



## RATIO ANALYSIS OF HYDERABAD AGRICULTURAL COOPERATIVE ASSOCIATION OPERATIONAL FUNCTIONS

Dr. M.S. Ramananda\*

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**Abstract:** *The Hyderabad Agricultural Cooperative Association (HACA) Limited, Hyderabad has come into being in the year 1949, to serve the farmers community of the erstwhile State of Hyderabad and commenced functioning from 01.07.1949. Originally, the area of operation of the society covering 16 districts of the then Hyderabad State. After Re-organization of states, the area of operation extends to the entire area of Telangana plus (3) Districts of Karnataka and (5) Districts of Maharashtra States. The Society thus comes under the Multi State Co-operative Societies Act 1984. HACA is an Apex Co-operative Marketing Society of the erstwhile State of Hyderabad, for purpose of Marketing. The present paper attempts to understand the operational functional aspects of HACA about the financial position and financial performance. The study is based on secondary sources only. The secondary data were collected from HACA office, HACA Bhavan, published, unpublished and Internet. The study period was during the year 2004 to 2009. The HACA operational aspects as per the data analysis it was not uniformly distributed among the years. During the reference period the HACA data analysis showed negative ratios could be observed. The shareholder's capital has risen quite a bit if you compare the balance sheet numbers versus the previous year. Again this could mean a number of things, there are a couple reasons that this could have happened. Perhaps they've made acquisitions which were partially paid for through the issue of stock, or maybe they took on additional share capital from another firm. Another possible reason is that they had to issue more shares because they were strapped for cash. For the most part a rise in share capital is better than a rise in debt, but too much of a rise could be cause for alarm.*

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\*Faculty Member, Regional Institute of Co-operative Management, Padmanabhanagar, Bangalore



## **INTRODUCTION**

The Hyderabad Agricultural Cooperative Association (HACA) Limited, Hyderabad has come into being in the year 1949, to serve the farmers community of the erstwhile State of Hyderabad and commenced functioning from 01.07.1949. Originally, the area of operation of the society covering 16 districts of the then Hyderabad State. After Re-organization of states, the area of operation extends to the entire area of Telangana plus (3) Districts of Karnataka and (5) Districts of Maharashtra States. The Society thus comes under the Multi State Co-operative Societies Act 1984. HACA is an Apex Co-operative Marketing Society of the erstwhile State of Hyderabad, for purpose of Marketing.

## **ACTIVITIES AND OBJECTIVES OF THE HACA**

The following are the main business activities of HACA as per its Bye-laws.

- (i) Supply of quality Seeds, Fertilizers, Pesticides and other Agriculture Inputs through its Branches and HACA Rythu Seva Kendrams at competitive prices to farmers.
- (ii) Production of Quality Seeds like Soybean, Groundnut, Dhaincha, Paddy, Castor & Red gram etc.
- (iii) Supply of Rice, Pulses, Oils and other Consumer Items to the Consumers in twin cities and also to Government Departments.
- (iv) Supply of Note Books to the Students, through the concerned government departments.
- (v) Sale of Crackers at the time of Diwali Festival.
- (vi) Production, Processing & Marketing of Seed on Certified & Truthful labels at reasonable and competitive rates and supply in time.

## **OBJECTIVES OF THE RESEARCH**

1. To study the financial position of the HACA
2. To analyze the financial performance of HACA

## **METHODOLOGY**

The present paper attempts to understand the operational functional aspects of HACA. The study is based on secondary sources only. The secondary data were collected from HACA office, HACA Bhavan, published, unpublished and Internet. The study period was during the year 2004 to 2009.



## STATISTICAL TOOLS USED

The researcher have been considered Ratio analysis was more suitable for the interpretation of the financial statements

Broadly accounting ratios can be grouped into the following categories :

- a. Liquidity ratios
- b. Activity ratios
- c. Solvency ratios
- d. Profitability ratios
- e. Leverage ratio

### LIQUIDITY RATIOS:

The term liquidity refers to the ability of the Cooperative Society to meet its current liabilities. Liquidity ratios assess capacity of the firm to repay its short term liabilities. Thus, liquidity ratios measure the firms' ability to fulfil short term commitments out of its liquid assets. The important liquidity ratios are

- i. Current ratio
- ii. Quick ratio

#### (i) Current ratio

Current ratio is a ratio between current assets and current liabilities of a firm for a particular period. This ratio establishes a relationship between current assets and current liabilities. The objective of computing this ratio is to measure the ability of the firm to meet its short term liability. It compares the current assets and current liabilities of the firm. This ratio is calculated as under:

$$\text{Current Ratio} = \frac{\text{Current Assets}}{\text{Current liabilities}}$$

Current Assets are those assets which can be converted into cash within a short period i.e. not exceeding one year. It includes the following:

Cash in hand, Cash at Bank, Bill receivables, Short term investment, Sundry debtors, Stock, Prepaid expenses Current liabilities are those liabilities which are expected to be paid within a year. It includes the following:

Bill payables, Sundry creditors, Bank overdraft, Provision for tax, Outstanding expenses



The current ratio indicates the amount of current assets available for repayment of current liabilities. Higher the ratio, the greater is the short term solvency of a firm and vice a versa. However, a very high ratio or very low ratio is a matter of concern. If the ratio is very high it means the current assets are lying idle. Very low ratio means the short term solvency of the firm is not good. Thus, the ideal current ratio of an organisation is 2 : 1 i.e. to repay current liabilities, there should be twice current assets. Atleast the organization should maintain 1.5: 1

It is clear from the above calculations that the current ratio is very poor. We cannot say that the HACA is having higher solvency. Hence steps have to be initiated to increase the sales as well as liquidity of the society. During the year 2008 the current ratio was not good. The current assets are just equal to the current liabilities. However during the year 2009 there was great improvement in the liquidity position of the society.

**(ii) Quick ratio**

Quick ratio is also known as Acid test or Liquid ratio. It is another ratio to test the liability of the concern. This ratio establishes a relationship between quick assets and current liabilities. This ratio measures the ability of the firm to pay its current liabilities. The main purpose of this ratio is to measure the ability of the firm to pay its current liabilities. For the purpose of calculating this ratio, stock and prepaid expenses are not taken into account as these may not be converted into cash in a very short period. This ratio is calculated as under :

$$\text{Liquid Ratio} = \frac{\text{Liquid or quick assets}}{\text{Current liabilities}}$$

where, liquid assets = current assets – (stock + prepaid expenses)

**Table 1 liquidity Ratio**

Year	Calculation		Results	Ratio arrived
2004	68611956/66596681	=	1.03	1.03 : 1
2005	100340590/77098753	=	1.301	1.301 : 1
2006	90226499/68187026	=	1.323	1.323 : 1
2007	166320616/13226710 1	=	1.257	1.257 : 1
2008	254695878/23365279 4	=	1.09	1.09 : 1
2009	207171020/15826440 2	=	1.309	1.309 : 1

Source: Compiled Calculated Data



Quick ratio is a measure of the instant debt paying capacity of the business enterprise. It is a measure of the extent to which liquid resources are immediately available to meet current obligations. A quick ratio of 1 : 1 is considered good/favourable for a Cooperative Society

It is clear from the above table that the quick ratio is as per the standards and the society is above to meet the current liabilities at any point of time as it is maintaining liquid resources or funds to meet the immediate obligations. The quick ratio was good during the year 2005, 2006 and 2009 when compared with other years.

## **TURNOVER RATIOS**

Activity ratios measure the efficiency or effectiveness with which a firm manages its resources. These ratios are also called turnover ratios because they indicate the speed at which assets are converted or turned over in sales. These ratios are expressed as 'times' and should always be more than one. Some of the important activity ratios are :

- (i) Stock turnover ratio
- (ii) Debtors turnover ratio
- (iii) Creditors turnover ratio
- (iv) Working capital turnover ratio

### **(i) Stock turnover ratio**

Stock turnover ratio is a ratio between cost of goods sold and the average stock or inventory. Every firm has to maintain a certain level of inventory of finished goods. But the level of inventory should neither be too high nor too low. It evaluates the efficiency with which a firm is able to manage its inventory. This ratio establishes relationship between cost of goods sold and average stock. The Stock Turnover Ratio show how many times over the business has sold the value of its stocks during the year.

Inventory turnover ratio measures the velocity of conversion of stock into sales. Usually a high inventory turnover/stock velocity indicates efficient management of inventory because more frequently the stocks are sold, the lesser amount of money is required to finance the inventory. A low inventory turnover ratio indicates an inefficient management of inventory. A low inventory turnover implies over-investment in inventories, dull business, poor quality of goods, stock accumulation, accumulation of obsolete and slow moving goods and low profits as compared to total investment. The inventory turnover ratio is also an index of profitability, where a high ratio signifies more profit, a low ratio signifies low profit.



Sometimes, a high inventory turnover ratio may not be accompanied by relatively a high profits. Similarly a high turnover ratio may be due to under-investment in inventories.

It may also be mentioned here that there are no rule of thumb or standard for interpreting the inventory turnover ratio. The norms may be different for different firms depending upon the nature of industry and business conditions. However the study of the comparative or trend analysis of inventory turnover is still useful for financial analysis.

It is calculated by:-

$$\text{Stock Turnover Ratio} = \frac{\text{Cost of goods Sold}}{\text{Average Stock}}$$

$$\text{Cost of goods sold} = \text{Opening stock} + \text{Purchases} + \text{Direct expenses} - \text{Closing Stock}$$

Or

$$\text{Cost of goods sold} = \text{Sales} - \text{Gross Profit}$$

$$\text{Average stock} = \frac{\text{Opening stock} + \text{Closing stock}}{2}$$

(i) If cost of goods sold is not given, the ratio is calculated from the sales.

(ii) If only closing stock is given, then that may be treated as average stock

The higher the stock turnover the better, because money is then tied up for less time in stocks. A quicker stock turnover also means that the firm gets to make its profit on the stock quicker, and so the firm should be more competitive. However, it will vary between industries and so it is important to compare within an industry. This means that an average one rupee invested in stock will turn into ten times in sales

In the Audited financial statements of HACA direct expenses were not shown. Hence we could not take direct expenses. Further to find out the cost of goods sold we can minus gross profit from net sales. But, there was no audited trading account. The trading account items were shown in the profit and loss statement. In this P&L statement direct expenses of trading is missing or clubbed with other expenses. Hence, the results arrived in this Ratio can be questioned easily and interpretation can be misleading also. However, in the given situation the results are as follows.



**Table 2 Calculation of Cost of Goods Sold**

Amount in Rs

Year	Cost of Goods Sold	=	Opening stock	+	Purchases	+	Direct expenses	-	Closing Stock
2004	203175655	=	4195461	+	212207220	+	Not shown in the Audited financial statements	-	13227026
2005	309119055	=	13227026	+	297165194	+		-	1273165
2006	506016360	=	1273165	+	508828853	+		-	4085658
2007	518562512	=	4085658	+	516140720	+		-	1663866
2008	904688731	=	1663866	+	904820658	+		-	1795793
2009	1387018659	=	1795793	+	1387717153	+		-	2494287

Source: Compiled Calculated Data

**Table 3 Calculation of Stock Turnover Ratio**

Year	Stock Turnover Ratio	=	Cost of Goods Sold	÷	Average Stock
2004	23.32	=	203175655	÷	8711243.5
2005	42.64	=	309119055	÷	7250095.5
2006	188.85	=	506016360	÷	2679411.5
2007	180.38	=	518562512	÷	2874762
2008	522.99	=	904688731	÷	1729829.5
2009	646.62	=	1387018659	÷	2145040

Source: Compiled Calculated Data

It is clear from the above table that the stock turnover ratio is very high during the year 2008 and 2009 when compared to the previous years. According to the above discussions and calculation with the given data the HACA is able to do very good inventory management. In reality HACA is not maintaining big godowns but rather it is doing almost trading business with the help of orders procured and goods delivered by the suppliers at different districts. However it is appreciated as far as stock turnover is concerned. It is also possible to express the ratio as a number of days, which is sometimes an easier way to understand it. To do this use the following formula.

$$\text{Stock Turnover Ratio (in days)} = \frac{\text{Average Stocks}}{(\text{Cost of goods sold}/365)}$$

The result of this ratio gives the "number of days that on average money is tied up in stocks". The longer this is, obviously the worse this is for the business as the money is not available to be used elsewhere. Since the stock is part of the working capital it is important that it is available for use promptly.



**Table 4 Calculation of Stock Turnover Ratio (in Days)**

<b>Average</b>			<b>Stocks</b>		
<b>(Cost of goods sold/365)</b>					
Year	Stock Turnover Ratio in days	=	Average Stock	Cost of Goods Sold	÷365
2004	15.65	=	8711243.5	203175655	÷365
2005	8.56	=	7250095.5	309119055	÷365
2006	1.93	=	2679411.5	506016360	÷365
2007	2.02	=	2874762	518562512	÷365
2008	0.70	=	1729829.5	904688731	÷365
2009	0.56	=	2145040	1387018659	÷365

Source: Compiled Calculated Data

It is clear from the above table that the stock turnover ratio is extremely good as far as number of days which is average money is tied up in stocks. The HACA has improved lot day by day.

### **Solvency Ratios**

The term 'solvency' refers to the ability of a concern to meet its long term obligations. The long-term liability of a firm is towards debenture holders, financial institutions providing medium and long term loans and other creditors selling goods on credit. These ratios indicate firm's ability to meet the fixed interest and its costs and repayment schedules associated with its

long term borrowings.

The following ratios serve the purpose of determining the solvency of the business firm.

- Debt equity ratio
- Proprietary ratio

### **Debt-equity ratio**

It is also otherwise known as external to internal equity ratio. It is calculated to know the relative claims of outsiders and the owners against the firm's assets. This ratio establishes the relationship between the outsiders' funds and the shareholders fund. Thus,

$$\text{Debt-equity Ratio} = \frac{\text{Outsiders' fund}}{\text{Share holders' funds}}$$

Shareholders' fund = Equity share capital + Reserves + Accumulated profits

Shareholders' fund = Total Assets – total debt

Long term debt = Total debt – current liabilities



$$\text{Debt equity Ratio} = \frac{\text{Debt}}{\text{Equity}}$$

The two basic components of the ratio are outsiders' funds and shareholders' funds. The outsiders' funds include all debts/liabilities to outsiders i.e. debentures, long term loans from financial institutions, etc. Shareholders' funds mean preference share capital, equity share capital, reserves and surplus and fictitious assets like preliminary expenses. This ratio indicates the proportion between shareholders' funds and the long-term borrowed funds. In India, this ratio may be taken as acceptable if it is 2 : 1. If the debt-equity ratio is more than that, it shows a rather risky financial position from the long term point of view.

The purpose of debt equity ratio is to derive an idea of the amount of capital supplied to the concern by the proprietors. This ratio is very useful to assess the soundness of long term financial position of the firm. It also indicates the extent to which the firm depends upon outsiders for its existence. A low debt equity ratio implies the use of more equity than debt. Shareholder Equity is the net worth of a Cooperative Society. It represents the stockholders' claim to a business' assets after all creditors and debts have been paid. Shareholder equity is also referred to as Owner's or Stockholders' Equity. It can be calculated by taking the total assets and subtracting the total liabilities.

The Debt/Equity ratio is certainly far from perfect! A low ratio of 0.26 means that the Cooperative Society is exposing itself to a large amount of equity. This is certainly better than a high ratio of 2 or more since this would expose the Cooperative Society to risk such as interest rate increases and creditor nervousness. One way to improve their situation would be to issue more debt and use the cash to buyback some of its outstanding shares. The problem with issuing more and more stock like Cory's Tequila Co. has done means that outstanding shares become diluted and existing investors receive a smaller ownership portion with each additional share issued

**Table 5 Debt- equity Ratio**

Debt-equity Ratio=		<u>Outsiders' fund</u> Share holders' funds					
Year	Debt Equity Ratio	=	Share Capital	+ Reserves	+ Profit	= Shareholders fund	Debt: Secured loans
2004	0.93	=	1133156	13401882	44088885	58623923	54298570
2005	1.06	=	1133156	13401882	36631932	51166970	54200665
2006	1.10	=	1133156	13401882	29773718	44308756	48901548



2007	1.37	=	1133156	13374841	22494462	37002459	50788960
2008	1.05	=	1133156	13374841	16329008	30837005	32414508
2009	1.83	=	1133156	13374841	6259765	20767762	38014287

Source: Compiled Calculated Data

It is clear from the above statement that the debt equity ratio is raising up during the year 2009. In the previous years the debt was almost nearer to the shareholders funds or to the extent of networth. Even though HACA is having debts i.e., secured loans, it should see that the ratio of debt has to be reduced. Even though 2:1 is the acceptable standard universally, being cooperative institution 1.83 is a matter of slight alarming about HACA depending on the external funds i.e., debt/secured loans.

### Profitability Ratios

The main aim of an enterprise is to earn profit which is necessary for the survival and growth of the business enterprise. It is earned with the help of amount invested in business. It is necessary to know how much profit has been earned with the help of the amount invested in the business. This is possible through profitability ratio. These ratios examine the current operating performance and efficiency of the business concern. These ratios are helpful for the management to take remedial measures if there is a declining trend. The important profitability ratios are :

- (i) Gross profit ratio
- (ii) Net profit ratio
- (iii) Operating profit ratio
- (iv) Return on investment ratio

#### (i) Gross profit ratio

It expresses the relationship of gross profit to net sales. It is expressed in percentage. It is computed as

$$\text{Gross profit ratio} = \frac{\text{Gross profit} \times 100}{\text{Net sales}}$$

***As the trading Account was not readily available following formula was utilized to calculate gross profit ratio.:***



**Table 6 Gross profit = Net sales – Cost of goods sold.**

Year	Gross profit	Net sales	Cost of goods sold
2004	13265624	216441279	203175655
2005	20557711	329676766	309119055
2006	25910834	531927194	506016360
2007	28830228	547392740	518562512
2008	39864097	944552828	904688731
2009	45432834	1432451493	1387018659

Source: Compiled Calculated Data

Gross profit ratio shows the margin of profit. A high gross profit ratio is a great satisfaction to the management. It represents the low cost of goods sold. Higher the rate of gross profit, lower the cost of goods sold.

It is clear from the table that the gross profit ratio is falling year by year. For the year 2004 the GP ratio was 6.13% . The GP Ratio was to 6.24%, for the year 2005, whereas it was decreased to 4.87% for the year 2006 and it has increased to 5.27% in the year 2007. Again in the year 2008 the ratio was decreased to 4.22% and finally for the year 2009 it was 3.17%. Hence it was found that the GP Ratio was very low and volatility also found. It is clearly indicating down trend and the management has to take steps to increase the GP ratio. The cost of the goods sold appears to be at higher side and the sales also needs to be increased with more margin to keep the GP ratio at higher end.

**(ii) Net profit ratio**

A ratio of net profit to sales is called Net profit ratio. It indicates sales margin on sales. This is expressed as a percentage. The main objective of calculating this ratio is to determine the overall profitability. The ratio is calculated as

$$\text{Net profit ratio} = \frac{\text{Net profit} \times 100}{\text{Net sales}}$$

**Table 7 Net Profit ratio**

Year	Net Profit	Net Sales	Net Profit Ratio
2004	236134	216441279	0.11%
2005	7456953	329676766	2.26%
2006	6858214	531927194	1.29%
2007	7279256	547392740	1.33%
2008	6165454	944552828	0.65%
2009	17338746	1432451493	1.21%

Source: Compiled Calculated Data



Net profit ratio determines overall efficiency of the business. It indicates the extent to which management has been effective in reducing the operational expenses. Higher the net profit ratio, better it is for the business.

It is clear from the above table that the net profit ratio is just 1.21% for the year 2009 whereas it was 0.65% in the year 2008. During the year 2004 it was just 0.11% and it has galloped to 2.26% in the year 2005. It is concluded that the overall efficiency of the business has to be increased and the management has to reduce its operational expenses.

### (iii) Operating profit ratio

Operating profit is an indicator of operational efficiencies. It reveals only overall efficiency. It establishes relationship between operating profit and net sales. This ratio is expressed as a percentage. It is calculated as :

$$\text{Operating profit Ratio} = \frac{\text{Operating profit} \times 100}{\text{Net sales}}$$

$$\text{Operating Profit} = \text{Gross Profit} - (\text{Administration expenses} + \text{selling expenses})$$

**Table 8 Operating profit**

$$\text{Operating profit} = \text{Gross profit} - \text{Operating expenses}$$

Year	Selling and admin expenses	+	Financial Exp	=	Operating Exp	-	Gross Profit	=	Operating Profit(+) Loss(-)
2004	17521117	+	7547945	=	25069062	-	13265624	=	11803438
2005	15712510	+	4231185	=	19943695	-	20557711	=	-614016
2006	19556804	+	4479672	=	24036476	-	25910834	=	-1874358
2007	24020247	+	4959157	=	28979404	-	28830228	=	149176
2008	34144847	+	6555329	=	40700176	-	39864097	=	836079
2009	25220426	+	3977584	=	29198010	-	45432834	=	-16234824

Source: Compiled Calculated Data

It helps in examining the overall efficiency of the business. It measures profitability and soundness of the business. Higher the ratio, the better is the profitability of the business. This ratio is also helpful in controlling cash. Some firms take profit before tax but usually companies take profit after tax.

We have taken only the exact operating expenses that is selling and administrative expenses and financial expenses only in this project report. We have neither taken depreciation nor



taxes. This is very liberal way of taking operating profit ratio. If we consider depreciation and taxes then we will arrive exact position of the operating profit ration.

It is clear from the above that the operating ratio is showing negative results in the year 2005, 2006 and in the year 2009. Hence, the expenses the HACA has to control to get the operating profit. If the firm is not in a position to maintain good percentage which shall be positive, then the firm has to face severe problem for profits and as well as margin. The management has to take severe steps to bring back the HACA on the rail.

## **CONCLUSION**

The HACA operational aspects as per the data analysis it was not uniformly distributed among the years. During the reference period the HACA data analysis showed negative ratios could be observed. The shareholder's capital has risen quite a bit if you compare the balance sheet numbers versus the previous year. Again this could mean a number of things, there are a couple reasons that this could have happened. Perhaps they've made acquisitions which were partially paid for through the issue of stock, or maybe they took on additional share capital from another firm. Another possible reason is that they had to issue more shares because they were strapped for cash. For the most part a rise in share capital is better than a rise in debt, but too much of a rise could be cause for alarm.

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