Research Paper COMMERCE

Financial Stability of Hitachi Home and Life Solutions (India) Ltd., [HHLI]

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ABSTRACT

The analysis of financial performance is a process of evaluating relationship between component parts of financial statements to obtain a better understanding of the firm's position and performance. This study covers over all financial performance of HITACHI home and life solutions (India) ltd., (HHLI) by using financial ratios, liquidity, solvency, activity and profitability. The study covers only five years between 2008-09 and 2012-13

KEYWORDS Liquidity, Solvency, Activity, Profitability. Correlation, Regression, Least square, 't" test.

Introduction

Air conditioning (Air con or A/c) is the process of altering the properties of air primary temperature and humidity to move favourable conditions, typically with the aim of distributing the conditioned air to an occupied space to improve comfort[1]. A/c can also be provided by a simple process called free cooling which uses pumps to circulate a coolant (typically water or glycol mix) from a cold source, which in terms act as a heat sink for the energy that is removed from the cooled space. Free coding system can have very high efficiencies and combined seasonal thermal energy storage, so the cold water can be used for summer A/c[2].

Refrigeration is a process in which work done to move heat from one location to another[3]. Refrigeration has many applications including but not limited to household Refrigerators, Industrial freezers, Cryogenics and A/c.

Prof. willam cullen designed a small refrigeration machine in 1755. He used a pump to create a partial vacuum over a container of diethyl elzer, which then boiled absorbing heat from the surrounding air[4].

Profile of HITACHI (HHLI)

HHLI popularly known as Hitachi is engaged in manufacturing a range of electronic home solutions. It was incorporated in 1984 in a subsidiary of HHL Inc, Japan. The company is among the leading A/c Co. in India, which experts to SAARC, Middle East and few more countries globally.

HHLI Co. is located in Ahmedabad (Gujarat), the company's manufacturing unit are located at Kadi (Gujarat) and Jammu. The company has installed capacity of 250000 units a year.

HHLI has a marketing network of 18 branches, 250 sales and service dealers, more than 800 showroom dealers and 350 service points. The company produces name of product such as window A/c$_s$, split A/c$_s$, tower and packaged A/c$_s$, Hitachi manufactures 2 and 3 door Refrigerators. It also manufactures fully automatic machines.

Scope of the study

The study involved the various factors that affect the financial stability of HHLI. It helps to find out the operational efficiency of the organization and allocation of funds to improve the financial stability of the company. The five years (2008-09 to 2012-13) financial information is taken into account for financial evaluation of the study. This study helps to improve the financial status and funds employed of HHLI.

Literature Review

1. Moses Joshuva Dantel (2013) "A study on financial status of TATA Motors Ltd" Indian Journal of Applied Research, vol:3 | issue:4 | April | p.320-322. He identified the financial strength and weakness of the unit from the available accounting data. He also analyzed the overall financial status of TATA Motors by using various financial tools-liquidity, solvency, activity and profitability.
2. Mr. Suvarun Goswami and Aniruddha Sarkar (2011), "Analysis of Financial Performance of TATA Steel", International Journal of Multidisciplinary Research, Vol.1, September. He observed that the financial strength and weakness of the company (TATA steel) like liquidity and profitability position.
3. Chienho and Sony Zhu (2004), "Financial effectiveness of Sony products, Japan". The study focused on most previous financial performance and operational efficiency and operational effectiveness which might directly influence the survival of a company. It is very helpful to our research paper for making the financial activity and improves financial performances of HHLI.

Research Objectives

1. To analyze the operational efficiency of HHLI.
2. To evaluate the short term and long term liquidity and solvency position of company.
3. To evaluate the financial stability and profitability of HHLI.
4. To offer suitable suggestions to improve the financial performance and overcome financial performance faced by the company.

Research methodology

The study based on secondary information. It includes collecting information from books, journals, magazines and annual accounting reports of HHLI for the past five years publications and websites also referred. Accounting and financial tools like ratios have been used for analysis of data. These techniques at different places were made in the light of the nature and suitability of data available and the requirement of analysis. Statistical tools, like 't' test with correlations, and regression with correlations have been used for the analysis of data.

Time study

This study covers the period of five years from 2008-09 to 2012-2013.

Financial Analysis

The focus of financial analysis is a key figure in the financial statements and the significant relationship that exists between them. The analysis of financial statements in a process of evaluating relationship between component parts of financial statements to obtain a better understanding of the firm's position and performance[5].

Ratio analysis is a powerful tool of financial analysis. It is used as a device and interprets the financial health of a HHLI. Analysis of financial statements with aid of ratios helps the management decision-making and control. For the purpose of financial analysis, ratios are classified into liquidity ratios, solvency ratios, activity ratios and profitability ratios.

Liquidity Ratio

Liquidity is a measure of the ability of debtor to pay their debts as and when they fall due. It is usually expressed as a ratio or percentage of current liabilities is the ability to pay short-term obligations. "Liquidity is the case with which assets may be converted into cash without loss[6]". Thus liquidity is the base of continuous business operations. To measure the liquidity position of the HHLI - current ratio, liquid ratio and absolute ratio have been calculated.

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

$$\text{Liquid ratio} = \frac{\text{Liquid Asset}}{\text{Current liabilities}}$$

$$\text{Absolute liquid ratio} = \frac{\text{Cash + bank}}{\text{Current liabilities}}$$

Table : 1
Liquidity Ratios
(in times)

Year	Current Ratio	Liquid Ratio	Absolute liquid ratio
2008 – 09	1.37	0.44	0.026
2009 – 10	1.35	0.43	0.043
2010 – 11	1.34	0.35	0.004
2011 – 12	1.28	0.43	0.007
2012 – 13	1.41	0.52	0.157

Source: Annual reports of HHLI.

The table 1 showed that liquidity position of HHLI for the period of five years between 2008-09 and 2012-13. During the first four years, the company's current ratio was gradually decreased. In the year 2012-13, the ratio was suddenly increased. The high ratio of company is 1.41 in 2012-13 and low ratio of 1.28 in 2011-12. The company had a financial trouble in all the study period, because of more stock and work-in-progress, which are not easily convertible into cash and therefore, may have less cash to pay-off current liabilities. The liquid ratio of the company also fluctuated during the study period, the higher ratio of 0.52 times in 2012-13 and the low ratio 0.35 in 2010-11, the main reason for the fluctuation is changes in stock. The absolute ratio was very low in 2010-11 in 0.004 times, because, the company has not maintained cash and bank balance to meet the current liabilities.

On the basis of above analysis, the liquidity position of HHLI was not satisfactory during the whole study period. The main reason for that, the company should not maintain the ideal ratio of current ratio 2:1 and liquid ratio 1:1.

Solvency Ratios

A key metric used to measure a company's ability to meet its debt and other obligations. The solvency ratio indicates whether a company's cash flow is sufficient to meet its short-term and long-term liabilities. The lower company's solvency ratio, the greater the probability that it will default on its debt obligations.[7] The following ratios have been calculated to analyse the long-term solvency position of the HHLI.

$$\text{Debt-equity Ratio} = \frac{\text{External Equity}}{\text{Internal Equity}}$$

$$\text{Proprietary Ratio} = \frac{\text{Net worth}}{\text{Total Tangible Assets}}$$

$$\text{Capital Gearing Ratio} = \frac{\text{Funds of debt and preference share capital}}{\text{Equity shareholders funds}}$$

Table: 2
Solvency Ratios
(in times)

Year	Debt-equity	Proprietary	Capital Gearing
2008 – 09	0.48	0.67	0.48
2009 – 10	0.49	0.71	0.41
2010 – 11	0.52	0.66	0.52
2011 – 12	0.58	0.71	0.58
2012 – 13	0.91	0.63	0.91

Source: Annual reports of HHLI.

Table 2 indicates that solvency position HHLI for the five years. The debt-euity ratio was gradually increased for the year 2008-09.

It is advisable that it should not maintain the standard ratio of 1:1 therefore, the company may utilise the large debt capital (less costly sources of funds) for smooth running of business.

The proprietary ratio of company was varied year after year. The higher ratio was 0.71 times in 2009-10 and the lowest being 0.63 times in 2012-13. The company's average ratio of proprietary was 0.68 times, it indicates the greater share holders' funds and lesser the borrowed funds, therefore the company's solvency position in safe as amount payable to outsiders will be less.

The capital gearing of HHLI is low geared, because, the company's rate of returns are more but it has paid only less fixed interest and not paid the preference dividend.

Activity Ratio

An activity ratio is a metric which determines to ability of a company to convert its balance sheet accounts into revenue. Activity ratios are critical in evaluating a company's fundamentals because, in addition to expressing how well the company generating revenue, activity ratios also indicate how well the company is being managed[8]. The following such ratios are calculated to judge the effectiveness of asset utilization by HHLI.

$$\text{Inventory Turnover Ratio} = \frac{\text{Cost of goods sold / Sales}}{\text{Average Stock}}$$

$$\text{Debtors Turnover Ratio} = \frac{\text{Net Credit Sales}}{\text{Trade Debtors}}$$

$$\text{Creditors Turnover Ratio} = \frac{\text{Credit Purchase}}{\text{Trade Creditors}}$$

$$\text{Fixed Assets Turnover Ratio} = \frac{\text{Cost of Sales}}{\text{Net Fixed Assets}}$$

$$\text{Working capital Turnover Ratio} = \frac{\text{Net sales}}{\text{Working Capital}}$$

Table: 3
Activity Ratios
(in times)

Year	Inventory Turnover	Debtors Turnover	Creditors Turnover	Fixed asset Turnover	Working capital Turnover
2008 – 09	3.97	5.74	2.56	7.23	6.49
2009 – 10	4.32	6.68	3.02	6.13	7.37
2010 – 11	3.01	6.12	2.61	5.83	6.14
2011 – 12	2.68	5.39	2.20	6.21	8.05
2012 – 13	3.24	5.65	2.23	5.24	4.97

Source: Annual reports of HHLI.

Table 3 shows that consolidated turnover ratio of HHLI for the period of five years study. The inventory turnover ratio registered fluctuating during the study period. It varied between 2.68 times and 4.32 times. The company's lowest ratio is 2011-12, due to the over investment in stock. Further the analysis revealed that for the efficient utilization of capital invested in stock and also properly maintains the cost of production. The HHLI has maintained debtors turnover ratio during the study period. The company has higher ratio in 2009-10 and 2010-11, due to it has collection of debts with short period.

The company has registered the fluctuation of creditors turnover ratio. An average of the ratio was 2.52 times. It indicated that the company had more or less stable credit policy in payment.

The fixed assets turnover ratio of HHLI has registered a fluctuating trend in the whole period of study. During the whole year the company had higher ratio and it indicates efficient utilization and proper management of fixed assets.

The net working capital turnover ratio indicates the better performance of the company i.e., the company has properly and efficiently utilizes the rotating working capital.

An analysis of activity turnover ratio of the company under study reveals it has sound position.

Profitability Ratio
Profitability ratios measure a company's ability to generate earnings relative to sales, assets and equity. These ratios assess the ability of a company to generate earnings, profits and cash flow, relative to some metric, often the amount of money invested. They highlight how effectively the profitability of a company is being managed[9]. Thus the importance of profit and profitability of HHLI in relation to sales, assets, capital employed, equity share capital is made here, with the help of the following ratios.

$$\text{Net Profit Margin Ratio} = \frac{\text{Net Profit (AT)}}{\text{Net Sales}} \times 100$$

$$\text{Return on Investment or capital employed} = \frac{\text{Operating Profit}}{\text{Capital employed}} \times 100$$

$$\text{Earnings Per share} = \frac{\text{Net profit (after tax)} + \text{Preference dividend}}{\text{Number of equity shares}}$$

Table: 4
Profitability Ratios
(in %)

Year	Net Profit	Return on Investment / capital employed	Earnings Per share
2008 – 09	4.48%	19%	9.18%
2009 – 10	7.20%	28%	20.10%
2010 – 11	3.84%	18%	12.77%
2011 – 12	0.41%	5%	1.42%
2012 – 13	1.65%	7%	6.67%

Source: Annual reports of HHLI.

Table 4 indentifies that the profitability position of HHLI for the year between 2008-09 and 2012-13. The net profit of the company shows alternatively changes in increase and decrease trend during the study period. But the company has an average profit 3.52% it gives the result normally better profit for the study period, at the same time, the company has missing the administrative expenditure and also control over labour productivity in 2011-12.

The performance of return on capital employed of HHLI was satisfactory during the study period, because the company has utilised the fund in proper way and also it maintains the operating efficiently.

Earning per share (EPS) indicates the higher value 20.10 in 2009-10 but it has lower value 1.42 in 2011-12 due to the net profit ratio in very low in the same period.

On the above analysis, it can be seen that the performance of profitability of HHLI was satisfactory during the study period.

Statistical tools

Table: 5
Correlations between Sales and Net Profit
(Rs in crore)

Year	Sales	Net profit
2008 – 09	469.90	21.07
2009 – 10	640.90	46.14
2010 – 11	764.01	29.33
2011 – 12	798.09	3.26
2012 – 13	929.99	15.30
Correlations between the variables = 0.79		

Source: Annual reports of HHLI.

The table 5 analyses the relationship between Sales and Net Profit of HHLI, using of correlation coefficient.

H_o: There is no significance difference between the variables that is Sales and Net Profit of HHLI.

$$t = \frac{0.79}{\sqrt{1-(0.79)2}} \sqrt{5\text{-}2} = 2.20$$

The degree of coefficient correlation between two variables is 0.79. The calculated value of 't' 2.20 is more than table value of 't' @ 5% level for d.f 5 = 2.015. Hence the hypothesis is rejected. It is concluded that the correlation between Sales and Net Profit of HHLI is significant.

Table: 6
Expected Profit for the year 2014-2015

Year	Mid value	X_1	Profit Y	X_1Y	X_1^2
2008 – 09	8.5	(-) 2	21.07	(-) 42.14	4
2009 – 10	9.5	(-) 1	46.14	(-) 46.14	1
2010 – 11	10.5	0	29.33	0	0
2011 – 12	11.5	1	3.26	3.26	1
2012 – 13	12.5	2	15.30	30.60	4
Total			115.10	(-) 154. 42	10

$$\mathbf{a} = \frac{\sum Y}{n} = \frac{115.10}{5} = 23.02; \qquad \mathbf{b} = \frac{\sum X_1 Y}{\sum X_1^2} = \frac{-54.42}{10} = (-)\ 5.44$$

Expected value of profit/ loss for 2014-15 = (-) 4.18crore

From the above analysis, the company expects the loss in 2014-15. Therefore, the company can try to reduce the cost of production, and little change in sales price for avoids the loss in future.

Proof
The researcher can be proved the regression value with the correlation, in the following formula

$$\mathbf{r} = \sqrt{\mathbf{b}_{xy} * \mathbf{b}_{yx}}$$

The following table shows that the regression between equity and total assets of HHLI.

Table 7
Regression between Equity and Total Assets
(Rs. in Crore)

Year	Owner's Equity	Total Assets
2008 – 09	104.51	155.03
2009 – 10	146.63	206.68
2010 – 11	171.96	261.97
2011 – 12	171.22	241.53
2012 – 13	236.42	375.51
Correlation between equity and total assets is 0.43		

Source: Annual reports of HHLI.

Regression x on y
X = 0.58y – 27.76

Regression y on x
Y = 0.32x + 194.97

Proof:

$$\textbf{Correlation:}\quad \mathbf{r} = \sqrt{\mathbf{b}_{xy} * \mathbf{b}_{yx}}$$

$$\mathbf{r} = \sqrt{0.\ 58 * 0.32} = 0.43$$

From the above table and analysis, the regression value of x on y and y on x has been applied in the correlation. It results that the relationship between Equity and Total assets are positively correlated and it can be proved here.
Findings

Liquidity position of HHLI
- The company has not maintained ideal current ratio of 2:1. Therefore, the liquidity position is not sound.
- In whole study period, the company has not also maintained the standard norm of quick ratio 1:1.
- The absolute ratio of HHLI was very low during the study period.

Solvency position of HHLI
- While the company debt equity position is gradually increased but it should not maintained the standard ratio of 1:1.
- Proprietary ratio indicates that the greater shareholders funds and lesser borrowed funds, therefore the company's solvency position in safe.
- The capital gearing of HHLI is low geared, because, the company's returns are more but paid less interest and no preference dividend.

Activity position of HHLI
- The company can be utilized the fund in stock effectively.
- The HHLI has collected the debts with the short period.
- The company has maintains the stable credit policy in payments of creditors.
- During the study, fixed turnover ratio is high, because the company has effectively utilized the fixed assets.
- Working capital also effectively maintained by the company for its operating cycle of production.

Profitability position of HHLI
- The net profit of the company suddenly decreased in 2011-12 and 2012-13. It gives the result causes the loss for the year 2014-15.
- Return on capital employed of the company was normally satisfactory.
- During the year 2011-12 and 2012-13, the EPS was very low, because the company earned low profit in the same year.

Suggestions:
On the basis of the above observation relating to the study the following measures are suggested to improve the overall financial stability position of HHLI.

- The company may take necessary steps to strengthen the liquidity position by improving current assets.
- The company borrow the short-term funds from outsiders, to maintain the standard ratio of debt-equalization ratio is 1:1.
- When the company borrow the debenture fund and issue of preference shares, it may pay the interest in debenture and preference dividend to the public, at the same time the company may maintain the high capital gearing is possible.
- The HHLI may take necessary steps to strengthen the fixed assets by the modernization.
- The company should improve its operational efficiency by taking appropriate measures to utilize the funds in proper way.
- If the company may improve its operational efficiency in future, it will earn a huge profit in future.
- The different functions of inventory management should be encompassed to minimize administrative lead time and proper inventory control techniques are to be adopted for the optimum investment in inventory.
- The company may be followed a stable credit policy in payment of creditors in future.
- The HHLI try to produce economic model of A/c and refrigerators with low cost to improve the huge sales in future.

Conclusion:
In the study of financial stability of HHLI, it is clear that the company's financial performance is satisfactory. The company has stable growth and its greater status in all the areas it works. The company has been suggested to produce economic model of A/c and refrigerators with low cost to improve the sales and to increase the profitability.

To improve the status the company will strive for better performance and increase the loan levels of the company. The suggestions provided though the study will help the company to improve the financial strength.

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