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An analysis on liquidity management of selected agriculture companies in India

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Abstract
As an important sector of Indian economy, Agriculture sector plays very decisive role in Indian economy as it is backbone of Indian economy. In this research paper researchers have analysed a study on liquidity management of selected agriculture companies in India. In this study researchers have taken 5 years from 2017-18 to 2021-22 as a study time period. For the purpose of study secondary data have been utilised by researchers and for testing of hypotheses researchers have used ratio analysis as accounting tool and twoway ANOVA has been applied as statistical tool.

Keywords: liquidity management and agriculture sector

Introduction

Liquidity is a very critical consideration for any business sector, because for almost every company it is essential to remain financially agile. Having enough cash in hand to meet company's obligations is very important to the health of an enterprise, so it become very vital to manage liquidity excellently and confirm that cash is in the accurate place at the accurate time. Liquidity is the term used to designate the liquid assets or cash of a company, it can usage for meet its current and future obligations, such as the claims of suppliers of goods, services and capital. According to Herbert Mayo, "Liquidity is the ease with which assets may be converted into cash without loss". The main objective of liquidity management is to ensure the business has cash in hand when required. This is accomplished by managing the company's liquidity as productively and successfully as possible. A significant part of liquidity management is the usage of techniques such as cash flow forecasting. Maintaining appropriate level of liquidity is reliant on having a clear view over forthcoming obligations and also considerate how rapidly assets can be converted into cash in order to pay for the company's short term, medium term as well as long term obligations. In eras of liquidity crisis, management of liquidity become even more vital for every business concern. Precise liquidity management can make a big variance in the success of your business sector.

Worldwide India is one of the major player countries in Agricultural sector and it is the primary foundation of livelihood for about 58% of India's population. India has the world's largest cattle herd(buffaloes), largest area fixed of wheat, rice, and cotton. India is the largest producer of milk, rhythms and spices in the all over world and also it is the second largest manufacturer of fruits, vegetables, tea, farmed fish, cotton, sugarcane, wheat, rice. Agriculture in India holds the top for second prime agriculture land in the world producing employment for about half of the country's population. Thus, farmers became an essential portion of the sector to provide us with means of ingredient. India has one of the largest and institutionally most complex agricultural research systems in the world. The agriculture sector in India is predicted to generate better energy in the next few years due to investment in agricultural infrastructure is growing such as irrigation facilities, warehousing and cold storage. With this background this present study intent is to analyse the liquidity management of selected sample companies of Agricultural sector in India.

Objectives of the Study

In the broad sense, the main objective of this research study is to analysed the liquidity management of the Agricultural sector through selected sample units. The objectives are as under:

- To analyse the liquidity management of selected companies of Agricultural Sector during the study period.
- To get knowledge about selected liquidity ratios.
- To suggest some appreciated suggestion regarding liquidity management of selected Agricultural companies of India

Literature review

Sameer Shekhar and N. Jena (2020) [1], published a research paper on "The Impact of Liquidity Management on Profitability of Steel Authority of Indian Limited (SAIL): An Empirical Assessment". This present study taken time period of 15 years from 2005-06 to 2019-20 and the study is based on secondary data collection. For data analysis, researcher used statistical tools and accounting tools also. In present study, dependent variables are return on capital employed, current ratio, liquid ratio, total debt/equity, inventory turnover ratio, whereas explanatory variable is interest coverage ratio. In last result shows that interest coverage has not been found having significant impact on the company's profitability during the period of study.

Laishram Priscilla, Arsha Balakrishnan, Lalrinsangpuii and A. K. Chauhan (2017) [2], have made a study "A Study on performance of agricultural sector in India". In this research paper researcher used secondary data and the time series data at all India level were complied and also decade wise analysis was done to study the performance of sample agriculture sector. This study concludes that during research period, the area under food grains shows negative growth where production and productivity of vegetables and fruits was shown positive relation. For vegetables and fruits, the

contribution of area effect was more than that of yield and the interaction effect suggesting that measures should be taken to improve their productivity.

K. Kiran Kumar and Jagadeesh K. K (2020) [3], have published a research article "Liquidity and Profitability Management: A comprehensive case of Indian Automobile Industries". The study period is taken for ten years from 2010 to 2019. In the study researcher has used accounting tools like ratio analysis and statistical tools such as correlation, coefficient and regression analysis. The results of the study disclosed that there is negative association between profitability and the explanatory variables (CR, LRS and WCTR) and one model (OPM) displays significant impact on liquidity and profitability and the rest of the three models (ROE, ROCE and NPM) demonstration a negative impact.

M. Z. Hossani and M. Z. Kabir (2015) [4], have done a study on "Liquidity Management of selected Pharmaceutical Industries in Bangladesh: A comparative study". For this study researcher has selected 4 corporations enlisted with the Pharmaceutical Industry of Dhaka Stock Exchange. In this study time period is taken of nine years from 2005 to 2013 and data collection source is purely secondary base. To analysed the data, statistical tools like mean, standard deviation, co-efficient of variation and accounting tools like ratio analysis and Motaal's ultimate rank test have been applied. The study result indicate that current assets, liquid assets and current liabilities of selected sample companies has positive relation.

Ahmad Abdelrahim D., Sulaiman Raji W., Mohammad A. (2021) [5], have published a paper on "Liquidity and Solvency Management and its Impact on Financial Performance: Empirical Evidence from Jordan". The study is carried out for a period of 10 years from 2010 to 2019. In the study researcher has used some accounting and statistical tools as Correlation and multi regression analyses have been applied for data analysis. In the study Return on Assets (ROA) and Earnings Per Share (EPS) are used to measure financial performance. In last this paper concludes that, there are statistically significant impact of independent and control variables (liquidity and solvency management and the size of the company) on financial performance.

Research Methodology

Period of the Study

In this study the researchers have taken a time period of five years from 2017-18 to 2021-22.

Sample Size

The researchers have selected top 5 Agriculture companies based on their sales listed under the BSE.

Sources of Data

In this study the collection of data was from secondary sources. The secondary data which is collected from annual financial reports for the selected companies were used. Moreover thesis, books, reports, journals, periodicals, newspaper and websites are used as a secondary data collection.

Hypothesis for the Study

Ho: There are not significant difference in the Liquidity ratios among the various companies and over the years.

H_1: There are significant difference in the Liquidity ratios among the various companies and over the years.

Tools and Techniques for Hypotheses Testing

To analyse liquidity management of the selected Agriculture companies, major liquidity ratios namely current ratio and quick ratio are utilised as an accounting tool. Whereas for testing of the hypothesis, Two-way ANOVA is applied as a statistical tool by researchers in this study.

Data Analysis and Interpretation

Current Ratio

The Current ratio is liquidity ratio that measures whether a company has ability to meet its short-term obligations such as accounts payable and current debt utilising their short-term assets such as cash, cash equivalent, inventory and receivables. Current ratio compares current assets to current liability of the company. Current Ratio of 2:1 is considered good or favourable. A company with less than 1 current ratio has insufficient cash to pay its short term due and with more than 1 will likely to meet its current liability of the company.

Table 1: Current Ratio

No.	Company Name	2017-18	2018-19	2019-20	2020-21	2021-22	Avg.
1	Kaveri seed	2.82	2.37	2.18	2.39	2.82	2.52
2	Goodricke Group	1.52	1.49	1.24	1.28	1.39	1.38
3	Harrisons Malay	0.44	0.42	0.45	0.47	0.49	0.45
4	Bombay Burmah	1.76	1.54	1.31	1.71	1.76	1.62
5	Nath Bio-Genes	3.55	3.03	2.81	2.99	3.55	3.19
	Industry Avg.	2.02	1.77	1.60	1.77	2.00	1.83

(Source: Calculated from Annual Published Report of Selected Companies)

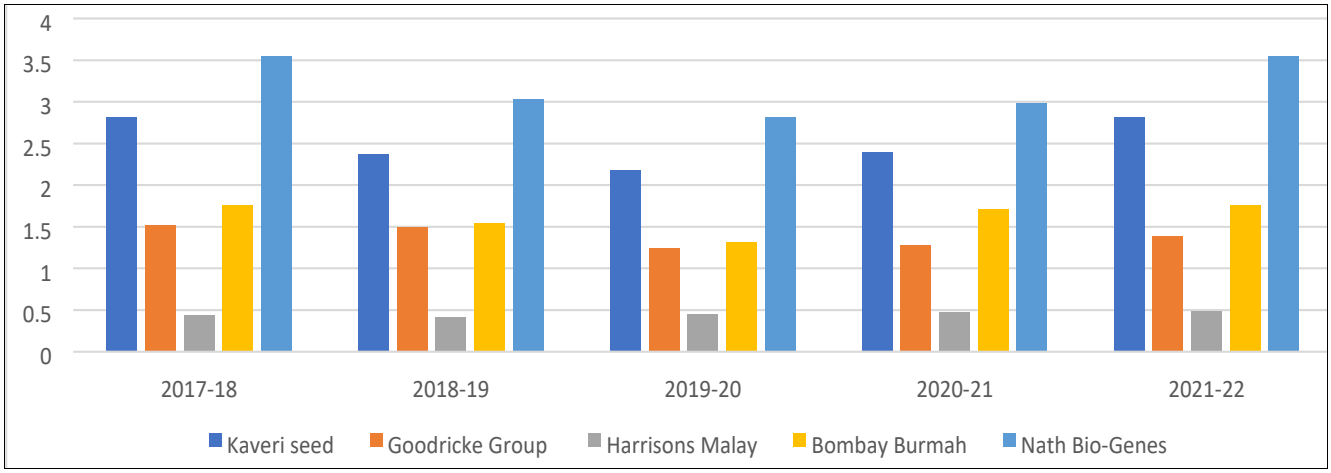

Chart No. 1 Trend of Current Ratio

Above table and Chart direct the Current Ratio for the selected sample companies from Agriculture Companies of India and shows the average trend of Agriculture Industry.

Overall industry average of Current Ratio is 1.83, Average of companies Kaveri seed Nath Bio-Genes both are higher than industry average. Whereas average of companies Goodricke Group, Harrisons Malay and Bombay Burmah are below than industry average.

Test of hypotheses for quick ratio anova F test

Null hypothesis

Ho: There are not significant difference in the Liquidity ratios among the various companies and over the years.

Alternative Hypothesis

H1: There are significant difference in the Liquidity ratios among the various companies and over the years.

If the, Null Hypothesis is rejected, the Alternative Hypothesis will be accepted or vice versa.

Table 2: Anova F Test for Current Ratio

Source of Variation	SS	df	MS	F	P-value	F crit
Between the Companies	14.40612	3	4.80204	188.1462	1.95E-08	3.862548
Between the Years	0.238469	3	0.07949	3.11444	0.081093402	3.862548
Error	0.229706	9	0.0255223			
Total	14.87429	15				

(Source: Data Processed by Researcher through excel)

The above table it shows that the calculated value of "F" is higher than the tabulated "F" value at 5% level of significance in between the companies. Hence, the null hypothesis gets rejected i.e., there is significant difference between the selected companies from Agriculture Industry of India. And the calculated value of "F" is smaller than the tabulated "F" value at 5% level of significance in between the years, hence we do not reject the null hypotheses i.e., there is not significant difference in between the years.

2. Quick Ratio

The quick ratio or acid test ratio measures the ability of a company to pay its current liabilities when they come due with only quick assets or cash and also it indicates a company's short term liquidity position.

Quick assets are current assets that can be easily rehabilitated to cash within 90 days or in very short-term. Quick assets are cash, cash equivalents, short-term investments or marketable securities and current accounts receivable. The quick or acid test ratio shows how quickly a company can convert its assets into cash in order to pay off its current liabilities. A quick ratio of 1:1 is considered satisfactory for a company. A company with less than 1 ratio cannot fully pay back its current dues.

Table 3: quick ratio

No.	Company Name	2017-18	2018-19	2019-20	2020-21	2021-22	Avg.
1	Kaveri seed	1.65	1.15	0.92	1.09	1.20	1.20
2	Goodricke Group	0.68	0.57	0.58	0.50	0.51	0.57
3	Harrisons Malay	0.30	0.27	0.26	0.29	0.31	0.29
4	Bombay Burmah	1.40	1.33	1.05	1.24	1.51	1.31
5	Nath Bio-Genes	2.31	1.85	1.61	1.72	1.27	1.75
	Industry Avg.	1.03	0.88	0.97	0.96	1.27	1.02

(Source: Calculated from Annual Published Report of Selected Companies)

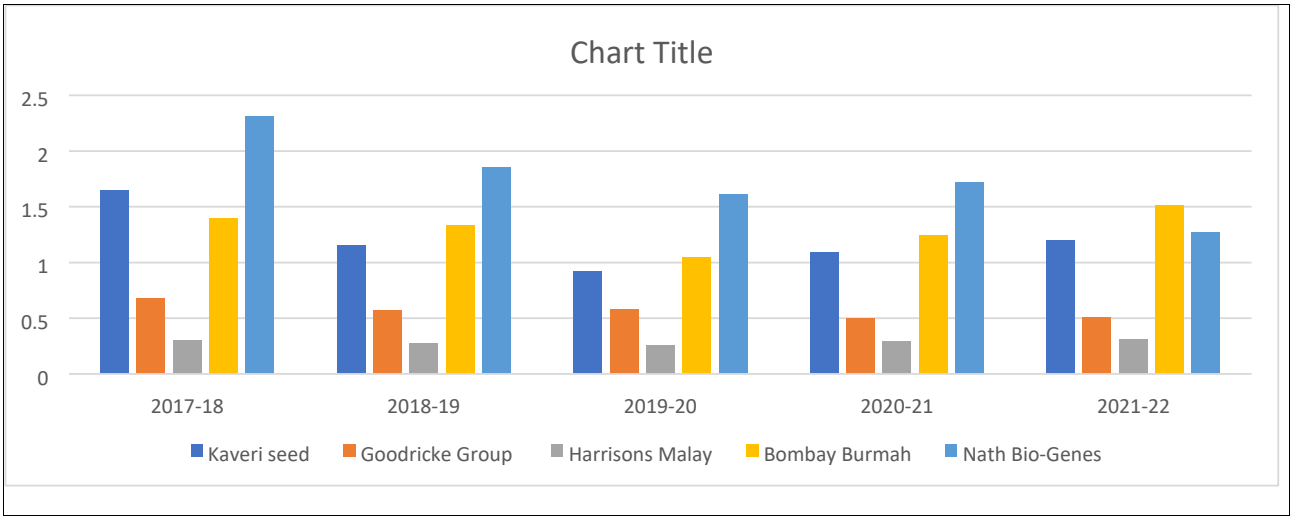

Chart 2: Trend of Quick Ratio

Above table and Chart indicates the Quick Ratio for the selected sample companies from Agriculture Companies of India and displays the average trend of Agriculture Industry. Overall industry average of Quick Ratio is 1.02, Average of companies Kaveri seed, Bombay Burmah and Nath Bio-Genes are higher than industry average. Whereas average of companies Goodricke Group and Harrisons Malay are below than industry average.

Test of Hypotheses for Quick Ratio Anova F Test
Null Hypothesis
Ho: There are not significant difference in the Liquidity ratios among the various companies and over the years.

Alternative Hypothesis
H1: There are significant difference in the Liquidity ratios among the various companies and over the years.
If the, Null Hypothesis is rejected, the Alternative Hypothesis will be accepted or vice versa.

Table 4: Anova F Test for Quick Ratio

Source of Variation	SS	df	MS	F	P-value	F crit
Between the Companies	4.645669	3	1.548556	52.95089	4.84E-06	3.862548
Between the Years	0.038419	3	0.012806	0.437893	0.731369	3.862548
Error	0.263206	9	0.029245			
Total	4.947294	15				

(Source: Data Processed by Researcher through excel)

The above table, it shows that the calculated value of "F" is higher than the tabulated "F" value at 5% level of significance in between the companies. Hence, the null hypothesis gets rejected i.e., there is significant difference between the selected companies from Agriculture Industry of India. And also, we do not reject the null hypotheses in between the years because the calculated value of "F" is smaller than the tabulated "F" value at 5% level of significance in between the years.

Findings of the study
Current Ratio
The current ratio denotes the proportion of current assets to current liability. This ratio measures the company's capability to pay short-term responsibilities and if the ratio is 1.5 or more than one directs company's sound financial conditions.
The overall highest ratio was 3.55 for the year 2021-22 of Nath Bio-Genes, then after Kaveri seed was highest 2.82 in 2021-22. The ratio was the lowest at 042 in year 2018-19 of Harrisons Malay. Overall average Current Ratio of Agriculture Industry was 1.86 which shows the Current Ratio of the industry.
Average of companies Kaveri seed Nath Bio-Genes are higher than industry average which indicates good liquidity management of that company, where average of companies Goodricke Group, Harrisons Malay and Bombay Burmah are below than industry average which indicates poor and dangerous liquidity management of that company.

Quick Ratio
The Quick Ratio is the proportion of quick assets to current liabilities, and quick assets includes cash and cash equivalents, short term marketable securities, and accounts receivable. The ratio is quick assets divided by current liabilities and this ratio basically suggests that cash and cash equivalents can be used to pay for current liabilities.
The overall highest ratio was 2.31 for year 2017-18 of Nath Bio-Genes company, then after company Kaveri seed at 1.65 in year 2017-18. The ratio was the lowest at 0.26 in year 2019-20 of Harrisons Malay company. Overall average Quick Ratio of Agriculture Industry was 1.02 which indicates the Quick Ratio of the industry.

Suggestions
- The Goodricke Group (1.38), Harrisons Malay (0.45) and Bombay Burmah (1.62), have to maintain at least acceptable current ratio which is 2:1. It is exposed from the analysis of the current ratio that the sample Agriculture companies should have acceptable current assets to meet the shortterm requirements as per the norm. However, the Nath Bio-Genes has the excess of current assets than required.

- The sample units the Nath Bio-Genes should make alteration of capitals for their long-term paybacks in the right direction and avoid the high investments in the current assets.
- The acid test or quick ratio displays how well a company can rapidly alter its assets into cash in order to meet its current obligations. Here, Goodricke Group (0.57) and Harrisons Malay (0.29) have not essential quick assets to meet its current dues. So, it is suggested that these companies should have to re-analyse its all strategies and effort to growth its sales and also implement improved collection periods. Moreover, these sample unit should control their current liabilities. These all suggestions are useful to companies that they are able to meet their dues on timelier basis.
- The Kaveri seed (1.20), Bombay Burmah (1.31) and Nath Bio-Genes (1.75) have too high quick ratio which indicates companies are not being put its assets to pay off their liabilities which indirectly effects on company profile. So, it is suggested to company that they should keep it to at least the industry average.
- There should be an appropriate liquidity management policy for the Agricultural industry.

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