0.03840, n = 7)*.

**Table X**

*Descriptive Statistics for the Financial Leverage Ratio of Agricultural Firms Listed at the Nairobi Securities Exchange*

**Descriptives**

| | N | Mean | Std. Deviation | Std. Error | 95% Confidence Interval for Mean | | Minimum | Maximum |
|---|---|---|---|---|---|---|---|---|
| | | | | | Lower Bound | Upper Bound | | |
| EAAGADS | 7 | 1.1244 | .05285 | .01998 | 1.0755 | 1.1733 | 1.08 | 1.24 |
| KAPCHORUA | 7 | 1.4096 | .04146 | .01567 | 1.3712 | 1.4479 | 1.36 | 1.49 |
| KAKUZI | 7 | 1.2869 | .03863 | .01460 | 1.2511 | 1.3226 | 1.24 | 1.33 |
| LIMURU | 7 | 1.3257 | .08281 | .03130 | 1.2491 | 1.4023 | 1.20 | 1.40 |
| SASINI | 7 | 1.1779 | .09903 | .03743 | 1.0863 | 1.2694 | 1.12 | 1.40 |
| WILLIAMSON | 7 | 1.3266 | .03840 | .01451 | 1.2911 | 1.3621 | 1.29 | 1.39 |
| Total | 42 | 1.2752 | .11412 | .01761 | 1.2396 | 1.3107 | 1.08 | 1.49 |

The assumption of homogeneity of variances was tested and found to be tenable using Levene's Test, $F_{(5, 36)} = 1.380$, $p = .255$. The ANOVA was significant, $F_{(5, 36)} = 19.340$, $p < 0.001$. Thus, there is a significant difference between the agricultural firms listed at the NSE based on their financial leverage ratio.

**Table XI**

*ANOVA Results for the Financial Leverage Ratio*

**ANOVA**

| | Sum of Squares | df | Mean Square | F | Sig. |
|---|---|---|---|---|---|
| Between Groups | .389 | 5 | .078 | 19.340 | .000 |
| Within Groups | .145 | 36 | .004 | | |
| Total | .534 | 41 | | | |

The homogenous subsets show the various combinations of the agricultural firms that belong together based on their financial leverage ratio and the probability of belonging to each of the subsets is provided:

**Table XII**

*Homogenous Subsets of the Agricultural Firms based on their Financial Leverage Ratio*

| | Agricultural Firms Listed at the Nairobi Securities Exchange | N | Subset for alpha = 0.05 | | |
|---|---|---|---|---|---|
| | | | 1 | 2 | 3 |
| | EAAGADS | 7 | 1.1244 | | |
| | SASINI | 7 | 1.1779 | | |
| | KAKUZI | 7 | | 1.2869 | |
| Tukey HSD[a] | LIMURU | 7 | | 1.3257 | 1.3257 |
| | WILLIAMSON | 7 | | 1.3266 | 1.3266 |
| | KAPCHORUA | 7 | | | 1.4096 |
| | Sig. | | .619 | .847 | .159 |

Means for groups in homogeneous subsets are displayed.

a. Uses Harmonic Mean Sample Size = 7.000.

An inverted rank-based scoring of these firms on the basis of the financial leverage ratio is guided by the logic that the lower the ratio, the better the solvency score of the firm. Lower financial leverage ratio shows that the firm has a lower probability of experiencing financial distress. Thus, EAAGADS has the highest score of six (6) points followed by SASINI with 5 points and KAPCHORUA coming last with only 1 point as it has the highest financial leverage ratio.

The above results can be used to generate an overall solvency ranking for the six firms starting from the least likely and moving to the most likely firm to face financial distress situation.

**Table XIII**

*Financial Distress Risk Ranking of the Agricultural Firms Listed at the NSE*

| Ratios | EGADS | SASN | KAKZ | LIM | WLM | KAP |
|---|---|---|---|---|---|---|
| L-term D/E | 6 | 5 | 3 | 4 | 2 | 1 |
| D/E | 6 | 5 | 4 | 3 | 2 | 1 |
| Debt ratio | 6 | 5 | 4 | 3 | 2 | 1 |
| Fin Lev ratio | 6 | 5 | 4 | 3 | 2 | 1 |
| **Average Solvency Score** | **6.00** | **5.00** | **3.75** | **3.25** | **2.00** | **1.00** |
| **Financial Distress risk** | **Lowest** | | | | | **Highest** |

*5) Current Ratio*

A one-way analysis of variance was conducted to evaluate the null hypothesis that there is no significant difference between the agricultural firms listed at the Nairobi Securities Exchange (NSE) based on their current ratio *(N = 42)*. The independent variable included six (6) listed agricultural firms forming six groups: EAAGADS LTD *(M = 5.7306, SD = 4.20825, n = 7)*, KAPCHORUA TEA LTD *(M = 4.3886, SD = 0.93997, n = 7)*, KAKUZI LTD *( M = 6.8263, SD = 3.08019, n = 7)*, LIMURU TEA LTD *(M = 5.9131, SD = 1.98714, n = 7)*, SASINI LTD *(M = 4.6186, SD = 1.26274, n = 7)* and WILLIAMSON TEA LTD *(M = 5.1786, SD = 2.31119, n = 7)*.

**Table XIV**

*Descriptive Statistics for the Current Ratio of Agricultural Firms Listed at the Nairobi Securities Exchange*

**Descriptives**

| | N | Mean | Std. Deviation | Std. Error | 95% Confidence Interval for Mean | | Minimum | Maximum |
|---|---|---|---|---|---|---|---|---|
| | | | | | Lower Bound | Upper Bound | | |
| EAAGADS | 7 | 5.7306 | 4.20825 | 1.59057 | 1.8386 | 9.6226 | .87 | 12.83 |
| KAPCHORUA | 7 | 4.3886 | .93997 | .35528 | 3.5192 | 5.2579 | 2.92 | 5.63 |
| KAKUZI | 7 | 6.8263 | 3.08019 | 1.16420 | 3.9776 | 9.6750 | 3.90 | 11.22 |
| LIMURU | 7 | 5.9131 | 1.98714 | .75107 | 4.0753 | 7.7509 | 3.50 | 8.37 |
| SASINI | 7 | 4.6186 | 1.26274 | .47727 | 3.4507 | 5.7864 | 2.13 | 5.76 |
| WILLIAMSON | 7 | 5.1786 | 2.31119 | .87355 | 3.0411 | 7.3161 | 2.99 | 8.67 |
| Total | 42 | 5.4426 | 2.52954 | .39032 | 4.6544 | 6.2309 | .87 | 12.83 |

The assumption of homogeneity of variances was tested using Levene's Test, $F(5, 36) = 3.455$, $p = .012$ and the violation noted. The Welch ANOVA was not significant, $F(5, 16.201) = 1.243$, $p = 0.335$. Thus, there is no evidence to reject the null hypothesis that there is no significant difference between the agricultural firms listed at the NSE based on their current ratio.

**Table XV**

*Welch ANOVA results for the Current Ratio between Agricultural Firms Listed at the NSE*

**Robust Tests of Equality of Means**

| | Statistic[a] | df1 | df2 | Sig. |
|---|---|---|---|---|
| Welch | 1.243 | 5 | 16.201 | .335 |

a. Asymptotically F distributed.

*6) Quick Ratio*

A one-way analysis of variance was conducted to evaluate the null hypothesis that there is no significant difference between the agricultural firms listed at the Nairobi Securities Exchange (NSE) based on their quick ratio *(N = 42)*. The independent variable included six (6) listed agricultural firms forming six groups: EAAGADS LTD *(M = 1.6706, SD = 1.25223, n = 7)*, KAPCHORUA TEA LTD *(M = 3.2267, SD = 0.59167, n = 7)*, KAKUZI LTD *( M = 5.6039, SD = 2.04518, n = 7)*, LIMURU TEA LTD *(M = 5.7896, SD = 2.03787, n = 7)*, SASINI LTD *(M = 3.3429, SD = 1.08977, n = 7)* and WILLIAMSON TEA LTD *(M = 4.0129, SD = 2.02512, n = 7)*.

**Table XVI**

*Descriptive Statistics for the Quick Ratio of Agricultural Firms Listed at the Nairobi Securities Exchange*

**Descriptives**

| | N | Mean | Std. Deviation | Std. Error | 95% Confidence Interval for Mean | | Minimum | Maximum |
|---|---|---|---|---|---|---|---|---|
| | | | | | Lower Bound | Upper Bound | | |
| EAAGADS | 7 | 1.6706 | 1.25223 | .47330 | .5125 | 2.8287 | .38 | 3.91 |
| KAPCHORUA | 7 | 3.2267 | .59167 | .22363 | 2.6795 | 3.7739 | 2.44 | 4.20 |
| KAKUZI | 7 | 5.6039 | 2.04518 | .77300 | 3.7124 | 7.4953 | 3.35 | 8.37 |
| LIMURU | 7 | 5.7896 | 2.03787 | .77024 | 3.9049 | 7.6743 | 3.19 | 8.20 |
| SASINI | 7 | 3.3429 | 1.08977 | .41189 | 2.3350 | 4.3507 | 1.47 | 4.25 |
| WILLIAMSON | 7 | 4.0129 | 2.02512 | .76542 | 2.1399 | 5.8858 | 2.31 | 7.17 |
| Total | 42 | 3.9411 | 2.08787 | .32217 | 3.2904 | 4.5917 | .38 | 8.37 |

The assumption of homogeneity of variances was tested using Levene's Test, $F(5, 36) = 3.130$, $p = .019$ and the violation noted. The Welch ANOVA was significant, $F(5, 16.022) = 5.513$, $p = 0.004$. Thus, there is significant evidence to reject the null hypothesis and conclude that there is a significant difference between the agricultural firms listed at the NSE based on their quick ratio.

**Table XVII**

*Welch ANOVA results for the Quick Ratio between Agricultural Firms Listed at the NSE*

**Robust Tests of Equality of Means**

|  | Statistic[a] | df1 | df2 | Sig. |
|---|---|---|---|---|
| Welch | 5.513 | 5 | 16.022 | .004 |

a. Asymptotically F distributed.

The homogenous subsets show the various combinations of the agricultural firms that belong together based on their quick ratio and the probability of belonging to each of the subsets is provided:

**Table XVIII**

*Homogenous Subsets of the Agricultural Firms based on their Quick Ratio*

|  | Agricultural Firms Listed at the Nairobi Securities Exchange | N | Subset for alpha = 0.05 | |
|---|---|---|---|---|
|  |  |  | 1 | 2 |
|  | EAAGADS | 7 | 1.6706 | |
|  | KAPCHORUA | 7 | 3.2267 | 3.2267 |
|  | SASINI | 7 | 3.3429 | 3.3429 |
| Tukey HSD[a] | WILLIAMSON | 7 | 4.0129 | 4.0129 |
|  | KAKUZI | 7 | | 5.6039 |
|  | LIMURU | 7 | | 5.7896 |
|  | Sig. | | .095 | .054 |

Means for groups in homogeneous subsets are displayed.

a. Uses Harmonic Mean Sample Size = 7.000.

An inverted rank-based scoring of these firms on the basis of the quick ratio is guided by the logic that the higher the ratio, the better the liquidity score of the firm. Higher ratios show that the firm has the ability to meet its short term obligations as and when they fall due. Thus, LIMURU has the highest score of six (6) points followed by KAKUZI with 5 points and EAAGADS coming last with only 1 point as it has the lowest quick ratio.

*7) Cash Ratio*

A one-way analysis of variance was conducted to evaluate the null hypothesis that there is no significant difference between the agricultural firms listed at the Nairobi Securities Exchange (NSE) based on their cash ratio *(N = 42)*. The independent variable included six (6) listed agricultural firms forming six groups: EAAGADS LTD *(M = 0.2810, SD = 0.52617, n = 7)*, KAPCHORUA TEA LTD *(M = 1.1046, SD = 0.82404, n = 7)*, KAKUZI LTD *( M = 4.6189, SD = 1.76481, n = 7)*, LIMURU TEA LTD *(M = 0.2123, SD = 0.15614, n = 7)*, SASINI LTD *(M = 1.9999, SD = 0.91975, n = 7)* and WILLIAMSON TEA LTD *(M = 1.8893, SD = 1.10971, n = 7)*.

**Table XIX**

*Descriptive Statistics for the Cash Ratio of Agricultural Firms Listed at the Nairobi Securities Exchange*

**Descriptives**

|  | N | Mean | Std. Deviation | Std. Error | 95% Confidence Interval for Mean | | Minimum | Maximum |
|---|---|---|---|---|---|---|---|---|
|  |  |  |  |  | Lower Bound | Upper Bound |  |  |
| EAAGADS | 7 | .2810 | .52617 | .19887 | -.2056 | .7676 | .02 | 1.46 |
| KAPCHORUA | 7 | 1.1046 | .82404 | .31146 | .3425 | 1.8667 | .38 | 2.51 |
| KAKUZI | 7 | 4.6189 | 1.76481 | .66704 | 2.9867 | 6.2510 | 2.67 | 7.20 |
| LIMURU | 7 | .2123 | .15614 | .05902 | .0679 | .3567 | .02 | .48 |
| SASINI | 7 | 1.9999 | .91975 | .34763 | 1.1492 | 2.8505 | .84 | 3.43 |
| WILLIAMSON | 7 | 1.8893 | 1.10971 | .41943 | .8630 | 2.9156 | .70 | 3.64 |
| Total | 42 | 1.6843 | 1.77799 | .27435 | 1.1302 | 2.2384 | .02 | 7.20 |

The assumption of homogeneity of variances was tested using Levene's Test, $F(5, 36) = 7.018$, $p < .001$ and the violation noted. The Welch ANOVA was significant, $F(5, 14.815) = 14.979$, $p < 0.001$. Thus, there is significant evidence to reject the null hypothesis and conclude that there is a significant difference between the agricultural firms listed at the NSE based on their cash ratio.

**Table XX**

*Welch ANOVA results for the Cash Ratio between Agricultural Firms Listed at the NSE*

**Robust Tests of Equality of Means**

|  | Statistic[a] | df1 | df2 | Sig. |
|---|---|---|---|---|
| Welch | 14.979 | 5 | 14.815 | .000 |

a. Asymptotically F distributed.

The homogenous subsets show the various combinations of the agricultural firms that belong together based on their cash ratio and the probability of belonging to each of the subsets is provided:

**Table XXI**

*Homogenous Subsets of the Agricultural Firms based on their Cash Ratio*

| | Agricultural Firms Listed at the Nairobi Securities Exchange | N | Subset for alpha = 0.05 | | | |
|---|---|---|---|---|---|---|
| | | | **1** | **2** | **3** | **4** |
| Tukey HSD[a] | LIMURU | 7 | .2123 | | | |
| | EAAGADS | 7 | .2810 | .2810 | | |
| | KAPCHORUA | 7 | 1.1046 | 1.1046 | 1.1046 | |
| | WILLIAMSON | 7 | | 1.8893 | 1.8893 | |
| | SASINI | 7 | | | 1.9999 | |
| | KAKUZI | 7 | | | | 4.6189 |
| | Sig. | | .575 | .055 | .571 | 1.000 |

Means for groups in homogeneous subsets are displayed.

a. Uses Harmonic Mean Sample Size = 7.000.

An inverted rank-based scoring of these firms on the basis of the cash ratio is guided by the logic that the higher the ratio, the better the liquidity score of the firm. Higher ratios show that the firm has the ability to meet its short term obligations as and when they fall due. Thus, KAKUZI has the highest score of six (6) points followed by SASINI with 5 points and LIMURU coming last with only 1 point as it has the lowest cash ratio.

**Table XXII**

*Liquidity Ranking of the Agricultural Firms Listed at the NSE*

| Ratios | KAKZ | LIM | SASN | WLM | KAP | EGADS |
|---|---|---|---|---|---|---|
| Quick ratio | 5 | 6 | 3 | 4 | 2 | 1 |
| Cash ratio | 6 | 1 | 5 | 4 | 3 | 2 |
| **Average Liquidity Score** | **5.50** | **3.50** | **4.00** | **4.00** | **2.50** | **1.50** |
| **Ranking** | **Best** | | | | | **Worst** |

*8) Return on Asset*

A one-way analysis of variance was conducted to evaluate the null hypothesis that there is no significant difference between the agricultural firms listed at the Nairobi Securities Exchange (NSE) based on their return on asset *(N = 42)*. The independent variable included six (6) listed agricultural firms forming six groups: EAAGADS LTD *(M = 0.0523, SD = 0.12683, n = 7)*, KAPCHORUA TEA LTD *(M =0.0134, SD = 0.04916, n = 7)*, KAKUZI LTD *(M = 0.0936, SD =0.02691, n = 7)*, LIMURU TEA LTD *(M = -0.0157, SD = 0. .04003, n = 7)*, SASINI LTD *(M = 0.0257, SD = 0.02609, n = 7)* and WILLIAMSON TEA LTD *(M = 0.0306, SD = 0.04956, n = 7)*.

**Table XXIII**

*Descriptive Statistics for the Return on Asset of Agricultural Firms Listed at the Nairobi Securities Exchange*

| Descriptive | N | Mean | Std. Deviation | Std. Error | 95% Confidence Interval for Mean | | Minimum | Maximum |
|---|---|---|---|---|---|---|---|---|
| | | | | | Lower Bound | Upper Bound | | |
| EAAGADS | 7 | .0523 | .12683 | .04794 | -.0650 | .1696 | -.09 | .27 |
| KAPCHORUA | 7 | .0134 | .04916 | .01858 | -.0321 | .0589 | -.06 | .07 |
| KAKUZI | 7 | .0936 | .02691 | .01017 | .0688 | .1185 | .04 | .12 |
| LIMURU | 7 | -.0157 | .04003 | .01513 | -.0527 | .0213 | -.08 | .02 |
| SASINI | 7 | .0257 | .02609 | .00986 | .0016 | .0498 | -.02 | .06 |
| WILLIAMSON | 7 | .0306 | .04956 | .01873 | -.0153 | .0764 | -.03 | .10 |
| Total | 42 | .0333 | .06841 | .01056 | .0120 | .0546 | -.09 | .27 |

The assumption of homogeneity of variances was tested using Levene's Test, $F(5, 36) = 4.517$, $p = .003$ and the violation noted. The Welch ANOVA was significant, $F(5, 16.461) = 7.886$, $p = 0.001$. Thus, there is significant evidence to reject the null hypothesis and conclude that there is a significant difference between the agricultural firms listed at the NSE based on their return on asset.

**Table XXIV**

*Welch ANOVA results for the Return on Asset between Agricultural Firms Listed at the NSE*

**Robust Tests of Equality of Means**

| | Statistic[a] | df1 | df2 | Sig. |
|---|---|---|---|---|
| Welch | 7.886 | 5 | 16.461 | .001 |

a. Asymptotically F distributed.

The homogenous subsets show the various combinations of the agricultural firms that belong together based on their return on asset and the probability of belonging to each of the subsets is provided:

**Table XXV**

*Homogenous Subsets of the Agricultural Firms based on their Return on Asset (ROA)*

| | Agricultural Firms Listed at the Nairobi Securities Exchange | N | Subset for alpha = 0.05 | |
|---|---|---|---|---|
| | | | 1 | 2 |
| | LIMURU | 7 | -.0157 | |
| | KAPCHORUA | 7 | .0134 | .0134 |
| | SASINI | 7 | .0257 | .0257 |
| Tukey HSD[a] | WILLIAMSON | 7 | .0306 | .0306 |
| | EAAGADS | 7 | .0523 | .0523 |
| | KAKUZI | 7 | | .0936 |
| | Sig. | | .355 | .192 |

Means for groups in homogeneous subsets are displayed.

a. Uses Harmonic Mean Sample Size = 7.000.

An inverted rank-based scoring of these firms on the basis of the return on asset is guided by the logic that the higher the (ROA), the better the profitability score of the firm. Higher return show that the firm is generating high returns for the assets employed. Thus, KAKUZI has the highest score of six (6) points followed by EAAGADS with 5 points and LIMURU coming last with only 1 point as it has the lowest return on asset.

*9) Return on Equity*

A one-way analysis of variance was conducted to evaluate the null hypothesis that there is no significant difference between the agricultural firms listed at the Nairobi Securities Exchange (NSE) based on their return on equity *(N = 42)*. The independent variable included six (6) listed agricultural firms forming six groups: EAAGADS LTD *(M = 0.0556, SD = 0.14230, n = 7)*, KAPCHORUA TEA LTD *(M =0.0194, SD = 0.07027, n = 7)*, KAKUZI LTD *(M = 0.1204, SD =0.03632, n = 7)*, LIMURU TEA LTD *(M = -0.0217, SD = 0.05540, n = 7)*, SASINI LTD *(M = 0.0336, SD = 0.03088, n = 7)* and WILLIAMSON TEA LTD *(M = 0.0407, SD = 0.06749, n = 7)*.

**Table XXVI**

*Descriptive Statistics for the Return on Equity of Agricultural Firms Listed at the Nairobi Securities Exchange*

| **Descriptive** | N | Mean | Std. Deviation | Std. Error | 95% Confidence Interval for Mean | | Minimum | Maximum |
|---|---|---|---|---|---|---|---|---|
| | | | | | Lower Bound | Upper Bound | | |
| EAAGADS | 7 | .0556 | .14230 | .05378 | -.0760 | .1872 | -.12 | .30 |
| KAPCHORUA | 7 | .0194 | .07027 | .02656 | -.0456 | .0844 | -.09 | .10 |
| KAKUZI | 7 | .1204 | .03632 | .01373 | .0868 | .1540 | .05 | .16 |
| LIMURU | 7 | -.0217 | .05540 | .02094 | -.0729 | .0296 | -.11 | .03 |
| SASINI | 7 | .0336 | .03088 | .01167 | .0050 | .0621 | -.02 | .07 |
| WILLIAMSON | 7 | .0407 | .06749 | .02551 | -.0217 | .1031 | -.04 | .14 |
| Total | 42 | .0413 | .08371 | .01292 | .0152 | .0674 | -.12 | .30 |

The assumption of homogeneity of variances was tested using Levene's Test, $F(5, 36) = 3.596$, $p = .010$ and the violation noted. The Welch ANOVA was significant, $F(5, 16.370) = 7.126$, $p = 0.001$. Thus, there is significant evidence to reject the null hypothesis and conclude that there is a significant difference between the agricultural firms listed at the NSE based on their return on equity.

**Table XXVII**

*Welch ANOVA results for the Return on Equity between Agricultural Firms Listed at the NSE*

**Robust Tests of Equality of Means**

| | Statistic[a] | df1 | df2 | Sig. |
|---|---|---|---|---|
| Welch | 7.126 | 5 | 16.370 | .001 |

a. Asymptotically F distributed.

The homogenous subsets show the various combinations of the agricultural firms that belong together based on their return on equity and the probability of belonging to each of the subsets is provided:

**Table XXVIII**

*Homogenous Subsets of the Agricultural Firms based on their Return on Equity (ROE)*

|  | Agricultural Firms Listed at the Nairobi Securities Exchange | N | Subset for alpha = 0.05 | |
|---|---|---|---|---|
|  |  |  | 1 | 2 |
| Tukey HSD[a] | LIMURU | 7 | -.0217 |  |
|  | KAPCHORUA | 7 | .0194 | .0194 |
|  | SASINI | 7 | .0336 | .0336 |
|  | WILLIAMSON | 7 | .0407 | .0407 |
|  | EAAGADS | 7 | .0556 | .0556 |
|  | KAKUZI | 7 |  | .1204 |
|  | Sig. |  | .424 | .160 |

Means for groups in homogeneous subsets are displayed.

a. Uses Harmonic Mean Sample Size = 7.000.

An inverted rank-based scoring of these firms on the basis of the return on equity is guided by the logic that the higher the (ROE), the better the profitability score of the firm. Higher return show that the firm is generating high returns for the stockholders. Thus, KAKUZI has the highest score of six (6) points followed by EAAGADS with 5 points and LIMURU coming last with only 1 point as it has the lowest return on equity.

*10) Earnings per Share*

A one-way analysis of variance was conducted to evaluate the null hypothesis that there is no significant difference between the agricultural firms listed at the Nairobi Securities Exchange (NSE) based on their earnings per share *(N = 42)*. The independent variable included six (6) listed agricultural firms forming six groups: EAAGADS LTD *(M = -0.5871, SD = 1.19363, n = 7)*, KAPCHORUA TEA LTD *(M =6.3200, SD = 17.48161, n = 7)*, KAKUZI LTD *(M = 26.6700, SD =8.97786, n = 7)*, LIMURU TEA LTD *(M = -2.1529, SD = 4.45342, n = 7)*, SASINI LTD *(M = 1.4386, SD = 1.79345, n = 7)* and WILLIAMSON TEA LTD *(M = 13.7671, SD = 35.74866, n = 7)*.

**Table XXIX**

*Descriptive Statistics for the Earnings per Share (EPS) of Agricultural Firms Listed at the Nairobi Securities Exchange*

**Descriptives**

|  | N | Mean | Std. Deviation | Std. Error | 95% Confidence Interval for Mean | | Minimum | Maximum |
|---|---|---|---|---|---|---|---|---|
|  |  |  |  |  | Lower Bound | Upper Bound |  |  |
| EAAGADS | 7 | -.5871 | 1.19363 | .45115 | -1.6911 | .5168 | -2.18 | .66 |
| KAPCHORUA | 7 | 6.3200 | 17.48161 | 6.60743 | -9.8478 | 22.4878 | -16.06 | 32.21 |
| KAKUZI | 7 | 26.6700 | 8.97786 | 3.39331 | 18.3669 | 34.9731 | 8.17 | 36.40 |
| LIMURU | 7 | -2.1529 | 4.45342 | 1.68324 | -6.2716 | 1.9659 | -9.22 | 1.06 |
| SASINI | 7 | 1.4386 | 1.79345 | .67786 | -.2201 | 3.0972 | -1.39 | 4.27 |
| WILLIAMSON | 7 | 13.7671 | 35.74866 | 13.51172 | -19.2948 | 46.8291 | -23.77 | 81.36 |
| Total | 42 | 7.5760 | 18.71220 | 2.88736 | 1.7448 | 13.4071 | -23.77 | 81.36 |

The assumption of homogeneity of variances was tested using Levene's Test, $F_{(5, 36)} = 8.171$, $p < .001$ and the violation noted. The Welch ANOVA was significant, $F_{(5, 15.528)} = 12.122$, $p < 0.001$. Thus, there is significant evidence to reject the null hypothesis and conclude that there is a significant difference between the agricultural firms listed at the NSE based on their earnings per share.

**Table XXX**

*Welch ANOVA results for the Earnings per Share (EPS) between Agricultural Firms Listed at the NSE*

**Robust Tests of Equality of Means**

|  | Statistic[a] | df1 | df2 | Sig. |
|---|---|---|---|---|
| Welch | 12.122 | 5 | 15.528 | .000 |

a. Asymptotically F distributed.

The homogenous subsets show the various combinations of the agricultural firms that belong together based on their earnings per share and the probability of belonging to each of the subsets is provided:

**Table XXXI**

*Homogenous Subsets of the Agricultural Firms based on their Earnings per Share (EPS)*

| | Agricultural Firms Listed at the Nairobi Securities Exchange | N | Subset for alpha = 0.05 | |
|---|---|---|---|---|
| | | | 1 | 2 |
| | LIMURU | 7 | -2.1529 | |
| | EAAGADS | 7 | -.5871 | |
| | SASINI | 7 | 1.4386 | 1.4386 |
| Tukey HSD[a] | KAPCHORUA | 7 | 6.3200 | 6.3200 |
| | WILLIAMSON | 7 | 13.7671 | 13.7671 |
| | KAKUZI | 7 | | 26.6700 |
| | Sig. | | .494 | .078 |

Means for groups in homogeneous subsets are displayed.

a. Uses Harmonic Mean Sample Size = 7.000.

An inverted rank-based scoring of these firms on the basis of the earnings per share is guided by the logic that the higher the (EPS), the better the profitability score of the firm. Higher EPS show that the firm is generating high returns for the stockholders. Thus, KAKUZI has the highest score of six (6) points followed by WILLIAMSON with 5 points and LIMURU coming last with only 1 point as it has the lowest EPS.

**Table XXXII**

*Profitability Ranking of the Agricultural Firms Listed at the NSE*

| Ratios | KAKZ | WLM | EGADS | SASN | KAP | LIM |
|---|---|---|---|---|---|---|
| ROA | 6 | 4 | 5 | 3 | 2 | 1 |
| ROE | 6 | 4 | 5 | 3 | 2 | 1 |
| EPS | 6 | 5 | 2 | 3 | 4 | 1 |
| Average Profitability Score | **6.00** | **4.33** | **4.00** | **3.00** | **2.67** | **1.00** |
| Ranking | **Best** | | | | | **Worst** |

When the three groups of ratios are put together, an overall ranking is generated for the firms which shows their combined average scores. Thus KAKUZI has the highest score (15.25) followed by SASINI (12.00) and KAPCHORUA coming last with the lowest combined score (6.17).

**Table XXXIII**

**Overall Ranking of Agricultural Firms Listed at the NSE**

| Ratios | EGADS | KAP | KAKZ | LIM | SASN | WLM | AVERAGE |
|---|---|---|---|---|---|---|---|
| Average Solvency Score | *6.00 | 1.00 | *3.75 | 3.25 | *5.00 | 2.00 | 3.5 |
| Average Liquidity Score | 1.50 | 2.50 | *5.50 | *3.50 | *4.00 | *4.00 | 3.5 |
| Average Profitability Score | *4.00 | 2.67 | *6.00 | 1.00 | 3.00 | *4.33 | 3.5 |
| Total Score | *11.50 | 6.17 | *15.25 | 7.75 | *12.00 | 10.33 | 10.5 |
| RANKING | 3rd | 6th | 1st | 5th | 2nd | 4th | |

*firms that score above average

## Conclusion

This study concludes that the listed agricultural firms do in fact differ on key financial metrics and that some firms are strong on solvency but moderately strong or weak on liquidity and/or profitability. The key consideration to guide anyone who is interested in the findings is to compare each firm's score to the average score under each category of ratios as a basis for decision making.

## Recommendations

This study has provided an empirical basis for making a number of recommendations. Current investors as well as prospective investors who are interested in any or all of the agricultural firms listed at the Nairobi Securities Exchange should re-evaluate their portfolios of interest and investment horizons in light of the findings on the financial distress risk represented by the average solvency scores presented in this study. Trade creditors are advised to use the liquidity score of firms before they commit to deal with any firm. Investors who are keen on the earnings power of the firms can be guided by the profitability scores of these firms so that they invest with reasonable prospects of getting dividends. For each category of ratios, an average score has been provided that can be used as a decision criterion by investors and other stakeholders who may contemplate dealing with the said firms. As to whether, any particular category of ratios is more important than others, is a question that is left for determination by the investors, creditors or any stakeholders who deal with these firms after having regard to the nature of their interests and the engagement time horizon. Short term engagement may be most interested in the liquidity findings. Similarly, speculative traders and dealers may find value in any possible securities mispricing that may become apparent from these findings with the inherent arbitrage opportunities.

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